

Brooklin Expansion Area

Phase 2 Whitby Official Plan Review
Background and Land Use Alternatives Report



November 2024

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Appendix A –Natural Heritage Review Brooklin Expansion Area

Appendix B Details of Cultural Heritage Sites

1 Introduction



1.1 What is an Official Plan?

An Official Plan is a document that sets out a vision and policies to guide the growth and development of a municipality over the long term. At a high level, an Official Plan establishes the structure of a community and what type of land uses are permitted in different areas, including how much, where and what type of growth and development will occur. It provides policy direction on a wide range of topics relevant to the function and planning of a community, including parks, servicing, transportation, protection of lands for agricultural uses, protection of natural areas, urban design and sustainability, as well as policies related to the implementation of the Official Plan.

1.2 Why Undertake an Official Plan Review?

Under the requirements of the Planning Act of Ontario, every municipality is required to review and update their Official Plan every 5 years. Since the Official Plan for the Town of Whitby was last updated in 2018, the Town is required to undertake a review to update their Official Plan. Part of that process will include updates to the Official Plan to ensure consistency and conformity with Provincial legislation and policies, as well as Regional policies, specifically the adopted Region of Durham Official Plan (Envision Durham).

Envision Durham recently introduced a number of changes that are required to be reflected into the Town of Whitby's Official Plan, including the delineation of and establishment of policies for a Protected Major Transit Station Area (MTSA) around the Whitby GO Station and the identification of areas where growth is to occur. Envision Durham also introduced new lands primarily around Brooklin for Urban Boundary expansion, which is the subject of this Report. Envision Durham was approved with modifications by the Minister of Municipal Affairs and Housing in September 2024.

While the Official Plan Review is being undertaken as one comprehensive project, the updates to the Town of Whitby's Official Plan will happen via four Focus Areas, to be implemented as four separate Official Plan Amendments (OPAs):

Focus Area 1: Updates related to the Protected Major Transit Station Area (PMTSA) located in and around the Whitby GO Station, as identified in Envision Durham. Protected Major Transit Station Areas are areas planned to accommodate greater densities around a major transit station, such as a GO train station.

Focus Area 2: Updates related to Strategic Growth Areas and other Nodes and Corridors.

Focus Area 3 (This Report): Updates related to the expansion of the Brooklin Urban Area as set out in Envision Durham.

Focus Area 4: All other updates required to confirm to upper-level policy and legislation.

The locations of where these four OPA Focus Areas will apply is identified on **Figure 1**.



Figure 1: OPA Focus Areas

1.3 Purpose of this Report

The purpose of this Report is to explore matters to be considered in the planning for the Brooklin Expansion Area and describes two potential land use and transportation alternatives along with evaluation criteria to be used in the next phase of the Study. Focus Areas 1, 2 and 4 are discussed in detail under separate reports.

This Report is outlined as follows:

Section 1 is the introduction.

Section 2 highlights Envision Durham policies for the 2051 Urban Expansion Areas and designations for the Brooklin Urban Expansion Area.

Section 3 summarizes technical background information to inform land use decisions for the Brooklin Urban Expansion Area.

Section 4 presents and describes the land use alternatives regarding the Brooklin Urban Expansion Area.

Section 5 presents the evaluation criteria that will be used to evaluate the two Brooklin Urban Expansion Area land use alternatives in future stages of this project.

Section 6 provides next steps

1.4 Project Schedule

The project schedule for all Focus Area OPAs is shown below.



2 Envision Durham



Envision Durham is the Region Official Plan (ROP) which was adopted by Region of Peel Council in May 2023 and approved by the Minister of Municipal Affairs and Housing in September 2024.

Envision Durham brought new lands into the Whitby Settlement Area or urban boundary around the Brooklin community as shown in **Figure 2**. These additional areas are intended to accommodate future growth to 2051 and will need to be designated for urban land uses through the Whitby Official Plan update.

2.1 2051 Urban Expansion Areas

Section 5.7 of Envision Durham sets out policies for Urban Expansion Areas, with the intent to ensure future decisions on land use, densities, development standards, impacts, infrastructure, servicing and financing are informed through comprehensive study, consultation and evaluation. Area municipalities are required to undertake detailed planning for lands within the 2051 Urban Expansion Areas, primarily through the preparation of secondary plans.

2.2 Designations in Envision Durham

As shown in **Figure 2**, Envision Durham designates a mix of Community Area and Employment Area, as well as Regional Corridor within the Brooklin Urban Expansion Area. **Table 1** below summarizes each area, its size and designation.

Table 1. Brooklin Expansion Areas by Size and Designation

Area	Approx. Size (ha)	Designation
A1	140	Community Area
A2	265	Employment Area with a Regional Corridor along Columbus Road.
B	170	Community Area with a Regional Corridor along Columbus Road
C	120	Community Area
D	20	Employment Areas
E	20	Employment Areas
F	7	Employment Areas and a Regional Corridor along Highway 7

Area	Approx. Size (ha)	Designation
G	4	Employment Areas
H	9	Employment Areas
I	50	Community Area, with a Regional Corridor along Columbus Road.

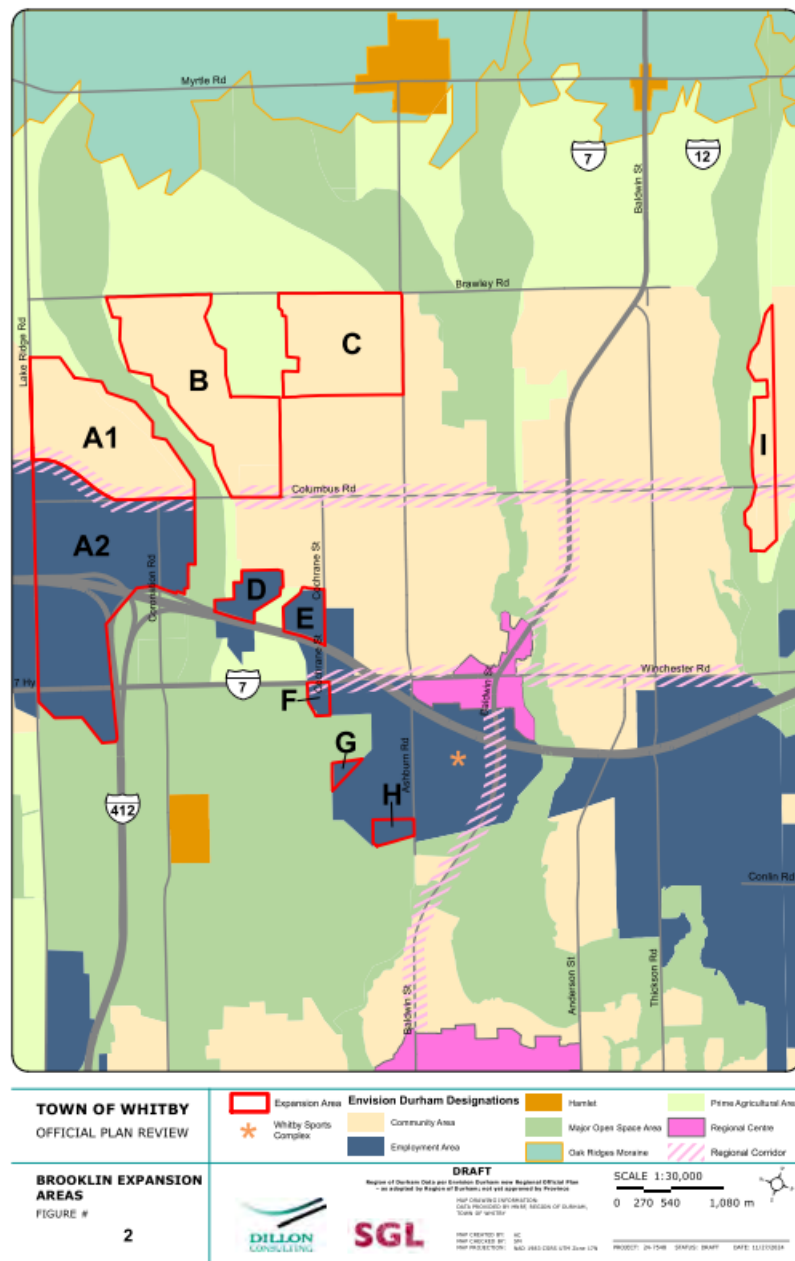


Figure 2: Brooklin Expansion Areas

3 Opportunities and Constraints



This section of this Report reviews opportunities and constraints for development of this Brooklin Urban Expansion Area that will inform the policies and land use designations applied to these new areas.

3.1 Existing Land Uses and Built Form

The following section discusses existing land uses within the Brooklin Urban Expansion Areas shown in **Figure 2** above.

Area A

Area A (Figure 3) is the largest of the expansion areas, at the eastern edge of Whitby. It is approximately 408 hectares in size. Highway 407 cuts east-west through **Area A** and Highway 412 is adjacent to its southeast portion. **Area A** is further divided into **Area A1** and **Area A2** as shown on **Figure 2** to align with the Community Area and Employment Area Official Plan Designations. **Area A1** is approximately 141.5 hectares and **Area A2** is approximately 267.6 hectares.

The majority of **Area A** appears to be cultivated land with limited natural areas, with the following exceptions found in **Area A2**:

- A carpool parking lot at the northwest intersection of Highway 412 and Highway 7/Winchester Road W.;
- Rural residential properties on the west side of Coronation Road between Columbus Road West and Highway 407;
- A stormwater management pond southwest of the Highway 407 and 412 intersection;
- Scattered properties containing farms or rural residences south of Highway 7/Winchester Road and west of Highway 412; and
- A landscaping business on the east side of Halls Road North.

Apart from natural areas and cultivated lands and rural residences, uses adjacent to **Area A** include:

- A Montessori school on the west side of Lakeridge Road, west of **Area A2**, south of Highway 7/Winchester Road;
- The Watson's Glen Golf Club to the west of **Area A1** and Lakeridge Links Golf Club to the north of **Area A1**; and
- A large farm containing livestock to the east of **Area A1**, north of Columbus.

In 2021, Whitby Council endorsed a property on the southeast quadrant of **Area A2** at Highway 407 and Lake Ridge Road for a new hospital. Lakeridge Health subsequently announced the site as being the preferred location for a new hospital to be located within Durham Region. This site is located within **Area A2** and shown on **Figure 3** with a green star. The Official Plan update will need to determine the total land area needed for the hospital and the appropriate land use designation.

Currently Schedule K identifies a Health Precinct Special Policy Area on the west side of Baldwin Street South, south of Highway 407. The existing policies¹ in the Whitby Official Plan related to the Health Precinct will be updated to reference, instead, the planned hospital site at the 407 and Lake Ridge Road.

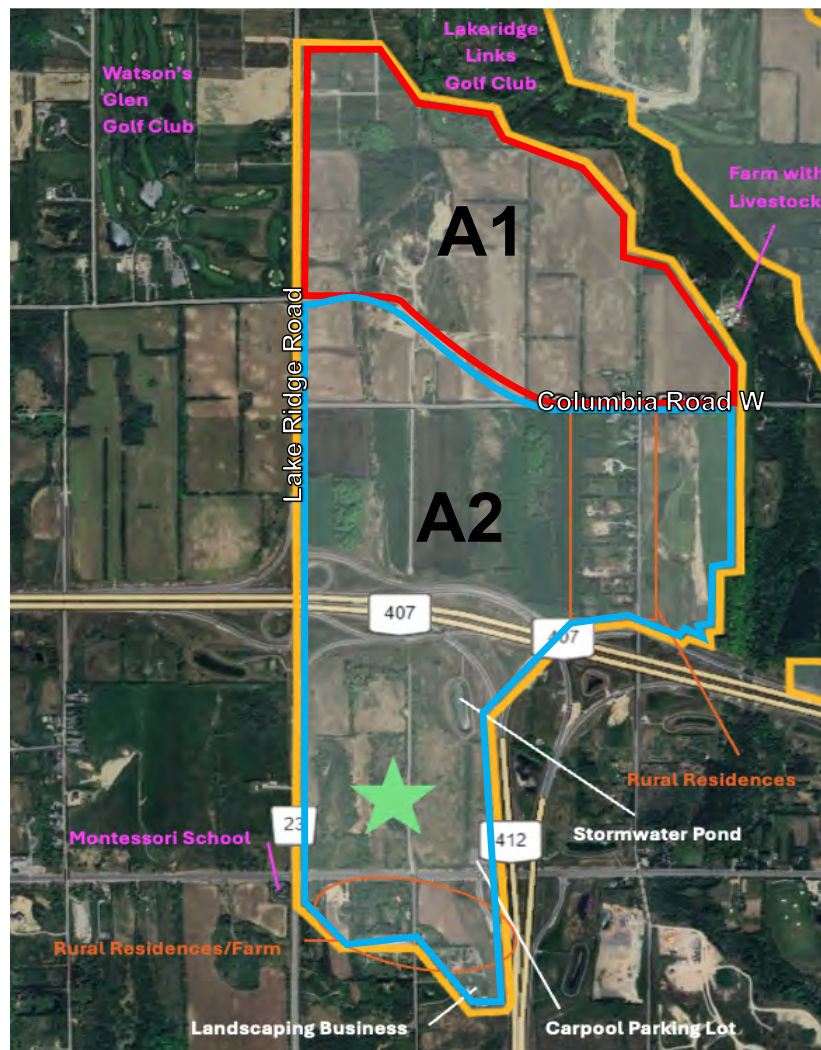


Figure 3: Area A

¹ Currently Section 4.7.3.2.7 of the Whitby Official Plan and Section 11.5.21 of the Brooklin Secondary Plan.

Area B

Area B (Figure 4) is the second largest of the expansion area pockets, approximately 170 hectares in size. Lakeridge Links Golf Club is located in the northwest part of Area B. An estate lot subdivision is currently being developed within the golf course. There are a number of rural residences on the east and west sides of Country Lane, north of Columbus Road W on large estate lots. The Spencer Community Centre is located at the northeast corner of Country Lane and Columbus Road West within the Greenbelt Plan. **Area B** also contains some cultivated lands.

Land uses abutting Area B include cultivated lands to the north, the existing Brooklin Secondary Plan to the south and south east and natural areas within the Greenbelt Plan, as well as rural residential properties.

