

Municipality of Clarington
Soper Hills Secondary Plan Study

**AGRICULTURAL
ANALYSIS SUMMARY
REPORT**

September, 2020



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1 Chapter 1: Introduction

The Soper Hills Secondary Plan Study area, or the “Study Area”, is a 193 hectare area in the Municipality of Clarington, located on the east side of Bowmanville. It is generally bound by Highway 2 to the south, Lambs Road to the west, the Canadian Pacific Railway to the north and Providence Road and its unopened road allowance to the east. Map C of the Clarington Official Plan (COP) identifies this area as requiring preparation of a Secondary Plan.

The purpose of this report is to summarize background information and analyses which will guide the preparation of a Secondary Plan for the Study Area (**Figure 1**). Each of the chapters in this report summarize the various background studies and analyses undertaken in the first phase of the study.

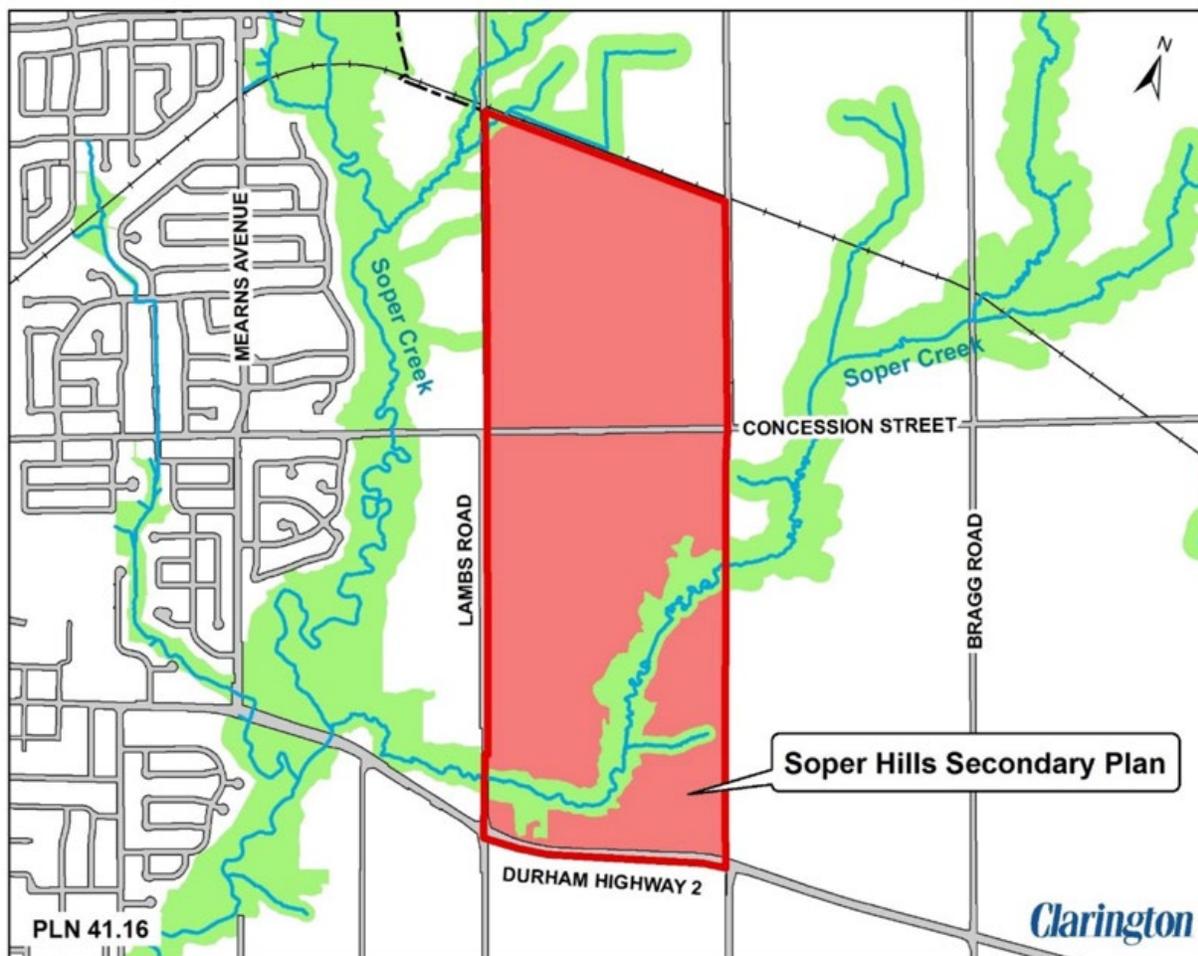


Figure 1: Soper Hills Secondary Plan Area Context

Source: Municipality of Clarington

Chapter 2 provides a landscape analysis.

Chapter 3 summarizes relevant provincial, regional and municipal policy and other relevant background information.

Chapter 4 provides an agricultural evaluation.

Chapter 5 contains the land budget.

Chapter 6 contains draft sustainability principles.

Chapter 7 summarizes Cultural Heritage and Archaeological Reports.

Chapter 8 summarizes the Transportation and Functional Servicing Study Report.

Chapter 9 describes constraints and opportunities for urban development within the Soper Hills Secondary Plan area. This chapter provides a fulsome summary of the opportunities and constraints identified in each of the background reports.

Chapter 10 describes the next steps in the study.

2 Chapter 2: Landscape Analysis



2.1 Purpose of this Chapter

The landscape analysis evaluates, describes and interprets the existing topography, built form and natural features and provides a site summary to inform the planning and design of the Soper Hills Secondary Plan. A review of the existing context, topography, natural features, and built form are provided within this chapter to help to identify the opportunities and constraints for the development of the Soper Hills Secondary Plan.

