

CONFIDENTIAL

Appendix F: Landscape Analysis

Southeast Courtice Secondary Plan and Environmental Assessment

Municipality of Clarington, Ontario

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Table of Contents

	page
F. SE Courtice Landscape Analysis	F-1
F.1 Key Take-Aways	F-1
F.2 Purpose	F-2
F.3 Study Area.....	F-2
F.3.1 Land use	F-2
F.3.2 Environmental Protection Areas	F-4
F.3.3 Future Public Amenities and Places of Interest	F-4
F.4 Existing Conditions	F-5
F.4.1 Topography and Grading.....	F-5
F.4.2 Existing Landscape Features	F-5
F.4.3 Landscape Amenities and Cultural Features.....	F-10
F.4.4 Views and Vistas	F-10
F.5 Policy Direction.....	F-10
F.5.2 Priority Green - Green Development Framework	F-12
F.6 Opportunities/Constraints & Related KPIs.....	F-13

List of Figures

Figure F-1:	Official Plan Land Use Designations	F-3
Figure F-2:	Urban Trails – Clarington OP	F-4
Figure F-3:	Terrain Analysis – Elevation	F-6
Figure F-4:	Terrain Analysis – Slope	F-7
Figure F-5:	Vegetation Communities (Source SWS Report).....	F-8
Figure F-6:	Existing Public Amenities	F-9

List of Tables

Table F-1:	Parkland per Capita.....	F-11
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F. SE Courtice Landscape Analysis

F.1 Key Take-Aways

- ✦ Preservation and enhancement of key landscape features such as slope, watercourses, and other regulated natural or cultural heritage features is strongly recommended as a focus of the landscape framework based on regulatory requirements, best practice and as a tool for placemaking.
- ✦ With no significant landform or slope concerns, the study area can support the higher intensity development targets as directed by existing policy.
- ✦ Protect, preserve and enhance ecological diversity & environmental stability while improving accessibility and suitability for low-intensity recreation.
- ✦ Avoid significant changes to landform and maintain the natural drainage pattern to minimize the risk of flooding.
- ✦ Create a hierarchy of nodes, prominent intersections, view and vistas along landscaped boulevards that promote legibility and way finding within the community.
- ✦ Create a hierarchy of parks and open space connected by a robust active transportation network which would contribute to creating a sense of place while improving mobility options and serving the recreational needs of the residents.
- ✦ Recommend provisions for low impact development to minimize hard surface infrastructure, enhance stormwater infiltration and increase permeability. Techniques to maximize energy efficiency and water conservation should be integrated into the design of streetscapes, parks and other outdoor public spaces (e.g., green streets, native / drought tolerant landscaping; LED street lighting; shade plantings and structures; rain gardens).
- ✦ Integrate Stormwater Management facilities with landscape amenities (e.g., loop trail around ponds, establish viewpoints) and community gardens/orchards within buffers or parkland.
- ✦ Encourage habitat connectivity and maintain the function of existing linkages where possible

F.2 Purpose

A component of the background analysis, the Landscape Analysis provides a framework for the level of change appropriate in a development area or site. This analysis will provide an understanding of the structure, characteristics and functions of the landscape in the study area prior to development and contributes to the foundation for the development of the Southeast Courtice Secondary Plan. The following sections describe and assess the study area and its existing context, including its topography and grading; existing built form and natural features establishing a foundation for the area's development.

