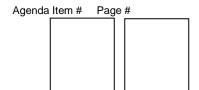| TO:	CHAIR AND MEMBERS PLANNING AND ENVIRONMENT COMMITTEE MEETING ON JUNE 18, 2012
FROM:	J. FLEMING DIRECTOR OF LAND USE PLANNING
SUBJECT:	TRAILS IN ENVIRONMENTALLY SIGNIFICANT AREAS

RECOMMENDATION

That, on the recommendation of the Director of Land Use Planning, the following actions **BE TAKEN** regarding the new Planning and Design Standards for Trails in Environmentally Significant Areas:

a) This report providing background information and the public commenting process for establishing the City's best management practices for trails in Environmentally Significant Areas (ESAs) **BE RECEIVED**;

b) The *Planning and Design Standards for Trails in Environmentally Significant Areas* **BE APPROVED** as a planning and design tool for use in the development of trail master plans and/or Conservation Master Plans for ESAs;

c) An ESA Trails Advisory Committee **BE ESTABLISHED** representing all user groups with diverse membership to comment on any trail related issues in ESAs that were not addressed or contemplated in the most current Conservation Master Plans;

d) The moratorium placed on the use of asphalt trails in ESAs (November 2009) **BE LIFTED**, as the new *Planning and Design Standards for Trails in Environmentally Significant Areas* document will provide the direction for any use of asphalt in ESAs;

e) The recommended restriction on dogs within the most environmentally sensitive areas of ESAs **BE REFERRED** to a separate public process for a potential amendment of the Parks and Recreation By-law;

f) The *Planning and Design Standards for Trails in Environmentally Significant Areas* **BE REVIEWED** by the ESA Trails Advisory Committee after further application in finalizing the Coves ESA Conservation Master Plan (CMP) and developing the Meadowlily CMP, in order to provide any technical changes that would result in greater clarity of intent and purpose of the Standards, and;

g) The ESA Trails Advisory Group **BE THANKED** for their time and effort in making their submissions to the City.

EXECUTIVE SUMMARY

Environmentally Significant Areas (ESAs) contain natural features and perform ecological functions that warrant their retention in a natural state (O.P. 15.4.1.).

Where necessary, public access to identified Environmentally Significant Areas within public ownership will be controlled so that access is not detrimental to the significant features of the property (O.P. 15.4.1.4.).

ESAs are unique features of the City's Natural Heritage and Open Space System. Publicly owned ESAs are a special classification of park and are managed under the guidance of Conservation Master Plans (CMP). One of the key management issues that a CMP must address is the management of people who are drawn to natural areas in urban settings. The most common recreational activity in ESAs is hiking and dog walking. Unplanned and/or excessive trails can have serious long-term impacts on natural areas. Poorly planned trail development can create negative impacts to sensitive ecological features and functions through their location, width and surface type. Trail users themselves, can contribute to negative impacts through the frequency, intensity, and type of use.

For all natural areas identified as ESAs, one of the management goals is to protect the significant features and ecological functions from negative effects arising from passive recreational uses. The primary consideration for trail development is to provide passive recreation and promote ecological education. Trail planning for the provision of safe and accessible recreational opportunities must therefore be well designed, maintained and monitored in order to provide access and protect the resource.
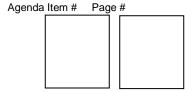
The City currently employs ecologists and landscape architects who oversee the development of CMPs for our ESAs. We also have contracted the Upper Thames River Conservation Authority to lead or assist with these plans to ensure that the plans respect the full range of ecological conditions and user issues. In 1996, the City developed planning and design standards for trails in ESAs. Those standards have been utilized by other Municipalities to create their own standards for their trail systems.

Through a two-year consultation period with an ESA Trail Focus Group and other community organizations and interested parties, the City has developed a new design standards manual to guide the planning and design of trails in ESAs. This manual updates and expands our current standards. The new document has been widely circulated and tested in two ESAs currently undergoing trail planning processes. These two areas are the Medway Valley Heritage Forest north of Fanshawe Park Road in relation to the recent installation of a sanitary sewer; and the Coves ESA in relation to the first stage of a CMP process.

The document, entitled **"Planning and Design Standards for Trails in ESAs"** (the "Trail Standard") is being submitted to Planning and Environment Committee for approval to be used when undertaking conservation management activities within ESAs and during the preparation of a Conservation Master Plan. This document incorporates the most up-to-date management practices for recreational trail design, a precautionary approach to trail planning, and an adaptive management model for monitoring. The Trail Standard is consistent with and generally exceeds management practices surveyed from other urban municipalities in Canada and the United States and are generally more restrictive than any other Canadian municipality or standards used in Provincial and National Parks.

The Trail Standard establishes guiding principles that must be followed for trail design and use in ESAs based on policy, process, practice, permitted activities, design and construction, and maintenance, monitoring and management, including;
- establishing management zones based on natural area significance and sensitivities;
- establishing and implementing a trail hierarchy according to management zones;
- identifying key abiotic, biotic and cultural indicators of ecosystem health and integrity within management zones (see below);

- designing and implementing a trail monitoring program to document any environmental damage or inconsistent use affecting key indicators;
- responding to unacceptable change through appropriate mitigation and adaptive management to alter practices, as required;
- establishing a process for circumstances where a wider paved pathway may be required to accommodate exceptional uses related to maintenance of infrastructure, community connections or unsustainable use.

Areas within an ESA that require the highest level of protection and the lowest intensity of use are identified as **Nature Reserve** where no new trails will be permitted and existing trails reassessed for appropriateness. In the **Natural Area 1**, only natural earth surface, wood chip, narrow boardwalk, corduroy log, or stepping stones. Level 1 trails will be permitted within these moderate to highly sensitive zones. These trails will generally be less than 1.5 m in width over more challenging terrain permitting only pedestrians (hikers, joggers). To protect environmental sensitivities, dogs (on leash) should no longer be permitted on Level 1 trails.

In less sensitive areas of some ESAs, **Natural Area 2** may permit improved Level 2 trails using asphalt or other suitable non-erodible materials less than 2.5 m in width, providing for all levels of permitted nature-based recreation activities. These permitted activities include strollers, walkers, wheelchairs, children on bicycles accompanied by pedestrian adults and dogs on-leash.

MANAGEMENT ZONES FOR ESAs
and
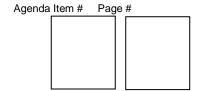**TRAIL HIERARCHY FOR MANAGEMENT ZONES**

- **Nature Reserve Zone** – high sensitivity – no trails permitted except where a Special Feature Overlay applies

- **Natural Area Zone 1** – moderate to high sensitivity – Level 1 hiking trails – natural earth surface or boardwalk, <1.5 m width – pedestrians only, no dogs or bicycles

- **Natural Area Zone 2** – low to moderate sensitivity – Level 1 hiking and/or Level 2 pedestrian trails - asphalt or other suitable non-erodible material, < 2.5 m width - Pedestrians, stroller, children on bicycles accompanied by pedestrian adults, wheelchair, dogs on leash

- **Cultural Heritage Zone** - identified where large enough to be placed in a unique zone (e.g. Park Farm at Meadowlily ESA) - Level 1, Level 2 trails and/or Level 3 pathway – multi-use

- **Access Zone** – generally located outside or at the edge of an ESA - Level 1, Level 2 trails and/or Level 3 pathway – multi-use – parking, bike racks, information kiosks, control structures

"OVERLAY" ZONES

These may be applied to the basic management zones to highlight:
1. **RESTORATION OVERLAY** - areas recommended for ecological restoration and management;
2. **SPECIAL FEATURE OVERLAY** – areas of unique or characteristic features of the ESA for education and interpretive value - with structures such as boardwalks or viewing platforms as required to protect natural features;
3. **UTILITY OVERLAY** – areas where a pre-existing permanent utility site or corridor, or other infrastructure or facility is located and is required for maintenance access.
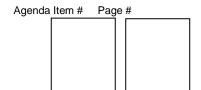

The development of this Trail Standard with the series of different management zones permitting different levels of use provided a good basis for introducing a new wildlife and hazard tree risk management practice. A workshop was held in January of 2011 with representatives from the City's Urban Forestry (Planning and Operations), Parks Planning, City Planning and Research, Risk Management and Legal, and invited representatives from the UTRCA and City of Toronto Forestry. This new practice is being finalized and will be implemented in City-owned and/or managed ESAs beginning in 2012 with the documentation of all significant wildlife trees within the risk zone along official "mapped" trails.

The goal of the new Wildlife Tree Practice is to meet or exceed the minimum Provincial standards for wildlife tree retention within ESAs, to the extent safely possible in order to provide the desired values for ecosystem, education and visitor experience. The objectives are to implement a proactive monitoring and pre-emptive and adaptive management procedure to identify and protect significant wildlife trees adjacent to managed Level 1 and Level 2 trails.

PREVIOUS REPORTS RELEVANT TO THIS MATTER

On December 13, 2010, a report on "*Trails in Environmentally Significant Areas*" was presented to the first meeting of the Built and Natural Environment. The General Manager of Planning and Development recommended the following actions be taken with respect to the report:

(a) Appendix 'A' " *Trails in Natural Areas*", prepared by the City's Ecologist Planner, regarding issues associated with compatibility of trails and paved pathways for the protection of ecological integrity within publicly owned Environmentally Significant Areas **BE RECEIVED;** it being noted that specific issues addressed in this report include:
> (i) responsibilities for conservation land management of public natural areas;
> (ii) review of existing Natural Heritage, Open Space and Parks and Recreation policies to identify any gaps in the ability to protect Environmentally Significant Areas and other components of the Natural Heritage System,
> (iii) trail and pathway issues in natural areas; and
> (iv) review of other guidelines and current practices in London.

(b) Appendix 'B, "Planning and Design Standards for Sustainable Trails in Environmentally Significant Areas (ESAs)" **BE CIRCULATED** for review by members of the public and interested stakeholders with the intention that it be used during the preparation of Conservation Master Plans and that it be incorporated into the Parks Planning & Design Manual of Design Specifications for new projects to be used by contractors, planners, or consultants undertaking conservation management activities within ESAs and other components of the Natural Heritage System, noting that the finalization of this document will address issues related to the moratorium placed on the use of paved trails in ESAs;

(c) the Civic Administration **BE DIRECTED** to proceed with text amendments to the Official Plan for policies 16.1, 16.2.5.(v) and 18.2.13 as described in the above-noted report to:
> (i) clarify the unique classification of Environmentally Significant Areas within the Parks hierarchy; and
> (ii) delete the requirement for Conservation Master Plans to be consistent with the Bicycle Master Plan for trail planning purposes.

(d) consideration of the request by the London Advisory Committee on Heritage (LACH) with respect to the drafting of a distinctive Natural Heritage Strategic Plan **BE DEFERRED,** [January 19, 2010] pending circulation of the above-noted Appendix 'B', and subsequent comment by the LACH; and

(e) consideration of the drafting of a special policy for Advisory Committee consultation relating to proposed modifications in Environmentally Significant Areas [June 14, 2010] **BE DEFERRED** pending circulation of the above-noted Appendix 'B'.

ITEMS ADDRESSED IN THIS REPORT

This report presents the final document: **"Planning and Design Standards for Trails in ESAs"** as noted in clause (b) above (Appendix A).

With respect to clause (c) it should be noted that the proposed by-law to amend the Official Plan by changing Section 16 and Section 18 to re-classify Environmentally Significant Areas as a new and separate category within the park hierarchy system and delete the requirement for Conservation Master Plans to be consistent with the Bicycle Master Plan was approved by Council on January 31, 2012, noting that:

1. The proposed Official Plan amendment will protect and enhance the long term features and functions of Environmentally Significant Areas.
2. The proposed Official Plan amendment will ensure the needs of the Provincial Policy Statement (PPS) are met for City-owned environmentally significant areas.
3. The proposed Official Plan amendments will clarify the unique classification of Environmentally Significant Areas within the parks hierarchy system.

Issues and recommendations pertaining to clause (d) will be addressed in the forthcoming Urban Forest Strategy.

The process for consultation for proposed modifications in ESAs (clause (e)) is addressed in the **"Planning and Design Standards for Trails in ESAs"** (Appendix A). As of the fall of 2011, all proposed projects in ESAs are presented to EEPAC for comment.
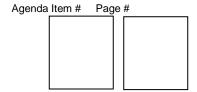
DEVELOPMENT OF THE TRAIL STANDARDS DOCUMENT-
BACKGROUND AND SUMMARY OF MEETINGS

Issues and concerns regarding trails and Environmentally Significant Areas were first raised at a public meeting held on September 29, 2009 discussing a proposed pedestrian/cycling pathway and bridge connection across Medway Creek that would link the east end of Gainsborough Road to the western portion of Windermere Road through the Elsie Perrin Williams Estate and the Medway Valley Heritage Forest ESA. The proposal was to establish a 3.0 meter wide asphalt pathway connection across the Medway Valley in an ecologically sensitive manner, to improve community connections, support sustainable transportation and encourage more active life style choices for all residents. Some residents and representatives of Community Associations expressed opinions in opposition to the paved pathway and bridge proposal, others were in favour.

