

Witness Statement  
by  
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for the  
Greenspace Alliance

Background

1. I am a manager in the Department of Human Resource and Skills Development Canada, leading a team of analysts on a series of Federal-Provincial Relations files - specifically in the areas of social development (homelessness, literacy). During a 20-year career inside and outside of government I have worked in program and policy positions at three different federal departments. I have worked as a project director and manager on international development projects managed by non-governmental organizations and at one private sector consulting firm – both at headquarters and overseas. I hold three university degrees (a Masters degree in Project Management, a Bachelor of Arts and a Bachelor of Science degree) and speak French and Spanish. Attachment 1 is my curriculum vitae.
2. I have been a member of South March Highlands - Carp River Conservation Inc. (SMH-CRC) since its formation in October 2010 and have been its President since June 2011. The mandate of our organization is to protect and preserve the ecological integrity and eco-connectivity of the South March Highlands and the adjacent Carp River floodplain. The ultimate objective of SMC-CRC is to establish a land trust or park that would ensure its continuation as a single integrated and unique ecosystem for the benefit of future generations. Another important objective of SMH-CRC is the promotion of sustainable development and good government within the National Capital Region. As Canada's national capital, the city of Ottawa should be a model of sustainable development for the rest of the country by making its principles the foundation of each municipal policy, practice and decision.
3. In preparation of this testimony I have informed myself of the relevant provincial and municipal policies. I am also generally familiar with the area and have walked part of the Area 1 lands. My testimony is as a lay person, attempting to divine the plain meaning of the texts.

Issues addressed

4. My testimony addresses the following Issues:
  - GA1 Are the criteria and weighting employed by the City consistent with the Provincial Policy Statement policies regarding watershed planning and protection of linkages between natural areas?

GA2 Are the criteria and weighting employed by the City respectful of Official Plan policies regarding watershed planning and protection of linkages between natural areas?

GA3 Was appropriate consideration given to subwatershed studies?

Official Plan page references are to the Annotated Version, showing the OPA 76 Amendments and Ministerial Modifications (Exhibit X). Account is taken of Board decisions on and follow-up to earlier hearings for PL100206. OPA 76 amendments are signaled as "uncontested" where that is so to the best of my understanding, based on advice from Mr. Dreessen.

#### Referenced documents and attachments

5. I refer to the following documents:

DOC1: City of Ottawa, Annotated version of the Official Plan, (Exhibit X)

DOC2: Provincial Policy Statement (2005)

DOC3: City of Ottawa, Environmental Strategy (2003)

DOC4: Shirley's Brook and Watts Creek Subwatershed Study (Dillon, September 1999)

DOC5: City of Ottawa, Planning Committee report 16A, Item 1 (Exhibit 4 for this hearing)

DOC6: Ontario Ministry of Natural Resources, Natural Heritage Reference Manual (Second Edition, 2010)

DOC7: Ontario Biodiversity Council, Biodiversity Strategy 2011

DOC8: Official Plan, Volume 1, Annex 2 - Rural, Watershed and Subwatershed Plans

6. In addition to my CV I enclose the following:

Attachment 2: Ontario MOE, Stormwater Management Planning and Design Manual (2003),  
Figure 2.1

Attachment 3: National Capital Commission, letter to City staff, September 12, 2011

Attachment 4: Shirley's Brook and Watts Creek Subwatershed Study, Figure 3.3a

#### The (sub)watershed is the appropriate scale for planning

7. The Provincial Policy Statement (PPS) directs that

“A coordinated, integrated and comprehensive approach should be used when dealing with planning matters within municipalities, or which cross lower, single and/or upper-tier municipal boundaries, including:

...

b) managing natural heritage, water, agricultural, mineral, and cultural heritage and archaeological resources;

...

d) ecosystem, shoreline and watershed related issues; “ (Section 1.2.1)

And section 2.2.1 states explicitly:

"Planning authorities shall protect, improve or restore the *quality and quantity of water* by:  
a) using the *watershed* as the ecologically meaningful scale for planning;"

8. Ottawa's Official Plan confirms this, stating in the Preamble to Section 2.4 - Maintaining Environmental Integrity, that