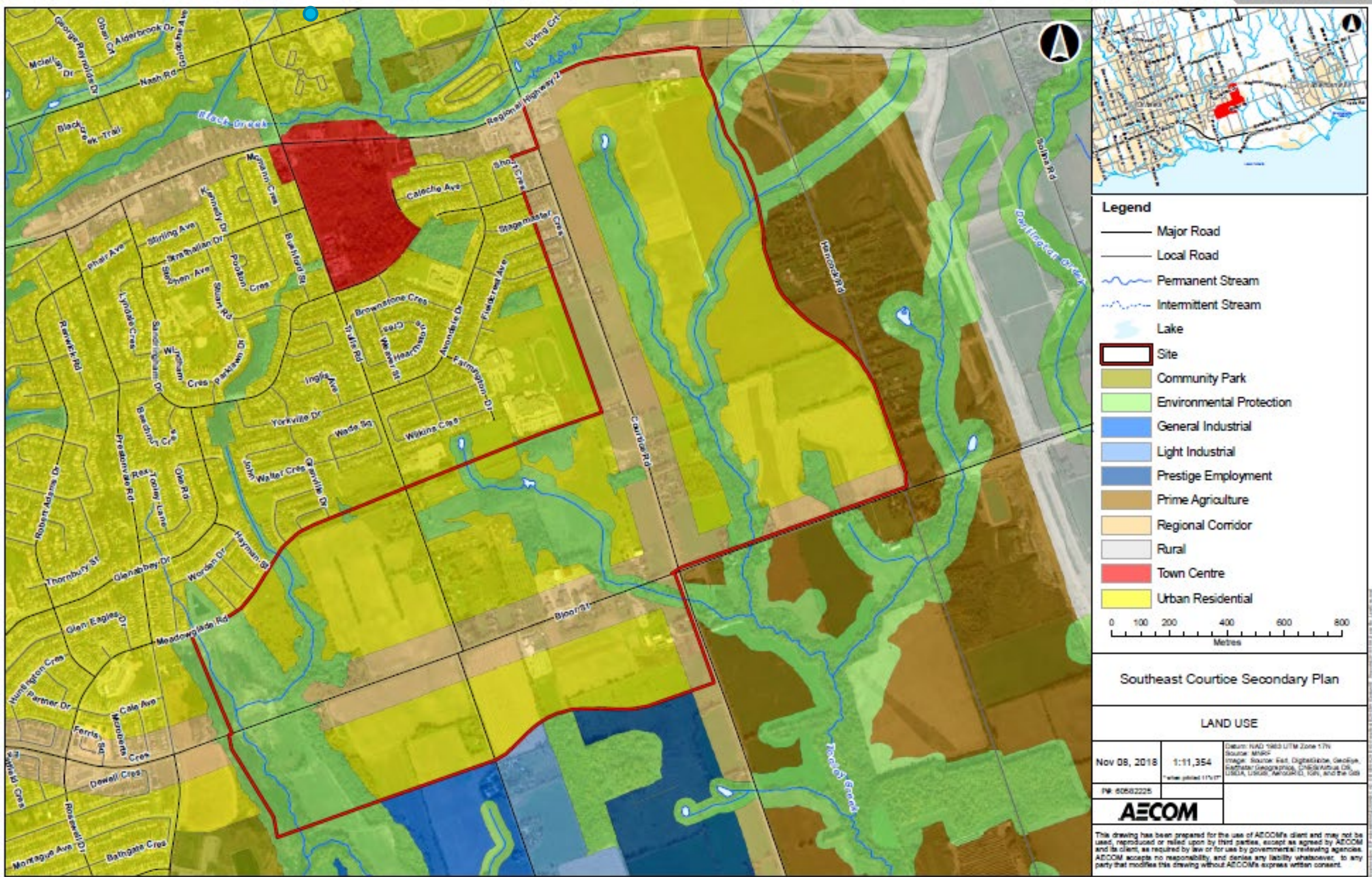
F.3 Study Area

F.3.1 Land use

Part of Lots 32, 31, 30, and 29, Concession 1 Former Township of Darlington, now Municipality of Clarington, Region of Durham, the SECSP area represents 288 ha (712 acres) of land designated as Urban Residential, Regional Corridor and Environmental Protection Area by the Municipality of Clarington Official Plan. It is important to note the absence of provincially significant wetlands and areas of natural or scientific interest (ANSI) within the study area.

The study area is flanked by low density single-family residences and the Courtice Town Centre to the north and west, prime agriculture to the east and Provincially Significant Employment Zone (PSEZ) with lands including Prestige Employment Area, Light and General Industrial and Business Park to the south.

Figure F-1: Official Plan Land Use Designations



F.3.2 Environmental Protection Areas

Environmental Protection Areas include the natural heritage features and hydrologically sensitive features that comprise the natural heritage system as well as those lands within the regulatory flood plain of a watercourse. (COP 14.4.2)

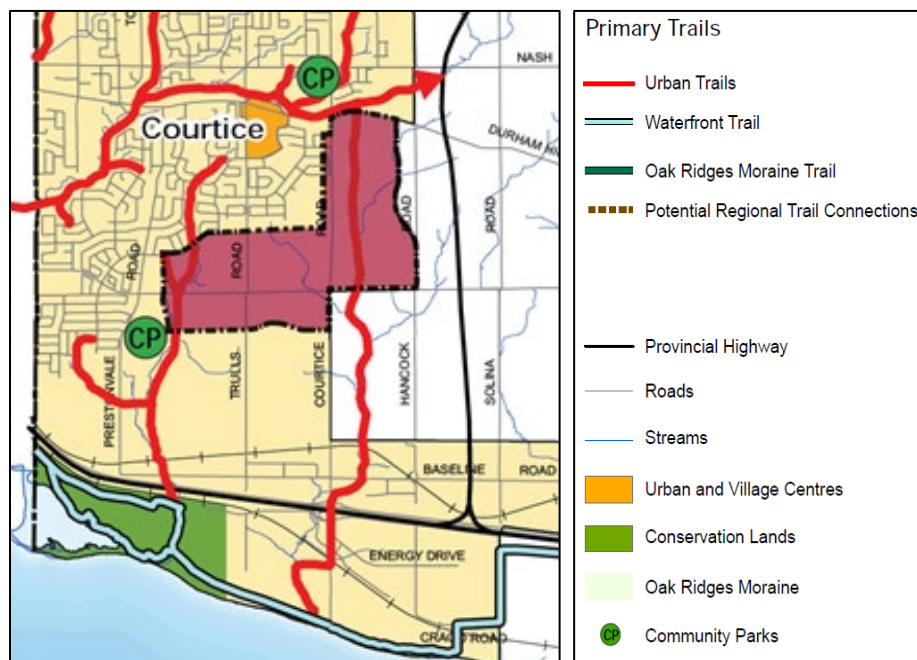
Recognising the non-static nature of the natural environment, The Robinson Tooley Subwatershed study conducted field based investigations and provided mapping to summarise existing conditions. The existing characterisation of environmentally sensitive features formed the basis to determine developable area for the Southeast Courtice Secondary Plan area.