2.2 Existing Context

A mixture of agricultural fields and operations, natural areas, private residential properties, and institutional uses exist within and around the subject lands as shown on **Figure 2**.

To the west of the Secondary Plan area is Soper Creek and Bowmanville, to the south is Highway 401, and to the north and east are agricultural fields and natural areas.

To the west of Lambs Road, north of Concession Street, there is a historically important site which served first as a school then as a prisoner of war camp during World War II. As described in ASI's Cultural Heritage Report, which is summarised in Chapter 7 of this report, a number of buildings remain on this site.

2.3 Topography

The site's topography is relatively flat, however, three knolls and a tributary of Soper Creek provide undulation to the landscape as shown in **Figure 3**.

The peak of the highest knoll is located on the western side of the property, just south of Concession Street East, reaching 33 metres above the lowest point in the Study Area and steeply slopes to the west, south and southeast, providing approximately a 20 metre change in elevation over a short distance but slopes more gently towards the north and north east (see **Figure 3**). The slope on the west and southwest side of the highest knoll can be seen in **Figure 4**.

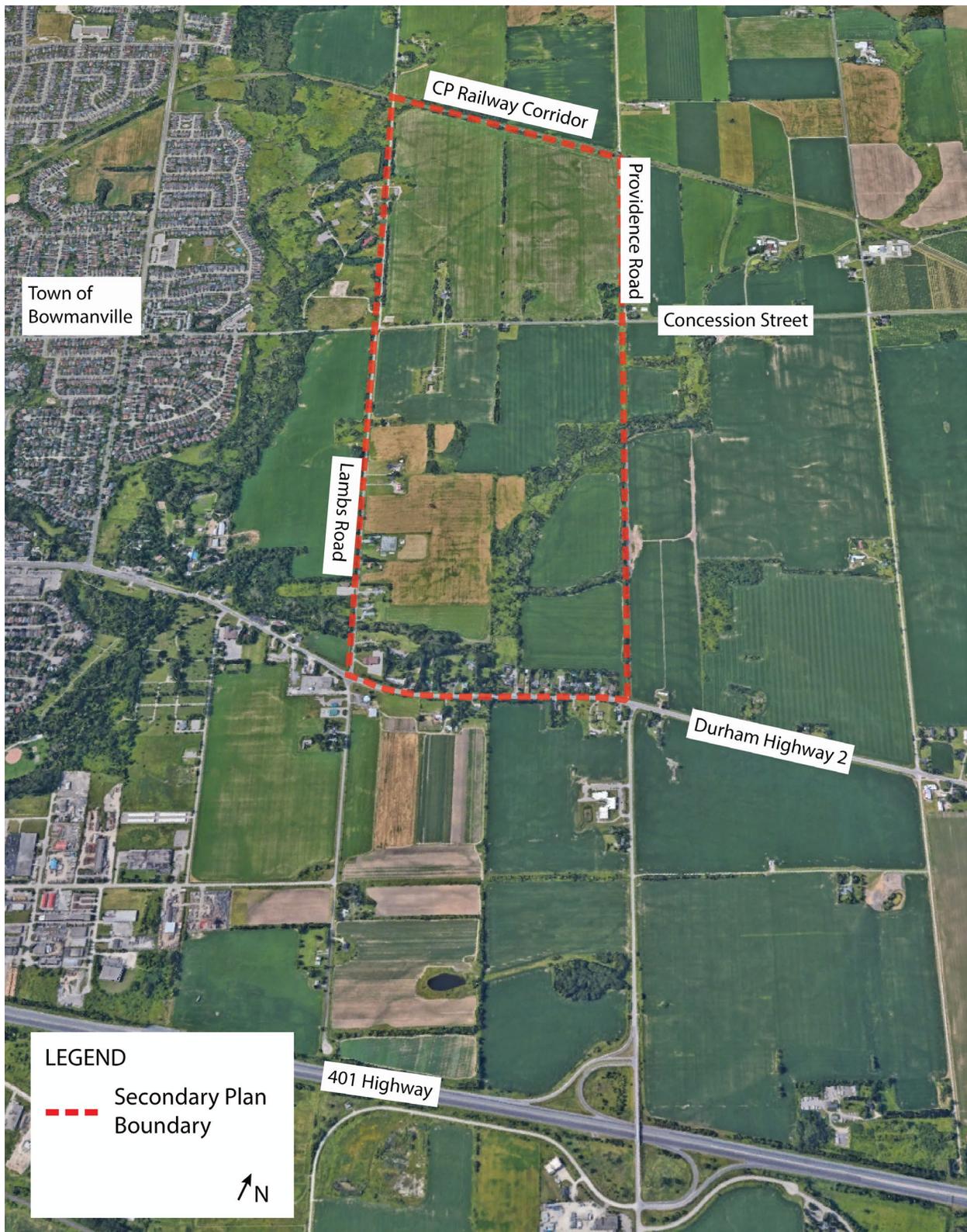


Figure 2: Subject area and surrounding area
Source Google Earth (Base)