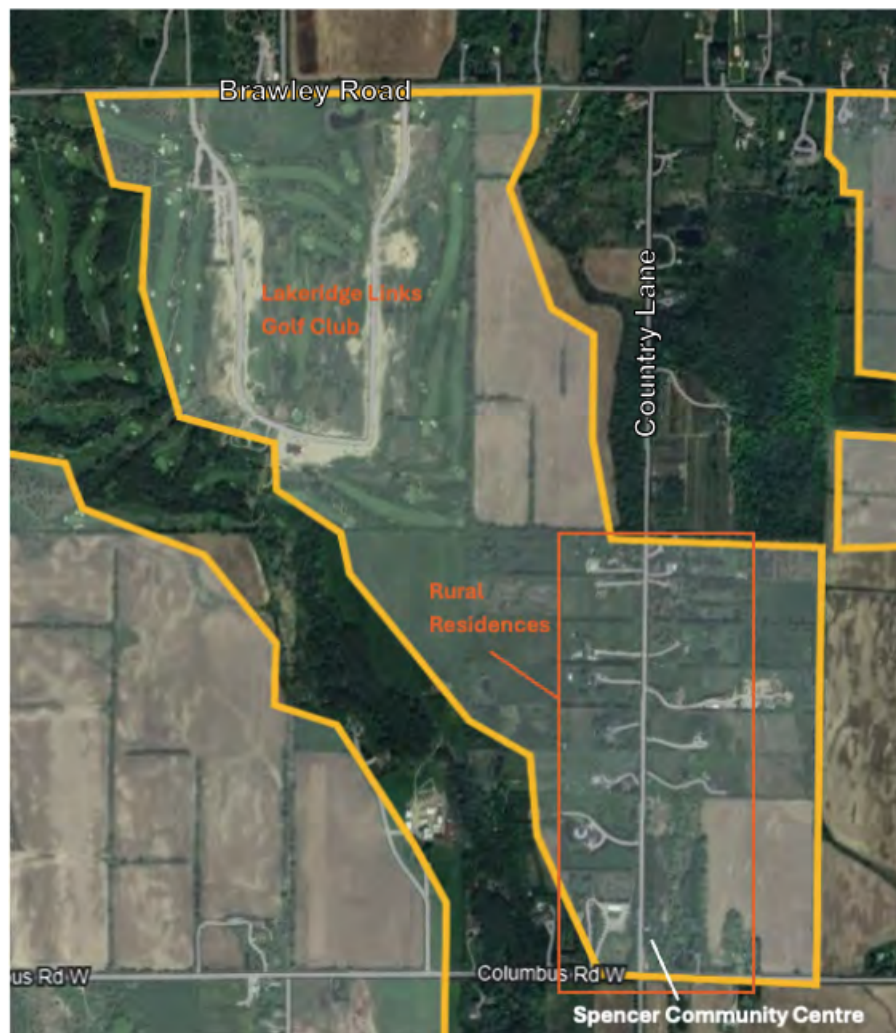


Figure 4: Area B

Area C

Area C (Figure 5), approximately 120 hectares in size, includes rural residential and cultivated farm properties, along Brawley Road W, Cochrane Street and Ashburn Road. Lands adjacent to **Areas C on the north side of Brawley Road** also include rural residential homes on large estate lots and farms properties including a livestock operation. The Brooklin Secondary Plan area is located to the south and east.

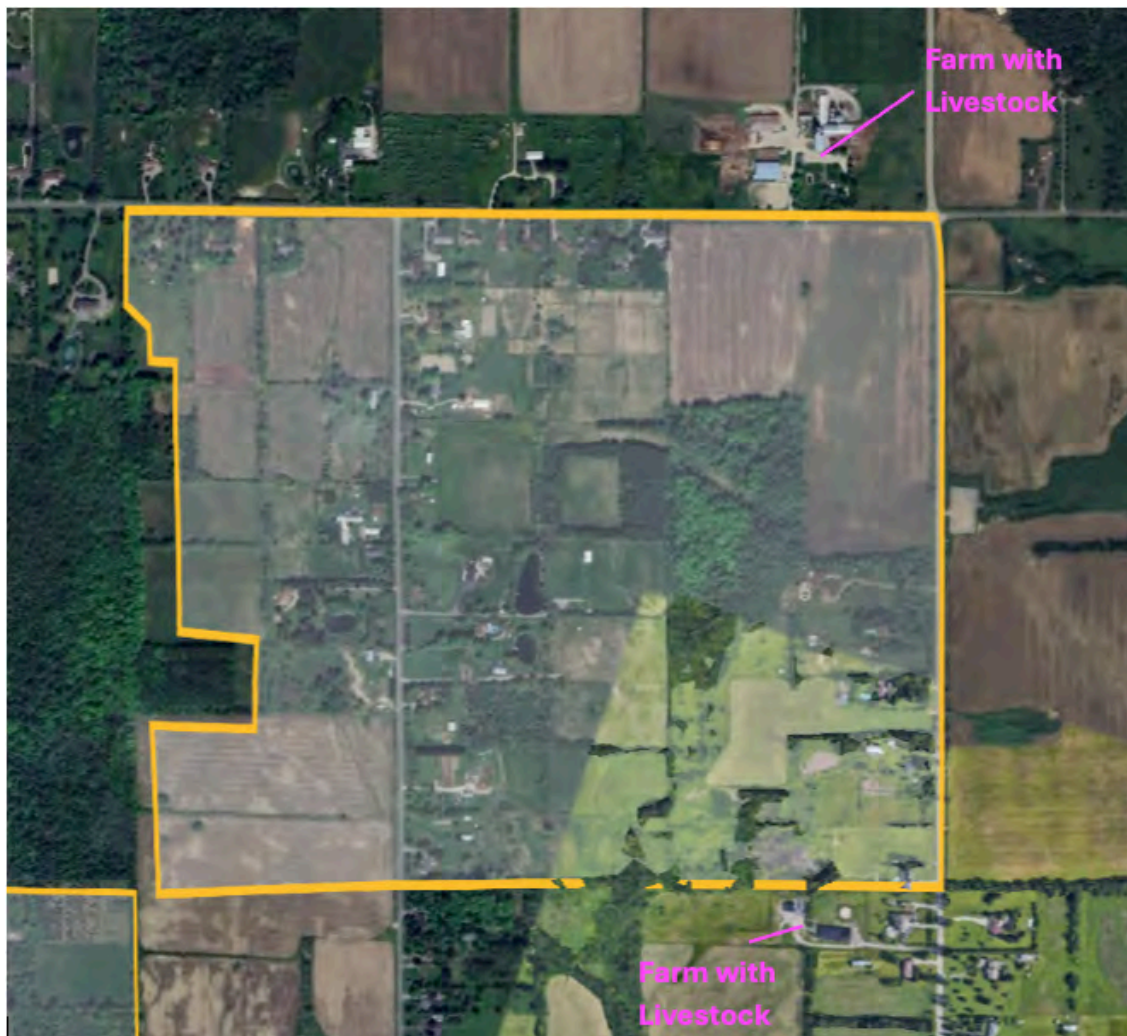


Figure 5: Area C

Area D

Area D (Figure 6), a little more than 20 hectares in size, four rural residences; two of which are related to farm operations. Adjacent, there are natural areas to the west of **Area D** within the Greenbelt Plan, the Brooklin Secondary Plan to the north and East and Highway 407 to the south.

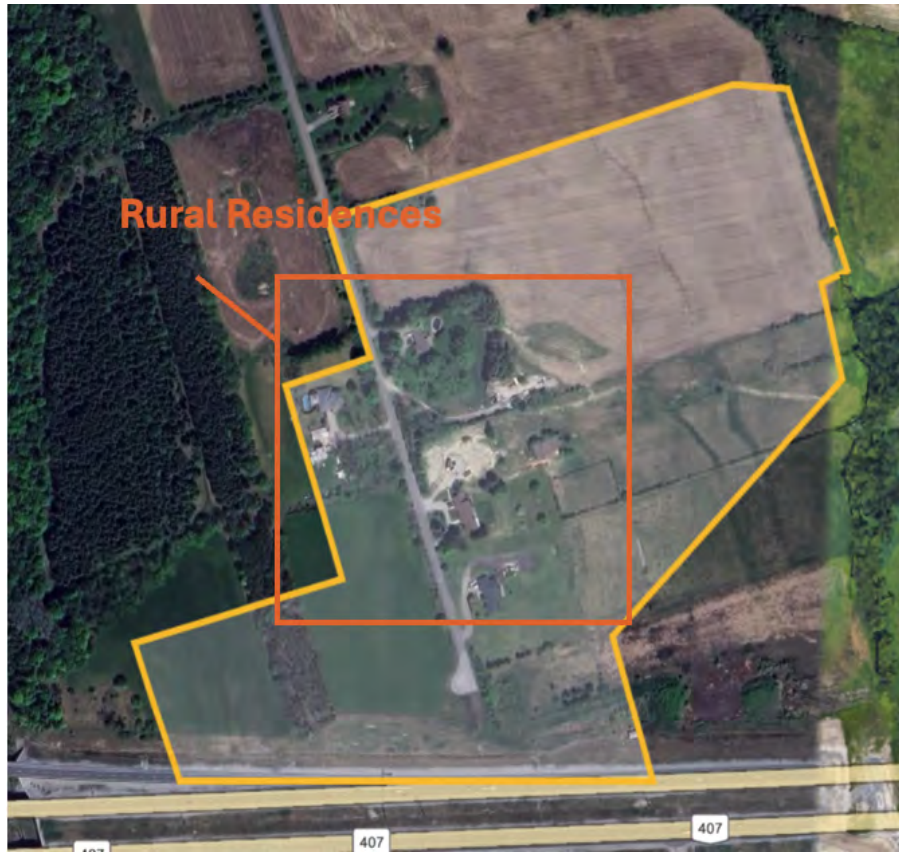


Figure 6: Area D

Area E

Area E (Figure 7), a little less than 20 hectares in size, includes a pond and cultivated farmlands. It abuts a stream corridor to the west and the Brooklin Secondary Plan to the north and east and Highway 407 to the south.

These lands are currently owned by the Town of Whitby and Province of Ontario.



Figure 7: Area E

Area F

Area F (Figure 8) is approximately 7 hectares in size and contains cultivated farmlands, with Cochrane Street on the east side. It is surrounded by the Greenbelt Plan to the west and south and the Brooklin Community Secondary Plan to the north and east. Area F was removed from the Greenbelt Plan Area in 2017, when the Greenbelt Plan was reviewed.



Figure 8: Area F

Area G

Area G (Figure 9) is approximately 4 hectares in size and located at the southern end of Cochrane Street. It contains cultivated farmlands. It is situated to the east of the North Whitby Off-leash Dog Park and the Heber Down Conservation Area, with additional cultivated farmlands within the Greenbelt Plan to the north and the Brooklin Secondary Plan to the east and south. Area G was removed from the Greenbelt Plan Area in 2017, when the Greenbelt Plan was reviewed.



Figure 9: Area G

Area H

Area H (Figure 10), approximately 9 hectares in size, includes a rural residence and cultivated farmlands. It abuts cultivated lands to the south, and the Brooklin Secondary Plan to the north, east and west. Area H was removed from the Greenbelt Plan Area in 2017, when the Greenbelt Plan was reviewed.



Figure 10: Area H

Area I

Area I (Figure 11), a little less than 50 hectares in size, contains mostly cultivated lands. There are three rural residences on the south side of Columbus Road. It abuts natural areas to the west within the Greenbelt Plan, and urban designated lands within Oshawa to the west. The Town of Whitby will need to coordinate planning with the City of Oshawa when planning this area.



Figure 11: Area I

3.2 Transportation Analysis

The Brooklin Urban Expansion Area has been analyzed to identify constraints and opportunities for developing a multi-modal transportation network that is connected and conducive to moving people and goods with varying mobility needs. The following constraints and opportunities have been identified, as shown on **Figure 12**.

Constraints:

Baldwin Street is a Provincial highway whose design does not align with the objectives of the Town for pedestrian-oriented downtown along Baldwin Street in Brooklin. Baldwin Street realignment at Thicksen Road shown in the Whitby Official Plan Schedule D – Transportation is continuing to be considered, even though the previous Highway 7/12 Alternative Route Environmental Assessment was canceled.

The current Official Plan shows a proposed Columbus Road West realignment at Lake Ridge Road to connect to 7th Concession Road in Pickering. This is the Town of Whitby's preliminary preferred alignment. A future EA is required to confirm the future alignment and design characteristics.

A proposed east/west collector in “Area C” south of Brawley Road between Cochrane Street and Ashburn Road (crossing 5 tributaries of Lynde Creek) is identified in the Whitby Official Plan Schedule D – Transportation based on previous planning and transportation work. More recent transportation work done for the Brooklin Secondary Plan and as part of the Brooklin North Major Roads EA has removed this east/west facility due to the environmental constraints. Future secondary plan work will need to confirm the need and location of this facility.

A proposed east/west collector north of Columbus Road just east of Cedarbrook Trail (crossing the pipeline corridor) is identified in the Whitby Official Plan Schedule D – Transportation. The Brooklin North Major Roads EA identifies a long-term need for this crossing and connection but defers it to a longer time frame. Future detailed work will need to also consider what is being contemplated in neighbouring municipalities.

Significant Natural Heritage Systems and Natural Hazards will make new road alignments and construction challenging within the urban expansion areas.

Opportunities:

Proposed realignment of Thickson Road and modifications to the connections / intersection of Brawley Road/Thickson Road/Baldwin Street are being reviewed including the potential for a roundabout.

Possible streetscape improvements (benches, bike racks, planters, sidewalk improvements, street trees, lighting, etc.) to Baldwin Street within the urban area. Proposed Columbus Road West realignment at Lake ridge Road to connect to 7th Concession Road or future planned infrastructure in Pickering.

Proposed new Highway 407 interchange at Cochrane Street.

Possible upgrade of Coronation Road to a Type B Arterial road between Des Newman Blvd (just north of Taunton Road) and Columbus Road.

Transportation connections will be considered through the Region's Transportation Master Plan exercise and require coordination with neighbouring municipalities.

Possible arterial road extension of Coronation Road from Columbus Road to Brawley Road.

Possible arterial extension of Carnwith Drive West (connection to Area A, D and E).

Potential arterial extension of Carnwith Drive East (connection to Area I) into Oshawa.

Proposed arterial extension / connection of Brawley Road to Howden Road (in Oshawa).

Proposed grade separated crossing of Garrard Road over Highway 407 and connection to Cachet Boulevard at Winchester Road.

Proposed upgrade of Garrard Road to a Type C Arterial between Cochrane Street (just north of Conlin Road) and Winchester Road.

Possible upgrade of Winchester Road to a Type A Arterial.