F.3.3 Future Public Amenities and Places of Interest

In addition to the existing park along Courtice Road, the Clarington OP 2018 directs the development of two community parks just north and west of the SEC SP area with two primary trails, running along the Robinson and Tooley Creeks, with the intent to connect the Town Centre to the Waterfront Trail along Lake Ontario to the south.

The Secondary plan process will build a trails strategy to confirm the identified primary multi-use trails supporting a variety of recreational uses and that allow occasional vehicular traffic for maintenance, while looking for opportunities to define low impact secondary trails providing access to natural areas such as creek edges, woodlots or wetlands improving connectivity through the community and into the wider landscape.

Figure F-2: Urban Trails – Clarington OP



F.4 Existing Conditions

F.4.1 Topography and Grading

Based on a spatial analysis of the terrain using Geographic Information Systems (GIS) and further confirmed through the SWS, the subject lands are determined to be generally flat with a gentle slope towards the southwest as illustrated in **Figure F-3**. Significant Valley lands are not present within the study area boundary.

The majority of the study area exhibits a medium to shallow gradient, ranging from 2% - 8% as illustrated in **Figure F-4**. Steeper slopes exist primarily along Robinson Creek. These areas need to be preserved from a slope stability, watercourse health and policy perspective. Preservation will also support opportunities for placemaking and may contribute to support forms of passive recreation or serve as naturalistic vantage points.

F.4.2 Existing Landscape Features

Watercourses within the study area include the Robinson & Tooley Creeks and their tributaries.

Agricultural land uses dominate the landscape with a combination of cropland and livestock pasture. Existing vegetation consists of crop fields, sporadic hedgerows, small pockets of thickets, woodlands and forests, and areas of wetlands and meadows associated with Robinson and Tooley Creeks (**Figure F-5**).

At the north end of Robinson Creek, marsh and meadow plant communities are present containing a variety of graminoid species and a mix of deciduous and coniferous trees. As the creek drains south toward Bloor Street, vegetation transitions to denser woodlands and forests containing a mix of deciduous and coniferous trees. At the north ends of Tooley Creek, swamp and meadow plant communities are present containing a mix of deciduous and coniferous trees. As the creek drains south toward Bloor Street, vegetation transitions to denser woodlands /forests, containing a mix of deciduous and coniferous trees.

The SWS also provided a botanical inventory of a total of 305 plant species, the majority considered to be common and secure. One SAR, Butternut, was recorded in several communities (). Based on field investigations and background studies recorded in the Robinson Tooley Subwatershed Report, prepared by Aquafor Beech 2018 (SWS), wooded wetlands greater than 0.5 ha in size (i.e., swamps) often overlapped with areas in the Significant Woodland category (i.e., treed vegetation communities (including swamps, plantations, and cultural woodlands >1 ha in size).

The majority of wetlands within the study area are contained to valley lands or to tablelands in headwater areas. No rare vegetation communities receiving regulatory protection were found in the study area and therefore not found to constitute a constraint to development. Linkages including hedgerows that connect at least two natural heritage features (e.g., significant woodlands or wetlands), as well as drainage features were noted.

