

DRAFT FOR DISCUSSION- Version 3

City of Peterborough: Preliminary Natural Heritage System Components and Level Definitions

Table 1. City of Peterborough Natural Heritage System – Natural Heritage System Levels

Goal of the Natural Heritage System	Natural Heritage System Levels
<p>A comprehensive, functional and resilient Natural Heritage System that is implemented through strong planning policies that identify and maintain long-term sustainability of the valuable natural heritage resources within the City of Peterborough.</p>	<p>Level A. Protection and conservation of NHS form and function <i>in situ</i> is a priority. Includes provincially significant features. Development and site alteration is not permitted, except in accordance with provincial and/or federal requirements</p> <p>Level B. No negative impact to the function of these features within the overall NHS. Development and site alteration will only be considered if it can be demonstrated that a net gain of NHS function will be achieved through compensation (e.g., replacement, restoration, and/or enhancement) as well as conformity with provincial and federal policies/regulations.</p> <p>Level C. May provide natural heritage attributes or provide supporting functions to the NHS (e.g., an isolated constructed pond). Development and site alteration will be considered where there is an opportunity to replicate the function elsewhere within the City, in conformity with provincial and/or federal requirements.</p>

Table 2. City of Peterborough Natural Heritage System – Wetlands Component Definition and Criteria

Component	Definitions	Natural Heritage System Level Criteria			Notes
		NHS Level A	NHS Level B	NHS Level C	
Wetlands	<p>Wetlands - Lands that are seasonally or permanently covered by shallow water, as well as lands where the water table is close to or at the surface. In either case, the presence of abundant water has caused the formation of hydric soils and has favoured the dominance of either hydrophytic or water tolerant plants. Four main categories of wetland are swamps, marshes, bogs and fens. Periodically soaked or wetlands being used for agricultural purposes which no longer exhibit wetland characteristics are not considered to be wetlands.</p>	<p>Provincially Significant Wetlands (PSW) as designated by the Ministry of Natural Resources and Forestry.</p>	<p>Non-PSW or unevaluated wetlands that meet the following criteria:</p> <ul style="list-style-type: none"> i. Wetlands ≥ 0.5 ha; or ii. Wetlands 0.2 to 0.5 ha that meet one or more of the following: <ul style="list-style-type: none"> • located within floodplain; • contiguous with a permanent or intermittent watercourse, a Significant Valleylands or NHS Level A or B woodland; • identified as a bog or fen; or 	<p>All wetlands that do not otherwise qualify under Wetland NHS Level A or B.</p>	<p>It is the objective of the City to promote the evaluation of all wetlands within the City following the Ontario Wetland Evaluation System (OWES) for Southern Ontario to determine whether or not they are provincially significant. Evaluations could be undertaken by public agencies such as MNR, ORCA, the City or where feasible, members of the public.</p>

Component	Definitions	Natural Heritage System Level Criteria			Notes
		NHS Level A	NHS Level B	NHS Level C	
			<ul style="list-style-type: none"> identified as part of an ecologically functional corridor or linkage between natural heritage features. 		

Table 3. City of Peterborough Natural Heritage System – Woodlands Component Definition and Criteria

Components	Definitions	Natural Heritage System Level Criteria			Notes
		NHS Level A	NHS Level B	NHS Level C	
Woodlands	<p>Tree: Woody vegetation that can grow to a minimum of 6 m in height at maturity. Excluded are: Buckthorn (<i>Rhamnus</i> spp.), Staghorn Sumac (<i>Rhus typhina</i>) and Common Lilac (<i>Syringa vulgaris</i>).</p> <p>Woodlands: all treed areas determined by dripline, woodlots and forested areas, including treed wetlands, other than a cultivated fruit or nut orchard or a plantation established for the purpose of producing Christmas trees or nursery stock. The following Ecological Land Classification (ELC) Community Classes and Series are also considered woodland:</p> <ul style="list-style-type: none"> Forest – coniferous forest (FOC), mixed forest (FOM) or deciduous forest (FOD); Swamp – coniferous swamp (SWC), mixed swamp (SWM) or deciduous swamp (SWD); and Cultural – cultural woodland (CUW) or cultural plantation (CUP). <p>Treed areas separated by more than 20 m will be considered to be separate woodland areas.</p>	<p>Significant Woodlands are woodlands that are:</p> <ol style="list-style-type: none"> woodlands 2 ha or greater in extent; and woodlands 0.5 ha or greater in extent and that: <ul style="list-style-type: none"> directly supports threatened or endangered species, with the exception of specimens deemed not requiring protection by the Province (e.g. as is sometimes the case with Butternut); or, are within 30 m of a provincially significant wetland or permanent stream or intermittent stream; or are identified as part of an ecologically functional corridor or linkage between natural heritage features; or are dominated by native trees older than 100 years and having late successional characteristics. 	Woodlands ≥ 0.2 ha that do not meet the test to be identified as Significant.	Other Woodlands < 0.2 ha	<p>It is the objective of the City to maintain woodland cover above 15% of the City area (it is currently approximately 15.86%).</p> <p>All woodlands ≥ 0.5 ha shall be evaluated for significance.</p>