To address these issues and concerns, and to provide more background information, staff convened a meeting on October 23, 2009 with members of the public, as well as other community groups and developers who raised these issues or were involved in the discussion of the issues concerning the Medway Valley pathway and bridge proposal. No resolution of issues arose from this meeting.

At a public participation meeting held on November 23, 2009, for the adoption of the updated Parks and Recreation Strategic Master Plan, twelve (12) presentations were made regarding the lack of a Natural Heritage Strategic Plan strategy to deal with Environmentally Significant Areas (ESAs) and their protection within the Plan. A request was made by LACH to identify ESAs separately from all other parks and open spaces and that ecological integrity and ecosystem health take precedence over any other park or recreational use.

Other opinions expressed at this meeting were that the Parks and Recreation Strategic Master Plan needed to provide greater clarity regarding pathway and trail system extensions involving ESAs. They stated that paved pathways should not be allowed in ESAs due to their high degree of significance and sensitivity. They also felt that there should be a better distinction of ESAs in the hierarchy of City parks to recognize their importance existence within the natural heritage

system according to the Provincial Policy Statement and Official Plan. Subsequently, Council placed a moratorium on paved pathways in ESAs and directed staff to:

- assess and report back on the issues raised by the public in the context of Official Plan policies, and;
- where conceptual routes (as shown on the Bicycle Master Plan) are proposed to cross components of the Natural Heritage System consideration be given, where possible, to route the pathway around the feature or function and not to dissect an environmental connecting linkage [November 23, 2009].

Staff determined that the best way to resolve the City-wide issue of trail planning for ESAs and the moratorium on asphalt was to organize a special task force or working group. All of the people involved in the previous meetings were invited to participate on this working group which was named "ESA Trails Focus Group". Best efforts were made to invite people from different groups representing different opinions and perspectives. The ESA Trails Focus Group comprised approximately 30 individuals representing the Sunningdale/Richmond Community Association, Old Masonville Ratepayers Association, Orchard Park/Sherwood Forest Ratepayers Association, Friends of Dingman Creek, Friends of Meadowlily Woods, Thames Talbot Land Trust, Nature London, EEPAC, ACCAC, LACH, Corlon Properties Inc., as well as City technical and managerial staff from the Planning Division, and area Councillors.

The objective of the group was to review and discuss policies, practices and strategies for trail planning and design for Environmentally Significant Areas. Two working meetings led by the City Ecologist were held on March 9, 2010 (14 people 3 Councillors, 4 staff, 9 different community organizations) and June 22, 2010 (3 Councillors, 3 staff, 13 community). Minutes were prepared and circulated following each meeting. The first version of the document was presented to BNEC on December 13, 2010 and widely circulated for review at five community/public meetings related to ESAs (Westminster Ponds, Sifton Bog, The Coves, Medway Valley), the City's website, and testing in Medway Valley, The Coves and Dingman Creek (Boler Mountain). That first version was also presented to EEPAC and to Accessibility Advisory Committee (ACCAC) on March 9, 2011. Based on comments received, subsequent versions were: Version 2 February 28, 2012; Version 3 March 20; and Version 4 April 25, 2012.

At the EEPAC meeting held on April 19, 2012 a presentation from the City's Ecologist Planner responded to recent comments regarding the Planning and Design Standards for Trails in ESAs, it being noted that members of the Trails Advisory Group were invited to the EEPAC meeting to ask questions and/or present their comments to the committee. EEPAC members were provided a copy of version 4 (April 25, 2012) for their review. Version 5 of the document is presented in this report and incorporates most responses from the final round of comments.

COMMENTS RECEIVED

Over the period of document development some very good questions were asked, key issues were raised, discussed and researched, and comments were received that helped to refine and clarify the Trail Standard. In the development of the trail standards document best efforts were made to circulate it to as many organizations and interest groups and individuals as possible. Some of the main points of discussion over the last two years that have been addressed in this new Trail Standard include:

a) ESAs are areas recognized for their significance according to the PPS (2005) and the Official Plan as core areas of the natural heritage system. Council adopted Official Plan policy changes to recognize ESAs as a separate and distinct category of park in January 2012.

b) How do we control people who want to use ESAs and how do we keep them out of most sensitive areas and being "loved to death"? The use of identifying a hierarchy of management zones for ESAs was designed. The most sensitive areas of ESA will be zoned as Nature Reserve where no new trails will be permitted, unless identified as a Special Feature Overlay, and existing trails will be reviewed for possible closure or re-routing.

Municipal Official Plan Policy
NATURAL HERITAGE SYSTEM
[Protect, Maintain, Enhance]

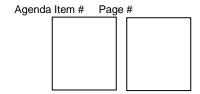ESA Management Zones are multi-tier based upon:

Sensitivity (constraints)	Uses (opportunities)
HIGH = Nature Reserve Zone	no use
MEDIUM = Natural Area 1 Zone	Level 1 - hiking trail
LOW = Natural Area 2 Zone	Level 2 – improved pedestrian trail

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c) All ESAs are SIGNIFICANT - To protect environmental quality, ESA management must recognize a Protected Area Core (Nature Reserve and Natural Area 1 Zone) and provide a sufficient buffer (Natural Area 2 Zone).

d) Natural Area 2 Zones will permit the use of "improved" surface hardened with asphalt or other non-erodible material that meet accessibility standards. This will provide the opportunity for all Londoner's and visitors to access ESAs for nature-based recreation and education as ESAs are considered the most favourite areas for many. An accessible trail needs to be 2 m wide, preferably as one way loops to avoid passing issues. Where this is not possible, lay-bys or bump-outs will need to be installed at appropriate distances along a trail or boardwalk.

e) During a Conservation Master Plan (CMP) process, areas identified for restoration will be mapped as a Restoration Overlay on top of the target management zone. Managed trails with temporary closures and restoration can lead to net environmental benefit for the ESA.

f) Three (3.0) m wide paved pathways are considered infrastructure therefore, O.P. policy 15.3.3 could apply. All trails must be less than 2.5 m wide regardless of the surface type. No pathways (3.0 m and wider "shared use trails") to be permitted in ESAs, except within distinct Access or Cultural Heritage Zones or unless an exceptional circumstance arises, such as a Utility Overlay. Any such proposal will require demonstration of no negative impact and a full and transparent public process.

g) The tree risk management policy needed review and this document supports a proactive and pre-emptive inventory and management plan to identify and designate "significant wildlife trees" within the tree risk zone on either side of trails or structures. This management practice will result in better retention of live and/or dead trees along managed trails for wildlife habitat and education of trail users by eliminating small hazards (e.g. dead limb) when the tree can still be safely climbed. Current ESA management activities will have to be revised to meet this goal.

h) Trail monitoring and management for disturbance will be a more active process as trails are the primary mode of introduction of invasive non-native species. Current ESA management activities will have to be revised to meet this goal.

i) Bicycles should not be permitted within ESAs even on "improved" trails as these trails are intended to facilitate use by persons with disabilities, wheelchairs and walkers, and families with young children and baby strollers. In ESAs, bicycle riding is generally an incompatible use with hiking.

j) Over the past several years, the education and enforcement activities undertaken by the UTRCA ESA Management Team have not resulted in any decrease in the number of people who let their dogs run off-leash with our ESAs. Therefore, stricter rules should

be applied such that dogs (even on leash) should not be permitted within Nature Reserve or Natural Area 1 Zones.

k) The issue of community connectivity versus fragmentation of natural areas was a major point of discussion. In some areas, adjacent communities desire greater access and linkages to their neighbouring communities – links that would permit convenient connections without the use of cars. The general purpose of trails in ESAs is not to provide community and neighbourhood linkages. This is because the connection of recreational trails for neighbourhood and community linkage can result in the disconnection or delinking of the natural heritage system features and functions. This delinking or "fragmentation" can lead to negative effects at multiple spatial scales that disrupt dynamic ecological processes upon which all biota rely. This is truer in an intact ecosystem than one that may already be disrupted. Any community linkage issues would be resolved at the detailed ESA Conservation Master Plan level utilizing the Trail Standard to protect the ESA and permit appropriate use.

To reach this level of common understanding and a satisfactory resolution of issues, staff made significant time available to meet with various groups or individuals to discuss issues of disagreement or incomplete understanding. The Trails Advisory Group and other participants dedicated hours of time to present collective comments and editing suggestions in an understandable and well explained fashion to minimize staff time required for editing. As Sandy Levin wrote after reviewing the first version of the Trail Standard and the background report on trails in ESAs, "Many thanks to Bonnie for pulling this document together. A lot of thought and research went into it and takes us a long way towards coming up with something that will serve London well."

To assist the process, the third version of the Trail Standard was peer-reviewed by North-South Environmental and Schollen and Company Inc., private consulting firms with expertise and experience in trail planning for National and Provincial Parks, the Province of Ontario (Seaton lands) and other municipalities. They provided a global review of the document to ensure the language was consistent in terminology, definitions, usage, style, composition and form. The table for determining the appropriate management zones for areas within the ESA (Table 1) was reviewed for accuracy and clarity relative to the City's Environmental Management Guidelines (2007) best management practices. Dr. Brent Tegler wrote, "These [Trail Standards] look great, we are happy to have our name associated with this work."
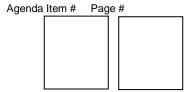
The Trails Focus Group wrote: "There is much to recommend in this document. We particularly salute:

- The recognition that where a balanced approach between the protection of natural features/functions and human access would harm the features and functions, the features and functions will take priority over human access.
- That trail planning and design within ESAs must be based first on protection through avoidance of impacts, and secondly, the application of appropriate mitigation to avoid degradation of natural features or loss of ecological functions.
- That the most sensitive portions of ESAs must be identified and protected from uses that may lead to permanent loss of the features or their ecological function."

Appendix B summarizes the chronology of meetings held and comments received and how they were incorporated in whole or part to revise the document in Appendix A of this report. Staff found the comments very helpful and most of the suggested edits were made. Construction details for the installation of trails and structures as described in the Trail Standard will be updated, as required, from the current 1996 standard later in 2012.

CONCLUSION

In all considerations relating to the "Planning and Design Standards for Trails in Environmentally Significant Areas", it is important to keep one key environmental objective foremost:

OP 15.3.7 ii) Environmentally Significant Areas - to protect the existing ecosystem features and functions, to increase the amount of interior forest habitat, and to strengthen corridors.

A well planned trail system ensures that this environmental objective can be achieved in urban natural areas where public use pressure is high. Public use offers a scenic and restorative trail experience for Londoners within their City. A properly designed trail system can also help to educate users about the unique features and functions of natural areas. The new Planning and Design Standards for Trails in ESAs document will provide clear direction on how to successfully plan and design these trails systems.

Members of the public who participated in this two year process have contributed significantly to the production of a clear, transparent and defensible Trail Planning Standard. The document has been through five revisions, with each revision an improvement over the last and supported by testing in ongoing projects by the City and consultants.
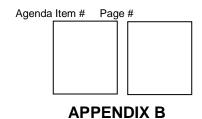
This Trail Standard will be used in all new Conservation Master Plan processes and to reassess the most recently completed CMPs (Westminster Ponds and Sifton Bog). The approval of this Trail Standard will permit Parks Planning and Design to complete several key projects that have been on hold since the process began. This includes the Medway Valley North ESA Trail Planning project related to recent sanitary sewer installation in the valley and the Coves ESA CMP.

PREPARED BY:	SUBMITTED BY:
B.M. BERGSMA M.Sc. **ECOLOGIST PLANNER**	**A.W. MACPHERSON** **MANAGER - PARKS PLANNING & DESIGN**
RECOMMENDED BY:	**REVIEWED AND CONCURRED BY:**
J. M. FLEMING - DIRECTOR OF LANDUSE **PLANNING AND CITY PLANNER**	

Appendix A - PLANNING AND DESIGN STANDARDS FOR TRAILS IN ENVIRONMENTALLY SIGNIFICANT AREAS

Appendix B – SUMMARY OF WRITTEN AND ORAL COMMENTS RECEIVED AND PPD / STAFF RESPONSE

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APPENDIX A

APPENDIX B

September 14, 2009 – presentation slides prepared by G. Thorn UWO forwarded to PPD for consideration.