Figure F-3: Terrain Analysis – Elevation

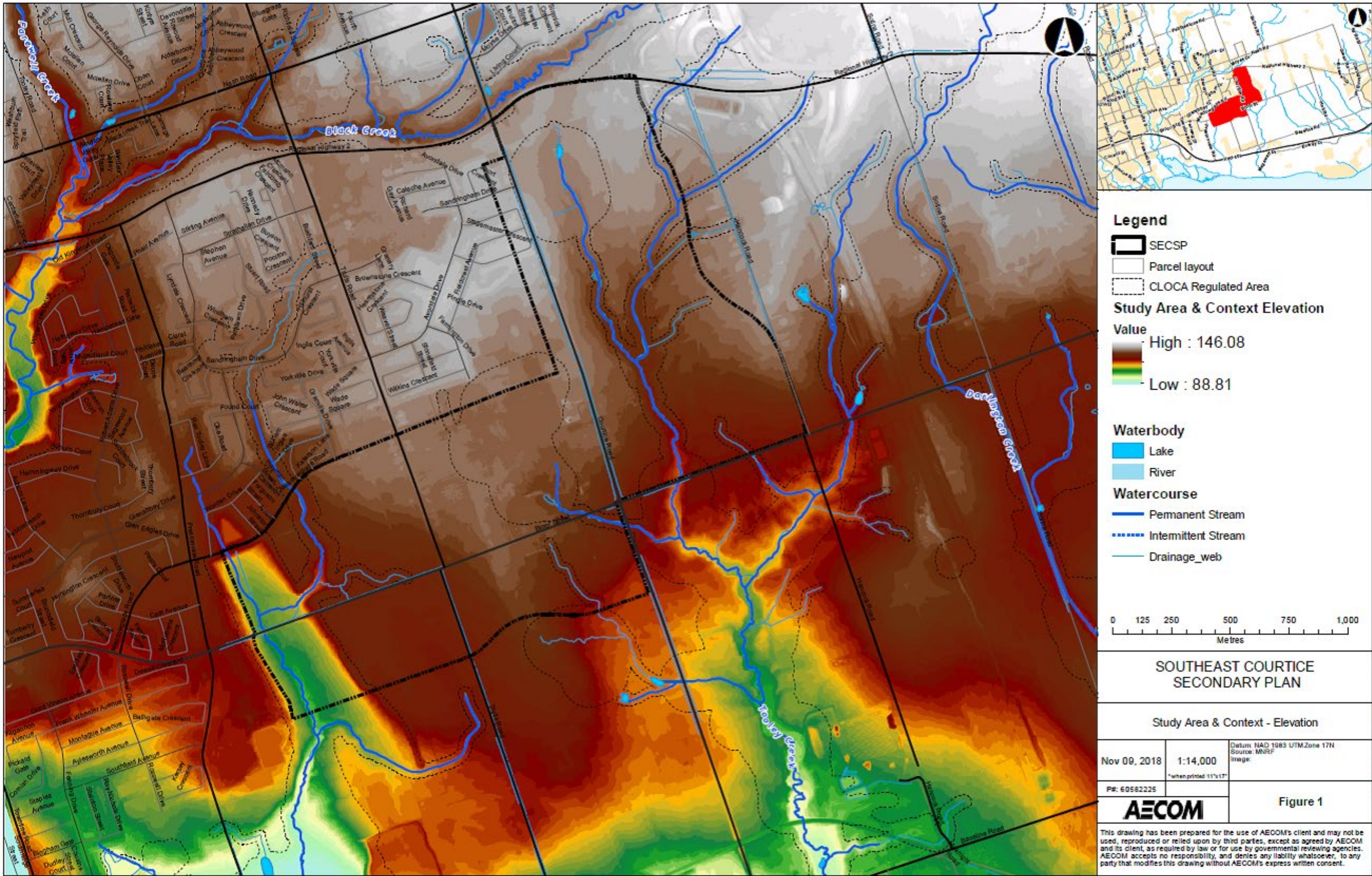


Figure F-4: Terrain Analysis – Slope