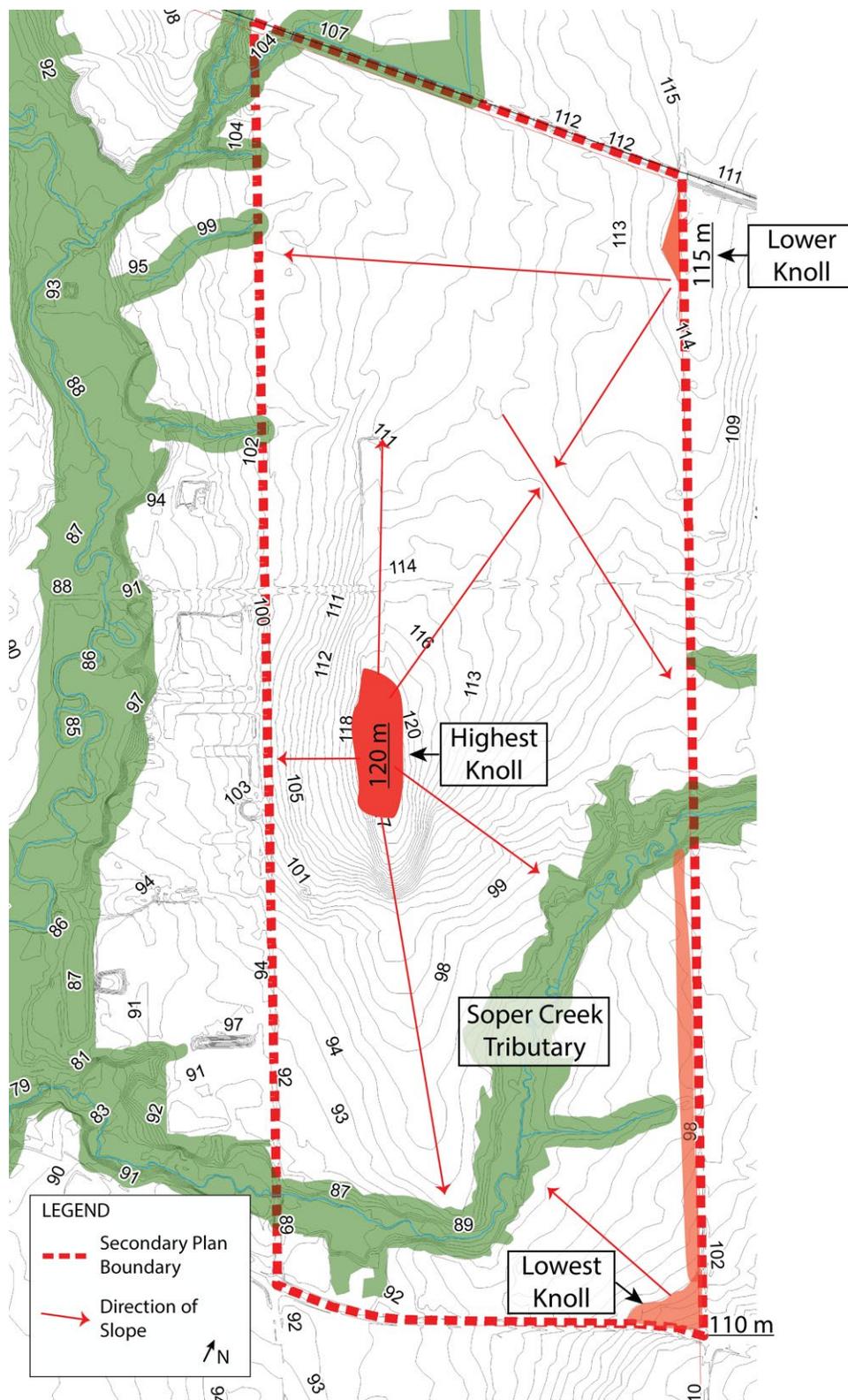


Figure 3: Topographical map of the Soper Hills Secondary Plan Area with 1 meter intervals.

The two lower knolls have gentler slopes. The lower knolls are located at the south eastern and north eastern corners of the subject area, as shown on **Figure 3**.

The Soper Creek tributary runs through the southern portion of the Study Area creating low lying topography. The Soper Creek tributary provides a gentle valley feature within the subject lands as shown in **Figure 3**.

The general flatness of the lands is shown in **Figure 5** looking southwest from the north eastern corner of the Study Area.

2.4 Built Form

Within the Study Area, the existing built form consists largely of single-detached residential properties, some agricultural buildings including a green house, hoop houses and a barn, a church and what appears to be an unused cinder block storage unit as shown on **Figure 6**.

The residential homes within the site are concentrated along Highway 2. Going north on Lambs Road from Highway 2, there is a church, additional homes, and a small greenhouse facility. North of Concession Street East, one residential property exists and what appears to be an unused storage unit, as shown in **Figure 6**.

2.5 Natural Features

2.5.1 Wooded Features

There are a number of wooded features on the site, as shown in **Figure 7**. These features include trees bordering the Soper Creek tributaries, trees on the roadside that borders the Study Area, trees associated with residential properties, lone groupings and hedgerows. The wooded features located along the Soper Creek tributaries fall within the designated Natural Heritage System (NHS) as shown in **Figure 7**.

2.5.2 Creek Corridor

A main tributary to Soper Creek runs north south to the west of the subject area and is largely contained within the designated NHS as shown in **Figure 7**. There is also a small tributary that crosses the north western tip of the Study Area.

The tributary areas are low lying with creek banks that are largely vegetated with grasses, shrubs and mature trees, as seen in **Figure 8**.



Figure 4: The knoll shown in Figure 3 with contours can be seen rising above the red barn while looking north east on Lambs Road just south of the centre point between Concession Street East and Highway 2.

Source: Google Earth



Figure 5: The Site is generally flat as seen from the north eastern corner of Providence Road and the Canadian Pacific Railway corridor looking south west.