- All ESAs are SIGNIFICANT
- To protect environmental quality ESA management must recognize a Protected Area Core and provide a sufficient buffer.
- Small intrusions (e.g. 3 m path) through an intact core reduces core area.
- If core area is already disturbed, additional intrusion will spread further.
- Connectivity versus fragmentation – the connection of recreational trails results in disconnection (fragmentation) of a system of protected and connected areas.
- Keep inappropriate uses out of ESAs.

March 9, 2010 Trails Focus Group (12 participants)

Main Issues

- ESAs should be differentiated from parks because they are recognized as significant natural areas in the PPS (2005) and the Official Plan as core components of the natural heritage system.
- Three (3) m wide paved pathways are considered infrastructure section and therefore policy 15.3.3 applies
- Tree risk management policy needs review
- Include issue of fragmentation from new pathways
- How do we control people who want to use ESAs? How to keep them out of most sensitive areas and being "loved to death".
- Clarify trail hierarchy city wide.
- Bring draft standard back to group and add other organizations who should be part of this process – e.g. TVTA, UTRCA, BAC
- Apply to test case areas.
- Managed trails with temporary closures and restoration can be a net benefit
- Width of trails, speed of travel, pavement impairs habitat
- New trails through an ESA are impacts
- Wildlife use trails as corridors – can have positive or negative effects

May 31, 2010 ACCAC Facilities Sub-committee – Requested that PPD consider specific Chapters (1, 6 and 7 as provided) from the publication **"Ontario's Best Trails: Guidelines and Best Practices for the Design, Construction and Maintenance of Sustainable Trails for all Ontarians"** in the development of policies related to this matter.

June 22, 2010 Trails Focus Group (13 participants)

Discussed research and review by PPD on the 12 issues identified at March 9 meeting. The following recommendations were supported:
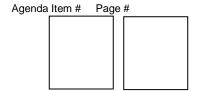
- Proposed policy changes
- Creation of management zones for ESAs
- Development of the trail standards document.
- No pathways (3.0 m and wider "shared use trails") to be permitted in ESAs, unless an exceptional circumstance, demonstration of no negative impact, and full public process.
- Development of a trail hierarchy
- Review of hazard tree maintenance program
- Additional research on fragmentation effects.

September 20-27, 2010 – general comments on trail planning received from J. Cushing, A. Caveney, S. Levin.

December 13, 2010 - Version 1 of the Trail Standard was received by BNEC (Planning Committee) and circulated for review. Document was posted on the City's web site. Document was also taken to public meetings for the Medway Valley North Trail planning project and the Coves ESA CMP project and the public was asked to provide comments.

January 4, 2011- second version of the Trail Standard prepared and circulated.

January to March 2011– individual comments received from D. and W. Wake, S. Levin, J. Cushing, E. Westeinde, J. Bowles, A. Caveney. Some were submitted as tracked changes- all changes agreed to (Levin and Bowles).

COMMENTS FROM A. CAVENEY

State the **guiding principles** at the beginning of this document. As this document is about trails in ESAs, the distinction between these and all other trails or pathways in the City should be made clear from the start. I suggest the deletion of any discussion about the trail and pathway hierarchy and standards in the other classes of parks so as to avoid confusion.

Wherever there is a direct quote from the O.P., use italics or indicate the reference. This will be helpful for cross-referencing.

It is hard to believe that planning and design can fully prevent degradation of features or loss of some functions. Some degradation of features is inevitable whenever a trail is created.

". . . cultural use values . . ." More appropriate wording would be either "conforming human activities" or "appropriate human activities".

SECTION 1

Ecosystem Approach in Trail Planning - the locations of many trails were established... This is not correct with respect to the MFN. No trails were deliberately created by the MFN.

Conservation Priorities for Environmentally Significant Areas- Where you say "provision of services . . ." do you mean "provision of **functions** such as air and water purification; **production** of fibre and protein; and provision of spiritual . . ."?

Unique Management Needs of Urban ESAs - Insert "management" in front of "zones" in the first sentence.

Management Zones within ESAs - Insert "horizontal" in front of "hierarchy of zones" in the second sentence to indicate that the proper management of all zones is of equal importance. All zones should be managed to enhance them ecologically, with the improvement of the overall ecosystem being the main goal.

Restoration and Management Zone: Delete "Management" in this title; "Restoration" is sufficient.

Special Feature Zone: This category of zone is unnecessary and should be deleted. With respect to the example of a boardwalk, boardwalks are permitted in Natural Area, Restoration, and Access and Staging zones. Presumably, wooden viewing platforms are also permitted.

Cultural Heritage Zone – Primary goal: The third sentence suggests that paved pathways greater than 3 m in width might be required for reconstruction of a heritage feature. (In my opinion, this pathway would not be compatible in an ESA unless the structure was not in a sensitive natural area and was so close to the ESA boundary that it could be reached by a very short access pathway from a road outside the ESA.) Therefore, I suggest removing the word "reconstructing" from the sentence.
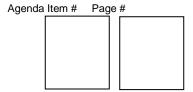
SECTION 2
Trail Design Principles and Management
1. Add a second sentence to say "The number of trails will be kept to a minimum."

2. The sentence needs to be reworded to say "Natural features and functions and ecological integrity shall be protected, while enjoyable, safe, sustainable trails for passive recreation, learning, mental and spiritual regeneration, interaction and movement are provided."

Trail Heirarchy and Standards
As mentioned previously, in order to avoid confusion, this document should be confined to trails within ESAs and should not cover trails and pathways in other classes of the Parks system. The latter could be placed in a separate document.

Should have all mention of trails in other classes of City parks deleted (e.g., the Thames Valley Parkway and the City's multi-use recreational system). Multi-use pathways and bikeways wider than 3 m are considered inappropriate for ESAs.

Table 1: Nature Reserve – Trail Type column: Delete "or temporary by permit Level 1" (research should not require installation of a trail).

Special Features: Delete this category from the table.
Cultural Heritage – Trail Type column: Delete "Level 3 – Multi-use" because these are wider than 3 m and are inappropriate for ESAs.

LEVEL 3 PATHWAY AND LEVEL 4 PATHWAY: Delete these sections as they are not appropriate for an ESA trails guideline document.

<u>**Trail Structures**</u>
Bridges:, the wording should be modified to say something like "A bridge may have to be used to protect a sensitive ravine or creek area from trampling." The emphasis should **not** be on attracting people but rather on protecting the ecological features.

Regulatory signs: Current signage in ESAs does not prohibit horse-riding; new signs should include this and other activities that may have been overlooked in existing signs. Regulatory signs should state the **by-law** governing enforcement of the regulations for which a maximum fine of $5000 applies to violations. Does such a by-law exist? If not, what official policy exists to enforce the regulations?

<u>COMMENTS FROM D. AND W. WAKE</u>

Title :Do these guidelines apply only to ESAs or do they also apply to other parts of the Natural Heritage System? Probably wise to restrict this to ESAs only.

Suggested rewording: Protection of ecological integrity is the key consideration when access is proposed into an ESA.

Suggested rewording: This document outlines the process for protection of ecological integrity when introducing and/or managing trails within an ESA.

Definitions - Ecosystem Health. We note that Jane Bowles has put forward alternative definitions for your consideration. Please review definitions carefully.

Establishment of existing trails: We can't speak for Thames Valley Trail Association, but based on DW's direct knowledge over more than forty years, we can say that McIlwraith has not undertaken any trail establishment activities in any city ESAs, nor provided any "standards" for trail construction. With few exceptions, the majority of existing trails in ESAs are unplanned.

Design for sustainable trails... there seems to be confusion over the use of the word sustainable. The emphasis should be on protection of the ESA. Need to be clear about distinction between sustainability of **Trails** and sustainability of **ESAs**. Suggest rewording: *The purpose of an ESA is protection of ecological integrity. Human uses should be permitted only when they can be conducted without harming the ecological integrity of the ESA.*

The Official Plan requires protection of ESAs for their intrinsic values, based on a set of specific criteria. The priority of the manager should be protection of the intrinsic values of the ESA rather than for the purposes of education and research..
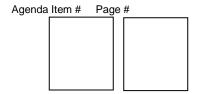
Trail designer needs to recognize an adverse impact such as user based widening and respond to it by considering appropriate management and/or design options. How can we define the term "acceptable change" for all ESAs?

This document must at every opportunity clarify that these are management zones

narrow, constrained wildlife corridors are two examples where trails may not be appropriate.
Observation: Much of the Medway Valley ESA could be described as "a narrow, constrained wildlife corridor."

Management Zones within ESAs Overview Questions/Comments:
1. How can we shift the emphasis in the zoning discussion so that managers do not lose site of the overall context of the ESA? Introducing zones is attractive in some respects, but brings with it a risk that some portions of the ESA will be viewed as unimportant.

2. Zones should provide goals or targets for future condition, rather than simply accepting current condition.

3. What opportunities will there be for public to influence decisions regarding location and boundaries of management zones? Will this be part of the Conservation Master Plan process? What about ESAs that currently do not have a Conservation Master Plan?

4. Why not define the Nature Reserve Zone in the most restrictive way? Instead of including a buffer within it, the buffer would exist in an adjacent zone. *Nature Reserve Zone…Primary Goal* What about protecting existing ecosystem features and functions, increasing interior forest habitat and strengthening corridors, as in OP 15.3.7?

5.   *Access and Staging Area Zone* Perhaps it is better to say "*Access and staging zones are located in areas of* **lower sensitivity?"** Or perhaps "*Access and staging zones are located in areas where they will cause the least impact to ecosystem features and functions of the ESA.*" Question – Why prescribe an Access and Staging Area Zone? Wouldn't it be better to prescribe the "least impact" approach to developing access points. What happens if there is not any suitable adjacent land available for an access zone?

6.   *Restoration and Management Zone* Suggest calling this *Restoration Zone*. Management is an activity that may occur within this or any other zone. Need to include the possibility of No Trails in this zone. Decision would depend on site-specific management regime. If restoration involves sensitive habitats, leading to a new Nature Reserve designation, it may not be possible or appropriate to provide a trail.

7.   *Special Feature Zone* We question the need for this zone. It should be possible to address such situations through other zones.

8.   *Cultural Heritage Zone* Some cultural heritage features may occur within other zones.

9.   *Changes to Management Zone Boundaries: Caution: risk that areas will be downgraded over time, depending on use. In such cases, perhaps the first change to be considered should be to Restoration Zone.*

Trail Design Principles and Management - Perhaps this whole section should be reorganized to distinguish the policy considerations vs the actual design principles.

Trail Mitigation Strategies The ten points are not specific to trails, but seem to be principles that would apply to overall management of ESAs. Another option would be *Relocate the trail*.

Trail Hierarchy and Standards Appendix B discusses trails in ESAs. Therefore, it is **not** appropriate to include in this document, full details of the hierarchy and standards for all trails and pathways on all public lands. The Trail Hierarchy and Standards should be a separate document, or a separate appendix. Only the relevant content belongs in this ESA document. Context is valuable, but there is too much detail in this section as written.

Document should include a statement acknowledging that there are existing trails that do not currently conform to the vision put forward in this paper, and that those trails will be reviewed over time.
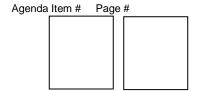
Table 2
Restoration Zone should be a temporary zone, leading to a more naturalized condition in future.
Special Features Zone – As noted above, we question the need for this designation. If this category is accepted, then the trail width should be consistent with Natural Area Zone.
Cultural Heritage – Trail Type should be compatible with adjacent management zones. Why introduce Level 3 trails here?

Level 1 Trail Standards, Design and Maintenance Reference to low-tech design standards – we trust that this means Level 1 trails will not have Y-shaped junctions. Consider adding words about "minimizing footprint of the trail."

Need to address potential implications of hazard tree removal, or policy changes. Deadfalls – if deadfalls block trails, users often make new trails around them.

Stairways In some circumstances, a stepped trail may be preferred over a steep slippery slope.

Trail and Structure Standards and Specifications We look forward to reviewing this section as soon as it becomes available.

Appendix C Principles of Use for Trails This section contains valuable information, in a clear and concise manner. Perhaps a similar approach could be applied to earlier sections of this report.