"The Official Plan protects and enhances the quality of the environment in the city by:

...

o Planning on the basis of the natural systems defined by watersheds;"  
(section 2.4, page 2-34)

Further, the uncontested first sentence of Policy 2 in section 2.4.2, as amended by OPA 76, reads:

"The natural heritage system as defined by Policy 1 is protected by:

a. Establishing watershed and subwatershed plans as the basis for land-use in Ottawa through policies in Section 2 of this Plan." (section 2.4.2, page 2-37)

Again, the Preamble to section 2.4.3 - Watershed and Subwatershed Plans, states (underlining added):

"...Watershed and subwatershed plans address such matters as setbacks from water bodies, stormwater management requirements, protection of significant natural features and habitat linkages, and opportunities to rehabilitate degraded areas or otherwise enhance the environment. They are as important in the urban area as they are in the rural area."  
(section 2.4.3, page 2-38)

9. Policies 4, 7 c) and 9 of section 2.4.3 of the Official Plan, as modified by OPA 76 and all uncontested, are particularly relevant here (underlining added):

"4. Once a watershed plan is approved by City Council, the City will implement the recommendations of the plan where it has the ability to do so through existing programs, the development review process, subwatershed plans, environmental management plans, and other mechanisms and will encourage other parties to do the same. Areas where watershed or subwatershed studies have been approved are shown in Annex 2."  
[Amendment 13, September 8, 2004]

"7. A subwatershed plan will be undertaken:

...

c. As a basis for City Council consideration of a community design plan or an application to amend the Official Plan which provides for new development areas or redevelopment areas, or applications to subdivide land in locations that are largely undeveloped. A subwatershed plan should shall [Mod. 13] guide development patterns and therefore should be the first step in planning for land uses. It may proceed in concert with the land-use plan. As a priority, the subwatershed plan will identify the natural heritage system ~~natural~~ areas that are

worthy of protection and establish mechanisms to secure these areas and to ensure development has no negative impact on the system. Where the proposed development is deemed to be of limited extent and impact, based on consultation with the appropriate Conservation Authority and other relevant bodies, City Council may waive the requirement for the subwatershed plan. Where the requirement for the subwatershed plan is waived, the natural heritage system will be identified in keeping with the policies of this Plan along with measures to ensure development has no negative impact on the system. Natural areas that are worthy of protection will be identified and mechanisms to secure these lands will be established. [OMB decision #1582, June 17, 2005]"

"9. Once a subwatershed plan is approved by City Council as a statement of City Council policy, the City will implement plan recommendations where it has the ability to do so, such as through existing programs, development review and approvals, environmental management plans, and other mechanisms. The City will encourage other parties to undertake whatever actions are within their jurisdiction to implement subwatershed plans."

(section 2.4.3, pages 2-39 - 2-40)

10. While these policies do not explicitly reference expansion of the urban area, it would seem plain that expanding the urban boundary in a way that implements a subwatershed plan's recommendations is one of the "mechanisms" available to the City to implement a plan's recommendations. i.e., it had the ability to do so through the current Official Plan Amendment.
11. The City's Environmental Strategy (October 2003) similarly sets out subwatershed planning as key. Goal 2 of the Strategy -- "Development in Harmony with the Environment" means *i.a.* that:

"... Development is planned on the basis of subwatershed units and incorporates greenspace and natural features into development designs, where possible, using both traditional and creative conservation measures." (page 19)

And further:

"Subwatershed planning is an integrated, ecosystem approach to land-use planning based on the boundaries of a subwatershed. Subwatershed studies examine the natural environment features, such as the river and associated tributaries, groundwater resources and the aquatic and terrestrial (woodlands, wetlands) habitats. The resulting Plans attempt to balance environmental protection, conservation and restoration with development and other land-use practices to ensure long-term, ecological sustainability of the watershed and its significant natural resources." (page 28)

12. Figure 2.1 in Ontario's Stormwater Management Planning and Design Manual (2003), provided as Attachment 2 to this Statement, clearly depicts the position of watershed planning vis-à-vis municipal land use planning. This Figure is also reproduced in the Official Plan as Figure 2.6 on page 2-38.