Source: Google Earth

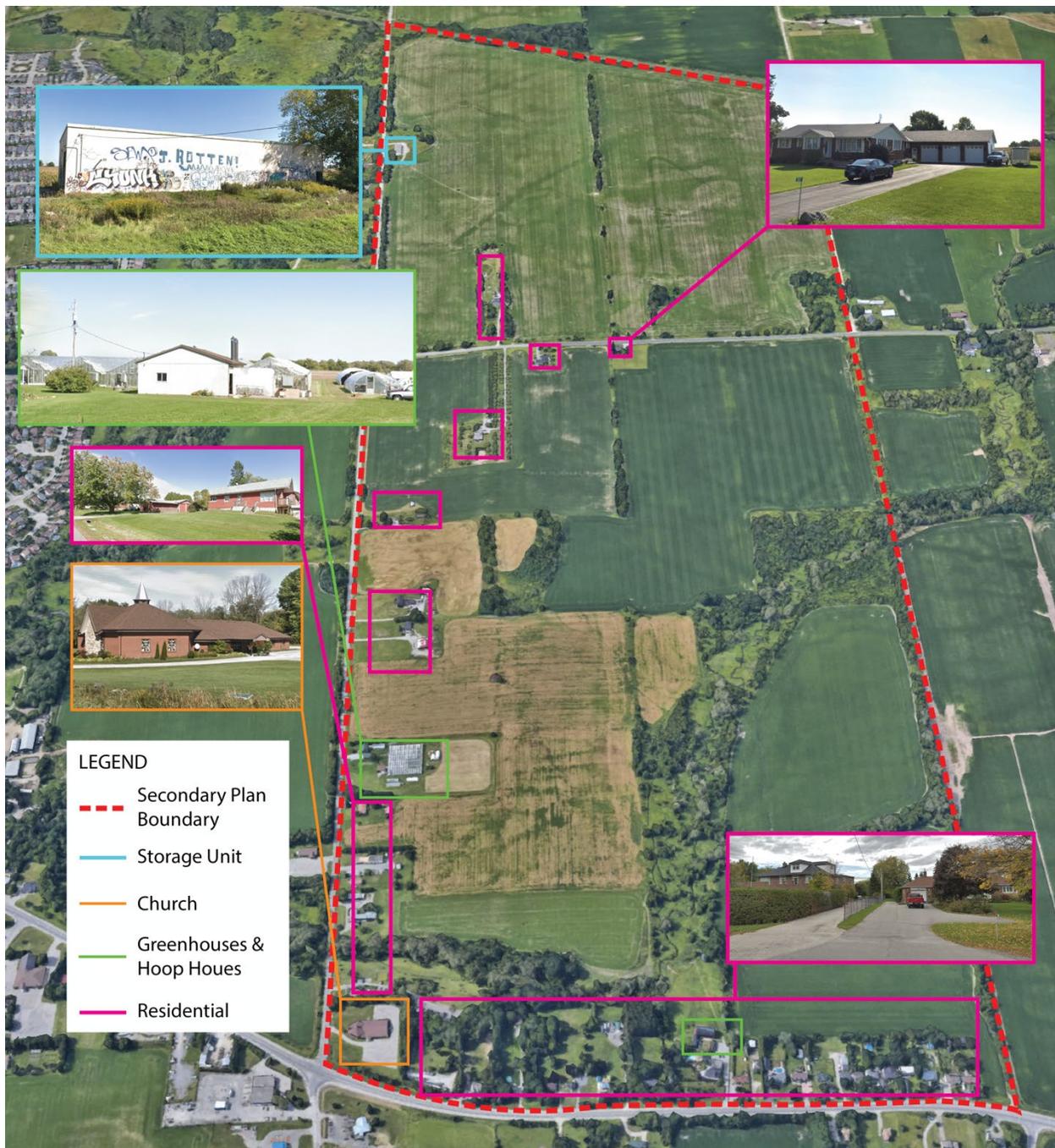


Figure 6: Existing Buildings
Source: Google Earth (Base)