COMMENTS FROM J. CUSHING

- There is a disconnect between what various planning documents say about protecting and managing natural areas and what actually happens on the ground. The City of London must have bylaws to carry out this protection/ management and must actually enforce them. This is not being done presently.
- The C of L must unequivocally establish that the prime purpose of designating ESAs and other natural areas is to preserve the natural features and that access to them is of secondary concern and subject to the sustainability of the ecosystems.
- Conservation Master Plans are essential; however, there are many examples of 'exuberant interpretation' of CMPs leading to inappropriate and overly expensive projects in ESAs. In addition, many years can pass after approval of a CMP before work starts to take place in ESAs leading to selective memory of the intent of the CMP, which in turn can lead to a project put in place that was never actually envisioned in the CMP. To overcome this disconnect between the intent of the CMP and the implementation I strongly support advisory committee and ratepayers/friends of groups involvement in large proposals prior to budget finalization. NOTE – On June 14, 2010, Council requested that Administration prepare a report on what is known as 'Clause E'. To date this report has not appeared. One of the aspects of the report would be to define what constitutes a large project or a staged part of a large project. (Smaller maintenance works were not a concern).
- Historical trails in most of our ESAs and other natural areas are a fact. They weren't put in place by any recent group activities. For instance the Park Farm entrance and farm tracks to the various fields without the use of bridges are about 200 yrs old and the walking trails that carry on in to the woods further east are remnants of aboriginal trails many years older again. These trails are functional and didn't cost the city a penny. These historical trails should be retained wherever possible and not replaced and duplicated unnecessarily.
- ESAs are damaged by the city's hazard tree policy, which should only be applied in high-use recreational areas, multi-use pathways and playgrounds. The onus for safety in ESAs should be on the users of the natural walking trails. Avoid these areas during high winds and inclement weather and be prepared for mishaps with buddy systems and proper attire. There should be signage warning of dangers and entry at own risk. With recent sightings of bears, cougars and packs of coyotes in and around London, natural areas may not be the place for young mothers with toddlers or frail elderly people to wander.
- I personally enjoy the multi-use pathway system in the city for walks, jogging and biking BUT I don't want it to be imposed on to natural areas. Everyone can, with common sense, choose the type of path/trail that they are most comfortable with.
- When a development is proposed near an ESA or natural area the city could exercise its legal right to require land for a multi-use pathway over and above parkland dedication thus alleviating the pressure to place such a path in the ESA or natural area.
- Restoration areas within ESAs should be just that - 'restoration' - to allow them in to blend into the adjoining or surrounding landscape type.
- I think there are too many proposed management zones. It makes the concept of an ESA difficult to picture when it's chopped up into so many zones
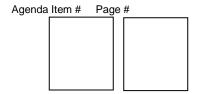
February 17, 2011 EEPAC – draft comments were prepared by EEPAC and recommended to be forwarded to PPD for consideration.

Management Zones within ESA's
While this approach has some potential merit, it also has its potential drawbacks. There is the ever present risk that somehow the management zones will be seen as identifying some areas of the ESA as being less important than other areas.   This drawback must be battled at every opportunity within this proposed regime. Assignment and delineation of Management Zones should be made based on the ecological management goals for the ESA. They should not be driven solely by the existing conditions, disturbances or uses. This forward looking nature of Mgmt Zones must be clearly stated in order to guide consistent application.

Goals of Each Mgmt Zone
These stated goals (primary and secondary) should be deleted. They diffuse and distract. The one overriding goal for every Mgmt Zone is the same as for the entire ESA: to protect and enhance the ecological integrity of the ESA. Stating different goals detracts from this primary goal. The general description provided for each zone does an adequate job of describing the

intent and character of each zone. There is no need to complicate it by adding primary and secondary goals for each zone.

Nature Reserve Zone
The definition of this zone should include: rare communities, SAR habitat, sensitive geo-technical areas, sensitive wet areas, sensitive species and sensitive vegetation communities. The description "may include a protective buffer area in which a minimum amount of human activity is permitted" seems incongruous with the intent of the zone. It should be deleted.

Natural Area Zone
The reference to this zone as often being a buffer between other zones is not required. Including it seems to imply that this zone's main function is simply to act as buffer. The reference should be deleted.

Access and Staging Zone
As this is not generally a natural or ecological area, allowance for the creation and use of an Access and Staging Zone should be made during the boundary delineation of the ESA. Otherwise, there may be pressure to locate staging areas within the ecological ESA which is clearly not desirable.   The definition of this zone should state that it should be outside the ecological boundary of the ESA. Clearly, providing staging area does is not congruent with the primary purpose of ESA's.

Special Feature Zone
There seems to be no obvious nor pressing need for the existence or use of this zone. Any potential 'special feature' is likely to be located within one of the other zone types and the rules regarding access and trails of this zone should be observed. Designating a special feature seems only to be a tool to over ride the protections of offered by other ecological zones.

Restoration and Management Zone
The title of this zone should be simply Restoration Zone. It is simpler and clearly conveys the intent of any management. This should not be a zone but in fact be an overlay on top of other zones. The underlying zone, for example Nature Reserve or Natural Area would implicitly set out the end goal of the restoration as well as provide consistent guidance as to the type of activities and trails appropriate to the restoration area.

Cultural Heritage Zone
This may be best applied either as a discreet zone or as an overlay as may be appropriate. It can easily be foreseen that cultural features may be located fully within Nature Reserve or Natural Area zones and that the rules regarding these natural zones should not be automatically trumped. Further, since the ESA Boundary Delineation Guidelines do not allow for the inclusion of land on cultural heritage basis, it is not easy to foresee how this zone would or should function.
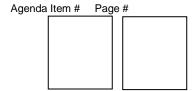
Trail Design Standards
The whole document is too long and too wordy. To be powerful as a guideline or standard, it would be better presented as clearly and concisely as possible. Currently the document frequently re-states similar sentiments or themes and uses different words in doing so. The effect is that the intent becomes more clouded and leaves wider room for interpretation, or misinterpretation. EEPAC requests that the next draft of the Trail Planning and Design Standards be presented in the form it would be adopted as a stand-alone design standard document as opposed to being a series of appendices to a staff report. A clear and consolidated presentation will be very helpful in evaluating its clarity and effectiveness.

De-Coupling ESA Management Zones from Trail Standards
Much like the current Boundary Delineation Guidelines and the Criteria for Evaluating Environmentally Significant Areas, the current the Trail Standards Guideline is being linked to the concept of ESA Mgmt Zones simply because it is ESA's that are pushing the development of trail standards. In fact, the Trail Standards should be proposed as a fully separate document which can be used completely independently of ESA's. It is highly desirable to have a single source of Trail Definitions and Standards as a distinct document which can be used for any application. EEPAC recommends that the current proposed Section 1 and Section 2 each become separate stand alone Guideline/Standard documents.

Conservation Master Plan Framework
Currently no framework exists to guide and harmonize the development of Conservation Master Plans. Many of the same issues arise in CMP processes for different ESA's and time, energy and

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community engagement could be optimized by developing and following a basic framework for each CMP going forward. The new concept of ESA Mgmt Zones is clearly something that could be described in that framework.

Guiding Principles for an ESA Master Plan could also be defined within a CMP framework. This would assist in focussing and expediting the CMP process and the public participation and understanding. Principles have already been established at during the CMP process at specific ESA's and they could easily be contained in a framework to assist in future CMP's. These include, as examples:
- minimize trails
- minimize ecological fragmentation
- first ESA management priority is the protection and enhancement of the Environmentally Significant Area and providing recreational opportunities is not a primary goal of ESA Management.
- principles of trail planning in ESA's (as per App C of staff report)
- identification of indicators of environmental damage beyond a limit of acceptable change
- specific monitoring required to provide data on the indicators identified above

EEPAC recommends the City commit to developing a framework that would guide and provide a consistent foundation for all future ESA Conservation Master Plans. This is very timely since several CMP's seem to be upcoming.

Exceptions to the Trail Hierarchy
It is recognized that due to other planning decisions (such as the unfortunate location of sanitary sewers within Environmentally Significant Areas), that there will be circumstances which must be considered to be 'exceptional' and in such a case, there may be a variance from the Trail Hierarchy.
The current existence of infrastructure, such as sanitary sewers and maintenance 'roads' do clearly fall within the definition of exceptional. However, the suggestion by staff that a need to 'connect neighbourhoods' should also be an exceptional circumstance which should trump the ecological protection of an Environmentally Significant Area should not be accepted as 'exceptional.' There is nothing exceptional about this at all. The desire to connect neighbourhoods is no different than the desire to provide regular ongoing recreational and walking paths. Connections between neighbourhoods should never be considered as trumping ecological protection of Environmentally Significant Areas.

To date, no other condition, other than existing sewers and associated maintenance 'roads' should be recognized as exceptional. To do so would open the door uncontrollably to side-stepping the duly agreed upon Trail Design for ESA's. It may even be useful on an ongoing basis to maintain a list of recognized "exceptional circumstances" so that community and user expectations regarding the use and development within ESA's can be more clearly conveyed. It is a level of certainty and confidence that the community seeks.

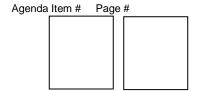**Land Use Planning surrounding ESA's**
It is requested that staff give further consideration to how land use planning surrounding ESA's might be better guided to avoid creating situations of over impact within the ESA. Situations exist currently where 'cut through' foot traffic is so great that the ecological impact of trampling and erosion is far beyond acceptable limits. Clearly the best way to manage this is to avoid it entirely. This can be done to a large degree by considering this kind of impact during the land use planning process. Perhaps a more formal mechanism or policy is required to ensure this consideration is made during planning.

Site Alteration
Pg. 6 of the staff report (Agenda pg 177) states that all trail construction within ESA's would be subject to the Site Alteration Bylaw. It is not clear what benefit this will have in ensuring the optimal ecological decisions are made regarding trail planning and construction. This impact and process should be explained further.

Trail Design Principles and Management
The staff report presents seven key points/principles. It is not clear how this is meant to be different from the principles presented in Appendix C or even the principles presented at the end of Appendix A. This is a good example of possible redundancy that could lead to differing interpretations.

The most important principle for trails in ESA's is missing from the list: that the number and magnitude of trails should always be minimized as a top tool in protecting the ESA.

The list of seven criteria could/should be prefaced with: "Where trails are appropriate, the following considerations shall be followed."

Principle 2 - The intent of the words "interaction and movement" is unclear and could be taken to support the development of trails specifically to link communities or to provide travel or commuting through the ESA. Neither of these are appropriate for ESA's. They should be deleted.

Principle 5 - Community engagement needs further clarification. On one hand staff is suggesting the annual City budget is sufficient public transparency while here more public consultation is promoted.

Principle 6 - The needed 'practice and protocol' supports EEPAC's above noted recommendation regarding the Conservation Master Plan Framework. The identification of indicators and monitoring should/could be done as a standard practice in all CMP's.

Principle 7 - EEPAC does not support a desire for a community connection to be an 'exceptional circumstance.' The ecological integrity of an ESA, the very reason it was designated for protection, surely takes precedence.

March 24, 2011 AACAC - Presentation by PPD on the first version of the Trail Standard to receive comments, issues and concerns. Document was referred to the Facilities sub-committee. The following comments were made at the meeting:
- Accessible trail needs to be 2 m wide.
- Loops are preferred to avoid passing issues. If not, bump-outs for passing must be installed along the trail.
- Would ideally like there to be an improved access and trail sequence in each ESA as they are favourite areas for many.
- The boardwalk at the bog is good, but rather narrow and getting to it is a problem. Access must always be provided from the parking lot.
- Is there a minimum % of area within each ESA that you want to classify as Nature Reserve?
- Provide a web-based resource to show which trails are accessible? Show on the ESA brochures and maps and label the trail as accessible.

April to December 2011 PPD – research, testing and revisions to the Trail Standard.

December 7, 2011 Medway Valley North Trail Planning Public Meeting
Trail Standard discussed and public invited to comment through on-line survey posted until mid-January.

February 28, 2012 – third version of the Trail Standard prepared and circulated.
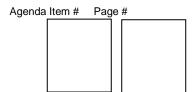
March 28, 2012 Medway Valley North Trail - Sunningdale North Community Public Meeting - Trail Standards discussed and public invited to comment.

April 18, 2012 Trails Focus Group – Nine (9) participants of this group submitted collective comments on version 3 Trail Standards to PPD; individual comments received from D. Potten representing TVTA; comments received from B. Williamson, UTRCA.

Version 3 was also sent to North-South Environmental and Schollen & Co. for peer review and to produce the final document and the trail and structure design specifications. With respect to the use of bicycles in ESAs, they advised to state up front that on Level 1 trails bicycles are not permitted and that on "other trails" (e.g. Level 2 trails) bicycles would only be permitted in the special circumstance where an important route linking communities has been identified. There is no other reason for permitting the use of bicycles in ESAs.

