

## 4. Structure of the Natural Heritage Network

Figure 3 illustrates the result of the application of the methodology detailed in Chapter 3. The Natural Heritage Network reflects the importance of the Greenbelt lands to the protection of ecosystem functions, but also seeks to maintain, manage and enhance the best of the remaining features in the urban and urbanizing parts of the City.

There are some features that are of such significance (e.g., provincially significant wetlands and high functioning woodlots) and provide ecosystem functions of such importance that there is no way to (nor desire to) reconfigure or compensate for those services anywhere else on the landscape. These features or components of the Network are considered to be Core Features. In contrast, there are some features that provide important supporting functions, but the location of these features can be shifted somewhat to accommodate planning exercises. These features are considered to be Supporting Features or Enhancement Areas.

In order to distinguish these features, a four-part classification has been applied to the Network. It is not intended to imply that the features are more important, or less important: all components of the Network are deemed to be important. Rather, it is intended to provide guidance with respect to the amount of protection that is appropriate to the core vs. other components of the Network, in order to assist in the development of policies in the Official Plan.

The four categories are summarized in Table 6. Core Features (Category 1) is the most restrictive, intended to protect and direct management and enhancements for a variety of key features and ecosystem functions. Categories 2, 3 and 4 identify those lands that support the Core Features, with slightly different policy frameworks to be interpreted in terms of the goal for the NHN: the protection and enhancement of ecosystem health, with emphasis on terrestrial and aquatic biodiversity.

**Table 6. Classifications within the Natural Heritage Network**

Classification	Interpretation
<b>Core Features (Category 1)</b>	Highest level of protection; prevails over all other criteria; limits of feature and mitigation to be determined through an Environmental Sustainability Report if adjacent lands become subject to a development application.
<b>Enhancement Areas (Category 2)</b>	Some flexibility however area of footprint (at a minimum) and function is to be retained unless a proposal for compensation is determined through an Environmental Impact Study. This is not to replace other requirements for geotechnical stability or requirements under O.R. 166/06.
<b>Built-up Valleylands (Category 3)</b>	Built-up Valleylands: Recognized areas of residential, commercial or industrial development below top of bank that provide natural heritage functions that must be maintained.
<b>Other supporting lands within the Greenbelt and NHN (Category 4)</b>	Other supporting lands within the NHN including agricultural lands within the Greenbelt NHS.

The Core Features are those that are subject to existing policy whose outcome does not permit a negative impact to the features. No development or site alteration should occur within Core Features, unless subject to a management plan that results in the net improvement in ecosystem function.

Core Features include:

1. Valley and Stream Corridors;
2. Wetlands as identified by the City in consultation with TRCA;
3. Woodlands

4. Significant Wildlife habitat and significant habitat of threatened or endangered species, and species of concern, including concentrations of biodiversity
5. Fish habitat (including all watercourses)
6. Environmentally Significant Areas and Areas of Natural and Scientific Interest (regional and provincial; life science and earth science);
7. Key natural heritage features and key hydrological features on lands to which the Greenbelt Plan policies and/or regulations apply; and,
8. Hazard lands (floodplains, meander belts and stable top of bank).

Enhancement Areas include those supporting lands that are important to the network, and important to incorporate into land use planning such as:

- a) Stormwater management ponds that are contiguous with a valley corridor or other identified natural heritage feature;
- b) Exceptional floodlines where in a few locations historical development has occurred that has created a floodplain that, with redevelopment, will result in a refinement of the floodplain (identified by TRCA as part of O.R. 166/06)
- c) Grasslands, including (and supportive of) agricultural uses connected to the Network;
- d) Landscape linkages, where there may be more than one alternative to create the linkage; and,
- e) Habitat enhancement areas identified through modelling and consultation.