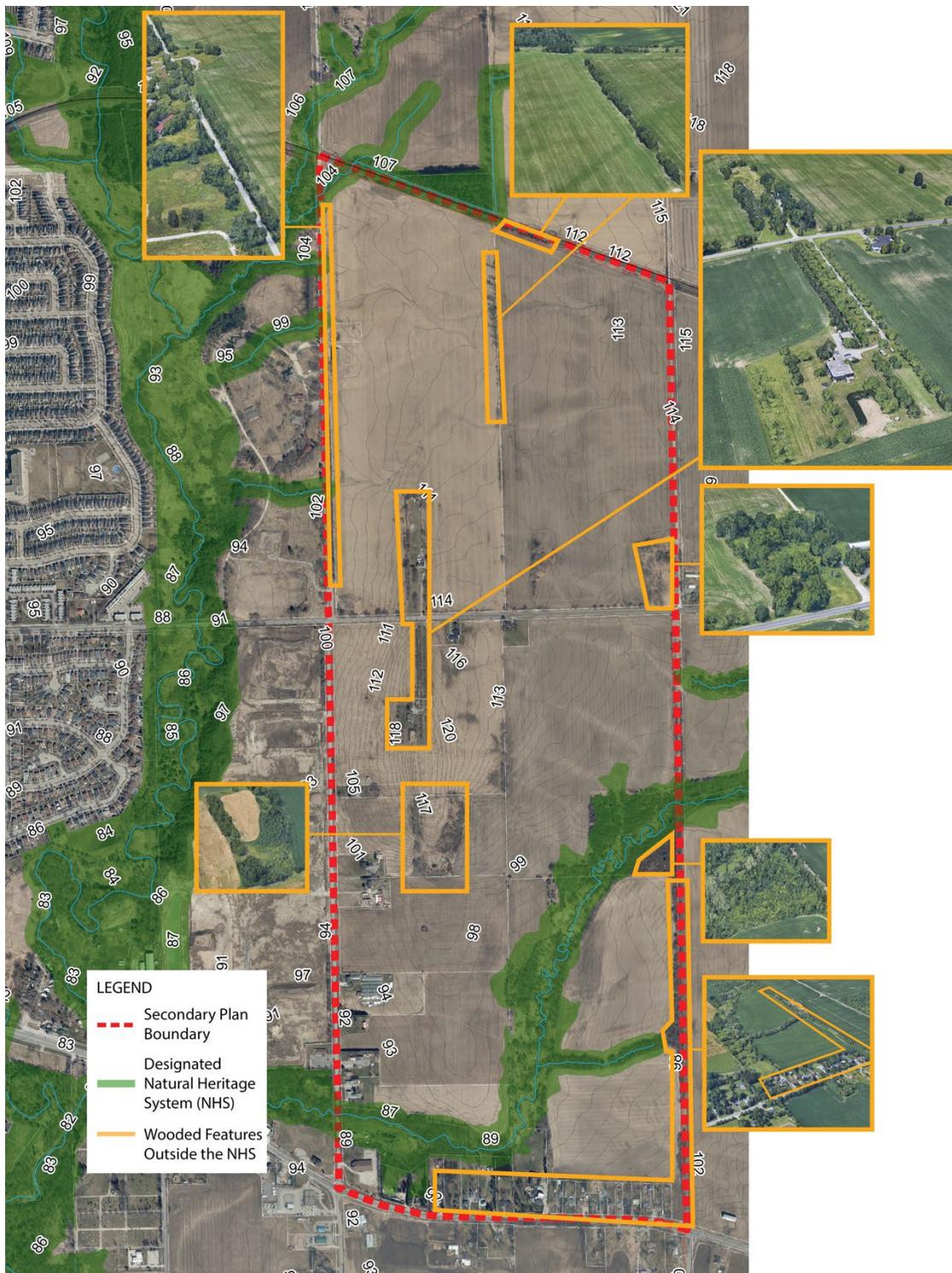


Figure 7: Treed features exist on the property within the designated NHS, near residential properties, along the roadside and as stand-alone groupings.
 Source: Google Earth and the Municipality of Clarington (Base)



Figure 8: Soper Creek tributary in the southern section of the site, located just north of the residential properties abutting Highway 2.

Source: Google Earth

2.6 Summary

This landscape analysis is based on observation and photos of the study area. The Soper Creek Subwatershed Study will provide more detailed identification of significant natural heritage features requiring protection and maintenance.

At this point in the process, based on the existing context, topography, built form and natural features, the following landscape opportunities and constraints within the Soper Hills Secondary Plan Area have been identified:

1. Views from elevated knolls
2. Integration of Natural Features
3. Public Access to Nature
4. Canadian Pacific Railway

2.6.1 Views from elevated knolls

The existing topographical features include a large knoll and two smaller knolls that provide some undulation to the site (**Figure 3**).

An opportunity exists to maintain the knolls to provide some variety to the site and allow for a potential view into Soper Creek which is located to the west of the site. There is a potential for open space and road patterns to be designed to take advantage of the views from the knolls.

2.6.2 Integration of Natural Features

The Soper Creek tributary shown in **Figure 7** is currently protected within the NHS designation and its boundary will be further defined through the Soper Creek Subwatershed Study that is currently underway. There is an opportunity to integrate the creek corridor into the land use plan through trails and window streets, however, the creek corridor also creates a constraint to provision of additional continual north-south and east-west collector roads south of Concession Street.

The existing hedgerows and groupings of trees should be considered for possible integration into new developments (**Figure 7**). Consideration for maintaining these features should be based on their overall health, age, and quality as assessed during the preparation of plans of subdivision. Whether the hedgerows and trees consist of native or invasive species and if they will complement the proposed surrounding land uses should also be considered.

2.6.3 Public Access to Nature

The Soper Creek tributary located in the southern section of the subject area provides opportunities for trails along the corridor and viewpoints into the creek corridor through trailheads and window streets allowing residents to access a natural area (**Figure 7**).

2.6.4 Canadian Pacific Railway

The Canadian Pacific Railway runs along the northern section of the subject site creating a connectivity restraint. Additionally, development setbacks will be required from the rail line. There are existing crossing points on Lambs Road and Providence Road. The Lambs Road crossing is at grade and the Providence Road crossing is a wooden bridge, and it appears to be closed off at this time (**Figure 5**).

3 Chapter 3: Policy and Other Relevant Background

3.1 Purpose of this Chapter

This chapter describes the relevant policy which will guide the preparation of the Secondary Plan.

3.2 Provincial Policy Statement (2014)

The Provincial Policy Statement (PPS) 2014 sets a land use vision for Ontario, providing policy direction on matters of provincial interest related to land use planning and development. Looking forward in order to achieve liveable and resilient communities, the policies of the PPS address how the landscape is to be settled, how the built environment is to be altered, and how the management of land and resources is to be carried out.

A number of policies speak to efficient and resilient development and land use patterns and are relevant to the Soper Hills Study.