COMMENTS FROM TRAILS FOCUS SUB-GROUP
Submitted by: A. Caveney (Nature London), T. McClenaghan (Friends of the Coves), S. Levin (Orchard Park/Sherwood Forest Ratepayers), D. Sheppard (EEPAC), A. Stolarski (Friends of

Meadowlily), D. Wake and W. Wake (Nature London), E. Westeinde (Friends of Dingman Creek), C. Agocs (Friends of Stoney Creek)
Comments prepared April 2012.

In all considerations relating to the Draft Planning and Design Standards for Trails in Environmentally Significant Areas, it is important to keep one key statement foremost in all of our thoughts.
OP 15.3.7 ii) Environmentally Significant Areas - to protect the existing ecosystem features and functions, to increase the amount of interior forest habitat, and to strengthen corridors.

There is much to recommend in this document as being an improvement on previous versions. We particularly salute:
- The recognition that where a balanced approach between the protection of natural features/functions and human access would harm the features and functions, the features and functions will take priority over human access (page 10).
- That trail planning and design within ESAs must be based first on protection through avoidance of impacts, and secondly, the application of appropriate mitigation to avoid degradation of natural features or loss of ecological functions.
- That the most sensitive portions of ESAs must be identified and protected from uses that may lead to permanent loss of the features or their ecological function

The following highlights recommendations for change. We have also created an updated Draft Planning and Design Standard for Trails, which includes these and other editorial changes. We look forward to discussing these with you.

Table of Contents
The Table of Contents will need to be updated after changes are made to the rest of the document.
Scope of Document
The introduction on page three states the intent of this document as including:
- the establishment of a trail hierarchy based on natural area sensitivities as defined by management zones;
- identifying key abiotic, biotic and cultural indicators of ecosystem health and integrity along trail segments;
- designing and implementing a trail monitoring program to document environmental damage or inappropriate use affecting key indicators;
- responding to unacceptable change through appropriate mitigation and adaptive management to alter practices, as required.
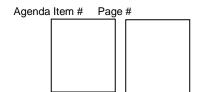
It would be expected, therefore, that these four intentions/goals might even form the framework of the Standard and that all four would be addressed by the Trail Standard. Unfortunately, two of the four identified areas are not really addressed at all. Monitoring of impacts and a definition and response to unacceptable change are largely, if not completely, excluded from the current Standard.

Perhaps even a separate document is needed to address the important points of "designing and implementing a trail-monitoring program" and "responding to unacceptable change through appropriate mitigation ...." Unfortunately, to date, only limited budgets are set aside for ongoing protection. And while it is recognized that no monitoring program can be absolutely effective, the current monitoring program is opaque to the public involved and often seen as slow moving (Sifton Bog and Westminster Ponds, 1996 Site Plan for the Lower Medway). We would be happy to participate in the preparation or refinement of such a document(s).

A related example is what action will be taken on signage? While the document includes information on this matter, it is not clear if it has been accepted by staff as beneficial compared to the current limited (or absent) signage practices (e.g. not every access point in the current system even has a sign marking the area as an ESA). We believe the ball is in staff's court to take action on this.

Existing Trails in Nature Reserves
We have concerns about how this document will assist in dealing with trails that are already located in Nature Reserves, particularly in ESAs that have not had a Conservation Master Plan (CMP) conducted (Meadowlily, Kains Woods, for example). For example, in Kains Woods, where the existing trail is likely in the Nature Reserve zone and, given the narrowness of the ESA, there is likely only Nature Reserve within the ESA.

Our recommendation, if such trails are to continue to exist, is that they be in a special "overlay" classification.   The surrounding area of the ESA should not be "down designated" to another zone. This point is key. The application of the Nature Reserve and Natural Area management zones must be done on an ecological basis and certainly should not be influenced by any existing trails or recreational demands.   Special circumstances can then be addressed within Nature Reserves by employing the already available Special Feature Overlay.

A specific example of this would be the "bend" in the North Medway which was previously identified as being within a Nature Reserve and now, because there is an existing unofficial path, the area has been changed to Natural Area. This approach to applying management zones is wrong. The application of the zone must be on an ecological, not recreational, basis. Using the Special Feature Overlay would allow the recognition of this pre-existing trail and the difficulty likely inherent in any attempt to close it. The surrounding area would still be identified as Nature Reserve and more importantly <u>managed</u> as Nature Reserve, save and except the location of the Special Feature Overlay.

Conservation Master Plans

The above concerns and the discussion of adaptive management and the establishment of baseline conditions, highlights for us the importance of having a Conservation Master Plan done immediately after (if not part of) the area planning process. Alternatively, when an ESA is identified as part of the area planning process, the completion of a CMP should be done prior to approval of a draft plan (yes, even before assumption by the City). This will help to avoid the creation of an ad hoc trail pattern caused when adjacent development is built prior to a CMP. This should also mitigate the "eagerness" of the UTRCA to clear hazard trees when a new ESA comes into public hands. For ESAs that come into city ownership in future, it is important to consider access as part of the area planning process. Proper consideration of access at an early stage will help to reduce pressure for Access Zones within sensitive portions of an ESA.

Guiding Principles for Trails in ESAs

page 4.
-        In order to avoid the introduction of new words and possible new interpretations, we believe that the third paragraph should be fully consistent with the first two of the Guiding Principles on the next page. Change should read "The basic principle for trail planning and design is to protect the natural features and ecological functions for which the ESA has been identified. The ecological integrity and ecosystem health of the ESA shall have priority in any trail use or design-related decisions."

page 5
-        The second bullet under Process is of concern. We are unclear as to what a "main" trail route is and suggest the word "main" be deleted. We are unclear what "an environmental process" is. If it is to be a process like an EA, wording to clarify the meaning should be used. Perhaps you mean "environmental planning process." Otherwise, "environmental process" could mean anything. As we have stated before regarding the situation in Kains Woods, we are concerned that the "exceptional" situation will become the de facto process for most trails in ESAs. These are further examples of introducing wording that is not necessary and not clear.
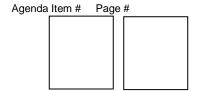
page 6
-        Second bullet under Design and Construction dealing with structures.   The use of the word "generally" in relation to the need for structures is confusing and introduces uncertainty. Other than being identified in the CMP, when would a structure be identified as necessary? If it is outside the CMP, it then might end up outside of the public consultation process outlined elsewhere. The sentence could read "The need for structures will be identified in the CMP except under exceptional situations as noted under the process for "exceptional situations" described on page 5.

Maintenance, Monitoring, Management (page 7)

The focus and reliance on impact monitoring seems impractical. Our experiences to date are that there is no staff time or budget to conduct even the currently mandated levels of monitoring, let alone monitoring to support a new LAC framework. While this impact monitoring approach is laudable it should not be the main plank of our framework, given the uncertainty that it will ever happen. It is preferable, and more cost effective, for Conservation Master Plans to adopt a precautionary approach to impact avoidance in preference to mitigating impacts after they occur and then only if they are monitored.

We are concerned with the emphasis on the public to educate other members of the public (bullet under Practice in Guiding Principles and last bullet on page 7). We have been advised by

UTRCA staff not to confront those violating the Parks by law, yet the document shares the education role between the city and the public. What specific suggestions do you have? Are there any best practices you have found that you can share?

Key Strategies for Trail Management...

page 11
-        It is worth noting that the first sentence of the second paragraph is key to the entire management zone approach. The statement "Ecological data are used to map all areas of an ESA into a number of management zones based on factors such as ecological function and sensitivity to disturbance" should be a standalone paragraph unto itself. It informs the rest of the entire process.

page 13
-        first paragraph - The introduction of the words "critical" and "significant" are new to this process and are not defined. We should avoid introducing new terms as experience shows that it trips us up in the long run. Further, these words imply "fragmentation by language" which is one of the concerns that was raised when the "Zone" model was first raised. The sentence starting with "Some parts . . . " should, therefore, be deleted in its entirety. Delete these references. Leave all the defining of the zones to section titled "Management Zones", to avoid conflict or duplication.

-        second paragraph - First sentence referring to "horizontal hierarchy" does not make sense. Suggest replace first two sentences with " In keeping with the concept of the ESA as an integrated whole, all zones must be managed to maintain and enhance the ecological features and functions of the zone, in the context of the overall protection and enhancement of the ESA. ."

-        We are concerned about the Access Zone being described in the last paragraph as being ". . . marginally within the ESA boundary." This is because, once the ESA Boundary Delineation Guidelines apply, one is either in or out of the ESA. This is particularly so because, most of the time, the data used to establish the boundary have already removed land from the ESA. Why should an access zone be in the ESA? If there is no public land (described on page 18) available outside the ESA for an Access point, then there should be no access.

Table 1: Matrix for Determining and Mapping Management Zones

The Trail Standard correctly states trail location and design will be based on the significance <u>and the sensitivity</u> of the areas/features/functions located within the ESA. However, Table 1 is based solely on a list of indicators which are <u>not intuitively nor transparently based on ecological sensitivity</u>. This seems a fatal flaw of the table.

Experience has shown that the ecological sensitivity of a feature or function can vary from situation to situation. After all, the entire City Environmental Impact Study process is predicated on this principle. It seems arbitrary and falsely rigid to try to assign an ESA Management Zone according to a checklist of features which are at best potential proxies for ecological sensitivities.

Since the underlying reason a Nature Reserve Zone will be applied to a given area is due to ecological sensitivity, it seems simpler and more accurate to transform Table 1 into a tool for guiding and assessing ecological sensitivity. With an assessment of sensitivities in hand, the human judgement can then be made as to whether the area satisfies the intent of Nature Reserve as defined in the Standard. Further, through a simplified and revised definition of Natural Area Zone, the only true need is to focus on whether an area within an ESA should be identified as Nature Reserve or not.

To this end, we propose that Table 1 be redesigned and renamed **Criteria for Assessment of Sensitivity in Determining Nature Reserve Zones**.

The table should include a list of indicators of potential ecological sensitivity (similar to its current list) and should allow for a documented judgement as to the degree of sensitivity associated with each particular criterion in the specific case being evaluated. That is, the degree of ecological sensitivity can be assessed as being high, medium, or low, according to the situation at hand. Further, the list of indicators in Table 1 should be clearly stated to be a guide to the assessment of sensitivity but should not be considered to be a complete nor exhaustive list. Each new situation may bring additional indicators to the fore.

Concept of the table format is:

Indicator	Ecological Sensitivity		
	High	Medium	Low
Unusual landform Provincial or Regional Earth Science ANSI			
Areas of unique regional geology - kettles, slipfaces, talus slopes, beach ridges, oxbows, cut terraces, steep north facing slopes			
Provincially rare communities (S1-S3)			
Uncommon natural communities in London			
Unique species assemblages e.g fens, bogs, prairies			

The list of indicators should include, at a minimum the following:

a) Indicators of ESA Qualification
    - as per City Guideline (and perhaps already fully represented in proposed Table 1)

b) Indicators of a Significant Woodland (which may be related to sensitivity)
    - Breeding birds
        Confirmed, probable, or possible breeding of one or more species at Level 1, or two or more at Level 2, or > five at Levels 2-4 in the patch.
    - Community and Topographic Diversity
        contains 3 or more Ecosites in one Community Series OR
        four or more Vegetation Types OR
        three or more topographic features (e.g tableland, rolling upland, valley slope, terrace, bottomland).
    - Amphibians
        3 or more species of amphibians present OR critical amphibian habitat
    - Fish Habitat Quality
        Dissolved oxygen > 8.0 mg/L or abundant in stream woody debris and rocks and watercourse with a natural channel located within or contiguous with the patch.

c) Indicators of Significant Habitat (which may be related to sensitivity)
    - habitat of species particularly susceptible to impacts for a specific period of their life cycle
    - seasonal wildlife concentration areas;
    - rare vegetation communities
    - specialized habitat for wildlife;
    - habitat for species of special concern;
    - habitats for species of conservation concern;
    - animal movement corridors.
    - under-represented habitat types in the City of London
    - area of habitat having a high diversity of species that are of value for research, conservation, education and opportunities.
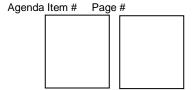
It is important to re-iterate that the above indicators do not necessarily mean an area is ecologically sensitive. Rather the indicators themselves need to be judged as to whether they represent a sensitive feature or function of the ESA.

An approach to redesigning Table 1 can be seen in the accompanying marked up Trail Standard.

Management Zones
page 15
-       The coupling of Wildlife Tree Management Zones with the titles of the Management Zones is very confusing. The Zone A, Zone B etc., add-on to the Management Zone names should be dropped. Each management zone has many characteristics, just one of which is wildlife tree management; therefore wildlife tree management should not be used as a defining nomenclature for the management zones. We propose this be addressed by establishing a Table 3 specifically for Wildlife Tree Management and Trail Maintenance.