13. I would expect an important policy initiative such as expansion of the urban boundary to be very alert to the potential damage to natural features and functions that can occur as a result and to consider carefully what should be done "upstream" to protect them.

Linkages (eco-corridors) are part of the natural heritage system

14. Policy 2.1.2 of the PPS states (underlining added):

2.1.2 The diversity and connectivity of natural features in an area, and the long-term *ecological function* and biodiversity of *natural heritage systems*, should be maintained, restored or, where possible, improved, recognizing linkages between and among natural heritage features and areas, surface water features and ground water features.

15. This policy gives weight to the importance of "linkages" between natural heritage features and areas. By the PPS definition of natural heritage features and areas (underlining added),

"Natural Heritage Features and Areas: means features and areas, including significant wetlands, significant coastal wetlands, fish habitat, significant woodlands south and east of the Canadian Shield, significant valleylands south and east of the Canadian Shield, significant habitat of endangered species and threatened species, significant wildlife habitat, and significant areas of natural and scientific interest, which are important for their environmental and social values as a legacy of the natural landscapes of an area. " (page 33),

natural heritage features and areas are not exclusively defined as consisting of the enumerated "significant" and other elements. Even less is there a requirement for "linkages" between such elements to be significant – only that they be "recognized."

16. The Natural Heritage Reference Manual, 2nd edition, defines the term "linkage/corridor":

"a linear area intended to provide connectivity (at the regional or site level), supporting a complete range of community and ecosystem processes, enabling plants and smaller animals to move between core areas and other larger areas of habitat over a period of generations. The terms are used interchangeably for planning purposes but may need to be distinguished for ecological or biological reasons." (page 217)

17. The Manual states unambiguously:

"Natural heritage systems encompass or incorporate natural features, functions and linkages (also referred to as "corridors") as component parts within them and across the landscape. They also enable the linking of different landscapes." (par. 3.1, page 15)

and further:

"By definition, the features covered in policies 2.1.3, 2.1.4 and 2.1.5 of the PPS are included, but are not necessarily the only features and areas that could be considered important for their environmental and social value. Thus, a natural heritage system may also contain features that

are considered significant at watershed, regional or local scales." (par. 3.2, page 17)

and again:

"In identifying a natural heritage system, linkages that are ecologically functional should be incorporated." (par. 3.4.2.2, page 24)

There is a long list of "Linkage/Corridors Attributes" to assist the planner in that identification (Table 3-4, pp. 28-29).

18. I note that, according to the Manual's Appendix A.1, page 145, a policy to "protect natural links and corridors" was identified early on in the evolution of environmental planning in Ontario. It was included in a 1994 ministerial Comprehensive Set of Policy Statements which became the 1997 PPS.

19. The Ontario Biodiversity Council's Biodiversity Strategy 2011, in the chapter "Enhancing Resilience," sets out as one objective:

"The connectivity of fragmented landscapes in Ontario is increased and currently intact landscapes are maintained."

"Key Actions" for this objective include (underlining added):

"24. Integrate biodiversity values into growth management plans.

25. Adopt landscape conservation planning and comprehensive land use planning approaches at all scales.

...

27. Develop and implement urban biodiversity and green infrastructure strategies for Ontario's cities and towns." (page 48)

The lead responsibility for these actions includes municipal governments in each case.

20. Protection of linkages is also an objective of the Official Plan. Uncontested portions of the Preamble to section 2.4.2 -Natural Features and Functions, read (underlining added):

"The natural heritage system in Ottawa is identified and protected by watershed and other environmental plans, land-use designations, and policies on how land is used to ensure that development does not result in negative impacts on natural features or their functions. ... In this regard, the diversity and connectivity of natural features and the long-term ecological function and biodiversity of the City's natural heritage systems shall be maintained, restored, or where possible, improved, recognizing linkages between and among natural features and areas, surface water features and ground water features." [Mod 11] (page 2-36)

21. Policy 1 of section 2.4.2 was the subject of an earlier hearing on appeals of OPA 76. This Policy defines the natural heritage system in Ottawa. With the exception of item j), I understand that the new policy as amended by OPA 76 was uncontested. For item j) I show the text as originally proposed in OPA 76, followed by the City's proposed wording to implement the OMB's Order of

July 21, 2011 following that hearing. Underlining is added.