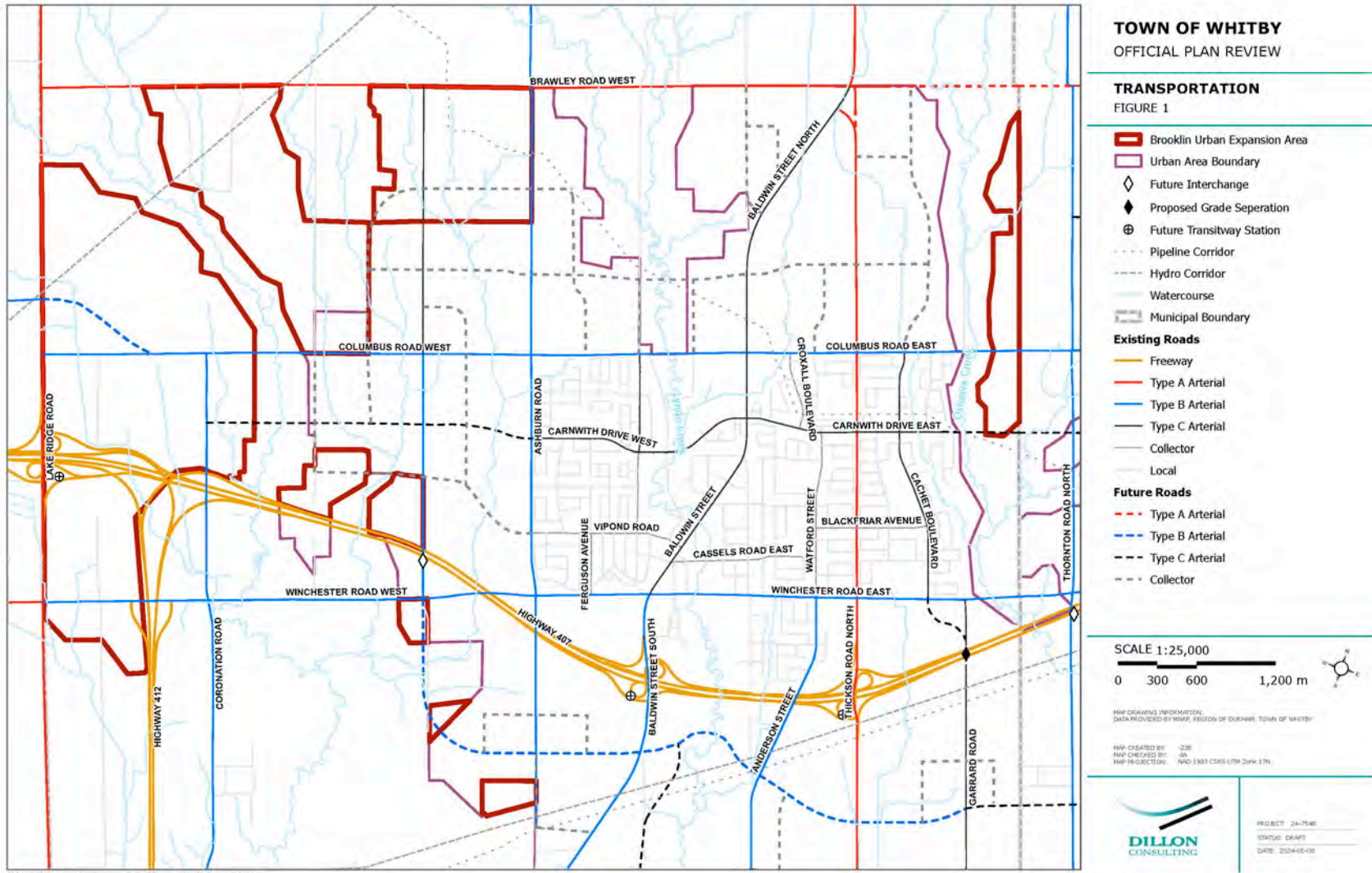


Figure 12: Transportation Constraints and Opportunities in the Brooklin Expansion Area

3.3 Servicing Analysis

As part of the Servicing Analysis, consultation with Region staff was conducted to identify opportunities and constraints as they related to water and wastewater servicing for the Brooklin Expansion Area. Although detailed servicing work is not available at this time, the Region has noted that it is expected that the Brooklin Expansion Area will be serviceable and that logical extension of servicing from the existing urban area will be provided. Once Envision Durham is approved, the Region will initiate a new master servicing plan and a new DC Background Study to identify and plan for required municipal servicing.

3.4 Natural Heritage Analysis

Dillon undertook a desktop review of policies and mapping of natural heritage features and the natural heritage system (NHS) within the Brooklin Expansion Area. This review can be found in a technical memo in **Appendix A**. This memo does not provide recommendations on new policy, but rather reviews the policy in place to identify the key natural heritage considerations needed when planning for growth within Brooklin Expansion Area. Overall, the result of this memo shows that the natural heritage system within the Town's OP are generally up to date and would be applicable to the Brooklin Expansion Area.

A review of available CLOCA, MNRF LIO data and NHIC mapping (as shown on **Figure 13**) identified that many watercourses transverse the Brooklin Expansion Area parcels; the related CLOCA regulation limits associated with these features can also be seen on this figure. Furthermore, pockets of woodland and open water features are also found in some of the Brooklin Expansion Area parcels; no Provincially Significant Wetlands or Areas of Natural and Scientific Interest (ANSI) were identified. Another note of interest is that the MNRF's NHS layer does not overlap with any of the areas.

The current Whitby Official Plan natural heritage policies are generally suitable for the Brooklin Urban Expansion Area. However, recent changes to the Ontario Wetland Evaluation System (OWES; 2022) specify that wetland identification and protection is to be done in consultation with the applicable Municipality rather than the MNRF and/or the Conservation Authority (except when within regulated areas). Furthermore, through the OWES update, "locally significant wetlands" and "wetland complexing" are no longer considered. Therefore, policies will need to be reviewed and changes considered.

Furthermore, the references to certain agencies that are to be consulted during the development process are now outdated. For example, the Ministry of Natural Resources and Forestry does not regulate drainage features and is not required to be consulted for these feature removals.

The technical memo in **Appendix A** also identifies ROP policies that could be considered when developing OP policies for Brooklin Expansion Area.

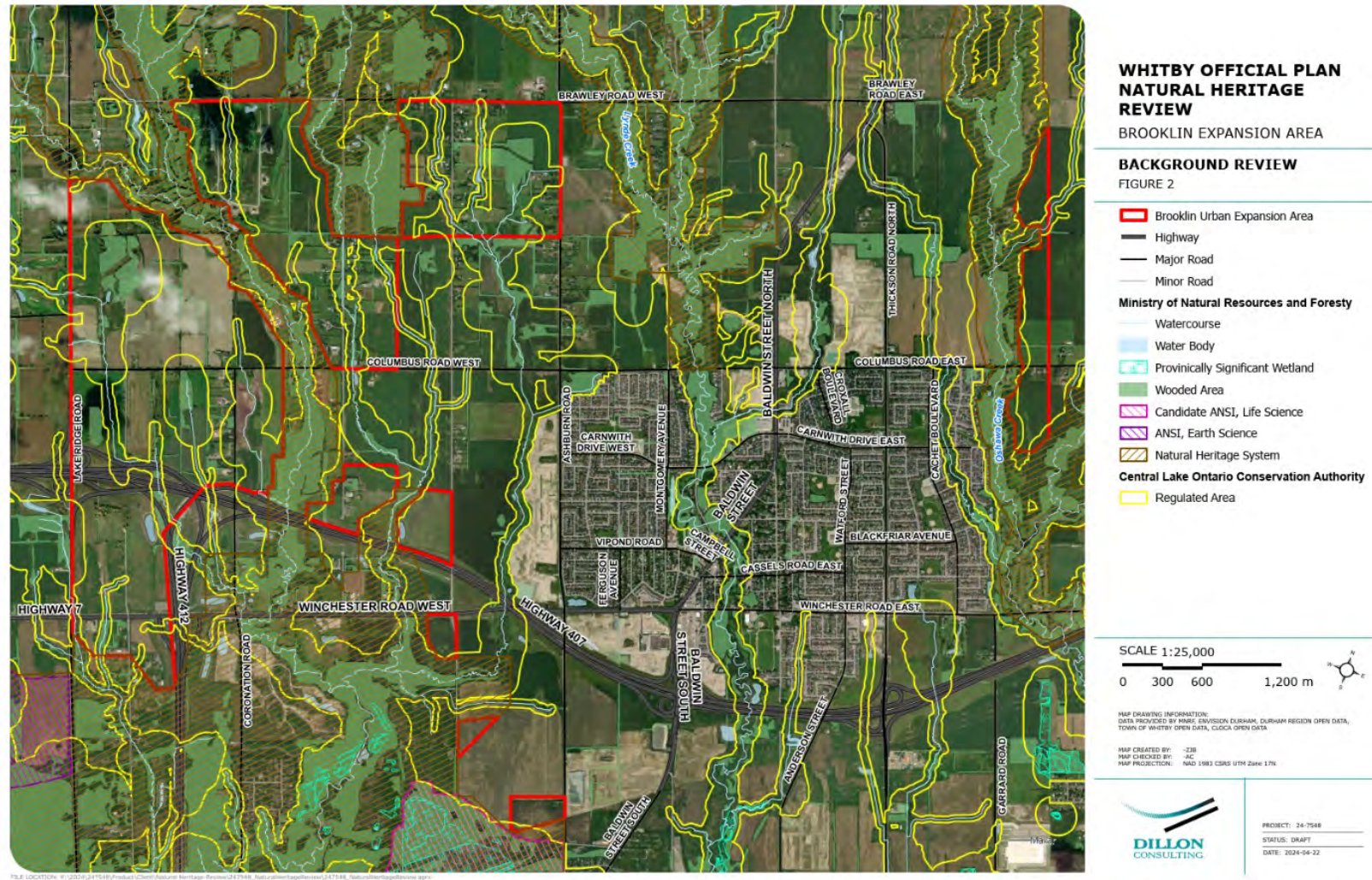


Figure 13: CLOCA, MNRF LIO data and NHIC mapping in Brooklin Expansion Area

3.5 Cultural Heritage

Figure 14 shows cultural heritage sites that have been identified in and around the Expansion Area from previous studies. Yellow pins were identified by Unterman McPhail Associates in their Cultural Heritage Technical Report prepared in 2019. Details of the sites, are provided in **Appendix B**.

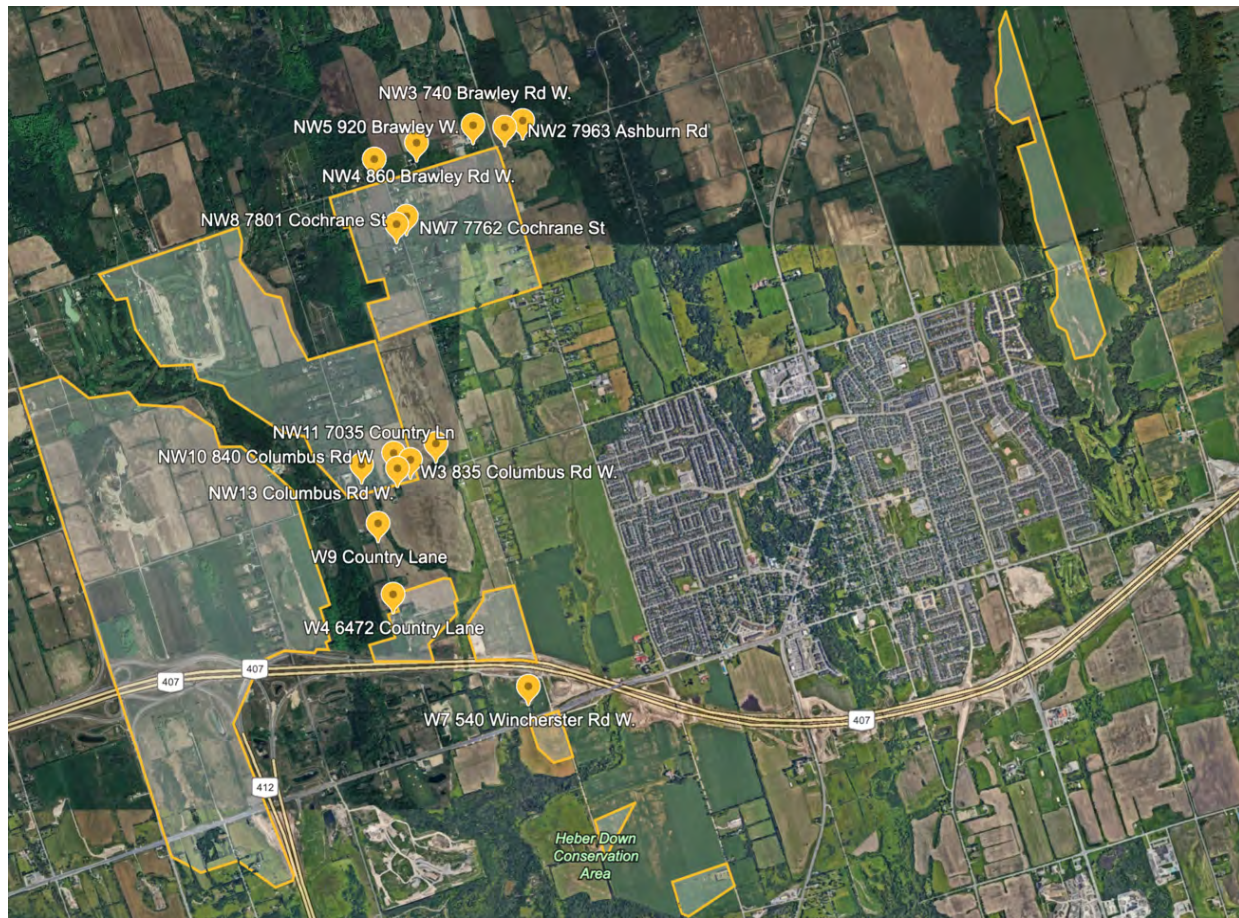


Figure 14: Cultural Heritage Sites within and Near the Brooklin Expansion Area

4 Land Use Alternatives



Two land use alternatives have been prepared for the Brooklin Expansion Area as shown in **Figure 15** and **16**. The alternatives use the designation categories from the Brooklin Secondary Plan. This chapter explains the common elements found in both alternatives and then describes transportation network and land use arrangement proposed in each of the two alternatives.

4.1 Common Elements and Baseline Assumptions

The common elements and baseline assumptions explained in this section were considered in the development of the Land Use Alternatives and are consistent between the two alternatives.

Designated Greenfield Area Density

Both of the Land Use Alternatives plan for a minimum gross density of 64 residents and jobs per hectare which exceeds the minimum target in Envision Durham, with similar overall densities provided in each of the land use designations.

Corridors

Both Land Use Alternatives reflect the delineation of a Regional Corridor/Intensification Corridor along Columbus Road, per Envision Durham and the Whitby Official Plan, respectively.

Regional Corridors are to provide for residential and mixed-use development with a wide array of uses, to achieve higher densities and transit-oriented development.

The proposed land uses along the Columbus Road corridor are approximately 100 metres deep in each of the Land Use Alternatives.

Land Use: Envision Durham

As per Envision Durham, the Brooklin Urban Expansion Area is planned generally to be a residential community north of Columbus Road and planned for employment south of it.

Abutting Land Uses: Brooklin Community Secondary Plan Area

Both Land Use Alternatives show the planned land use framework and road network in the abutting Brooklin Community Secondary Plan.

Roads

Existing roads and roads currently planned are shown in the two Land Use Alternatives. Proposed new arterial and collector roads are illustrated with different line work in the Land Use Alternatives.

Natural Heritage System

The Natural Heritage System, primarily made up of the natural features and their associated buffers, are the same in the two Land Use Alternatives, based on the existing delineation of features in the current Official Plan. In total, 135 hectares of the Brooklin Expansion Area are within the Natural Heritage System. No development, with the exception of trails, erosion control or stormwater management features or similar features, would be permitted in these areas.

Servicing

Both Land Use Alternatives will be required to be serviced to provide sufficient water operating pressures and fire flows, as well as sufficient sanitary network to accommodate future development. Such elements are not evaluated in the criteria.