3.2.1 Building Communities

Policy 1.1.1 provides policies on healthy, liveable and safe communities while Policy 1.1.3 provides direction on land use patterns in settlement areas. Common themes in both these PPS policies that are applicable to development on the Soper Hills Study Area include:

- the promotion of efficient, cost effective, compact development;
- an appropriate range of uses;
- promotion of conservation of biodiversity and reduction in climate change impacts;
- provision of appropriate and efficient infrastructure; and
- support of active and public transportation.

3.2.2 Housing

A number of policies also speak directly to the provision of housing within Ontario. Policies for housing are outlined in Section 1.4 of the PPS. Relevant to the development of the Soper Hills Secondary Plan area, Policy 1.4.3 requires an “appropriate range and mix of housing types and densities”. The policies of the PPS outline that this range and mix of housing can be achieved by permitting a full range of housing, including intensification and second units, promoting densities that efficiently

use land, services and infrastructure and establishing development standards that minimize costs.

3.2.3 Agricultural Protection and Mitigation

One of the themes of the Provincial Policy Statement (PPS) 2014 is the protection of agricultural lands. Policy 1.1.3.8 requires that impact from new or expanding settlement areas on agricultural operations are mitigated to the extent feasible. One of the mechanisms to assess potential agricultural impacts is the application of the Minimum distance formulae. According to the PPS 2014, the minimum distance separation formulae:

“means formulae and guidelines developed by the Province, as amended from time to time, to separate uses so as to reduce incompatibility concerns about odour from livestock facilities” (6.0 Definitions).

3.2.4 Summary

In summary, the PPS provides relevant direction for growth in general and growth in designated greenfield areas that is relevant to the preparation of the Soper Hills Secondary Plan. The PPS directs that development should:

- efficiently use land and infrastructure;
- contain an appropriate mix of uses;
- mitigate impact to agricultural operations;
- address environmental concerns by minimizing the effects of climate change, improving air quality, conserving biodiversity and reducing land consumption; and
- provide for an appropriate mix and range of housing.

3.3 Provincial Policy Statement (2020)

The 2020 PPS was recently released. It comes into effect on May 1. As such, the Secondary Plan will be required to be consistent with the 2020 PPS

3.3.1 Building Communities

Similar to the Provincial Policy Statement (PPS) 2014, Policy 1.1.1 and Policy 1.1.3 of the PPS 2020 provide direction on land use patterns in settlement areas. Several additions have been made to the existing policies. Policy 1.1.1b) has been updated to speak to accommodating “affordable and market” housing and specifying that this includes single detached housing, additional units and multi-units housing. Policy 1.1.1(e) ties intensification and transit supportive development to cost-effective land use patterns.

Changes were made to policy 1.1.1(i) to specify that development and land use patterns should prepare for regional and local impacts of a changing climate.

3.3.2 Housing

Section 1.4 of the PPS 2020 maintains policies concerning the provision of housing. However, a number of changes were made to this section. Policy 1.4.3 now requires an appropriate and mix of housing *options* and densities. The PPS also maintains its previous policies concerning how a range and mix of housing can be achieved, with the exception of second units. Second units are now described as *additional residential units* in the 2020 PPS. Furthermore, an additional policy (1.4.3(e)) was included in the 2020 PPS which states that “transit-supportive development and prioritizing intensification, including potential air rights development in proximity to transit, including corridors and stations”, are additional factors required to achieve the range and mix of housing options described above.

3.3.3 Agricultural Protection and Mitigation

The policies concerning the protection of agricultural lands, have not changed from the previous policies described in the 2014 PPS.

3.3.4 Summary

Overall, there has been a slight shift in the focus of the PPS to reflect market pressures, to broaden how housing is considered in terms of options and to tie development to transit.

3.4 Growth Plan for the Greater Golden Horseshoe (2019)

A Place to Grow: Growth Plan for the Greater Golden Horseshoe (Growth Plan) builds upon the foundational policies provided by the Provincial Policy Statement on matters related to land use planning and development in the Greater Golden Horseshoe, providing additional and more specific planning policies to address the growth in the regional area in and around Toronto. The Growth Plan states that the policies contained within it represent minimum standards, and development and land use planning decisions are encouraged to go beyond these minimum standards to address important matters.

3.4.1 Growth

Section 2 of the Growth Plan sets out policies for “Where and How to Grow”. Section 2.2.1.4 directs that forecasted growth should be accommodated in compact and complete communities. To meet people’s daily needs, an appropriate and diverse mix of residential and employment uses, local services and stores, public service facilities and a full range of housing for a range of incomes and household sizes is required. Communities should have access to high quality public open space, parkland, trails and recreation and active transportation opportunities, along with healthy, local and

affordable food options (including through urban agriculture), to support the quality of life and human health.

3.4.2 Protecting the Environment

Section 2.2.1.4 supports climate change mitigation and compact built form to protect agricultural lands, water resources and natural areas, to reduce greenhouse gas emissions and to contribute to environmental sustainability. Green infrastructure and appropriate low impact development measures are also encouraged, with specific mention to building more compact greenfield communities, helping to reduce the rate at which land is consumed.

3.4.3 Commercial Uses

Policy 2.2.5.3 encourages retail and office uses towards locations with existing or planned transit that will be able to support active transportation. According to Policy 2.2.5.15, retail uses should have compact built form that integrates other land uses, in order to support the achievement of complete communities.

3.4.4 Housing

When planning for housing, the achievement of complete communities will be supported by the accommodation of forecasted growth, along with minimum intensification and density targets as outlined by the Growth Plan. Multi-unit residential development should be encouraged to incorporate a mix of unit sizes in order to support development of a complete community and accommodate a wide range of housing incomes and sizes (Policy 2.2.6.3).