Natural Area Zone
page 16
A simplified definition for Natural Area Zone is proposed: "All other parts of the ESA that are not identified as Nature Reserve or Cultural Heritage or Access Zone." With the new focus on determining Nature Reserve through an assessment of ecological sensitivity, and the proposed deletion of 'Natural Area Supporting' (see below), this definition of Natural Area Zone is simple and elegant. Further it avoids the arbitrary approach originally proposed by Table 1 of using a checklist approach to classify an area as Nature Reserve vs. Natural Area.

Natural Area Supporting Zone
page 16
We do not support this newly introduced zone . Even its description as "secondary" habitat areas is contrary to the principle of the ESA as an integrated whole. Further, its reliance on knowing what (usually minimal lands) were 'added' to the ESA during the application of the boundary delineation guidelines is flawed:

- Experience clearly shows that the application of the guidelines is predominantly used to exclude natural vegetation areas from the proposed ESA rather than add them.
- Over time it will quickly be forgotten, except in an EIS report somewhere, which bits of lands were the subject of inclusion/exclusion during the boundary delineation. This is a fully non-transparent and hard to understand part of the process for the public. Mapping management zones in this manner is not conducive to public engagement.
- The recent example of the management zone mapping for the Medway North trail planning effort illustrates that this zone is applied to lands that would clearly be within the ESA boundary notwithstanding the application of the delineation guidelines.

It seems the introduction of this zone is solely to allow the introduction of Level 2 Pedestrian trail, possibly made of asphalt, to allow use by strollers and bicycles. A new zone is not required to accomplish this.   The opportunity to introduce a Level 2 trail, acessible for strollers and wheelchairs already exists through the application of the Access Zone. This is exactly the model followed at Westminster Ponds. Further the Special Feature Overlay might also be used. There is clearly no need for a Natural Area Supporting zone.

Natural Area Supporting zone should be deleted as it does not bring new value to the discussion and puts large linear sections of an ESA at risk of having a paved bicycle pathway through them. This is clearly contrary to the stated intent of the Trail Standard. Our revisions reflect this deletion.

Cultural Zone
page 17
-       Definition of the zone does not match the indicators in Table 1. While this point is moot if the redesign of Table 1 is accepted, it nonetheless highlights an additional problem with the approach of the original Table 1. Keeping two sections of any document consistent with each other to avoid confusion and conflicts is always difficult and has proven to be problematic in many past instances. Keeping the definition of Cultural Zone to one location is simpler and clearer for a user to understand.

-       We propose a clarification in the definition to provide for small isolated cultural heritage features to be recognized within other zones. Such features would not constitute a Cultural Heritage zone strictly due to their small scale. Further, some cultural heritage features may benefit from not being identified by a management zone in order to protect them.
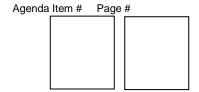
Access Zone
page 18
The current boundary delineation guidelines for ESAs do not make any allowance for additional lands to function as recreational access zones. Consequently, the current model is to impose access zones on some portion of the natural vegetation zones. The guidelines should be modified to ensure that in future, additional lands are allocated during the delineation process to ensure access areas can be added to the ESA, not subtracted from it.

The Area Planning process should also be revised to ensure that required access areas are planned for all natural heritage features, not just ESAs. This will help ensure that Access Zones are located outside the ecological boundary of the natural heritage features as they should be.

The description of this zone does not address existing multi-use pathways or other infrastructure. Yet, in the Medway example, the existing infrastructure is clearly an influencing factor. This needs to be reconciled.

To deal with specific and exceptional circumstances like infrastructure and related accesses within ESAs, we propose the use of a new "Utility Overlay" within the Management Zone types. See discussion of "Utility Overlay" below for fuller explanation.

Special Feature Overlay
page 20

To function in simple conjunction with Nature Reserve and Natural Area management zones as well as the trail hierarchy, we have proposed a modification to the public access description of Special Feature Overlay, to deal with the inevitable situation of having a trail in a Nature Reserve (i.e. one that will not be closed). We recommend that when Special Feature Overlay is applied to Nature Reserve management zone, the trail specifications consistent with Natural Area will be used.

Utility Overlay

The introduction of a new "Utility Overlay" seems a perfectly simple and clear tool to label, address and manage those exceptional situations within some ESAs such as we are facing currently in the Medway. Introduction of a Utility Overlay is a better solution than applying an Access Zone - the definition of which does not even encompass the Medway or Killaly situations. Rather it is more appropriate for Access Zone to be both intended and applied to situations such as the pathway to the viewing platform at Saunders Pond (Westminster Ponds).

Having both Access Zone and Utility Overlay simplifies and clarifies the intent of each of these applications.

The Utility Overlay would also be a very useful tool in expressing and managing the "exceptional circumstances" we have been wrestling with. And by definition, it is identified as a location where it may be desirable to locate trails.

See full description/definition of proposed Utility Overlay in marked up Trail Standard.

Changes to Management Zone Designations or Boundaries
Page 21

We do not agree that a zone should change due to human disturbance. Any temporary change should simply trigger a Restoration Overlay. The draft Trail Standard identifies that the ideal end state is that the entire ESA evolves to be Nature Reserve and Natural Area zones (p 13). Perhaps the intention here was to deal with new "big" infrastructure like a sewer? If so, this is another example of how the Utility Overlay will help simplify the application of ecologically based management zones - the special case or disturbance can be dealt with without affecting the management zone of the remaining ESA.

Trail Hierarchy
page 22

There is a great deal of duplication, which leads to conflict and confusion, between the Trail Hierarchy section and the Trail Standards section.
We understand and support the need to express the Trail Hierarchy as it applies City-wide. However, it needs to be clear beyond any doubt that Level 3 and Level 4 Pathways are neither appropriate nor permitted in ESAs. To this end we have suggested multiple wording clarifications (partly to be more consistent with the Bicycle Master Plan) and, most importantly, have formatted the information for Level 3 and 4 pathways to clearly indicate that this information is reference and context only and are not applicable to trail planning within ESAs.
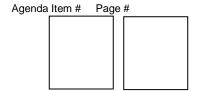
Trail Standards
page 25

For Level 2 trails, we have suggested the possibility of introducing "lay-bys" on boardwalks. These short sections of wider boardwalk (no more than 2.5 m wide)would provide opportunities for pedestrians to step aside so that a wheelchair or stroller could pass by, but the greater part of the boardwalk would have a smaller footprint(1.0 – 2.0 m wide.)

Since they are not applicable to ESAs, the specifications of Level 3 and 4 pathways are deleted from this section. Including them simply leads the reader to believe they are indeed applicable to ESAs. This undermines the rest of the document. It is simpler and clearer to remove them.

Table 2: Management Zones and Trail Hierarchy for ESAs
page 27

To reflect the multiple improvements and changes recommended overall, a new revised Table 2 is proposed. The revised table includes:

- deletion of Wildlife Tree Risk Zones; they are confusing in this table and have enough related information to warrant a separate table (See proposed Table 3)
- Nature Reserve information revised to recognize the possibility of pre-existing trails in Nature Reserve; this is managed through use of Special Feature Overlay
- Natural Area Supporting Management Zone is deleted; this zone is not needed, adds unwarranted complexity and as written improperly allows for long linear lengths of paved pathway
- Level 2 Pathway (2m of potential asphalt) is recognized as the maximum 'intensity' of trail/pathway which is appropriate to ESAs (i.e. reference to Level 3 Pathway is deleted)
- new proposed Utility Overlay is added and explained

Hazard Zones

The Trail Standard currently includes no text discussion regarding wildlife tree management. It is neither clear nor sufficient to simply try to address in one table, with some footnotes, with no additional explanation. For example, what kind of hazards are being managed? All hazards? Wildlife trees only?

The additional explanation of wildlife tree management required needs to, at a minimum, include the City's current working version of its Wildlife Tree Management definitions and objectives, which have been previously expressed only in a UTRCA Powerpoint slideshow. For reference, the text of that slide is included here. Please arrange to include the most current version in the next draft of the Trail Standards document.

Proposed Table 3:   Management of Wildlife Trees Within 20 metres of Trails

A new Table 3 is proposed to more clearly and completely convey the risk management activities associated with each trail type.

The new table is organized by trail type instead of by Management Zone (like the previous Table 2 was). The hazard management and risk information is related directly to the trail type and not directly to the management zone. After all, a trail type may occur in more than one type of management zone but the management approach should be consistent.

Zone A has been deleted from the table since no trails exist in a Nature Reserve Zone, unless the Special Feature overlay applies (see Table 2). Again, risk designation will relate to trail type. Similarly, since there is no trail in the Nature Reserve, there is no need for a blaze colour to be applied, and no place to apply it! Further, applying a red blaze to any form of pre-existing trail would only serve to draw attention to a trail that in fact should disguised, not highlighted.

Table 3 makes provision for Level 3 trails; this is to address existing situations. As noted above, we do not see the need for any new Level 3 trails in ESAs.
See fully developed proposed Table 3 in marked up Trail Standard.
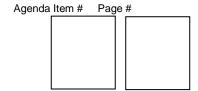
Trail Structures
Page 28
– The page should start with "The need for built structures will be planned and justified through a Conservation Master Plan." This is a very important process to ensure public participation and best practice planning of capital dollars and ongoing maintenance time and dollars.

The sentence "Generally structures will be rated as moderate use and moderate exposure to potential hazards" should be deleted. It seems impossible that a structure on a trail would have higher use than the trail on which it is located. Further, it would be fully inconsistent with the intent of the surrounding management zone, to manage trees surrounding the structure more intensely than the management zone itself.

Bridges
page 28
-        The section under Bridges should start "Where a bridge is determined to be necessary to cross rivers, streams, and ravines to protect ecological features; the size, span and engineering design requirements and materials will vary for every crossing type. Bridges can be designed to blend into the surrounding natural environment. The designer has the power to make the bridge a long-standing source of pride or of dissatisfaction. The role of the bridge in the natural environment should be determined during the project development process with input from a broad range of interested individuals and groups. However, the use of bridges (as opposed to boardwalks and "step" bridges) should be minimal and only for the purpose of protecting features

and functions as justified through the Conservation Master Plan.   Bridges over navigable waterways, due to the requirements of Transport Canada, due to high impacts, shall be avoided. "

-        Smaller bridges (third para under Bridges) - Small is in the eye of the beholder. Further, the depicted example of a "smaller bridge" does not seem small for an ESA. A class of bridges described as "smaller" is vague and will lead to ongoing confusion. For example, picture #1 of a bridge would be more intuitively called a smaller bridge than the example in picture 2. We have suggested deletion of the word "smaller."

-        Fourth para – what's the reference that a pre-fab bridge has "little or no impact." This needs to be clarified and/or referenced. This wording is easily understood to mean that installing the bridge has "little or no impact" which intuitively is not true.

Viewing Platforms and Lookouts
Page 30
-        Please start the paragraph with: "Locations for viewing platforms and look outs will be identified through the Conservation Master Plan. Vegetation removal shall be avoided to create platforms and lookouts. Viewing platforms may be recommended..." What is the distinction between a "viewing station" and a "viewing platform." Consistency in terminology is important, and new terminology must be defined. If a viewing station is a point of interest that does not require a platform, then it should not be discussed in the section that deals with "structures."

Information Signs
Page 33
–   The signs in the Coves are aesthetically pleasing and it has been noted that there has been no graffiti. The section on signage should indicate that informational signage should be aesthetically pleasing.

page 34
-        A defined set of 'standardized' signs for ESAs would be desirable

Trail Closures
We do not agree that trail closures using barricades have been effective. We recommend the following be added to the document at page 30 with the goal of providing more formal and consistent means of achieving successful trail closures. Our suggestion draws upon information from the International Mountain Bicycling Association. Further, our approach is supported by the reference on page 34 of the Standard to a study by Winter, where it is noted that "Evidence of off-trail use…increased the likelihood that hikers would also leave the trail."
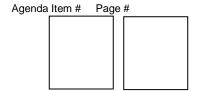
Trail Closures
As part of the effort to minimize the number of trails, and to optimize the location of trails, it may be necessary to close portions of the existing trail network.
The location of the new trail will be determined by following the planning principles and processes discussed throughout this document. Closing of the existing trail is an essential part of the overall process of trail planning and management. If the former trail is not properly decommissioned and its location sufficiently disguised, it will continue to attract users.
When an existing trail or a section of trail is to be closed, the following steps should be taken.
1. Construct new trail, reserving any plant material, topsoil, leaf litter, etc. that may be useful for restoration of closed trail.
2. Post "trail closed" sign at entrance to closed section of trail, in a location where it is easily seen by users.
3. Install temporary barrier fence, to protect work area on closed trail.
4. Break up or scarify soil on closed section of trail to facilitate restoration planting, encourage natural regeneration, and make closed trail uninviting to users.
5. Restore closed trail with plant material, including plants moved from new trail as well as those from reliable native plant nurseries. Choose plant species that are appropriate for this section of this ESA. In selecting plants, try to include some faster-growing species. Select tallest and fastest-growing shrubs for planting on the closed trail near the junction(s) with the new trail. This will help to hide the location of the former trail, and discourage ongoing use. In addition to plants and/or cuttings, sow native seeds as appropriate.
6. Rake leaves onto former trail.
7. When new plants are well established, remove temporary barrier fence.
8. As a last resort, construct a barrier to reinforce the message that this trail is closed.