Whitby Hospital

Both Land Use Alternatives identify the proposed hospital location southwest of the Highway 407/412 interchange.

Existing Estate Residential

Both Land Use Alternatives show the estate residential development currently being built within the Lakeridge Links Golf Club.

4.2 Land Use Categories

The land uses in the two Land Use Alternatives are based on the designations in the existing Brooklin Secondary Plan of the Whitby Official Plan.

Low Density Residential

The Low Density Residential areas would permit single detached dwellings, semi-detached dwellings, townhouses and other similar built forms with a minimum density of 25 units per hectare (uph) and maximum density of 35 uph. The maximum height in these areas would be 3 storeys.



Example of Low Density

Medium Density Residential

The Medium Density Residential areas would permit a range of medium density house forms, such as fourplexes, townhouses in multiple forms (traditional, stacked, back to back etc.), as well as low rise apartment buildings. The designation would have a minimum density for these areas of 30 uph and maximum density is 65 net uph, except a minimum density of 50 uph and a maximum density of 80 uph would apply along Columbus Road. The maximum height in these areas would be 4 storeys.

Both Land Use Alternatives provide approximately 81 hectares of Medium Density Residential, in different locations.



Example of Medium Density

High Density Residential

The High Density Residential areas would permit a range of townhouse types, apartments and other forms of multiple dwellings, with a density range of 65 up to 135 uph, though densities may be greater along Columbus Road.



Example of High Density

Both Land Use Alternatives provide approximately 12 hectares of High Density Residential, in different locations.

Mixed Use

The mixed use areas shall permit a combination of residential and non-residential uses and plan for densities of 60 to 85 uph. Both Land Use Alternatives provide approximately 11-12 hectares of Mixed use development, in different locations.

Local Commercial

Local Commercial is proposed in each Land Use Alternative. It is intended to provide a central location for retail and service uses meeting local residents' daily needs. The location provides the opportunity for residents to walk or bike to the node for daily needs and helps to create a more sustainable plan. Both Alternatives include Local Commercial areas totaling 7 hectares in different locations.

Table 2 summarises the density information provided above, by land use.

Table 2: Summary of Land Use Categories

	Height (Storeys)	Min. Density (uph)	Max. Density (uph)	Built Forms
Low Density Residential	Max. 3 storeys	25	35	- single detached dwellings - semi-detached dwellings - townhouses - other similar built forms
Medium Density Residential	Max. 4 storeys	30 except 50 along Columbus Road	65 except 80 along Columbus Road	- fourplexes - townhouses (traditional, stacked, back to back) - low rise apartment buildings - other similar built forms
High Density Residential	To be determined	65	135	- apartments - range of townhouse - other forms of multiple dwellings
Mixed Use	To be determined	60	85	- residential uses - non-residential uses

Schools

Based on initial population assumptions, there is estimated to be a need for 4 elementary schools with 3 public elementary schools and 1 separate elementary school, as well as need for 1 public secondary school. The school site sizes will be 3.2 hectares for public elementary schools, 2.4 hectares for the separate elementary school, and 6.1 hectares for the public secondary school.

Note, the school needs assumptions are preliminary and based on a high level analysis for the purposes of the preparation of and evaluation of the Alternatives. During the preparation of the Preferred Alternative, later in this Study, a more detailed analysis will be undertaken based on the final land use mix/densities. As such, the total number of and breakdown of school types may differ between the Alternatives presented in this Report and those in the final Preferred Plan prepared during future phases of this study.

Parks

Local Parks are intended to provide both active as well as passive recreational amenities in order to serve the needs of a neighbourhood. Facilities may include “sports fields, landscaped areas, walkways, ball courts, playgrounds, community gardens and similar facilities”. In both Land Use Alternatives, a number of Local Parks are contemplated with each park being approximately 1.5 hectares in size.

District Parks serve the broader community or a number of neighborhoods by providing “primarily active recreation areas with illuminated major sports fields and facilities, recreation/community centres, ball courts, playgrounds, community gardens, landscaped and passive recreation areas, and parking areas.” In the land use alternatives, one District Park is planned and will be approximately 4 hectares.

The Land Use Alternatives provide the same overall quantum of park land to be developed, totaling 17.5 hectares, while the location of park differs by Land Use Alternative, as described further under each Land Use Alternative.

Note, the parkland needs assumptions are preliminary and based on a high level analysis for the purposes of the preparation of and evaluation of the Alternatives. During the preparation of the Preferred Alternative, later in this Study, a more detailed analysis will be undertaken based on the final land use mix/densities and other parks planning considerations set out by the Town Parks and Recreation Master Plan. As such, the total land area, breakdown, number and nomenclature of parks could differ between the Alternatives presented in this Report and those in the final proposed Official Plan Amendment.

4.3 Land Use Alternative 1

This section describes Land Use Alternative Number 1 (“Alternative 1”), shown in **Figure 14**.

Alternative 1 is designed with a focus on corridors where key components of activity and density are located along major roads. In this alternative, High and Medium Density Residential designations, as well as the Mixed Use designation, are located along both Columbus Road West and Lake Ridge Road North. Additional medium density and Local Commercial a planned along other arterial and collector roads.

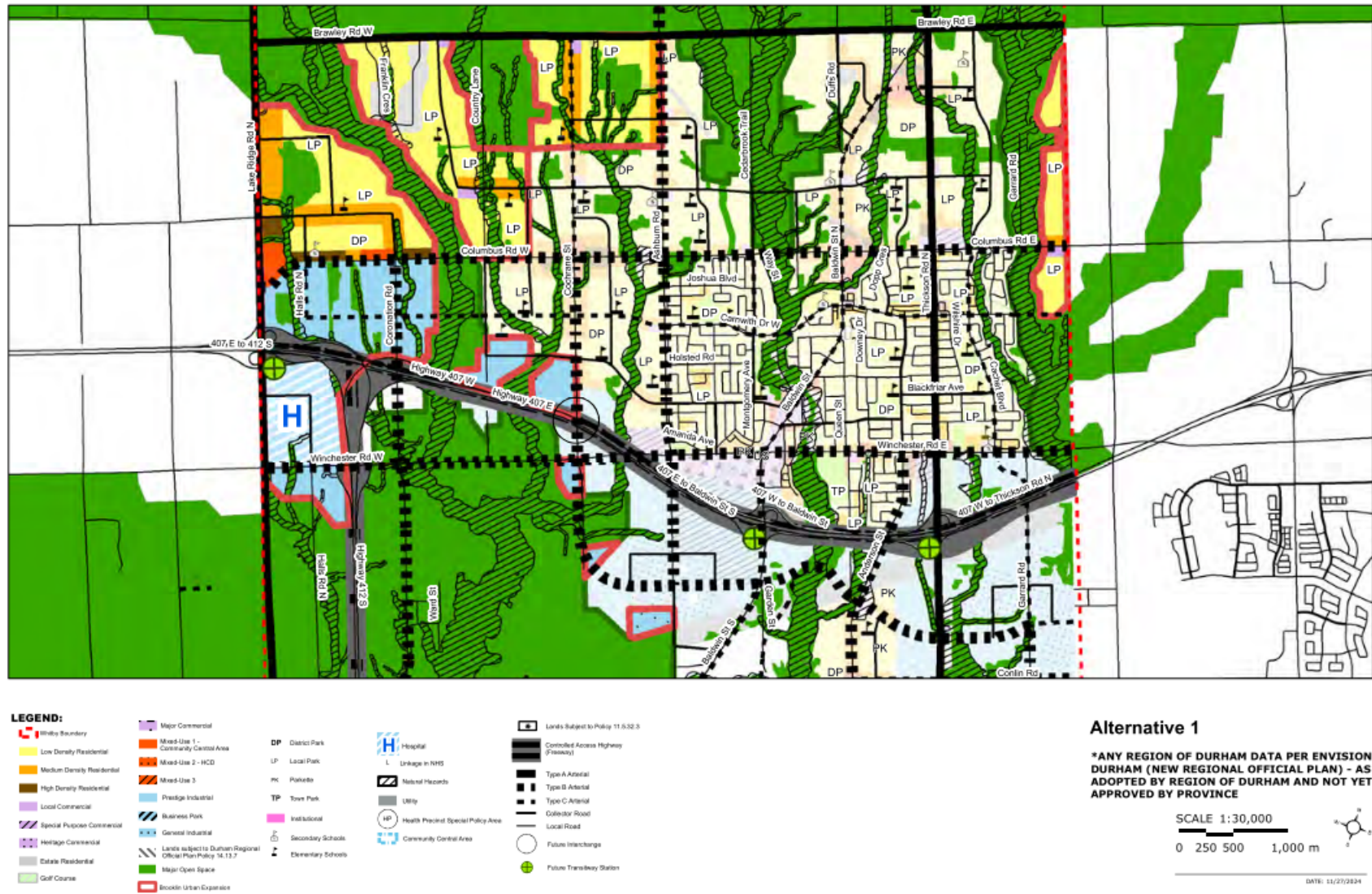


Figure 15: Alternative 1

Low Density Residential

In Alternative 1, the Low Density Residential land use is located throughout the Brooklin Urban Boundary Expansion Area.

Medium Density Residential

In Alternative 1, the Medium Density Residential land use is primarily located along corridors including Lake Ridge Road, Coronation Road and Ashburn Road, as well as along a proposed new east-west collector road north of the Columbus Road West and a proposed new east-west collector road which extends from Coronation Road to Lake Ridge Road.

High Density Residential

The High Density Residential land use is concentrated along Columbus Road West, which is a Regional Corridor, as well as a pocket on Lake Ridge Road North.

Mixed Use

The Mixed Use land use is concentrated along Columbus Road West adjacent to higher density areas, including at the intersection of Lake Ridge Road North and Columbus Road West.

Local Commercial

Four Local Commercial areas are located at collector and arterial road intersections to enhance walkability to commercial services. One of the Local Commercial areas is located on Columbus Road the eastern boundary of Whitby.

Schools

Alternative 1 shows four elementary schools located on collector and Type C arterial roads, as follows:

- One school is centrally located at the intersection of two proposed collector roads north of Columbus Road West and east of Lake Ridge Road ;
- A second school is located on the south side of the proposed east-west collector road;
- A third school is located near the existing the Lakeridge Links Golf Club on a north-south collector road; and
- A fourth school is on the west side of Cochrane Street about midway between Columbus Road West and Brawley Road West.
-

One secondary school is located at the corner of Halls Road North and Columbus Road West.

Parks and Open Space

There are nine local parks and one district park planned within the Brooklin Expansion Area. The district park is located west of Coronation Road and north of Columbus Road West adjacent to the secondary school, with the local parks distributed throughout the Brooklin Expansion Area and adjacent to schools where possible

Alternative 1 assumes the existing golf course will be redeveloped for residential uses.

Transportation

Arterial Roads

In addition to the existing road network, Alternative 1 proposes to realign Columbus Road West where it meets the City of Pickering to align with one of the road options being considered by the City of Pickering in its Northeast Pickering Secondary Plan study.

An extension of Carnwith Drive is also proposed to Halls Road North.

Collector Roads

Two of the east-west planned collector roads in the Brooklin Community Secondary Plan are proposed to be extended west into the Brooklin Urban Expansion Area, one of them to connect to Cochrane Street and the other to curve north to connect to Brawley Road West near the existing golf course.

Two new collector roads are proposed in the area to the east of Lake Ridge Road connecting Coronation Road and Halls Road to Lake Ridge Road.

A collector road connection between Halls Road North and Lake Ridge Road North is planned south of the 407.

Estimated Density, Units, Population and Jobs

Table 3 describes the land areas and projected units, population and jobs that could arise from Alternative 1. This Alternative results in an approximate density of 22 units per hectare and 60 persons and jobs per hectare.

Table 3: Approximate Land Area, Units, People, and Jobs for Land Use Alternative 1

Land Use Alternative 1 - Community Areas				
	Area (ha)	Units	People	Jobs
Low Density Residential	241	4,500	15,750	N/A
Medium Density Residential	81	3,200	7,900	N/A
High Density Residential	12	800	1,050	N/A
Mixed Use	11	550	730	100
Local Commercial	7	N/A	N/A	400
School	18	N/A	N/A	450
Parks	18	N/A	N/A	N/A
Estate Residential	23	0	100	N/A
Total	411	9,100	25,560	950
		Units per hectare	People and jobs/hectare	
Approximate Density		22	64	

4.4 Land Use Alternative 2

This section describes Land Use Alternative Number 2 (“Alternative 2”), shown in **Figure 15**.

Alternative 2 is designed with a focus on nodes, where there are clusters of higher density uses and amenities located at collector and arterial road intersections.

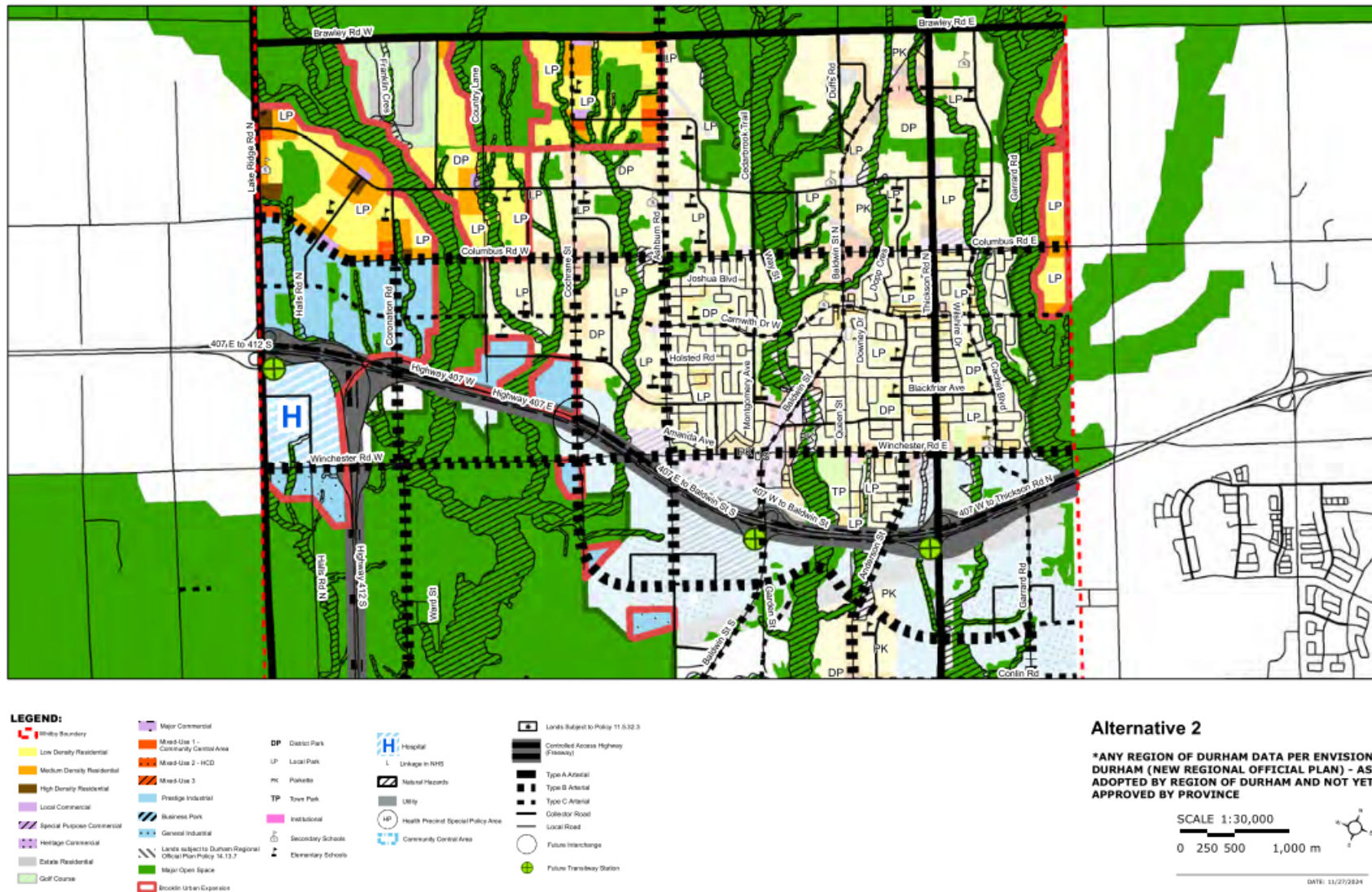


Figure 16: Land Use Alternative 2

Low Density Residential

In Alternative 2, the Low Density Residential is distributed throughout the Brooklin Urban Expansion Area, outside of the nodes.