3.4.5 Designated Greenfield Areas

Policies for new development taking place in designated greenfield areas are outlined in Section 2.2.7. Development should support the achievement of complete communities, support active transportation and integrate viable transit services (Policy 2.2.7.1). The minimum density target for designated greenfield areas in municipalities within Durham Region is no less than 50 combined residents and jobs per hectare (Policy 2.2.7).

3.4.6 Transportation

Policies for infrastructure to support growth are outlined in Section 3.2 of the Growth Plan. The Growth Plan Policy 3.2.2.3 requires a complete streets approach when planning a new street network that ensures the needs and safety of all road users are considered and appropriately accommodated. Public transit is to be prioritised (3.2.3) and active transportation networks are to be integrated in a manner that is safe and comfortable for pedestrians, cyclists and other active transportation users, and should have continuous links between strategic growth areas, other neighbourhoods, major trip generators, and transit stations. Dedicated bicycle lanes on major street networks should be provided, as well as safe and convenient alternative routes (Policy 3.2.3.4).

3.4.7 Summary

The Growth Plan provides direction for growth that is relevant to the preparation of the Soper Hills Secondary Plan; it directs that development should:

- Provide for complete and compact communities containing a mix of uses to meet people's needs;
- Support environmental sustainability through compact built form, green infrastructure and low impact development;
- Provide housing diversity in terms of form, size and affordability;
- Include transportation systems that support transportation alternatives, including active transportation and transit, and complete streets; and
- Achieve a minimum density of 50 people and jobs per hectare, which is discussed again to follow, under the discussion of Regional and lower tier policy.

3.5 Durham Region Official Plan

On Schedule A to the Durham Region Official Plan, Regional Structure, the Soper Hills Secondary Plan Area is primarily "Living Areas", with a Regional Corridor along Highway 2 (**Figure 9**).

The Regional Official Plan sets out the following for Living areas:

- Living Areas will primarily permit housing as well as some home occupations and convenience stores, public and recreational uses and limited office and retail and service uses in a mixed use format; (Policy 8B.2.1)
- Living Area should be designed so that public transit access is supported; (Policy 8B.1.3)
- Review of development applications within Living Areas should consider a desire for compact built form, commercial uses along Corridors and walkability and proximity to destinations and transit, as well as infrastructure and service capacity (8B.2.3)

The Durham Region Official Plan sets out the following with regards to Corridors, which would apply in the Soper Hills Secondary Plan along Highway 2:

- Corridors are key connections and main arteries of the Region's structure, allowing for movement between Centres; (Policy 8A.1.4);
- Corridors shall include development with a mix of uses at greater densities which support transit and active transportation; (Policy 8A.1.5a, 8A.2.9));
- Development along Corridors should be designed to face the Corridor with limited, amalgamated accesses; (Policy 8A.1.5b));

Along Corridors, existing and new development should be integrated to maintain historical main streets (Policy 8A.1.5c) and cultural heritage should be protected; (Policy 8A.1.5d));