Section 4 - Missing Trail Structure Standards

We would also appreciate an opportunity to review Section 4 on trail structure standards before the document goes to Planning and Environment Committee. We believe it forms an important part of this document.

COMMENTS FROM TVTA

Practice The primary consideration for trail development in ESA's is **to provide passive recreation and promote ecological education**. Trails do not maintain and protect the ESA.

Some existing trail routes may be permanently closed or rehabilitated **after public consultation and council approval.** (Provide public accountability before closing major trails)

Design & Construction Should this be **minimum cost** rather than **minimum technology?**

Matrix for Management Zones Is this matrix based upon a Provincial or National standard? Given a liberal interpretation, most of London's ESA's could be classified as a Nature Reserve. The 200 m guideline would exclude access to the entire [Medway] valley. Excluding access to London's ESA's may appear to be a noble ecological objective; however, it may have disastrous long term implications. Tax payers may cancel programs or reduce funding for ecological programs if they are unable to observe the associated benefits.

Trail Structures The sentences on minimizing structures and accommodating persons with disabilities appear to be inconsistent.

Designation/Directional signs Please note that the Thames Valley Trail construction began in 1971 prior to the construction of the city multi-use pathways. The interconnecting city pathways were based on much of the heritage trail rather than visa versa. The Thames Valley Trail is part of a continuous trail network from Port Stanley to Tobermory.

Most of the major trails in Ontario, including the Thames Valley Trail, use the Bruce trail and Appalachian Trail standard of white blazes for the main trail and blue blazes for side trails. The standards create consistency so that everyone understands their meaning when hiking on unfamiliar trails. Additional information on blazes can be found on pg. 27-33 in the Bruce Trail "Guide for Trail Workers – 3rd edition" (refer to brucetrail.org and search for Guide for trail workers).

Several US states have generated colour standards for their blazes. London should consider creating an Ontario city standard if one does not already exist.
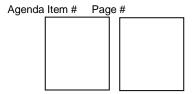
Specifications   The Bruce Trail "Guide for Trail Workers – 3rd edition contains a lot of valuable bridge construction information in Appendix A – Bridges.

Nature Reserve blaze, A red blaze would only attract attention, suggest no blaze.

Trail closures   This section continues to focus on trail closing and relocation of trails. To put this issue into perspective, our trails in ESA's occupy less than 2% by area. Each of the main trails in our ESA's has a significant heritage component, so this document should focus on future trail construction. The shutdown of our existing trails will harm our ecological progress. The majority of tax payers will not continue to support our ESA expenditures if they are unable to use and appreciate their value.

COMMENTS FROM UTRCA

1. Who is responsible for monitoring the LAC?

2. In Zone A it states that "natural insect and disease outbreaks and erosion are permitted" I was wondering if there are any exceptions to this such as Asian Long Horn Beetle, EAB, Kudzu Vine, etc. Extreme cases where intervention may be required to effectively stop the infestation before the very environment we are trying to protect is eliminated (occurs in a very short period of time). I am not talking about G Mustard or other pest like that are harmful but may not completely eliminate what is being protected in a short period of time.

3. Under Trail Hierarchy and Standards - there should be a statement that indicates one of the standards is to "create sustainable trails". Sustainable is key when developing trail systems.

4. Level 1: Trail Purpose - How do we know if all people "are present at a single location for only a brief period", when discussing inherent risk on level 1 trails?

5. Design and Maintenance (Danger or Hazard trees), option a) is remove target. What will be the process if we decide to alter (move) a trail in order to avoid cutting a hazard tree? Will we have some freedom to make decisions on the ground in order to expedite the process to accommodate our schedules?

6. Under Regulatory Signs - 4 UTRCA officers should be changed to 5.

April 19, 2012 Trails Focus Group - Meeting with two representatives to discuss third version comments (D. Wake and D. Sheppard); Trail Standards sent to EEPAC for their review.

April 19, 2012 EEPAC - Presentation by PPD to highlight changes made to the first version of the Trail Standard based on comments receives and to hear other issues and concerns from invited members of the EEPAC, Trails Focus Group, TVTA, and Sunningdale Community Group.

April 25, 2012 – fourth version of the Trail Standard prepared and circulated.

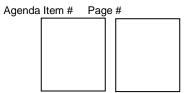**May 14, 2012 TVTA** - Comments received from D. Potten

May 15, 2012 Trails Focus Group – comments received on fourth version

Copy-editing comments on Trail Standards – all edits were made as per recommended
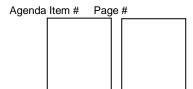
Comments on Draft Planning and Design Standards for Trails in Environmentally Significant Areas (Version 5 [4] dated April 25 2012)

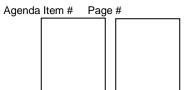Note: all comments were incorporated unless otherwise specified in the comment/response column

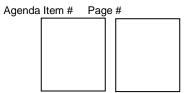| Page	Line Number	Statement in Trail Standards Version 5	Comment /Response/Suggested Wording
2	17	Publicly-owned ESAs have a purpose and function distinct from all other publicly owned open space parks, with permitted uses, access, and the provision of recreational activities governed by the Environmental Policies of the Official Plan for significant components of the natural heritage system.	Current sentence is hard to process. Suggest rewording as: *Publicly-owned ESAs have a purpose and function distinct from all other publicly owned open space parks. Permitted uses, access, and the provision of recreational activities within ESAs are governed by the Environmental Policies of the Official Plan for significant components of the natural heritage system.*
2	38	• the establishment of a trail hierarchy based on natural area significance and sensitivities as defined by management zones;	The trail hierarchy is not based on the management zones. Wouldn't the trail hierarchy exist independently of the management zones? Since the trail hierarchy and the management zones are the two fundamental building blocks maybe two separate bullets would be helpful: "establishing a trail hierarchy and the establishment of management zones based on natural area significance and sensitivities" "implementing the trail hierarchy according to management zones;"
4	8	Enjoyable, safe, accessible trails for passive recreation and learning should be encouraged in an urban setting and will be provided where ecologically feasible.	Out of context with other points. Delete, or perhaps place in a different order? Make this the final bullet under Policy, and re-word *Enjoyable, safe, accessible trails for passive recreation and learning will be permitted in accordance with above principles.*
4	11	sensitivity of the resource	Suggested revision: Replace"resource" with **natural features** throughout the document. Natural features seems to be a better fit for this context.

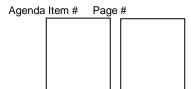| Page	Line Number	Statement in Trail Standards Version 5	Comment /Response/Suggested Wording
4	24	The second stage will include public engagement to develop the Vision, Goals, Objectives, Recommendations and priorities for implementation over the next ten years of the plan	This is a description of the 2nd stage of the CMP not a description of the 2nd stage of trail planning and design as the paragraph seems to suggest. Further, it is not clear what relationship there would be between the 2nd stage of the CMP and trail planning and design.
5	21-23	Commuter cycling routes or other types of non-recreational based linkages are to be excluded from within ESAs, except under exceptional situations as noted above under the process for "exceptional situations"	This statement should be deleted. The concept of commuter cycling route is not consistent with the principles on page 4. Also, there is no process for "exceptional situations" in the current version of the document.
6	29, 30	hazard zone for risk (generally 20 m on either side of any trail or 1.5 times the height of trees)	Why has this changed from the previous draft? Why is it now 1.5 times the height? Previously stated 20 m on either side of trail.
9	3, 4	The management of natural areas for these other goals can, in some cases, be incompatible with the primary goal of environmental protection	Suggested rewording: ***Failure to recognize that the primary goal requires protection of natural features may lead managers to introduce incompatible activities***.
10	40	Collection and establishment of baseline conditions …	It isn't possible to "collect baseline conditions." One can **collect data** to help establish or understand baseline conditions.
12	10 – 12	The majority of ESA areas…	This is actually saying "The majority of Environmentally Significant Areas areas…" Remainder of sentence is confusing also.
12	39	Zone A	This is not the definitive place to discuss this but it is the first instance: There seems to be no need for the added complication of appending A, B or C to three of the zones. See page 18 line 7 for more discussion.
13	16-18	Zone C will generally permit a greater diversity of trail types and intensity of use…	Perhaps this assumption is a little too broad. Try this: ***In some ESAs, [Zone C] may permit*** a greater diversity of trail types and intensity of use…
13	2-6	...included within the ESA boundary based on other planning considerations such as: the presence of cultural, archaeological or aesthetic features or areas that fulfill supportive social functions; the inclusion of additional parkland for provision of suitable access zones and supporting facilities (e.g. interpretive educational buildings, parking), and the use of the area for required infrastructure and maintenance access roads as identified through an approved Environmental Assessment process.	The ESA Boundary Delineation Guidelines do not currently address any of these social, planning, access or infrastructure considerations. Maybe they should to some degree or other, but currently they do not. **COMMENT – yes they do**
13	11	..presence and extent of habitat...	Management zones are not delineated based strictly on habitat considerations, which is what this explanation seems to say. Suggest we stick to describing management zones as being delineated according to significance and sensitivity of features as per other pages in this document.

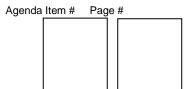| Page	Line Number	Statement in Trail Standards Version 5	Comment /Response/Suggested Wording
13	29	... or special management (e.g. open habitat management, fire management...	This is the first and only time Special Feature Overlay is described in terms other than an area or point of interest. The more fullsome Special Feature Overlay definition on page 21 also does not broach the idea of special ecological management. While identifying areas needing special management is of interest, perhaps it should be introduced to this document in a later revision since its inclusion in this version has not been well contemplated by all involved. Suggest consider deleting the reference for now. **COMMENT – Okay**
15	Table 1a	Matrix for Determining and Mapping Management Zones based on the presence of Indicators of Ecological Features and Functions that satisfy Environmentally Significant Area Criteria for the Protection of the ESA and Sensitivity to the Provision of Public Access for Nature-based Recreation (checkmarks indicate general range of sensitivity for each indicator)	Table 1a would benefit from the addition of a simple clear title such as "Matrix for Identifying and Delineating ESA Management Zones" The current paragraph explanation is valuable and should be retained (with slight edits) but only following a new simple title for clear reference.
15	Table 1a	Under Criterion 2: Representative species: populations of conservative native plant species (cc 8-10); low abundance of non-native or invasive weedy species; territories of PIF BCR13 breeding birds	This indicator should not be an indicator of lowest sensitivity. The most likely impacts of a Level 2 trail are: - a degree of habitat fragmentation - possible gap in vegetation cover - introduction of invasive species due to above impacts plus the increased intensity of the human use as an introduction vector. This would directly and significantly impact the very essence of this indicator. In most (if not all) cases one would expect the sensitivity for this indicator would be Highest, not Lowest.
15	Table 1a	Under Criterion 3: Areas more than 200 m from any edge with documented F-I or A-S breeding birds	An area > 200m from the edge should clearly be highest sensitivity whether or not we have managed to document one or more breeding birds. The mere existence of this habitat is uncommon enough and so likely to contain F-I or A-S birds that the need for us to document them is superfluous. Delete " with documented F-I or A-S breeding birds" See also following comment.