“1. The natural heritage system in Ottawa comprises the following significant features and the natural functions they perform:

- a. Provincially significant wetlands as identified by the Ministry of Natural Resources;
- b. Significant habitat for endangered and threatened species, as approved by the Ministry of Natural Resources;
- c. Significant woodlands defined in the rural area as woodlands that combine all three features listed below in a contiguous, forested area:
  - i. Mature stands of trees 80 years of age or older; and
  - ii. Interior forest habitat located more than 100 m inside the edge of a forest patch; and
  - iii. Woodland adjacent to a surface water feature such as a river, stream, drain, pond or wetland, or any groundwater feature including springs, seepage areas, or areas of groundwater upwelling;
- d. Wetlands found in association with significant woodlands;
- e. Significant valleylands defined as valleylands with slopes greater than 15% and a length of more than 50 m, with water present for some period of the year, excluding manmade features such as pits and quarries;
- f. Significant wildlife habitat found on escarpments with slopes exceeding 75% and heights greater than 3 m; or within significant woodlands, wetlands, and valleylands; or that may be identified through subwatershed studies or site investigation;
- g. Life Science Areas of Natural and Scientific Interest as identified by the Ministry of Natural Resources;
- h. Earth Science Areas of Natural and Scientific Interest as identified by the Ministry of Natural Resources designated on Schedule K;
- i. Urban Natural Features, consisting of remnant woodlands, wetlands and ravines within the urban area;

j [OPA 76]. Forest remnants and natural corridors such as floodplains that create linkages among the significant features defined above, but that may not meet the criteria for significance;

j [proposed]. Forest remnants and natural corridors such as floodplains that are identified through planning or environmental studies such as watershed or subwatershed plans, environmental management plans, community design plans, environmental impact statements or tree conservation reports as linkages between the significant features defined above, but may not meet the criteria for significance in their own right;

k. Groundwater features, defined as water-related features in the earth’s subsurface, including recharge/discharge areas, water tables, aquifers and unsaturated zones that can be defined by surface and subsurface hydrogeologic investigations;

l. Surface water features, defined as water-related features on the earth’s surface, including headwaters, rivers, stream channels, drains, inland lakes, seepage areas, recharge/discharge areas, springs, and associated riparian lands that can be defined by their soil moisture, soil type, vegetation or topographic characteristics, including fish habitat.”

(section 2.4.2, page 2-37)

In either version of item j), it is clear that the Official Plan recognizes identifiable linkages are part of the natural heritage system.

22. The Preamble to section 3.2 - Natural Environment, as modified by OPA 76 and uncontested after aforementioned hearing, states (underlining added):

“The environmental designations on Schedule A and Schedule B are Significant Wetlands ~~South and East of the Canadian Shield~~, Natural Environment Area, Rural Natural Features, and Urban Natural Features. The areas identified by these designations make up ~~a significant part~~ most of the natural heritage system of the city. These areas may also be linked by streams and wooded corridors that may or may not be located in the same designations but which allow for the migration of wildlife and the maintenance of natural functions across a large area.” (page 3-5)

And again in the uncontested amended Policy 3 of section 4.7.7 - Landform Features:

“3. The City will encourage the protection of other significant landform features, such as rock outcrops, escarpments, knolls, valley or other features identified in ~~such studies as provincial-ANSI studies, or~~ municipal subwatershed studies and community design plans.” (page 4-27)

23. The National Capital Commission, in its submission to staff dated August 12, 2011 (Attachment 3) also notes the importance of ecological corridors/linkages:

“Lands identified for future urban development which abut Greenbelt eco-systems, or where we are the stewards of downstream watercourses (candidate expansion Areas 1, 8, 9, 10), may also presently fulfill an important ecological/corridor linkage. Any of these future urban development areas must be permitted (or even required) to fulfill a dual role with regards to a natural environment linkage. Depending on the location, implementation policies for urban development should also establish policies related to storm water management, density thresholds in key areas, floodplain and ecological linkage preservation.” (page 3)