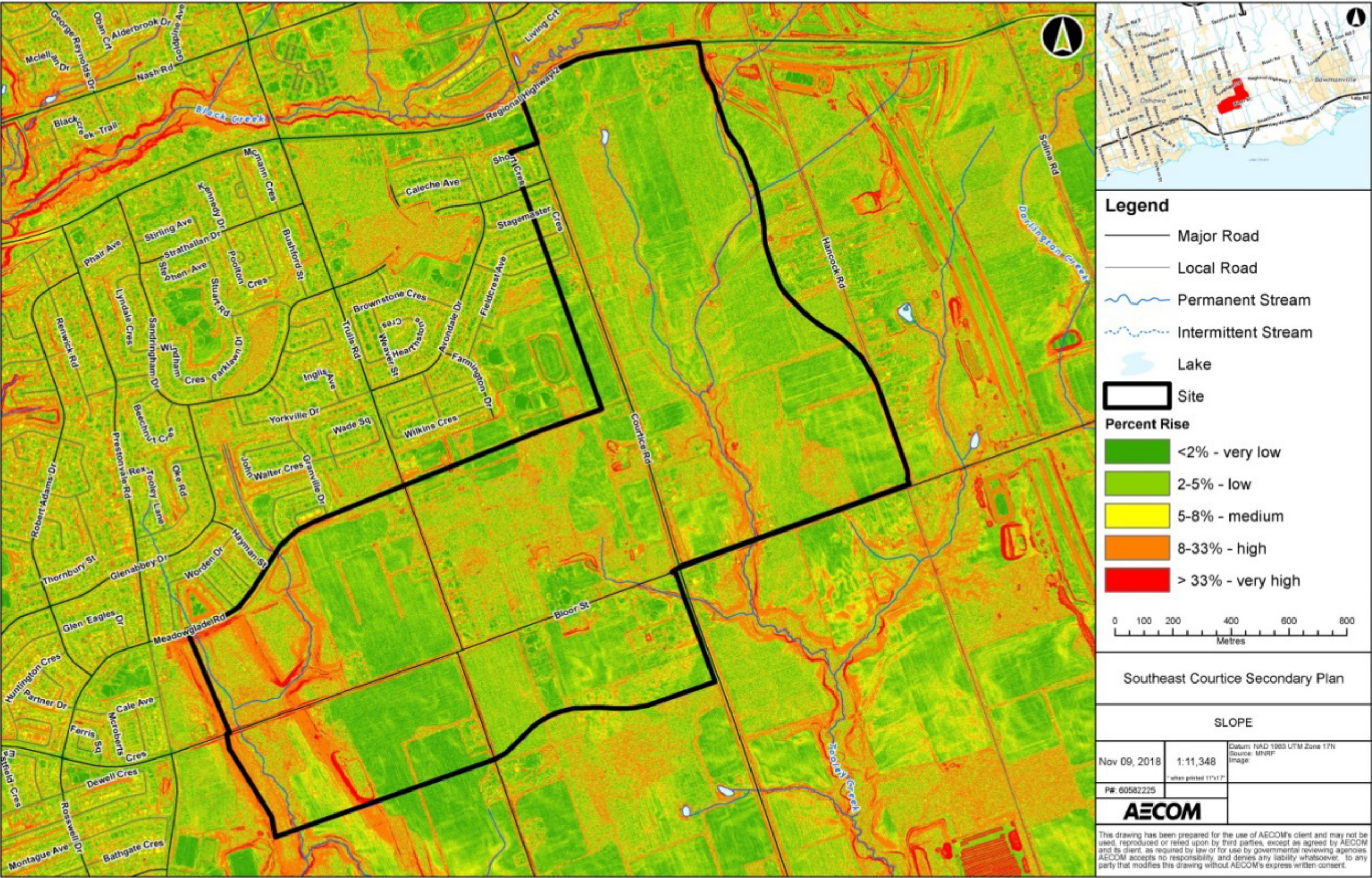


Figure F-5: Vegetation Communities (Source SWS Report)