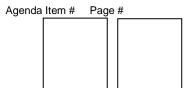| Page	Line Number	Statement in Trail Standards Version 5	Comment /Response/Suggested Wording
15	Table 1a	Under Criterion 3: Areas more than 100 m from any edge	While there are other indicators which might indeed convey higher sensitivity overall than this one, it is not inconceivable at all that this indicator could also be within the highest sensitivity. This is even more true if one considers the possibility of the existence of F-I or A-S breeding birds. These birds do not breed only in areas > 200m from the edge. Solution options include: a) Add 'highest' to the range for this indicator; or b) Add additional indicator "Areas more than 100 m from any edge with documented F-I or A-S birds" with 'highest' sensitivity.
15	Table 1a	Under Criterion 5: Native species composition and richness: terrestrial, wetland, aquatic, species:area and Structural: patch dynamics, habitat complexity	Both of these indicators should include the possibility of indicating 'highest' sensitivity. The most likely impacts of trails are: - a degree of habitat fragmentation - possible gap in vegetation cover - introduction of invasive species due to above impacts plus the increased intensity of the human use as an introduction vector. Any indicator related to biodiversity, richness, or complexity is directly susceptible to the above impacts of trails therefore should include the likelihood of 'highest' sensitivity.
15	Table 1a	Under Criterion 7: Habitat Areas for Regionally Rare species (R1-R5) and Habitat Areas for Very Uncommon or Uncommon species	It is not inconceivable at all that habitat areas for regionally rate or uncommon species may be of highest sensitivity. If a species is rare (even in our region), how can we assume that it cannot be of 'highest' sensitivity? Just because provincially or nationally recognized species at risk are also highest sensitivity should not mean that regionally rare is not highest. Rare is rare. While these habitat areas may indeed be moderate or low sensitivity, they are also possibly highest. Recommend adding 'highest' to both these indicators.
17	Table 1b	Matrix for Determining and Mapping Management Zones based on Other Planning Considerations that may add Additional Area to the ESA Boundary	The title of this table is confusing. Should be concise, as suggested or Table 1a.
17	Table 1b	Two tables with one name and number	It is not intuitive or robust to have two clearly separated tables being identified as a single table with a single name and number.

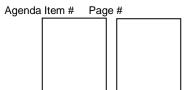| Page	Line Number	Statement in Trail Standards Version 5	Comment /Response/Suggested Wording
17	Table 1b	Cultural and Social indicators	It is very difficult to understand how the existence of a significant archeological site may indicate the appropriateness of mapping the area as Nature Reserve. This is the logic to be followed according to Table 1a but it does not seem to work the same in Table 1b. It appears that Table 1b is saying "one may find a significant archeological site within a Nature Reserve." This if very different from saying "it indicates the area should be mapped as Nature Reserve." How are the cultural and social indicators supposed to indicate anything at all for the three ecologically based management zones?
17	Table 1b	Overlays	The same argument applies here to Overlays as to Cultural and Social Indicators above. One may find a Restoration Overlay over an NR, or natural area but the Restoration Overlay does not indicate a NR or natural area.
17	Table 1b	Infrastructure Corridors vs. Facilities	It is not clear from the definitions whether an existing sanitary pipeline is a corridor or a facility. One might intuitively 'guess' but the definitions should be clarified to be explicit.
18	7	Nature Reserve Zone A	The appending of A, B and C to the ecologically based management zones is not only confusing but unnecessary. Reading it standalone "Nature Reserve Zone A" sounds like it should be followed by "Nature Reserve Zone B" and so on. Futhermore, we don't need the A, B and C to differentiate between the ecological zones. The fact that only the ecological zones have this A, B, C suffix and the other zones to do not, is more confusing and counter intuitive. This looks like a carryover from combining the risk management approaches into the management zones but we can do this more simply. Recommend: 1) Drop A from Nature Reserve. It doesn't add any value and adds only complexity and confusion. 2) Change Natural Area B and Natural Area C to Natural Area 1 and Natural Area 2. This shows clearly that there are two types of Natural Area (B and C does not do this because one expects also an A). It is also more intuitive to number the types than to letter them. As a further benefit, which adds greatly to the intuitive understanding of the nature of the management zones and their permitted uses, Natural Area 1 permits Level 1 hiking trails and Natural Area 2 permits Level 2 trails. This is much easier to understand and perhaps a more elegant design. The titles of Natural Area A and B (and hopefully Natural Area 1 and 2) is preferred over the terminology used in the previous draft document (Natural Area and Natural Area Supporting.)

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18	23	EXCLUDE - There shall be no disturbance of natural features or functions, or new fragmentation of habitat areas.	Explanation in more lay terms may be desirable. Further, there should likely be some acknowledgement of existing trails in Nature Reserve areas to explain to reader despite the edit here of 'no trails.' Using existing wording from Table 2 might be wise. Suggest: "There shall be no disturbance of natural features or functions, or fragmentation of habitat areas: no public access, no trail, no structures unless the Special Feature Overlay applies. Existing accesses, trails and structures will be reviewed for long term appropriateness."
18	39	Public access – Generally restricted to hiking trails in more significant areas	This statement is not consistent with description of Natural Area Zone B, and the subsequent discussion of trail types. Also, 'more significant' is not a clear or meaningful term in this context. Suggestion for revised wording: Public access – **Level 1 hiking trails, including permitted structures**.
18	49-50	This approach is particularly valuable in research	Please clarify. Was "This approach" intended to refer to the meadow example, rather than the bog example?
19	6-8	Supporting habitat areas are the least sensitive areas of the ESA and may provide the greatest diversity of trail type and intensity of use for all levels of permitted nature-based recreation activities.	**In general**, supporting habitat areas **may be expected to have lower sensitivity than Nature Reserve Natural Area Zone B**. Supporting habitat areas, **when directly adjacent to an Access Zone may provide an opportunity for introduction of trails that permit use by persons with disabilities**.
19	11-13	Primary goal – To permit activities to maintain intact habitats and communities and restore vegetation communities and habitats that have been damaged or modified by human beings.	This goal is confusing. A restoration overlay can be used to address the restoration aspect in any zone. Natural Area C should have the same goal as Natural Area B. The only distinction between the two should be for assessing sensitivity and allowing more intensive human use. Suggest " Primary Goal - **To protect significant features and functions for which an area has been identified by controlling the type and intensity of use.**" as per Natural Area B. This gives B and C the same primary and secondary goals with only the public access being different. This is consistent with the approach of this entire document.
19	18-20	Public access – Temporary facilities for research, education and management may be permitted in less sensitive supporting areas to allow human activities designed to improve values such as biodiversity, wildlife habitat and aesthetics;	Wording should be revised to be consistent with discussion on page 26. Suggested wording: Public Access - **Level 1 or Level 2 hiking trails. Level 2 trails may be located in Natural Area Zone C where it can be demonstrated that the trail will not result in negative impact to the ecological features and functions of the ESA.**

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19	23	For the protection of cultural heritage landscapes…	We suggest that the Cultural Heritage designation should apply only to cultural heritage features that are large enough to warrant a separate zone, and somewhat distinct from the natural zones. Park Farm would be one of those. Small, isolated cultural heritage features would be recognized and managed within other zones. Suggested wording: Applies where a cultural heritage feature is located inside an ESA, but is distinct from natural area (e.g. Park Farm at Meadowlily), and/or large enough to warrant a separate zone.
19	33	<u>Public access</u> - Development will depend on the type of feature, and may include a designated Access Zone for destination-oriented visitor use, pathways, trails, signs, interpretive, educational, research and management facilities, and historical restorations where appropriate, for example Park Farm.	For consistency with description of other zones, Public Access, wording should focus on the trail type and not other development. Further, reference to Access Zone should be deleted since provision of Access Zone is not dependent upon nor directed by the existence of Cultural Heritage Zone. Suggest " **Public Access - Level 1, or Level 2 trails. Level 3 pathway may be acceptable if adjacent to Access Zone, and where it can be demonstrated that the trail will not result in negative impact to ecological features or functions.**"
20	8-9	Access Zones within the ESA boundary will be located in areas of low sensitivity to minimize impacts to ecological features and functions	Please consider revised wording: **Where an Access zone must be located within the ESA, every effort will be undertaken to place it close to the edge of the ESA and/or in the area of lowest sensitivity, in order to avoid or minimize any impact on ecosystem features and functions.**
20	16-17	Development may include paved trails, visitor control structures, orientation, interpretive and educational signage	As written, this does not make sense. Development may include orientation??? Please consider revised wording: Development may include paved trails, visitor control structures, **and signage for orientation, interpretation and education**.
21	16-17	…platforms or lookouts established at the outer edge of the feature to ensure protection…	While this is a laudable goal, it may prove to be too restrictive. Perhaps a qualifier is needed; for example, it might say **at or near the outer edge**.
21	23-27	Where an existing trail is located in a Nature Reserve Special Feature Zone…	Suggested revision: Where an existing trail is located **within a Nature Reserve Zone it will be reviewed for potential closure and re-routing. The review will be undertaken in consultation with community and naturalist groups**.

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21	33	In a case where ongoing access requirements associated with the utility preclude restoration to the original ecological condition, a Utility Overlay is established.	A key point here is the "ongoing access requirements...preclude the restoration to the original ecological condition". Readers and users would likely benefit from underscoring of this point to clarify that not every single location of a utility in an ESA will or should result in a Utility Overlay. Suggest adding sentence "***Where restoration to the original ecological condition is possible, a Utility Overlay is not used, rather a target ecological zone is applied and overlaid with a Restoration Overlay***."
23	12	Item 5 To create accessible linkages between the natural heritage system and urban uses, where feasible	This is contrary to the spirit of the document. Item 5 should be deleted.
23	30-33, 42-45	Quotations from by-law	These quotations are confusing, because the Parks and Recreation by-law was in place prior to approval of the January 2012 OP Amendment, which establishes ESAs as a separate class of public land. To improve the clarity of the Trail Standards document, it would be better simply to refer to the content of the by-law without providing the complete quotation.
24	16-18	Level 3 pathways are generally not part of a trail system within an ESA; Level 3 pathways may pass through an ESA to provide connection among neighbourhoods where a safe alternative route outside of the ESA is not available.	Latter part of statement is contrary to the overall intent of this document. Suggested wording: ***Level 3 pathways are ~~generally~~ not part of a trail system within an ESA. ~~Level 3 pathways may pass through an ESA to provide connection among neighbourhoods where a safe alternative route outside of the ESA is not available.~~ In exceptional circumstances, Level 3 pathways may be constructed to provide access to a viewing platform or a cultural heritage feature where it can be demonstrated that the trail will not result in negative impact to the ecological features and functions of the ESA.*** It may be helpful to future readers to have some text here acknowledging that some sections of pavement exist in ESAs from a time that predates this document. ***Note that prior to the development of this guideline document, paved pathways had been constructed in portions of existing ESAs (Kilally, Medway). These older pathways are not consistent with the policies outlined in this guideline document***.
25	37-38	… hazard zone (20 m either side of a trail or structure or 1.5 times the height of trees.	This has changed from version 4. Why is it now 1.5 times the height? There seems to be no reason to involve an area greater than 1x the height of the tree.
25	44	small bridges	Is it possible to define "small bridges?" Will this be addressed through the specifications in Section 4?

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27	9-11	In exceptional situations, a Level 3 pathway may be permitted within a Natural Area Zone B or C to provide traditional or new neighbourhood connections through these low to moderately sensitive parts of the ESA, subject to the 'Process' outlined in the Guiding Principles	A new Level 3 pathway through the ESA is contrary to the overall intent of this document. This sentence should be removed.
29	Table 3	Risk Zones suffixes A, B and C and the relationship of risk to trail type.	See earlier discussion regarding titles of Management Zones. There seems no need to use the suffixes A, B and C simply for the purpose of Risk Zones. In fact, the risk zone is not directly linked to the management zone. Rather, the risk management is directly and fully linked to the trail type. This entire table should be primarily organized by Trail Type and not by management zone. There is a hierarchy of decision-making here. Areas having greater ecological sensitivity will have no trails, or the least intrusive type of trail. It is that trail type that should drive the risk management decisions. For example, not all trails in Natural Area 2 (Natural Area C) will be Level 2. That begs the question of what level of management will be applied. Deleting the management zones entirely from this table would not only simplify it but would make it more accurate and more robust. Delete entire column "ESA Mgmt Zone / Risk Zone".
29	Table 3	Green within Yellow	Is it necessary to have such a complicated blaze colour system? We fear that users will be confused by it and since we cannot reasonably expect users to understand it, we are concerned that the City may not be successfully relieved of its obligations to conduct high level maintenance on low risk trails. Is there really a reasonable expectation to convey the difference between low and limited maintenance?
29	Table 3	Green blaze	A green blaze within a green forest does not seem to be the most practical choice. While the red/yellow/green system seems intuitive, in practice, green may be a problematic choice.
30	47-48	This type of structure has less impact than a conventional bridge…	This is a very broad assumption that may not apply in every case. Please consider revised wording: This type of structure ***may have less*** impact…
33	24	blue for side trails	The document does not explain how the current system of blue blazes will be incorporated into the proposed colour system or whether they will be replaced.

May 30, 2012 Medway North – PPD and Councillor Brown met with representatives of Sunningdale Community Group (S. Chande) and Old Masonville Ratepayers (B. Davis) to discuss Trail Standards.

May 31, 2012 – Fifth version of the Trail Standard prepared for final posting on the City's web site and approval at the June 18 Planning and Environment Committee.