Table 4. City of Peterborough Natural Heritage System – Valleylands Component Definition and Criteria

Component	Definitions	Natural Heritage System Level Criteria			Notes
		NHS Level A	NHS Level B	NHS Level C	
Valleylands	<p>Valleylands: a natural area that occurs in a depression within the landscape that has two sides and that has water flowing through or standing for some period of the year.</p> <p>For the purposes of the NHS, Significant Valleylands and non-significant valleylands exclude built-up valleyland areas within the City of Peterborough. These areas may still be subject to ORCA regulations.</p>	Significant Valleylands as identified/regulated by Otonabee Region Conservation Authority (ORCA).	All Non-significant valleylands as identified/regulated by ORCA.	Not applicable.	<p>The presence and limits of all valleylands will be determined through site specific field investigations and technical reports in association with ORCA criteria. These limits will be established and confirmed to the satisfaction of ORCA and the City, as appropriate. Note that the Flooding Hazard and Erosion Hazards policies of ORCA should also be considered for applicability and may necessitate technical erosion hazard studies.</p> <p>Not mapped as an individual NHS component.</p>

Table 5. City of Peterborough Natural Heritage System – Area of Natural and Scientific Interest Component Definition and Criteria

Component	Definitions	Natural Heritage System Level Criteria			Notes
		NHS Level A	NHS Level B	NHS Level C	
Life Science Area of Natural Scientific Interest (ANSI's)	Life Science Areas of Natural and Scientific Interest (ANSI): means areas of land and water containing natural landscapes or features that have been identified as having life science or earth science values related to protection, scientific study or education.	Provincially or Regionally Significant Life Science ANSI's as designated by the Ministry of Natural Resources and Forestry.	Locally Significant Life Science ANSI's	Not applicable.	No Provincial, Regional or Local Significant Life Science ANSI's have been designated by MNRF within the City of Peterborough.

Table 6. City of Peterborough Natural Heritage System – Fish Habitat, Watercourses and Waterbodies Component Definitions and Criteria

Component	Definitions	Natural Heritage System Level Criteria			Notes
		NHS Level A	NHS Level B	NHS Level C	
Fish Habitat, Watercourses and Waterbodies	<p>Fish Habitat: Spawning grounds and any other areas, including nursery, rearing, food supply, and migration areas on which fish depend directly or indirectly in order to carry out their life processes.</p> <p>Watercourse: An identifiable depression in the ground in which a flow of water regularly or continuously occurs.</p> <p>Ephemeral: Water flows for a short period of time in response to localized precipitation (e.g. spring freshet or storm events). Surface water channel is above the local groundwater table.</p>	Permanent and Intermittent Watercourses (includes Little Lake)	Naturally Occurring Waterbodies	Ephemeral Watercourses	<p>Level A Fish Habitat and Watercourses may be altered so long as the undertaking follows the federal <i>Fisheries Act</i>, ORCA regulations and policies and any other applicable regulations.</p> <p>Level B Fish Habitat and Watercourse may be altered/removed so long as the undertaking is in compliance with the federal <i>Fisheries Act</i>, ORCA</p>