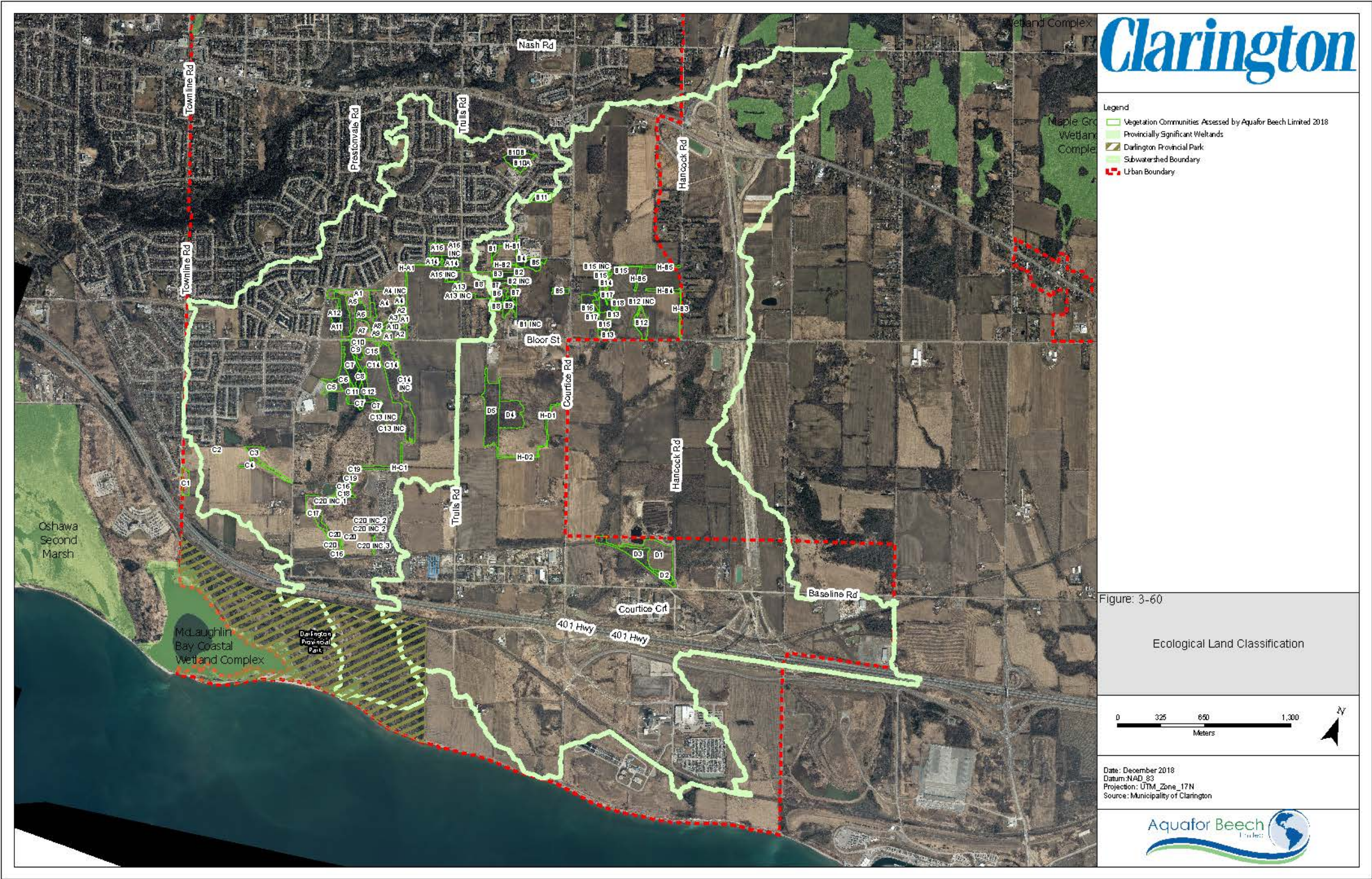
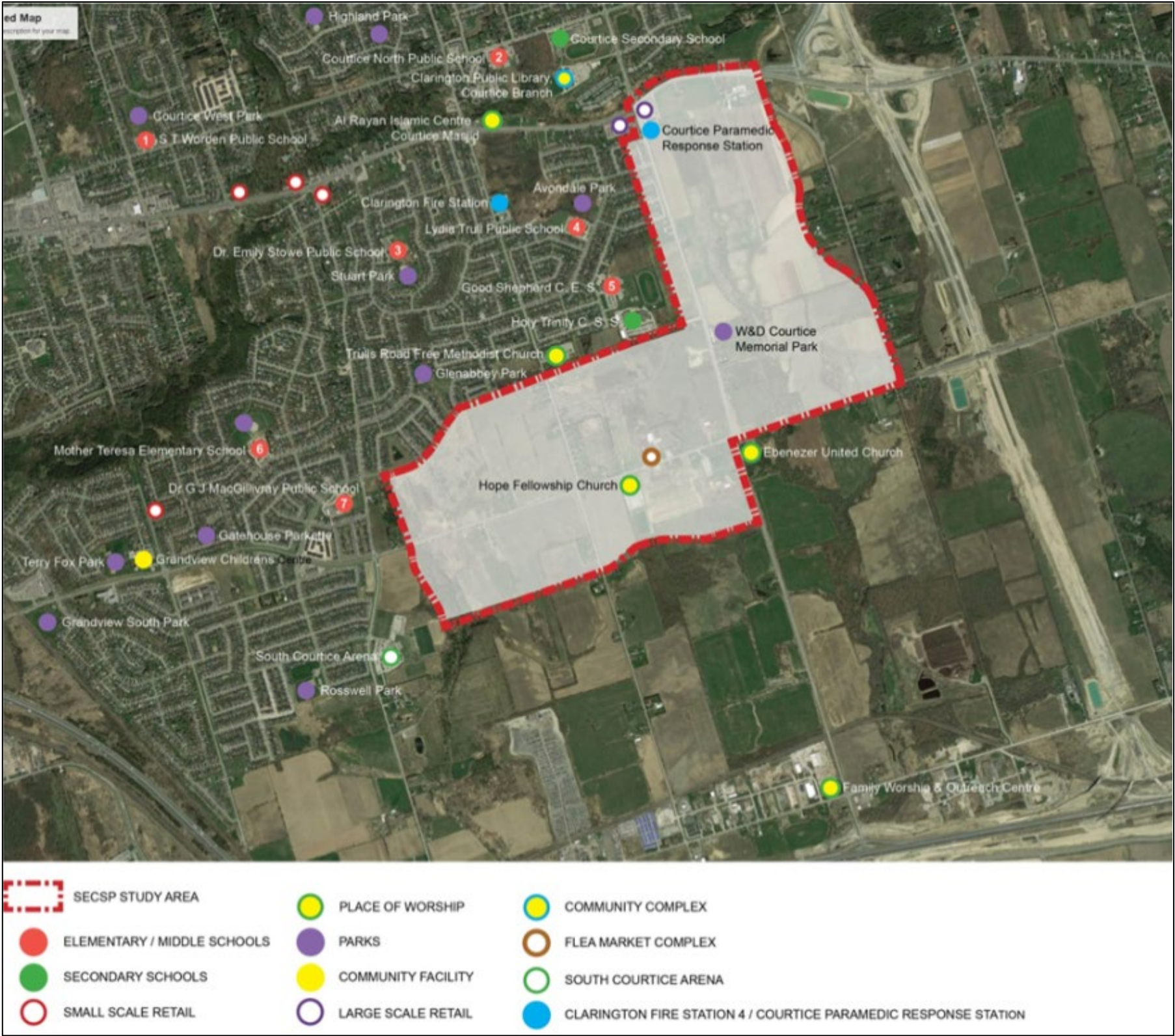