Medium Density Residential

The Medium Density Residential land use is located primarily in clusters at intersections, except where it follows the length of Columbus Road West and Lake Ridge Road North.

High Density Residential

The High Density Residential land use is concentrated in the western portion of the Brooklin Expansion Area at intersections with Lake Ridge Road North, Columbus Road West, and the extension of Halls Road North.

Mixed Use

The Mixed Use designation is concentrated along road intersections adjacent to Medium and High Density Residential areas, including at the intersections of Lake Ridge Road and a proposed collector road, Lake Ridge Road and Columbus Road =, Coronation Road and Columbus Road, Cochrane Street and a proposed collector road, and Ashburn Road and a proposed collector road.

Local Commercial

Five Local Commercial areas are located near High Density or Medium Density Residential uses at road intersections including Halls Road North and a proposed collector road, Halls Road North and Columbus Road, Country Lane and a proposed collector road, Cochrane Street and a proposed collector road, and Cochrane Street and Brawley Road West.

Schools

Alternative 2 shows four elementary schools located in the Brooklin Urban Expansion Area, as follows:

- One school is located on the west side of Halls Road North, north of Columbus Road West;
- A second school is located on the west side of Coronation Road, north of Columbus Road West;
- A third school is located east of Country Lane, on the south side of a proposed east-west collector road; and
- A fourth is located on the east side of Cochrane Street, south of Brawley Road West.

One secondary school is located along the east side of Lake Ridge Road North, north of Columbus Road West.

Parks and Open Space

There are nine local parks and one district park planned within the Brooklin Expansion Area. The District Park is located west of Country Lane, with the local parks distributed throughout the Brooklin Expansion Area generally adjacent to elementary schools where possible.

Alternative 2 maintains the majority of the existing golf course as a golf course.

Transportation

Arterial Roads

In addition to the existing road network, Alternative 2 proposes to connect Columbus Road to 7th Concession in Pickering (to the west). It also proposes to connect Carnwith Drive West all the way to Lake Ridge Road.

Collector Roads

In Alternative 2, two of the east-west collector roads planned in the Brooklin Community Secondary Plan are proposed to be extended west into the expansion area, one of them to connect to Cochrane Street and the other to connect to Lake Ridge Road. Halls Road is also extended and bended to link up to one of the aforementioned east-west collector road.

A collector road connection between Halls Road and Lake Ridge Road is planned south of the 407.

Estimated Density, Units, Population and Jobs

Table 4 describes the land areas and approximate projected units, population and jobs that could arise from Alternative 2. This Alternative results in an approximate density of 22 units per hectare and 60 persons and jobs per hectare.

Note, for the purpose of the comparison with Alternative 1, the table below does not include the existing golf course in the calculations.

The overall land areas differ between Alternative 1 and 2, due to the difference related to the treatment of golf course between the options, as well as the difference related to the Columbus Road alignment, which changes the divide between employment and community areas, and thus the size of the community area.

Table 4: Land Area, Units, People, Retail Floor Area and Jobs for Land Use Alternative 2

Land Use Alternative 2 - Community Areas				
	Area (HA)	Units	People	Jobs
Low Density Residential	178	3,300	11,650	N/A
Medium Density Residential	81	3,200	7,900	N/A
High Density Residential	12	800	1,050	N/A
Mixed Use	11	550	730	100
Local Commercial	7	N/A	N/A	400
School	18	N/A	N/A	450
Parks	18	N/A	N/A	N/A
Estate Residential	23	0	100	N/A
Total	348	7,900	21,440	950
		Units per hectare	People and jobs/hectare	
Approximate Density		22	64	

5 Evaluation Criteria and Measures



Evaluation criteria and measures were prepared to guide the evaluation of the two Land Use Alternatives for the Brooklin Urban Area. The criteria and measures reflect the findings of the background reports, requirements of official plan policies and consideration of guidelines and best practices. The criteria and measures are used to determine what elements of each Land Use Alternative are preferred and should be included in the Preferred Land Use Plan.

5.1 Evaluation Criteria and Measures

The following evaluation criteria are organized under key study principles:

Principle: Traffic Management

Criteria:

- Impact on the operation of existing and future transportation network
- Ability to accommodate other modes to reduce vehicle congestion
- Intersection spacing on arterial roadways

Principle: Mobility with Choices

Criteria: Ability to support alternate modes.

Principle: Connectivity

Criteria:

- Elementary Schools are within walking distance.
- Access to Secondary Schools
- Connectivity across Greenbelt

Principle: Healthy Living

Criteria: Safe and walkable distances to parks.

Principle: Green Space and Natural Areas

Criteria:

- Least potential to negatively impact natural systems.
- Least potential to negatively impact the linkage function of natural features.

Principle: Jobs

Criteria:

- Provides a diverse range of employment opportunities.
- Desirable employment area location.

Principle: Community and Culture

Criteria:

- Provides centrally located public meeting places and uses that can create place identity/sense of place.
- Provision of appropriate number and location of schools.

Principle: Housing Choice

Criteria: Offers diverse housing mix.

Principle: Neighbourhood Character and Design

Criteria: Ability to deliver a full range of housing typology within a neighbourhood.

Principle: Urban Structure

Criteria: Ability to create viable focal points.

5.2 Evaluation Matrix

An evaluation matrix will be prepared to summarize the evaluation of the two Land Use Alternatives against the criteria and measures. The evaluation matrix will describe the detailed analysis and the rationale for which elements to include in the Preferred Land Use Plan. The Preferred Land Use Plan will not necessarily be one of the two Land Use Alternatives, but rather a combination of the most preferred elements of each of the two alternatives and could include additional elements considered through the engagement process.

The evaluation matrix will communicate which element of each Land Use Alternative best achieves the measures through the following symbology:



Least Preferred



Moderately Preferred



Most Preferred

6 Conclusion and Next Steps



Based on the results of the two Land Use Alternatives evaluation, a Preferred Land Use Plan will be developed. A final land use plan and an Official Plan Amendment to include the Expansion Area in the Brooklin Community Secondary Plan will be prepared and a statutory public meeting held.

Appendix A

Technical Memo



To: Lori Tesolin, Principal Planner and Supervisor, Policy and Heritage Planning, Town of Whitby

From: Whitney Moore, Dillon Consulting Limited
Susanne MacDonald, SGL Consulting
Justine Giancola, Dillon Consulting Limited
Michael Hanifi, Dillon Consulting Limited

Date: August 13, 2024

Subject: Whitby Official Plan Natural Heritage Review- Brooklin Expansion Area

Our File: 24-7548

Introduction

Dillon Consulting Limited (Dillon) was retained by the Town of Whitby (the Town) to undertake a review of policies and mapping related to natural heritage features and the NHS within the Town with regards to the Brooklin Urban Expansion Area (BUEA). The Study Area for the BUEA is made up of nine areas of land varying in size, which are generally bounded by Lakeridge Road to the west, Thornton Road North to the east, Brawley Road West to the north and Conlin Road and Lyndebrook Road to the south, as shown on **(Figure 1)**.

The Durham Regional Official Plan (ROP), Envision Durham (May 2023), recently introduced an expansion to Whitby's Urban Area to the west of Brooklin to Lake Ridge Road and to the eastern border within Oshawa, which contains both new Employment Areas and Community Areas. Furthermore, three small areas were removed from the Greenbelt Plan Area in 2017 but were not included in the Urban Area at that time, but Durham Region (the Region) has now included them within their urban area and designated them as Employment Areas. As a result, the lands within the BUEA will need to be incorporated into the Town's Urban Area and given land use designations on Schedule A and incorporated into the Brooklin Secondary Plan on Schedule K within the Town's Official Plan (OP).

This memo does not provide recommendations on new policy, but rather reviews the policy in place for the BUEA lands to ensure they have been brought up to date. Furthermore, it is Dillon's understanding that Secondary Plans are required to be in conformance with the ROP.

Through this exercise, the Region's NHS was compared to the Town's NHS to determine if there are any discrepancies. Although the OP delineates the NHS and Natural Hazards on Schedule C and individual features on Appendix 1, these features should be confirmed through a more detailed review at a Secondary Plan level. The deferred lands in Brooklin were reviewed during the Brooklin Secondary Plan study but may require revisions. The natural heritage analysis will be a desktop activity relying on secondary source data, air photo interpretation and supplemented by up to date studies by individual

landowners, if available. Further, the desktop work can be confirmed, if necessary, through roadside surveys.

This work is not intended to be at a natural heritage evaluation or subwatershed study level study but rather to confirm and/or revise the boundaries of the NHS identified in the OP to the extent possible using the methods listed above.

Approach

Background Review

In conducting this review of natural heritage policies/ features within the BUEA, Dillon completed a desktop review of existing background documents and mapping of the Study Area; which included the following as they relate to the Study Area:

- Provincial Policy Statement (PPS; 2020);
- A Place To Grow: Growth Plan for the Greater Golden Horseshoe (Growth Plan; May 2019);
- Ministry of Natural Resources and Forestry (MNRF) Land Information Ontario (LIO) database;
- Ontario Endangered Species Act (ESA; 2007);
- Fisheries and Oceans Canada (DFO) Aquatic Species at Risk Mapping;
- Central Lake Ontario Conservation Authority (CLOCA) interactive mapping (2017);
- Town of Whitby Official Plan and GIS layers- Sections 5.3.7 and 11.5.25;
- Durham Region Official Plan; and
- Envision Durham (2023).

Site Visits / Roadside Checks

At this time, no site visits have been conducted; however, as the next phases of the OP review proceed, there may be a need to conduct confirmatory site assessments where access is granted or via windshield survey to confirm recommendations provided herein.

Discussion

The results of our desktop review are presented below. **Figure 2** illustrates the natural heritage features, identified through background review, within and surrounding the BUEA on a landscape level. Information presented in **Figure 2** is sourced from the MNRF and the CLOCA GIS database. **Figure 3** shows the current NHS layer provided by the Town (sourced from the OP) and the Region (sourced from the ROP).

Existing Conditions / Natural Heritage Features

Work had previously completed within the BUEA that supports the establishment of an NHS. These works include:

- Pringle Creek Master Drainage Plan Update (2018);
- Lynde Creek Master Drainage Plan – Municipal Class Environmental Assessment (2023);
- Brooklin Secondary Plan Watershed Planning, Hazard Lands and Stormwater Management- Stage 3 Final Report (2018);
- Brooklin Secondary Plan Area Natural Heritage Assessment Background Report (2017);
- Brooklin North Major Roads Environmental Assessment Study, Environmental Study Report (2021);
- Natural Heritage Assessment Report prepared for the Brooklin Traffic Management Plan (2017);
- Oshawa Creek Watershed Plan 2020);
- Lynde Creek Watershed Plan (CLOCA, 2024); and,
- Wildlife Corridor Protection and Enhancement Plan, (CLOCA, 2022).

Although these works had been done in the Study Area to characterize the NHS within the BUEA, further characterization of the NHS should be undertaken through a natural heritage evaluation, subwatershed study level study or other development application studies.

Some key takeaways from a review of these background resources are listed below:

- Information gathered in these background resources were collected with limited access;
- Much of the natural heritage data collected was done prior to 2021;
- The Branches of Lynde Creek within the Study Area contain regulated habitat for the provincially and federally endangered Redside Dace (*Clinostomus elongatus*);
- A majority of the identified vegetation communities within the BUEA have been identified as widespread and common in Ontario and are Globally secure (to be confirm through future field studies);
- The dominant land use with BUEA is agriculture; and,
- Rare species that have the potential to be in the Study Area include (please note that this list is not exhaustive, and further study is required):
 - Red Mulberry (*Morus rubra*);
 - Butternut (*Juglans cinerea*);
 - Barn Swallow (*Hirundo rustica*);
 - Bobolink (*Dolichonyx oryzivorus*);
 - Eastern Meadowlark (*Sturnella magna*);
 - Eastern Wood Pewee (*Contopus virens*); and,
 - Wood Thrush (*Hylocichla mustelina*).

Background Mapping

A review of available CLOCA, MNRF LIO data and NHIC mapping (as shown on **Figure 2**) identified that many watercourses transverse the BUEA parcels; the related CLOCA regulation limits associated with these features can also be seen on this figure. Furthermore, pockets of woodland and open water features are also found in some of the BUEA parcels; no Provincially Significant Wetlands or Areas of Natural and Scientific Interest (ANSI) were identified, though CLOCA's regulation limits have considered non-provincially significant wetlands. Another note of interest is that the MNRF's NHS layer does not overlap with any of the parcels.

Scoped Policy Review

Provincial Policy Statement, 2020

The PPS provides policy direction on matters of provincial interest related to land use planning and development. The PPS sets forth a vision for Ontario's land use planning system by managing and directing land use to achieve efficient development and land use patterns, wise use, and management of resources, and protecting public health and safety. This report has specifically considered Policy 2.1, Natural Heritage, Policy 2.2, Water, and Policy 3.1 Natural Hazards, which provides for the protection and management of natural heritage and water resources, which include the following:

- Significant wetlands;
- Significant coastal wetlands;
- Significant woodlands;
- Significant valleylands;
- Significant wildlife habitat;
- Significant areas of natural and scientific interest (ANSIs);
- Fish habitat;
- Sensitive surface water features;
- Sensitive ground water features; and
- Hazardous lands adjacent to river, stream and small inland lake systems which are impacted by flooding hazards and/or erosion hazards.