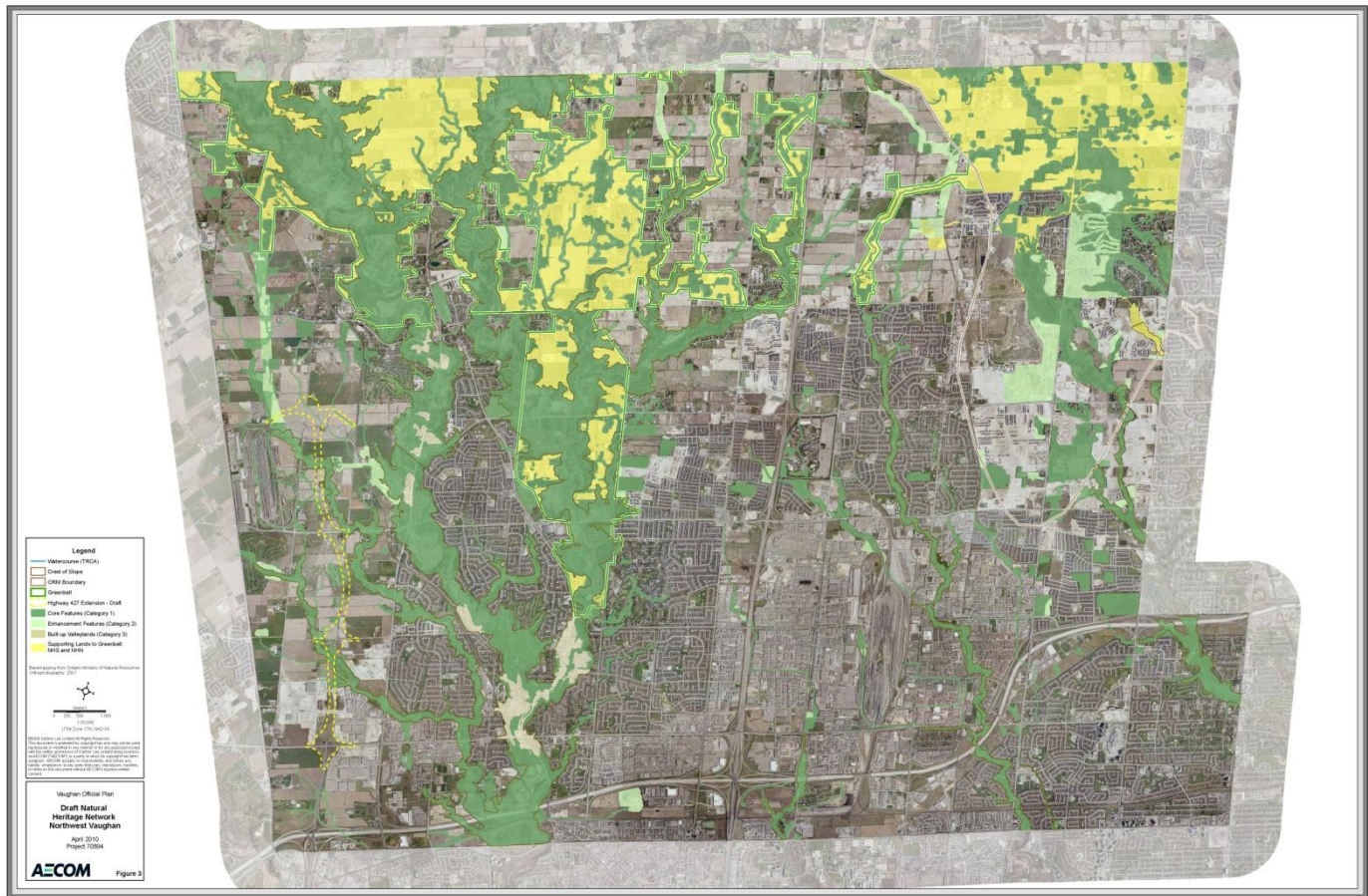
If development is proposed in or adjacent to Enhancement Areas, an assessment of the ecosystem functions in the context of the NHN provided by those lands must be undertaken, with an outcome of no net loss of functions at a minimum, and consistent with the sustainable development objectives identified as part of the City of Vaughan's Community Sustainability and Environmental Master Plan: Green Directions.