Component	Definitions	Natural Heritage System Level Criteria			Notes
		NHS Level A	NHS Level B	NHS Level C	
	<p>Intermittent: Water flows for several months during the year because of a connection with seasonally high groundwater table or flow contributions from wetlands. Typically flow typically ceases during the summer months (July and August).</p> <p>Permanent: Continuous year-round surface flow occurs in most years. Baseflow conditions are supported by year-round groundwater discharge and/or wetland/surface storage areas.</p> <p>Naturally Occurring Lakes / Ponds: waterbodies that occur and persist without anthropogenic influence (i.e. was not constructed and does not require on-going maintenance).</p> <p>Isolated or Dug-out Ponds: Anthropogenic waterbodies that are created by excavating basins with no inlet or outlet channels in which surface and/or groundwater collect.</p> <p>Exceptions: does not include facilities constructed for the treatment/storage of stormwater.</p>				<p>regulations and policies and any other applicable regulations and it has been demonstrated to satisfaction of the City that there will be a net gain to function.</p> <p>Where no detailed fish habitat and/or watercourse mapping has been completed, all waterbodies, including permanent or intermittent streams, headwaters, seasonally flooded areas, municipal or agricultural surface drains, lakes and ponds (except facilities constructed for the treatment/storage of stormwater) should be considered fish habitat and/or a watercourse for the purposes of the NHS unless it can be demonstrated to the satisfaction of the City/ORCA/DFO that the feature does not constitute fish habitat and/or a watercourse as defined by the <i>Fisheries Act and the Conservation Authorities Act</i>.</p>

Table 7. City of Peterborough Natural Heritage System – Habitat of Threatened and Endangered Species Component Definitions and Criteria

Component	Definitions	Natural Heritage System Level Criteria			Notes
		NHS Level A	NHS Level B	NHS Level C	
Habitat for Endangered and Threatened Species	<p>Provincial</p> <p>Habitat of Endangered Species and Threatened Species:</p> <p>a) with respect to a species listed on the Species at Risk in Ontario List as an endangered or threatened species for which a regulation made under clause 55(1)(a) of the <i>Endangered Species Act, 2007</i> is in force, the area prescribed by that regulation as the habitat of the species;</p> <p>b) with respect to any other species listed on the Species at Risk in Ontario List as an endangered or threatened species, an area on which the species depends, directly or indirectly, to carry on its life processes, including life processes such as reproduction, rearing, hibernation, migration or feeding, as approved by the Ontario Ministry</p>	<p>A) Habitat for species listed as endangered or threatened on the Species at Risk in Ontario Regulation 230/08 (under the <i>Endangered Species Act, 2007</i>)</p> <p>and/or</p> <p>B) Habitat for aquatic species or migratory birds species listed as threatened or endangered on Schedule 1 of the <i>Species at Risk Act</i>.</p> <p>SARA also applies on federal lands.</p>	Not applicable.	Not applicable.	Habitat for Threatened and Endangered species NHS Level A may only be altered/removed in accordance with applicable federal and/or provincial regulations. Where this is permitted, the habitat will not be considered part of the NHS under this component.

Component	Definitions	Natural Heritage System Level Criteria			Notes
		NHS Level A	NHS Level B	NHS Level C	
Habitat for Endangered and Threatened Species con't	<p>of Natural Resources; and places in the areas described in clause (a) or (b), whichever is applicable, that are used by members of the species as dens, nests, hibernacula or other residences.</p> <p>Endangered species: means a species that is listed or categorized as an “Endangered Species” on the Ministry of Natural Resources and Forestry official species at risk list, as amended from time to time.</p> <p>Threatened species: means a species that is listed or categorized as a “Threatened Species” on the Ministry of Natural Resources and Forestry official species at risk list, as amended from time to time.</p> <p><u>Federal</u> Species at Risk Act</p> <p>Habitat: (a) in respect of aquatic species, spawning grounds and nursery, rearing, food supply, migration and any other areas on which aquatic species depend directly or indirectly in order to carry out their life processes, or areas where aquatic species formerly occurred and have the potential to be reintroduced; and</p> <p>(b) in respect of other wildlife species, the area or type of site where an individual or wildlife species naturally occurs or depends on directly or indirectly in order to carry out its life processes or formerly occurred and has the potential to be reintroduced. (habitat)</p> <p>Critical Habitat: the habitat that is necessary for the survival or recovery of a listed wildlife species and that is identified as the species’ critical habitat in the recovery strategy or in an action plan for the species.</p>				