Potential significance of natural heritage features may be evaluated based on size, age, presence of rare or sensitive species, species diversity, and linkage functions, taking into consideration factors such as adjacent land use and degree of disturbance. Criteria for determining significance follow guidance outlined in the Natural Heritage Reference Manual (MNRF, 2010) and the Significant Wildlife Habitat (SWH) Technical Guide Eco-Region 6E Criterion Schedules (MNRF, 2015), where applicable.

When establishing policy to guide the development of the BUEA, the PPS and its associated guidelines should be consulted when determining what features should be protected from development. Furthermore, the policy should clearly define which features should be classified as Significant.

Note that in some of the background material reviewed as part of this technical memo, the methodology for determining SWH within the study area was outdated. Through more detailed studies, the policy should guide others to utilize the most recent guidelines for establishing SWH, which is the SWH Technical Guide Eco-Region 6E Criterion Schedules (MNRF, 2015).

Endangered Species Act

With the enactment of the provincial *Endangered Species Act (ESA)*, 2007, Ontario has strong policies in place for the protection and recovery of Species at Risk (SAR). The *ESA* protects species and their habitats. When a species is listed as Endangered (END) or Threatened (THR) under the *ESA*, 2007, its habitat is afforded protection under the Act. There are three applicable regulations under the *ESA*, 2007; *O. Reg. 230/08* - the Species at Risk in Ontario (SARO) List, *O. Reg. 242/08* (General), and *O. Reg. 830/21* (Exemptions - Barn Swallow, Bobolink, Eastern Meadowlark and Butternut). These regulations serve to identify which species and habitats receive protection and provide direction on the current implementation of the *ESA*.

The Ministry of Environment, Conservation and Parks (MECP) takes on the regulatory role of the *ESA*. However, it is common practice for municipalities to include protections of SAR within their OP by requiring the authorization of MECP under the *ESA* when approving development applications.

Department of Fisheries and Oceans

The protection of fish habitat in Canada is the responsibility of DFO and its partners. The Federal *Fisheries Act*, last amended in 2019, and its fisheries protection provisions establish authorities for the prohibition of killing of fish and of harmful alteration, disruption, and destruction of fish habitat. Fish habitat refers to spawning grounds and 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.

Policies created for the BUEA should direct proponents to consult with DFO (or applicable provincial or federal agency) where watercourse alteration is proposed.

A Place to Grow: Growth Plan for the Greater Golden Horseshoe, 2019

The Growth Plan is a Provincial Plan that directs how growth should occur in the Greater Golden Horseshoe (GGH). The Government of Ontario first released the original Growth Plan in 2006 under the terms of the provincial *Places to Grow Act*, 2005 and updated the plan in 2017, and then again on May 16, 2019. The current Growth Plan was consolidated and approved in August 2020. The *Places to Grow Act*, 2005 states that all decisions by municipalities under the *Planning Act*, 1990 shall conform to the Growth Plan. As per Schedule 4 of the Growth Plan, the Subject Lands are within the GGH Area, and within the Designated Greenfield Area.

Central Lake Ontario Conservation Authority

The CLOCA regulates development, interference with wetlands, and alterations to shorelines and watercourses in accordance with *Ontario Regulation 41/24 (O. Reg. 41/24)* made under the *Conservation Authorities Act, 1990*. *O. Reg. 41/24* applies to natural or hazardous areas (i.e., areas in and near rivers, streams, floodplains, wetlands, and slopes) in all Conservation Authority Regulated Areas. This regulation came into effect on April 1, 2024, replacing the previous *O. Reg 42/06*.

Regulated Areas within CLOCA jurisdiction have been mapped in association with the watercourses and wetlands present in the Subject Lands and as a result, the policies within *O. Reg. 41/24* apply within these areas. The Regulated Areas of the Subject Lands includes areas of mapped floodplain and are shown on **Figure 2**.

Where CLOCA regulated areas overlap with the BUEA, policy should be included directing the proponent to consult with them prior to development. Permits will be required for development within the regulated areas. To confirm if a project is located within the regulated area, consultation with CLOCA will be required.

Town of Whitby Official Plan, 2024

The Council adopted the Township's OP in 1994, and an updated review was done in 2017. The current OP is consolidated to February 2024. The OP establishes the direction for development for both public and private sectors.

This section of the memo will detail OP policies/schedules for the BUEA lands that are currently in place in the OP, as well as recommendations for updates, where needed.

Parts of the BUEA lands are identified on Schedule B of the Town's OP as subject to the ROP's policy 14.13.7, which states that:

14.13.7 The following policies apply to lands located in Whitby, identified as "Lands appealed to OMB" as shown on Schedule 'A' – Map 'A4':

- a) the proposed designations and Urban Area boundary as adopted by Regional Council on June 3, 2009, are under appeal at the Ontario Municipal Board and are adjourned;*
- b) the Board may be requested to resume consideration of the proposed Urban Area expansion and designations once a comprehensive review has been completed by the area municipality in accordance with the policies of this Plan, with the approval of the Region. The comprehensive review shall demonstrate conformity with the provisions of this Plan, in particular policies 7.3.9, 7.3.10, 7.3.11 and 7.3.12; and*
- c) Until such time that the provisions of subsection b) above is met, the lands in north Whitby will remain as designated on June 2, 2009.*

It's Dillon's understanding that now that the BUEA lands have been included in the Urban Boundary of the ROP that this reference to policy 14.13.7 may now be outdated.

As shown on Schedule C of the Town's OP, portions of the BUEA overlaps with the NHS, natural hazards, and Greenbelt Natural Heritage System. The NHS as shown on this Schedule C aligns with **Figure 3** attached to this technical memo. Dillon' has reviewed the mapping and believe that no further modifications are required at this time, and that policy will allow for further refinements to the NHS through an environmental study completed for development proposed with the BUEA. Note that policy should be included that specifies that through a more detailed natural heritage review of BUEA properties, additional areas could be added or removed the NHS that were missed at this high-level review. This is reflected in the Town's OP Policy 5.3.7.3.

Furthermore, it is recommended that the Town review its OP's Schedules, Maps and Appendices to ensure the entire BUEA is captured in this mapping.

Listed below are Policies from Section 5.3.7 (Natural Heritage System) of the Town's OP, each with associated review of updates needed (if required) and their applicability to the BUEA.

5.3.7.1 The Natural Heritage System is comprised of an interconnected system of key natural heritage and hydrologic features and areas within the Municipality including any associated vegetation protection zones. These key natural heritage features include: wetlands; habitat of endangered species and threatened species; significant woodlands; significant valleylands, including the applicable lands within the Urban River Valleys identified in the Greenbelt Plan; significant wildlife habitat; fish habitat; watercourses with associated riparian corridors, life sciences Areas of Natural and Scientific Interest (ANSIs), sand barrens, tallgrass prairies, alvars, and savannahs. Certain key natural heritage features are shown on Appendix 1. Key hydrologic features include: permanent and intermittent streams, Lake Ontario (and its littoral zone), seepage areas and springs, kettle lakes, aquifers, recharge areas and wetlands. The Natural Heritage System also includes lands which have been identified and targeted for restoration and enhancement to create linkage areas and connections. The Natural Heritage System is generally indicated on Schedule "C" and shall be retained and enhanced wherever possible. Lands indicated as Natural Heritage System that are located within the Greenbelt Natural Heritage System are subject to additional policies identified in this section and in Section 4.9. In order to protect the associated habitat and species from disturbance, habitats of endangered species and threatened species are not identified on Schedule "C".

No updates suggested for this policy. It is suitable to be included in the policies set out for BUEA.

5.3.7.2 The Municipality recognizes the importance of identification and protection of Provincially significant wetlands, regionally and locally significant wetlands, and unevaluated wetlands. Where known, these features are included within the Natural Heritage System on Schedule "C". The location and extent of wetlands as identified by the Ministry of Natural Resources and Forestry are indicated on Appendix 1 and may be updated from time to time as new mapping becomes available without amendment to this Plan. Other wetlands may be identified and protected through the land use planning process in consultation with the Ministry of Natural Resources and Forestry and/or the Conservation Authority.

This policy is suitable for the BUEA when protecting wetlands, though, recent changes to the Ontario Wetland Evaluation System (OWES; 2022) detail that the wetland identification and protection is to be done in consultation with the applicable Municipality rather than the MNRF. Furthermore, through the OWES update, “locally significant wetlands” and “wetland complexing” are no longer considered. Therefore, we recommend omitting policy related to locally significant wetlands as they are not defined or protected. Rather, we recommend the continued use of the term “unevaluated wetland” in the policy as this aligns with how other municipalities in Ontario have defined this type of feature. Regardless of whether the wetland is evaluated to be significant or not, any wetland can still be regulated by the CLOCA.

5.3.7.3 The extent and exact location of areas shown as Natural Heritage System, including their component natural heritage and hydrologic features and their significance, shall be determined at a site level through Environmental Impact Studies (EIS), other environmental studies, and may be further refined or delineated in the Zoning By-law through the development approval process, subject to the satisfaction of the Municipality and the Conservation Authority.

No updates suggested for this policy. It is suitable to be included in the policies set out for BUEA.

5.3.7.4 Development and site alteration shall not be permitted in key hydrologic features and key natural heritage features, including the associated vegetation protection zone, within the Natural Heritage System except for uses such as: a) conservation, flood or erosion control, where need is demonstrated and no reasonable alternative exists; b) fish, forest, and wildlife management; c) passive recreational uses such as trails and supporting small-scale structures; d) infrastructure, where need is demonstrated and no reasonable alternative exists; and e) existing agricultural uses.

No updates suggested for this policy. It is suitable to be included in the policies set out for BUEA.

5.3.7.5 Notwithstanding Section 5.3.7.4, development or site alteration shall not be permitted within: a) fish habitat, except in accordance with Provincial and Federal requirements; b) habitat of endangered species or threatened species, except in accordance with Provincial and Federal requirements; or c) significant wetlands and significant coastal wetlands.

No updates suggested for this policy. It is suitable to be included in the policies set out for BUEA.

5.3.7.6 Development or site alteration shall only be permitted on lands within or adjacent to the Natural Heritage System, in accordance with the provisions of this Plan and where it has been demonstrated that there will be no negative impact to the features and ecological functions of the features within the Natural Heritage System. An EIS shall be required to be prepared in accordance with the policies of Section 5.4.2 of this Plan, demonstrating that there will be no negative impact on the natural heritage or hydrologic features or their ecological functions, and determining the appropriate extent of a vegetation protection zone that is of sufficient width to protect the feature and its functions from negative impacts resulting from the proposed development and associated activities that may occur before, during, and after construction.

Dillon recommends that this policy be updated to say: "...in accordance with the provisions of this Plan and where it has been demonstrated that there will be no net negative impact to the features... An EIS shall be required to be prepared in accordance with the policies of Section 5.4.2 of this Plan, demonstrating that there will be no net negative impact on the natural heritage..." This will allow for compensation and offsetting options where appropriate.

5.3.7.7 For the purposes of Section 5.3.7.6, outside the Urban Area boundary and rural settlement areas, adjacent lands are defined as all lands within 120 metres of the boundary of the Natural Heritage System. Within the Urban Area boundary, the extent of adjacent lands shall be determined by the Municipality in consultation with the Conservation Authority and shall consider such matters as the type and scale of proposed development, the sensitivity of the natural heritage or hydrologic features and the existence of intervening development, roads, or other physical features.

Since the BUEA is now located within the Urban Area, language related to the rural settlement areas wouldn't be applicable; otherwise, this policy is suitable for the BUEA.

5.3.7.8 Outside the Urban Area boundary, the vegetation protection zone required for the protection of natural heritage or hydrologic features and their ecological functions shall not be less than 30 metres, but may be greater if supported by an EIS, or if required by the relevant provisions of the Greenbelt Plan or Oak Ridges Moraine Conservation Plan. Within the Urban Area boundary, the following minimum vegetation protection zones shall be required for protection of natural heritage or hydrologic features and their ecological functions:

- a) 10 metres from the dripline of a woodland;*
- b) 10 metres from the top of bank or the projected stable long-term top of slope within the erosion hazard for valleylands;*
- c) 30 metres from a Provincially significant wetland;*
- d) 15 metres from all other wetlands;*
- e) 30 metres from the centre line of a cold or cool water watercourse;*
- f) 15 metres from the centre line of a warmwater watercourse; and*
- g) any relevant requirement under the Endangered Species Act. The final delineation of the vegetation protection zone shall be determined through an EIS which may exceed the minimum distances. Notwithstanding the foregoing, within the Urban Area boundary, the minimum vegetation protection zone may be reduced where it is not feasible to provide the minimum distances due to existing development or other restrictions, and subject to the determination of an EIS and the approval of the Municipality and the Conservation Authority.*

Since the BUEA is now located within the Urban Area, language related to lands outside the Urban Boundary Area and rural settlement areas wouldn't be applicable; otherwise, this policy is suitable for the BUEA.

5.3.7.9 The vegetation protection zone is to be established and maintained as a natural self-sustaining vegetated area of a width sufficient to protect the key natural heritage feature or key hydrologic features and its functions from any negative impacts of the proposed development.

This is suitable to be included in the policies set out for BUEA, though Dillon recommends that the policy directs that vegetation protection zone widths should be established through site level studies such as an EIS. However, this policy should not supersede Official Plan Policy 5.3.7.8 that sets minimum vegetation protection zones for specific features within the Urban Boundary.

5.3.7.10 Notwithstanding Section 5.3.7.6, within the Greenbelt Protected Countryside, expansions to existing agricultural buildings or structures or associated residential uses may be permitted within the Natural Heritage System provided that no other alternative exists, development is within close proximity to the existing structure, the expansion is limited in scope and directed away from any natural heritage or hydrologic features, and impacts on the features and function is minimized to the maximum extent possible. Expansions to existing agricultural buildings or structures may be subject to the requirement for a scoped EIS in accordance with Section 5.4.2.5.

No updates suggested for this policy. It is suitable to be included in the policies set out for BUEA.

5.3.7.11 Within the Greenbelt Natural Heritage System, new buildings and structures for agricultural, agriculture-related or on-farm diversified uses are not subject to the policies of Section 5.4.2 if a minimum 30 metre vegetation protection zone is provided. In addition, the condition of natural self-sustaining vegetation for the vegetation protection zone is not required if the land is and will continue to be used for agriculture.

No updates suggested for this policy. It is suitable to be included in the policies set out for BUEA.

5.3.7.12 The policies of this Plan shall also apply to any key natural heritage or hydrologic feature which has been identified by the Municipality, the Region, the Conservation Authority, or the Province, but which is not presently shown on Schedule "C" or Secondary Plan schedules. Where such a feature is not shown on Schedule "C" or Secondary Plan schedules, it does not necessarily mean that the feature or any part thereof may be developed or altered in any way. Should a key natural heritage or hydrologic feature be identified through the development review process, the preparation of an EIS in accordance with the policies of Section 5.4.2 of this plan, or other assessment as deemed appropriate, may be required. Where a key natural heritage or hydrologic feature has been identified, Appendix 1 will be updated as required.

No updates suggested for this policy. It is suitable to be included in the policies set out for BUEA.