24. Based on all the above, it would seem reasonable to expect to see identified linkages excluded from developable residential land. However, such a criterion is not found in the staff report. Instead it simply notes (underlining added):

“The areas were screened based on the presence of Natural Heritage System components. Focus was placed on forested areas, wet areas, escarpments and valleylands. Other constraints to development, such as Hydro corridors and required setbacks from mineral resources, wetlands and other features, were also removed. This information was used to understand the availability of developable land within the study area and to profile the possibility of securing natural system lands through the process at no cost to the City. Constraint features *were not* included in the definition of ‘gross developable’ residential hectares.” (Exhibit 4, page 11)

While some of the screened out areas may in fact perform a linkage function, there clearly was no systematic effort to identify linkages.

Waterways and valleylands are complementary to land linkages for the protection of connectivity

25. PPS section 2.2.1, cited earlier, makes specific mention of the linkage function provided by water-related natural features:

"Planning authorities shall protect, improve or restore the *quality and quantity of water* by:

...  
e) maintaining linkages and related functions among *surface water features, ground water features, hydrologic functions and natural heritage features and areas*;"

26. Similarly, the Natural Heritage Reference Manual describes as a Linkage Attribute, under Water Features:

"Riparian and shoreline linkages are valuable because the land–water interface usually supports a high level of biodiversity and meets multiple species needs." (Table 3-3, page 25)

In section 8, on Significant Valleylands, the Manual states:

"While upland linkages also are important for natural heritage systems, the identification of significant valleylands based on their connectivity function within natural heritage systems can be essential in a highly fragmented or urban landscape." (page 76)

And further, under Recommended Evaluation Criteria for Determining Significant Valleylands (Table 8-1), under Linkage function, the Manual comments:

"o Valleylands provide terrestrial and aquatic linkages within the watershed.  
o Valleylands provide important corridors, allowing for the natural movement and dispersal of aquatic and terrestrial plants and animals.  
o Maintaining linkages for plant and animal movement will help mitigate climate change impacts." (page 79)

Recommended Standards are (underling added):

"o the portion of the valleyland with continuous natural vegetation corridors with a minimum width of 100 m  
o areas with functional ecological connections to other natural areas within the watershed both inside and outside the valleylands  
o areas that are determined to provide important wildlife corridors" (page 79)

27. I already quoted Policy 1 of section 2.4.2, which defines Ottawa's natural heritage system (paragraph 21 above). Uncontested item e) is:

"e. Significant valleylands defined as valleylands with slopes greater than 15% and a length of more than 50 m, with water present for some period of the year, excluding manmade features such as pits and quarries;" (section 2.4.2, page 2-37)

28. While the staff report recognizes flood plains and some valleylands as a constraint on parcels proposed for residential development, it is clear that, to be consistent with the PPS and its interpretation, more than flood plains should be set aside along waterways. In an area that I have examined closely, no valleylands are identified as a constraint even though they are identified in an approved watershed plan for the area (please refer to Attachment 4).

Linkages/eco-corridors should be identified early in the land use planning process

29. Section 12 of the Natural Heritage Reference Manual is entitled "How to Protect: Municipal Planning Techniques and Tools." It aims to

"outline how natural heritage features and areas can be addressed in the land use planning process, including in official plans and zoning by-laws, and how other tools can be used to achieve consistency with natural heritage policies of the PPS.<sup>48</sup>"

Footnote 48 states:

"Plans of subdivision and consent applications present further opportunities to address natural heritage features and areas but are not discussed in the manual." (page 107)

30. The official plan approach described in the Manual includes advice that:

"Policies and depictions on land use schedules should respect working landscapes in rural and prime agricultural areas that are providing linkage functions between and among natural heritage features and areas, surfacewater features and groundwater features..."  
(Table 12-1, page 109)

And further:

"...a natural heritage system approach can reduce the need for detailed natural heritage evaluations at the development application stage if municipalities choose to identify a natural heritage system, as part of an official plan or secondary plan process, where development and site alteration are restricted." (page 112)

And:

"...planning authorities should use planning policies and other tools that promote:

- o the retention of open/undeveloped areas and natural features and areas that are identified through the design process as essential components of a natural heritage system such that any subsequent land use changes do not result in the loss of these features and areas and their ecological functions;
- o the identification and retention of alternative habitats and linkages when existing ones need to be or will be removed, reduced or interrupted;
- o the retention of continuous open corridors between habitat patches within reasonable proximity of each other; and

o the retention, restoration and/or improvement of natural cover to buffer natural features, augment core areas and provide connectivity." (page 112)

31. It seems very clear, therefore, that, while further detailed assessments may be required at later stages, such as a Zoning By-law Amendment of the formulation of Conditions for a Plan of Subdivision, the prime time to protect natural heritage features is at the official plan stage, in this case the very identification of gross developable areas. This interpretation is confirmed in section 3.4.6.2 of the Manual which specifically addresses the identification of natural heritage system elements in Designated Growth Areas (underlining added):

"As part of a comprehensive planning process, it is recommended that a preliminary natural heritage system be identified before any other planning interests are considered. This will allow an opportunity to assess the natural heritage features and ecological functions up front and to determine the best way to connect them. A preliminary natural heritage system may need to be refined later in the planning process to incorporate other planning objectives.

...

Beginning the planning process with a natural heritage system concept that is based on an understanding of the natural features and ecological functions brings a fuller understanding to such discussions and any future direction that may need to be contemplated.

...

Including adjacent lands that maintain ecological function when developing a natural heritage system in the designated growth area could satisfy the need to demonstrate "no negative impacts," as required (as per policy 2.1.6 of the PPS) as part of a future proposed development adjacent to the protected natural heritage features and areas. Thus, the municipality would provide greater certainty about the extent of developable land earlier in the planning process, and the development proponent would not be required to complete an EIS or equivalent study to demonstrate no negative impacts..." (page 35)

32. Specifically, to meet the concern about landscape fragmentation, the Manual notes:

"Planning for natural heritage systems addresses fragmentation by identifying and protecting core areas, ecological linkages and landscape features that contribute to a system. This facilitates not only the maintenance of ecological function and biodiversity, but also the restoration and improvement of these things through stewardship (e.g., by identifying ecologically appropriate areas for enhancement and/or reconnection)." (page 19)

33. The Manual contemplates planning authorities adopting a comprehensive approach to natural heritage planning, such as through landscape- or features-based analyses (e.g., page 16 and *passim*). While the most recent comprehensive such approach for non-urban areas in Ottawa is the 1997 Natural Environment Systems Strategy (NESS), it does not follow that in the absence of more recent analyses the next best option is to push decisions down to the development application stage.

The staff reports correctly sets aside woodlands, flood plains, some valleylands and lands constrained for other reasons. It failed to consider linkages nor, it appears, did it capture all lands along watercourses that help achieve connectivity.

34. While this phase of the hearing is not to concern itself with specific parcels, to concentrate the mind it may be helpful to refer to the 1999 Shirley's Brook and Watts Creek Subwatershed Study (DOC4) -- approved by then-Regional Council on 12 April 2000 and listed in Annex 2 of the Official Plan [DOC8] -- and, specifically, to Figure 3.3a of that Study, which I enclose as Attachment 4.

### Conclusions

35. (a) A watershed or subwatershed is the appropriate scale for land use planning.
- (b) The City is obliged to implement an approved watershed plan when it is able to do so; a decision to expand the urban area is such a time.
- (c) Recognized linkages/corridors are part of the natural heritage system.
- (d) Waterways and valleylands are an important part of functional linkages.
- (e) The earlier in the land use planning process that natural heritage system elements are identified, the better for all parties concerned.
- (f) The City's methodology was flawed in that it did not, in its screening of parcels for potential urbanization or in its identification of constraints in parcels recommended for urbanization, systematically consider linkages/corridors identified in approved watershed plans.