Figure F-6: Existing Public Amenities



F.4.3 Landscape Amenities and Cultural Features

The site and its surrounding have several existing community amenities and places of interest including places of worship, schools and retail services, parks, and community centres (). Additional amenities required (specifically schools and retail services) will be assessed through other background reports and new facility locations will be recommended where appropriate as part of the community design process.

F.4.4 Views and Vistas

The subject lands do not present bold vantage points due to the lack of significant gradation within the study area. Significant views to the Natural Heritage areas and existing prominent cultural amenities will be protected and enhanced.

F.5 Policy Direction

Several high-level policy and guideline documents provide rationale and benchmarks for landscape and amenity provision within the study area.

F.5.1.1 Provincial Policy Statement (2020)

Ontario's Provincial Policy Statement (PPS) provides provincial policy direction related to land use planning and development. It provides a framework for comprehensive, integrated, place-based planning to achieve the goal of strong communities, a clean, healthy environment and long-term economic growth. Specific policies within the PPS as they relate to the landscape development within the study area include:

- Promoting healthy active communities by facilitating active transportation and access to recreation, parks and open spaces
- Protection of natural features and restricts areas of development and site alteration
- Establishing restrictions on development near natural hazard areas (i.e., floodways)

F.5.1.2 A Place to Grow: Growth Plan for the Greater Golden Horseshoe (2019)

A Place to Grow: Growth Plan for the Greater Golden Horseshoe (GGH) 2019 provides a framework for growth management and environmental protection of the GGH area through to 2041, furthering the policy direction on the protection of natural heritage features, sensitive hydrological features and landforms.

F.5.1.3 Durham Regional Official Plan

The Regional Municipality of Durham (2017) provides the framework for growth and development in the Region. Key policies relevant to the Southeast Courtice Secondary plan include the development of urban areas to support a pedestrian-oriented urban environment

promoting social interaction, culture and art; promoting the enhancement of the visual amenities of the urban environment, establishing by-laws to enact environmental, aesthetic, urban design and controls on signs and outdoor lighting; identify attractive vistas and views worth protecting, as well as unattractive views requiring screening, landscaping or upgrading; plant native trees as visual barriers and develop design solutions for the attenuation of excessive noise levels

F.5.1.4 Clarington Official Plan (2018)

The Clarington Official Plan (OP) is the municipality's primary planning document designed to manage growth and development of the community to the year 2031. Policy direction as it relates to parks and open space include;

- Environmental Protection Areas and their ecological functions are to be preserved and protected; encourage the protection of natural linkages where feasible.
- Protection and restoration of urban forests to address climate change;
- Incorporate the recommendation of the subwatershed study prior to development and site alteration;
- Create an interconnected system of community amenities of parks, schools, facilities and entertainment zones linked by open spaces, natural areas and trails.
- Parkland/ capita is 1.8 ha/1,000 people. Targets for specific park development are outlined in **Table F-1**. For residential development, redevelopment or plans of subdivision providing for low, medium and/or high density uses, conveyance or dedication shall be either equal to 5% of the land proposed for development/ redevelopment/ subdivision or 1 hectare per 300 dwelling units, whichever is greater;
- Establish an integrated trail network to include primary trails (multi-use trails) and secondary trails (provide access to natural areas);
- Enhance the public realm, promote active transportation networks and establish walkable, transit supportive Corridors through high quality streetscaping & built form;
- Manage development impacts on watercourses and promote green infrastructure measures including low impact developments.

Table F-1: Parkland per Capita

Park Type	Target
Community Park	1.0 ha per 1,000 persons (combined with Municipal Wide Parks) Each community park shall be 6-12 ha
Neighbourhood Park	0.8 ha per 1,000 persons (combined with parkettes and squares) Each neighbourhood park shall be 1.5-3 ha
Parkettes	0.8 ha per 1,000 persons (combined with neighbourhood parks and squares) Each Parkette shall be 0.5-1.0 ha
Public Squares	0.8 ha per 1,000 persons (combined with neighbourhood parks and parkettes) Each Public Square shall be up to 1.0 ha

F.5.2 Priority Green - Green Development Framework

PGGDF provides a set of development criteria to be used for evaluating the environmental sustainability of new developments. Key policy direction as it relates to landscape and amenity within the SECSP include:

- Design residential areas to be within a maximum of 800 m walking distance of at least three of the following existing or planned amenities: School, community/cultural facility; recreation facilities including parks; library; retail/convenience commercial use; pharmacy/medical facility; institutional use (daycare).
- Provide safe and direct routes for pedestrians to transit, commercial areas, community facilities and parks that encourage use of active transportation modes.
- Provide a connected system of parks and open spaces through trail systems, sidewalks, and pedestrian links.
- Establish a connected pedestrian and cycling network that is integrated with the Municipality's trail system and existing or planned public transit routes.
- Protect the Natural Heritage System, ensure connectivity between natural heritage features, maintaining and where possible improving or restoring corridor function.
- Maintain views and vistas of visible landmarks, including Natural Heritage System features, where possible.
- Integrate natural heritage features into the public green space and parks systems (i.e., by locating public spaces adjacent to natural features) and the Municipality's trail system, where appropriate.
- Distribute parks throughout the Plan Area for accessibility to residents within a 400 m walking radius.
- Maximize retention and infiltration of stormwater with minimum negative impact on natural wetlands, waterbodies, groundwater and natural hydrological systems;
- Stormwater management facilities shall be designed as landscape amenities in addition to performing their functional requirements. This should include integrating recreational amenities with stormwater management facilities (e.g., loop trail, around ponds, establish viewpoints, interpretive signage), where safe to do so.
- Techniques to maximize energy efficiency and water conservation should be integrated into the design of streetscapes, parks and other outdoor public spaces (e.g., native / drought tolerant landscaping; LED street lighting; shade plantings and structures; rain gardens).
- Road design / orientation should support subdivision and site plan design that maximizes passive solar energy opportunities. Identified passive solar gain opportunities for street/lot orientation to be described in the Plan.

F.6 Opportunities/Constraints & Related KPIs

In keeping with the direction provided through existing policy, landscape-related opportunities and constraints provide a structural framework that ensures environmental protection, while enhancing opportunities for passive recreation and placemaking. Opportunities and constraints can be summarized as follows:

- Community design opportunities to respond to natural and cultural heritage constraints and utilize these elements as assets for placemaking and community resilience.
- Social integration and active recreation opportunities to restore and enhance natural heritage features through low impact passive recreational facilities including board walks in a naturalised setting, education trails and opportunities for outdoor activities such as walking, biking, cross-country skiing or swimming.
- Connectivity opportunities to develop a circulation network that integrates trails, natural features, stormwater management facilities, open spaces and parks and the road system – sidewalks and bicycle paths – to minimize environmental impacts achieve a more complete network.
- Opportunity to create a pedestrian friendly, safe walkable neighbourhood with at least three community amenities (i.e., schools, community/cultural facilities; recreation facilities; library; retail/convenience commercial uses; pharmacy/medical facilities; institutional uses) within a maximum walking radius of 800 m. Parks and accessible natural open spaces should be located within 400 m of the all residents.
- The landscape framework should (where possible) maintain existing trees and significant vegetation (outside of protected woodlots) as well as identify an enhanced system of tree planting to offset or reduce any losses. Trees could be planted to promote urban beautification, reduce noise pollution, improving air quality and to increase the overall tree canopy. Where feasible, strengthening linkages for the natural habitat and wildlife will be a primary consideration.
- Improve Connectivity of the NHS through Development of Linkages and encourage the implementation of restoration and enhancement projects in areas recommended by the SWS
- Restore Vegetation Protection Zones in Key Areas with native vegetation so that eventually they may become an extension of the habitat area they were designated to protect; and
- Conserve or Mitigate Impacts to Regionally Rare and Uncommon Plants, integrate existing specimen trees with future landscaping, plant native wildflowers to support native insects and maintain or enhance riparian planting along protected HDFs

The above opportunities, constraints were considered in the development of the landuse alternatives in Phase 2 with options exploring opportunities to limit development in sensitive areas, maximise habitat linkages, enhance interconnectivity through the use of active

transportation routes (bike paths, trails), integrates parks & storm ponds to increase developable lands while maximizing natural area retention and to create an interconnected system of open spaces parks and open space to support the recreation needs of the community. Efficient layouts and strategies were recognised using the SSIM model and the predetermined Evaluation Criteria and further refined to inform the preferred plan.

The preferred plan recognises the landscape as a vital component of the community and focuses on the creation of a public realm with a strong sense of place and community identity. Landmark nodes and gateways were incorporated to lend to wayfinding and create a sense of ownership among the residents. Regional arterials are proposed as multi-ways to improve permeability, enhance the streetscape and create a boulevard character. Parkland dedication was met and are proposed to be as integrated landscapes supporting stormwater management ponds, swales and rain gardens in addition to programmed space for active recreation. Low Impact Development (LID) and preserving or enhancing habitat linkages is encouraged. Through further study, should areas of moderate environmental constraint be found not suited to development, this scheme encourages the development of a naturalised community amenity such as an arboretum or a wetland park, that will not only provide opportunities within the community for education and social interaction, but could improve the natural ecosystem over time.