5.3.7.13 The identification and protection of linkages between areas identified as Natural Heritage System shall be undertaken during the preparation of Secondary Plans and considered through the development approval process in order to provide opportunities for plant and animal movement and to contribute to the connectivity of the Natural Heritage System. Linkages recommended in relevant watershed plans shall be considered as part of this exercise. Where identified, linkages shall be protected as a component of the Natural Heritage System through the Zoning By-law. Linkages are also encouraged to be protected through private land stewardship.

No updates suggested for this policy. It is suitable to be included in the policies set out for BUEA.

5.3.7.14 Where any feature in the Natural Heritage System is damaged or removed without appropriate approvals, the Municipality shall require the reinstatement of the feature(s). Furthermore, the Municipality will not consider the removal of the feature as being the basis for any application seeking development approvals on the affected lands.

No updates suggested for this policy. It is suitable to be included in the policies set out for BUEA.

5.3.7.15 Where lands shown as Natural Heritage System are also shown as Natural Hazards on Schedule "C", the more restrictive policies shall apply.

No updates suggested for this policy. It is suitable to be included in the policies set out for BUEA.

5.3.7.16 Where lands shown as Natural Heritage System are privately owned, it is not intended that they are free and open to the general public or that they will be acquired by the Municipality or other public agency.

No updates suggested for this policy. It is suitable to be included in the policies set out for BUEA.

5.3.7.17 Lands shown as Natural Heritage System and their associated vegetation protection zone shall generally not be accepted as contributing toward the parkland dedication requirements of the Planning Act.

No updates suggested for this policy. It is suitable to be included in the policies set out for BUEA.

5.3.7.18 Infrastructure within or adjacent to the Natural Heritage System shall also be subject to the policies of Section 8 of this Plan.

No updates suggested for this policy. It is suitable to be included in the policies set out for BUEA.

5.3.7.19 Mineral aggregate extraction and operation within or adjacent to the Natural Heritage System shall also be subject to the policies of Section 4.12 of this Plan.

As the lands associated with the BUEA have been designated for Employment Areas and Community Areas, this policy is not applicable and should not be included.

The policies reviewed below are related to the Town's OP policy related to the NHS of the Brooklin Secondary Plan:

11.5.25.1 Lands designated as Natural Heritage System on Schedules "K" and "K1" fall within the Major Open Space designation on Schedule "A" and shall be subject to the policies of Section 5.3.7, except as modified by the following additional policies.

No updates suggested for this policy. It is suitable to be included in the policies set out for BUEA.

11.5.25.2 The components of the Natural Heritage System were identified through the "Brooklin Secondary Plan Area Natural Heritage Assessment Background Report" (December 2016). Reference shall be made to this study when determining which natural heritage features comprised the Natural Heritage System at the time of this study and when reviewing development applications and supporting studies.

Since the entirety of the BUEA parcels were not included in the Brooklin Secondary Plan and therefore may not have been covered by the Brooklin Secondary Plan Area Natural Heritage Assessment Background Report (Beacon, 2016), Dillon suggests that this policy be revised to say "where applicable" at the end of the last sentence.

11.5.25.3 The extent and boundary of the Natural Heritage System is conceptual. The exact boundary shall be determined through an Environmental Impact Study (EIS) and feature staking to the satisfaction of the Municipality in consultation with the Conservation Authority. The boundary of the Natural Heritage System may be refined with additions and deletions without an amendment to the Plan.

No updates suggested for this policy. It is suitable to be included in the policies set out for BUEA.

11.5.25.4 The Natural Heritage System includes all known permanent and intermittent streams which are delineated on Schedule "C". A number of the streams shown on Schedule "C" are headwater streams. The status as intermittent versus ephemeral has not been confirmed for some headwater streams. The "Brooklin Secondary Plan Area Natural Heritage Assessment Background Report" (December 2016) identifies these streams as subject to further study. A Headwater Drainage Feature Assessment will be required to the satisfaction of the Municipality and the Conservation Authority, in consultation with the Ministry of Natural Resources and Forestry, prior to approval of development adjacent to those streams. The assessment shall evaluate and classify the drainage feature status based on criteria established by the Conservation Authority and shall determine if the drainage features are to be maintained. Where authorized by the Conservation Authority and the Municipality, in consultation with the Ministry of Natural Resources and Forestry, the removal of a drainage feature from the Natural Heritage System may occur without an amendment to the Plan.

Note that the “Brooklin Secondary Plan Area Natural Heritage Assessment Background Report” (December 2016) does not consider all of the BUEA parcels. Dillon suggests that for BUEA policy, wording is added that streams within some BUEA parcels have not been previously studied through the Brooklin Secondary Plan process and will need to be surveyed for other permanent and intermittent streams.

Furthermore, the Ministry of Natural Resources and Forestry does not regulate headwater drainage features and is not required to be consulted on this matter. Dillon suggests the removal of the reference to the Ministry of Natural Resources and Forestry from the policy. Instead, we suggest that it should be done in consultation with DFO, or applicable provincial or federal agencies, where needed.

11.5.25.5 A number of small isolated natural heritage features are designated as part of the Natural Heritage System on Schedule “C”. Other than any natural heritage feature that is an identified Provincially Significant Wetland, further study through an EIS is required to determine the significance of these features and the appropriateness of inclusion in the Natural Heritage System prior to approval of any development. These features that are subject to further study are identified in the “Brooklin Secondary Plan Area Natural Heritage Assessment Background Report” (December 2016). An EIS shall be required to determine:

- a) if the feature is considered not to be a key natural heritage feature as set out in Section 5.3.7.1 or a linkage as identified on Schedule “K”. In this case, the feature may be removed without an amendment to the Plan;*
- b) if the feature is a key natural heritage feature but has limited function. In this case, the feature may be removed without an amendment to the Plan, at the discretion of the Municipality in consultation with the Conservation Authority, provided compensation is made which could include additional dedicated land and/or the construction and restoration of similar features elsewhere in the Secondary Plan Area adjacent to, or, where appropriate, within the currently designated Natural Heritage System in the Secondary Plan Area without an amendment to the Plan; and*
- c) if the feature is a key natural heritage feature and must be retained insitu. In this case, the EIS shall consider the feasibility of alternatives to re-connect or create linkages from the feature to the broader Natural Heritage System.*

Note that the “Brooklin Secondary Plan Area Natural Heritage Assessment Background Report” (Beacon, 2016) does not consider all of the BUEA parcels. Dillon suggests that for BUEA policy, wording is added that Natural Heritage Features within some BUEA parcels have not been previously studied through the Brooklin Secondary Plan process and will need to be surveyed for at site-level studies, such as an EIS.

11.5.25.6 Where a feature or portion of a feature is removed or reduced in accordance with Sections 11.5.25.3, 11.5.25.4 and 11.5.25.5, the urban designation abutting the feature shall apply.

No updates suggested for this policy. It is suitable to be included in the policies set out for BUEA.

11.5.25.7 In addition to the requirements of Section 5.3.7.3, feature staking, erosion analysis, confirmation of the Natural Heritage System boundaries and determination of the appropriate extent of vegetation protection zones beyond those set out in Section 5.3.7.8 shall be required through the completion of an EIS prior to approval of development.

No updates suggested for this policy. It is suitable to be included in the policies set out for BUEA.

11.5.25.8 The Natural Heritage System incorporates a number of linkages as identified in the "Brooklin Secondary Plan Area Natural Heritage Assessment Background Report" (December 2016). These linkages are schematically shown on Schedule "K." The EIS required for development shall identify how these linkages will be restored and enhanced through the development process. Stormwater management facilities may be located within linkages provided the EIS demonstrates that the linkage functions will be maintained, and there is no impact to adjacent natural heritage features.

Note that the "Brooklin Secondary Plan Area Natural Heritage Assessment Background Report" (December 2016) does not consider all of the BUEA parcels. Dillon suggests that for BUEA policy, wording is added that linkages within BUEA parcels have not been previously studied through the Brooklin Secondary Plan process and will need to be assessed at site-level studies, such as an EIS.

11.5.25.9 The northern extension of Cachet Boulevard crosses one of these linkages. The EIS required for development in that area shall identify appropriate design considerations for the collector road to ensure the function of the linkage is maintained.

Not applicable to BUEA.

11.5.25.10 The hydro corridor south of Highway 407 also serves as an open space linkage. The Municipality shall encourage Hydro One to maintain it as a grassland area.

No updates suggested for this policy. It is suitable to be included in the policies set out for BUEA.

11.5.25.11 The EIS required for development adjacent to the Natural Heritage System shall also identify opportunities for restoration and enhancement of riparian habitat within the Natural Heritage System including opportunities to restore meandering channels in previously straightened watercourses.

No updates suggested for this policy. It is suitable to be included in the policies set out for BUEA.

11.5.25.12 Restoration and enhancement is particularly important along all stream reaches providing contributing, occupied and recovery habitat for Redside Dace. Protection of these watercourses must conform to the requirements of the Ministry of Natural Resources and Forestry and comply with the provisions of the Endangered Species Act.

This policy is suitable to be included in the policies set out for BUEA; however, Dillon recommends that verbiage should be added referencing that requirements of DFO and other applicable federal or provincial agencies should be adhered to.

11.5.25.13 The final location and design of all required road and servicing crossings of Redside Dace habitat shall be evaluated and designed according to the Ministry of Natural Resources and Forestry's "Guidance for Development Activities in Redside Dace Protection Habitat" and shall be designed to: a) minimize the number of stream crossings to generally no more than one crossing per kilometre of stream; b) minimize lengths and widths of crossings; c) cross at straight sections of a stream; d) be located where possible at previously disturbed areas; e) minimize the width of the facility within the regulated habitat; f) co-locate various infrastructure within the crossing to minimize the number of crossings; g) adhere to appropriate timing windows during construction; h) incorporate effective erosion and sediment control measures.

No updates suggested for this policy. It is suitable to be included in the policies set out for BUEA.

Durham Region Official Plan, 2020

In November 1993, the Region's new Official Plan was approved by the Ministry of Municipal Affairs and Housing. This plan replaced the former ROP, which was prepared in 1976. The ROP was then reviewed and update through Regional Official Plan Amendment (ROPA) 114 (2006) and ROPA 128 (2009).

As per Map A4, in general, the BUEA lands are located within the Employment Areas and Living Area. As previously discussed as part of the Town's OP analysis, the BUEA land on Schedule A4 are subject to Envision Durham Policy 14.13.7. Furthermore, on Map B1d, Key Natural Heritage and Hydrologic Features, Greenbelt Natural Heritage System and Urban Areas overlap with the BUEA lands.

A list of ROP Policies that would be applicable to the BUEA lands are included below, with some commentary, if needed.

Section 2 - Environment

- Section 2.2 General Polices: 2.2.1-2.2.3, 2.2.6, 2.2.7, 2.2.9, 2.2.12. Note that reference to Dynamic Beach Hazards would not apply to the BUEA lands.
- Section 2.3 Policies: 2.3.1, 2.3.2, 2.3.7, 2.3.13-2.3.16, 2.3.18, 2.3.19, 2.3.22, 2.3.24, 2.3.43, 2.3.44, 2.3.50, 2.3.51, 2.4.1d.

Section 8 – Urban System

- Section 8.1 Goals: 8.1.6.
- Section 8.2 General Policies: 8.2.1h.

Section 10 – Greenlands System

- Section 10.2 General Policies: 10.2.1, 10.2.3-10.2.5.

- Section 10.3 Policies: 10.3.1-10.3.4, 10.3.8.

Sub-Section 10A – Major Open Space Areas

- Section 10A.2: 10A.2.1, 10A.2.2, 10A.2.4, 10A.2.5, 10A.2.8.

Section 14 – Implementation

- Section 14.3 Area Municipal Plans: 14.3.1-14.3.3.

While the Town is establishing policies for the BUEA, the above listed ROP Policies should be integrated in some manner. As mentioned in Policy 14.3.1: *Area municipalities are required to prepare and adopt a new area municipal official plan or appropriate amendment to existing official plans in conformity with this Plan.*

Dillon has reviewed the above listed ROP policies against the Town OP policies applicable to the BUEA lands and determined that the Town's policies are in general conformity with the ROP. Though, Dillon would like to note that there are several policies in the ROP that could be incorporated into BUEA policy:

ROP policy 2.2.9 states that *"The use of various land securement tools is supported as a means of protecting and enhancing the Region's natural environment."* Therefore, note that the Region supports securing lands within the NHS to promote protections and enhancement. More detail on the Region's involvement on this can be found in ROP Policy 2.3.50.

ROP Policy 2.2.12 provides direction regarding light pollution the Town could lean on:

The use of light pollution abatement measures are encouraged, to avoid and reduce light trespass, glare, over-lighting and 'uplight'. The intent is to conserve energy, improve pedestrian and road safety, contribute to an aesthetically pleasing nighttime environment, and protect the night sky for its scientific and natural interest, and educational value. Outdoor lighting shall also be directed away from key natural heritage and/or hydrologic features and their associated vegetative protection zones.

ROP Policy 2.3.7 (listed below) discusses recreation uses that are permitted in the NHS. More on recreational uses within Major Open Space Areas is found within ROP Policy 10A.2.8.

Pedestrian, bicycle and bridle paths may be permitted in any designation, provided that the functions and features of key natural heritage and hydrologic features and agricultural operations are not adversely affected. The fragmentation of valleylands, including ownership patterns, shall be discouraged.

ROP Policy 2.3.19 speaks to management of woodlands, which could help inform BUEA policy when determining the significance of woodland features.

ROP Policy 10A.2.1 provides direction regarding how municipal plans... "may further distinguish between non-agricultural uses which are compatible with the character of the Major Open Space Areas in urban and rural areas."

Envision Durham

In 2019, the Region launched Envision Durham – the Municipal Comprehensive Review of the Durham Official Plan. This review considered how and where the municipalities will grow, how to protect land and resources, what how type and job opportunities is needed for the residents and how people and goods will move across the Region. The new ROP was adopted by Council on May 17, 2023.

Policies within Envision Durham should be considered when establishing BUEA-specific policies. A list of Envision Durham Policies that would be applicable to the BUEA lands are included below:

Chapter 7 – Protected Greenland Systems

- Section 7.1 – General Green System Policies: 7.1.1-7.1.18.
- Section 7.2 – Greenbelt Urban River Valleys: 7.2.1-7.2.5.
- Section 7.4 – Regional Natural Heritage System: 7.4.1-7.4.13, 7.4.15-7.4.17-7.4.29.
- Section 7.5 – Water Resources System: 7.5.1-7.5.17.
- Section 7.6 – Natural and Human Made Hazards: 7.6.1-7.6.14.
- Section 7.7 – Environmental Stewardship: 7.7.1-7.7.16.

Dillon has reviewed the above listed Envision policies against the Town OP policies applicable to the BUEA lands and determined that similar to the ROP (2020), the Town's policies are in general conformity. The Town should review Section 7.7 for suggestions from the Region regarding the integration of traditional ecological knowledge, invasive species management, ecosystem compensation and land securement.