The Built-up Valleylands are those residential, commercial and industrial lands that currently occur below the physical top of slope in areas such as Woodbridge and Kleinburg. As part of a connected network, the valleys clearly provide distinct corridors on the landscape, and as such, even developed areas within the valley contribute to the connected network. Urban streetscaping and backyard biodiversity (wildlife habitat and/or use of native species in landscaping) contribute to the maintenance of connectivity and any redevelopment proposal should recognize those ecosystem functions, not only in the valley but across the City.

Other Supporting Lands identify those lands within the Greenbelt natural heritage system within the City that are currently subject to agricultural and/or rural uses and associated rural buildings (Urban Strategies Inc., 2008). These supporting lands contribute important features to the NHN that are associated with open space: species that require open areas to complete their life cycles such as Eastern Meadowlark, Bobolink and Horned Lark, or rare vegetation communities. As a result, these lands are expected to remain providing agricultural services, but, in the event that this use is abandoned, those lands should remain natural, with no potential to convert to more urban uses. The intent is to permit agricultural activities, but to restrict expansion of agricultural activities into adjacent woodlots, wetlands, ravines and watercourses, or other features as identified as Core Features.

The Greenbelt Plan proposed to protect the most valuable agricultural soils as well as natural heritage. In Vaughan, the best agricultural soils are largely outside of the Plan area in "whitebelt" areas (areas that are beyond the urban boundary and excluded from the Greenbelt). Conservation of these areas of productive soil should be considered for inclusion in the Agricultural System. The Greenbelt Agricultural System has been included within the Natural Heritage Network in order to represent those features that benefit from an agricultural landscape (e.g., Bobolink,

Eastern Meadowlark, Savannah Sparrow). As productive soils are also ideal for the enhancement of natural heritage features, specifically upland forests, future policies for lands outside the Greenbelt Plan should reflect this unique resource in the City that is currently without protection.



**Figure 3. City of Vaughan Natural Heritage Network**

#### 4.1 Ongoing Refinements to the Natural Heritage Network

The NHN as illustrated is based on the information available at this time. However, there are ongoing studies that will refine the system, before it is finalized in conjunction with the Vaughan Official Plan.

The update of the York Region Official Plan was ongoing concurrent with the Vaughan Official Plan. Discussions were held with York Region staff to compare the outcomes from the Vaughan process with that of York. The Regional Greenlands in the City of Vaughan is consistent with the Natural Heritage Network. The York approach emphasizes the importance of maintaining the Regional corridor north – south centred on the Humber River and the Greenbelt Natural Heritage System. The Region has also designated Landform Conservation Areas in conformity with the Oak Ridges Moraine Conservation Plan.

The City has undertaken the development of a Cultural Heritage Landscape Program (CHLP) that will identify, protect and celebrate areas of cultural significance in Vaughan. Cultural modifications to the landscape are reflected in the form and function of the remaining natural heritage resources, and therefore, there is a natural fit in linking a CHLP with the NHN. This work has only begun, but it is expected to modify the final NHN.

The Ministry of Natural Resources has identified a new Provincially Significant Wetland Complex centred on the East Humber that will be released in the near future. Although it is anticipated that all of these wetlands have been included in the Network, the policy framework with respect to individual units may change. For example, where the results of this study identified options for restoration and enhancement of the Network, a designation of PSW would likely make that impossible in the context of the PPS.

The City of Vaughan is engaged in several studies aimed at resolving flooding issues in the Black Creek watershed, a tributary to the Humber River. In order to safeguard public health and safety, it may be necessary to reconfigure the wetland and stormwater pond complex northeast of Jane and Highway 7 (Block 23). As a result, a modifier has been placed on the NHN designation at that location.

Similarly, the Environmental Assessment for the extension of the subway into Vaughan proposes to realign the drainage to facilitate a new station, and existing plans, and the fly-over planned for north of Hwy 400 and Hwy 7 (Blocks 29 and 30) will have consequences to the final NHN on these lands. As a result, these areas have similarly been modified or identified as in transition.

Consideration of development proposals has not abated during the preparation of the studies supporting the New Official Plan. The outcomes of applications sufficiently advanced, or recently approved have been incorporated into the TNHS for the watersheds provided by TRCA. These plans provide the land use planning framework for the Block that incorporates the findings of the background environmental studies, and incorporates the judgment of the Conservation Authority and City staff.

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