Table 8. City of Peterborough Natural Heritage System – Significant Wildlife Habitat Component Definitions and Criteria

Component	Definitions	Natural Heritage System Element Criteria			Notes
		NHS Level A	NHS Level B	NHS Level C	
Wildlife Habitat	<p>Wildlife Habitat: areas where plants, animals and other organisms live, and find adequate amounts of food, water, shelter and space needed to sustain their populations. Specific wildlife habitats of concern may include areas where species concentrate at a vulnerable point in their annual or life cycle; and areas which are important to migratory or non-migratory species.</p> <p>Significant Wildlife Habitat: Includes: habitat of seasonal concentrations of animals, rare vegetation communities or specialized habitat for wildlife, habitat for Species of Conservation Concern and animal movement corridors.</p>	Not applicable	Significant Wildlife Habitat within natural features.	Significant Wildlife Habitat within or associated with artificial and/or human-made features. Includes but not limited to: golf course ponds, irrigation ponds and sand traps, stormwater management treatment and storage facilities, orchards, buildings, road sides and constructed features.	Not shown as an individual component on mapping. Most SWH will be captured through mapped component (i.e. wetlands, woodlands, fish habitat etc.). The City of Peterborough will promote the assessment of SWH following the applicable categories from the provincial Ecoregion Schedules using thresholds and criteria that are being developed specifically for the City of Peterborough.

Table 9. City of Peterborough Natural Heritage System – Corridors and Linkages Component Definitions and Criteria

Component	Definitions	Natural Heritage System Element Criteria		Notes
		Regional Linkage/Corridor	Proximity Linkage/Corridor	
Corridors and Linkages	<p>Linkage/Corridor: a linear area intended to provide connectivity, 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.</p>	<p>Regional Linkage/Corridor: An area that provides a general pathway of connectivity between the Peterborough Natural Heritage System and the provincial NHS for the Growth Plan for the Greater Golden Horseshoe.</p> <p>It is intended that the connectivity function be maintained and where possible enhanced in the vicinity of these areas.</p>	<p>Proximity Linkage/Corridor: where NHS Level A and NHS Level B features occur within 60 m of each other and a functional linkage (i.e. free of barriers) is present.</p> <p>These are to be treated in a manner similar to Level B NHS features. In the instance of land development, the function may be addressed through various solutions established through site specific investigation to determine the location and dimensions best suited to the NHS function.</p>	<p>Linkages and corridors within the City of Peterborough boundary are shown with a symbol on the mapping to indicate the general pathway of connectivity. These symbols are not intended to represent the precise location of linkage/corridors.</p> <p>The exact location of corridors should be established through site specific investigation to determine the location and dimensions best suited to the function.</p>

Table 10. City of Peterborough Natural Heritage System – Component Level Summary

<u>Component</u>	<u>Level A</u>	<u>Level B</u>	<u>Level C</u>
Wetlands	Provincially Significant Wetlands	Non-PSW or unevaluated wetlands that meet the NHS criteria	All wetlands that do not otherwise qualify under Wetland NHS Level A or B.
Woodlands	Significant Woodlands	Non-Significant Woodlands \geq 0.2 ha	Other Woodlands < 0.2 ha
Valleylands	Significant Valleylands	All Non-significant valleylands All Non-significant valleylands	Not applicable
Life Science Area of Natural Scientific Interest (ANSI's)	Provincially or Regionally Significant Life Science ANSI's	Locally Significant Life Science ANSI's	Not applicable
Fish Habitat, Watercourses and Waterbodies	Permanent and Intermittent Watercourses (includes Little Lake)	Naturally Occurring Waterbodies	Ephemeral Watercourses
Habitat for Endangered and Threatened Species	A) Habitat for species listed as endangered or threatened on the Species at Risk in Ontario Regulation 230/08 (under the <i>Endangered Species Act</i> , 2007) and/or B) Habitat for aquatic species or migratory birds species listed as threatened or endangered on Schedule 1 of the <i>Species at Risk Act</i> .	Not applicable	Not applicable
Wildlife Habitat Wildlife Habitat	Not applicable	Significant Wildlife Habitat within natural features. .	Significant Wildlife Habitat within or associated with artificial and/or human-made features.