Mapping Review

The Town's NHS from their OP's Schedule C was compared against the Region's NHS on Schedule B and only four minor discrepancies were noted within the BUEA (refer to **Figure 3**). Through a desktop review it appears that the Town's NHS mapping generally aligns with natural heritage features on the landscape within the BUEA.

Furthermore, some parcels within the BUEA overlap with the areas that were studied through the *Brooklin Secondary Plan Area Natural Heritage Assessment Background Report* (Beacon Environmental Limited and R.J. Burnside and Associates Limited, 2016). The Town's NHS layer better aligns with the NHS that was established as part of this background report when compared to the Region's NHS. This is shown on **Figure 3**, where there were two discrepancy areas (yellow circles numbered 1 and 2) between the Town's NHS and the Region's NHS (located between Coronations Road and Ashburn Road). In these two instances, the NHS established as part of the background report match the Town's NHS rather than the Region's.

Additionally, there are two discrepancies between the Town's and Region's NHS just south of Highway 7, east of Highway 412 within the parcels of the BUEA that were not previously studied. In this case, based on aerial imagery and street view, these two discrepancy areas (highlighted with yellow circles numbered 3 and 4 on **Figure 3**) overlap with wooded areas. These two specific woodland fingers appear quite small on aerial imagery, and likely would be excluded from the NHS based on their width. Beacon

Environmental Limited and R.J. Burnside and Associates Limited (2016) had excluded hedgerows from the NHS during their study (i.e. features with a ratio less than 3:1 length to width ratio). On this premise, these two wooded fingers should not be included within the NHS. The Town's NHS excludes these two hedgerow features while the Region includes them, and therefore, the Town's NHS is more aligned with the existing NHS.

Note that further refinement of the NHS may be possible through confirmatory site visits.

Recommendations

The Dillon team recommends that the Town take into consideration what we have presented in this technical memo when establishing policies for the BUEA. Moreover, we recommend the use of the Town's NHS layer to show the BUEA's NHS.

Summary

Overall, previous policy established to guide the growth of the BUEA is mostly up to date and sufficiently protects the NHS. Within this memo, we have identified where policies are out of date due to the changing provincial and regulatory policy. Discrepancies between the Region's and Town's NHS system have been highlighted on **Figure 3**. Through the background review and review of aerial imagery, it was determined that the Town's shapefile containing the NHS layers would be appropriate to use for the BUEA.

Next Steps

As previously mentioned, no site visits have been conducted to inform this technical memo, however, as part of the next phase of review, there may be a need to conduct confirmatory site assessments where access is granted or via windshield survey to confirm recommendations provided herein.

If any questions come up during the review of this technical memo and through the natural environment policy created for BUEA, please don't hesitate to contact Whitney Moore at: 613.745.2213 ext. 3040 or WMoore@dillon.ca.

Appendix A

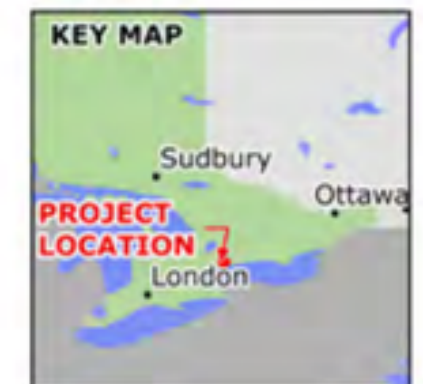
Figures

BROOKLIN EXPANSION AREA

FIGURE 1

-  Brooklin Urban Expansion Area
 Highway
 Major Road
 Minor Road
 Watercourse
 Water Body

Region of Durham Data per Envision
Durham new Regional Official Plan - as
adopted by Region of Durham: not yet
approved by Province



SCALE 1:25,000



MAP DRAWING INFORMATION:
DATA PROVIDED BY MMRP, ENVISION DURHAM, DURHAM REGION OPEN DATA,
TOWN OF WHITBY OPEN DATA

MAP CREATED BY: JJB
MAP CHECKED BY: AC
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N



PROJECT: 24-7548
STATUS: DRAFT
DATE: 2024-04-22

WHITBY OFFICIAL PLAN NATURAL HERITAGE REVIEW

BROOKLIN EXPANSION AREA

BACKGROUND REVIEW

FIGURE 2

- Brooklin Urban Expansion Area
- Highway
- Major Road
- Minor Road
- Ministry of Natural Resources and Forestry**
 - Watercourse
 - Water Body
 - Provincially Significant Wetland
 - Wooded Area
 - Candidate ANSI, Life Science
 - ANSI, Earth Science
 - Natural Heritage System
- Central Lake Ontario Conservation Authority**
 - Regulated Area

Region of Durham Data per Envision
Durham new Regional Official Plan - as
adopted by Region of Durham: not yet
approved by Province

SCALE 1:25,000

0 300 600 1,200 m

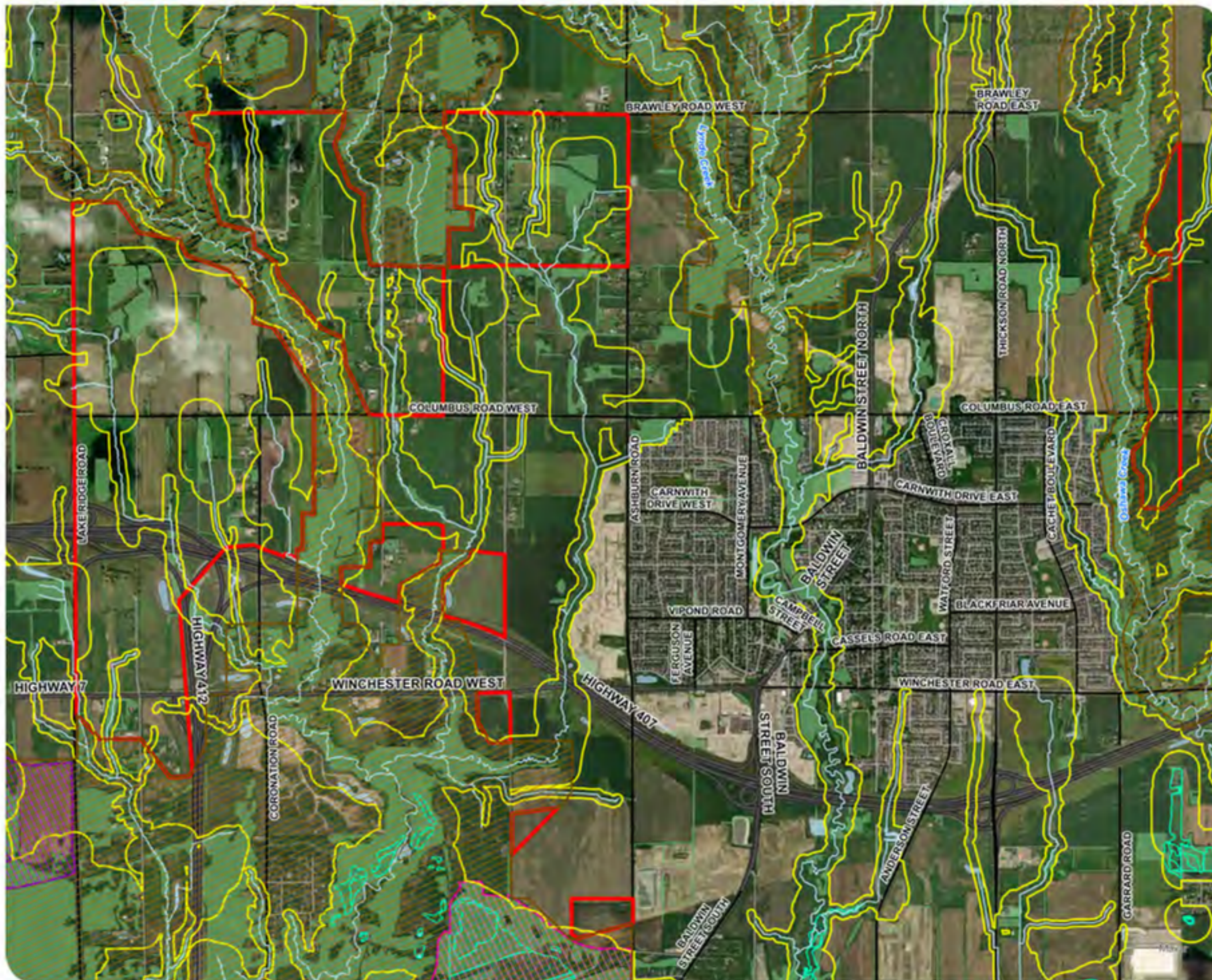


MAP DRAWING INFORMATION:
DATA PROVIDED BY MNR, ENVISION DURHAM, DURHAM REGION OPEN DATA,
TOWN OF WHITBY OPEN DATA, CLOCA OPEN DATA

MAP CREATED BY: ZJB
MAP CHECKED BY: AAC
MAP PROJECTION: NAD 1983 CSRS-UTM Zone 17N



PROJECT: 24-7548
STATUS: DRAFT
DATE: 2024-04-22



WHITBY OFFICIAL PLAN NATURAL HERITAGE REVIEW

BROOKLIN EXPANSION AREA

MUNICIPAL AND REGIONAL NS COMPARISON

FIGURE 3

- Brooklin Urban Expansion Area
- Natural Heritage System Discrepancies within the BUEA
- Highway
- Major Road
- Minor Road
- Ministry of Natural Resources and Forestry Watercourse
- Draft Regional Official Plan Natural Heritage System (Draft ROP)
- Town of Whitby Official Plan Natural Heritage System

Region of Durham Data per Envision Durham new Regional Official Plan - as adopted by Region of Durham: not yet approved by Province

SCALE 1:25,000

0 250 500 1,000 m

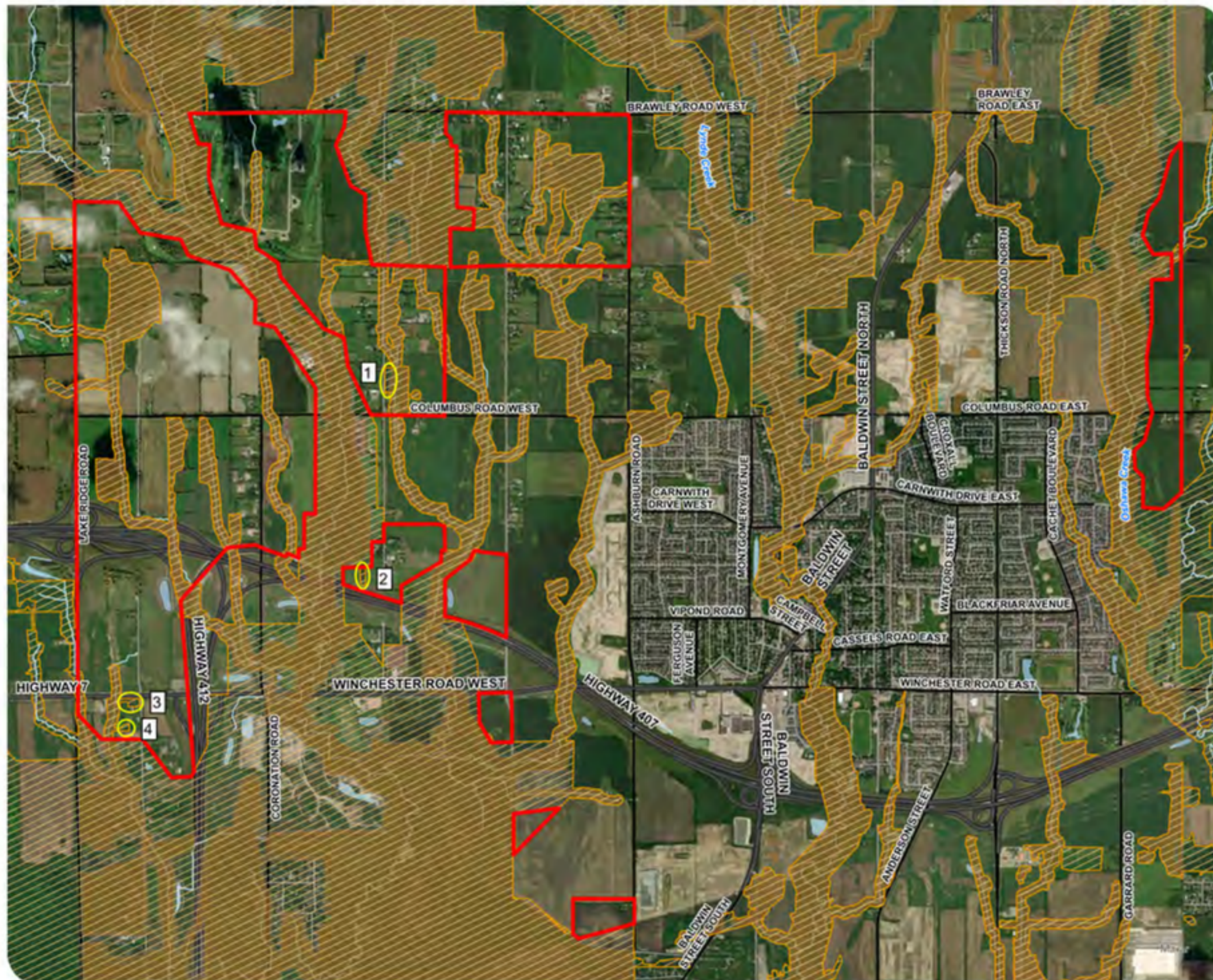


MAP DRAWING INFORMATION:
DATA PROVIDED BY MNR, ENVISION DURHAM, DURHAM REGION OPEN DATA,
TOWN OF WHITBY OPEN DATA

MAP CREATED BY: -ZB/DJ
MAP CHECKED BY: -AC
MAP PROJECTION: NAD 1983 CSRS UTM Zone 17N



PROJECT: 24-7548
STATUS: DRAFT
DATE: 2024-05-24



Appendix B

Appendix B – Details of Cultural Heritage Sites

The following table shows the heritage sites identified by Unterman McPhail Associates in Cultural Heritage Technical Report in 2019 that fall within the Brooklin expansion areas.

Cultural Heritage Properties within Brooklin Expansion Areas

Site	Type	Address	Photograph
NW2	Farmstead	7963 Ashburn Rd.	
NW3	Farmstead	740 Brawley Rd. W.	
NW4	Farmstead	860 Brawley Rd. W.	

Site	Type	Address	Photograph
NW5	Farmhouse	920 Brawley Rd. W.	
NW7	Farmstead	7762 Cochrane St.	No Photograph available
NW8	Farmstead	7801 Cochrane St.	
NW9	Farmstead	740 Columbus Rd. W.	

Site	Type	Address	Photograph
NW10	House	840 Columbus Rd. W.	
NW11	School	7035 Country Lane	
NW12	Road	Brawley Rd.	No Photograph available
NW13	Road	Columbus Rd. W.	No Photograph available
W3	Farmstead	835 Columbus Rd. W.	

Site	Type	Address	Photograph
W4	Farmstead	6472 Country Lane	
W7	Farmstead	540 Winchester Rd. W.	
W9	Road	Country Lane	No Photograph available



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