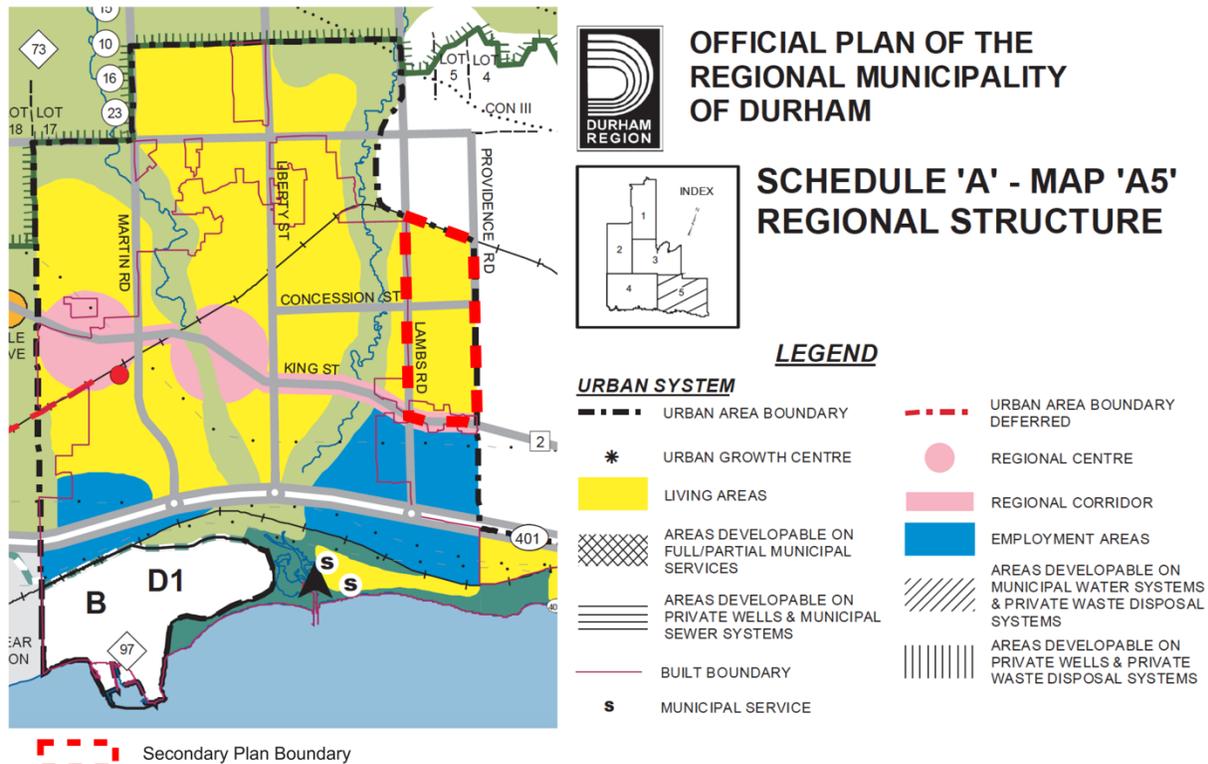


Figure 9: Soper Hills Secondary Plan within the Regional Urban System

Source: Durham Region Official Plan

- Where higher density mixed use is appropriate and identified in the local Official Plan, Regional Corridors should target 60 units per gross hectare and a floor - space index of 2.5, with generally mid-rise buildings but some higher buildings permitted, per the local Official Plans; (Policy 8A.2.9); and
- Under the Housing section, “at least 25% of all new residential units produced within each area municipality, to be affordable to low and moderate income households.” (policy 4.2.4)

On Schedule B – Map B1e, the Study Area has some Key Natural Heritage and Hydrologic Features identified, (**Figure 10**), which are largely limited to the Soper Creek tributaries previously discussed.

The subject site contains some Areas of High Aquifer Vulnerability, as identified on Schedule 'B' - Map 'B2' of the Regional Official Plan (**Figure 11**). Policies within the Durham Region Official Plan require that application for high risk uses in these areas be

accompanied by contamination plan and that transportation of chemicals and volatile materials in these areas is discouraged.

On Schedule C – Map C1 Road Network, as amended by ROPA 171, Lambs Road, Highway 2 and Concession Street East are identified as Type B arterials roads (**Figure 12**). On Schedule C – Map C3 Transit Priority Network, Highway 2 is identified as a “Other Transit Connection” (**Figure 13**). The plan also requires that reverse fronting on arterial roads be avoided and instead alternatives like window streets or cul-de-sacs be considered as well as using noise walls or fencing along any side yards abutting the arterial road and creating both visual and pedestrian connections between the arterial roads and abutting uses or streets. (policy 11.3.34)

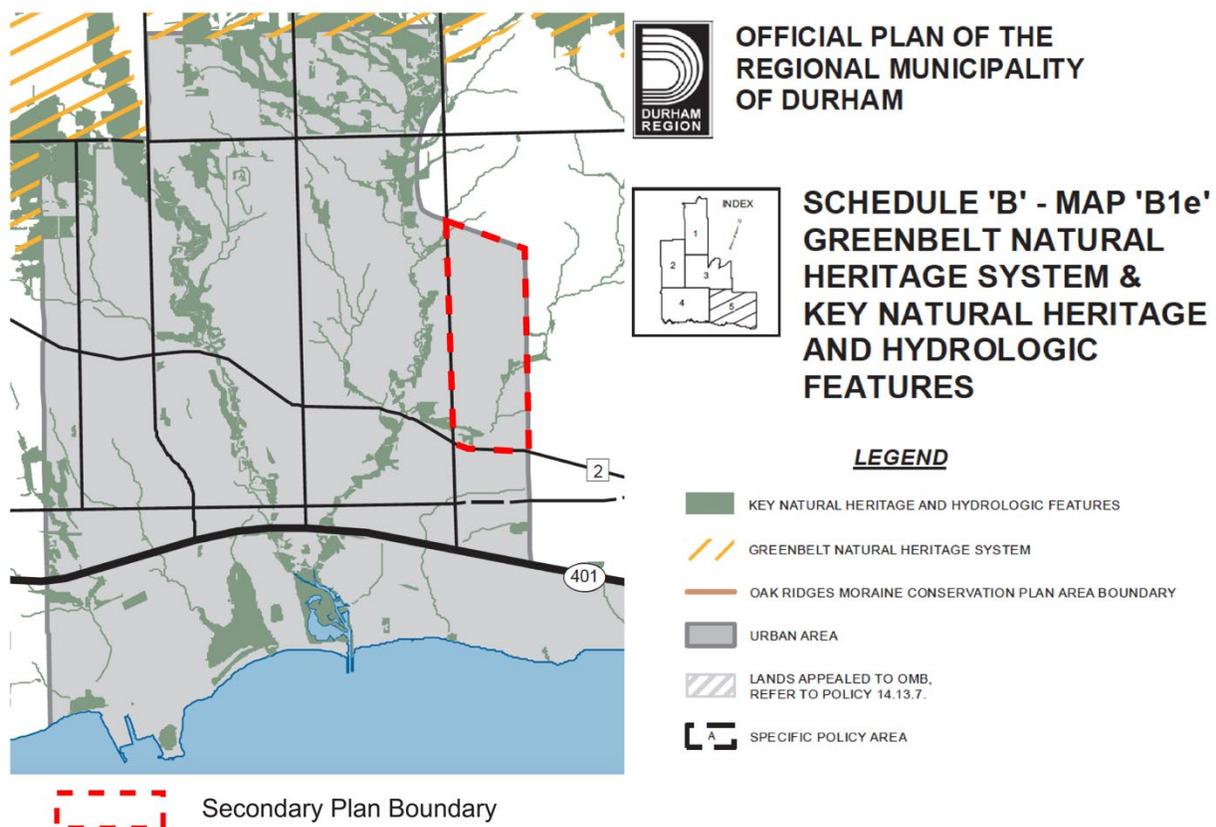


Figure 10: Soper Hills Secondary Plan Key Natural Features
 Source: Durham Region Official Plan

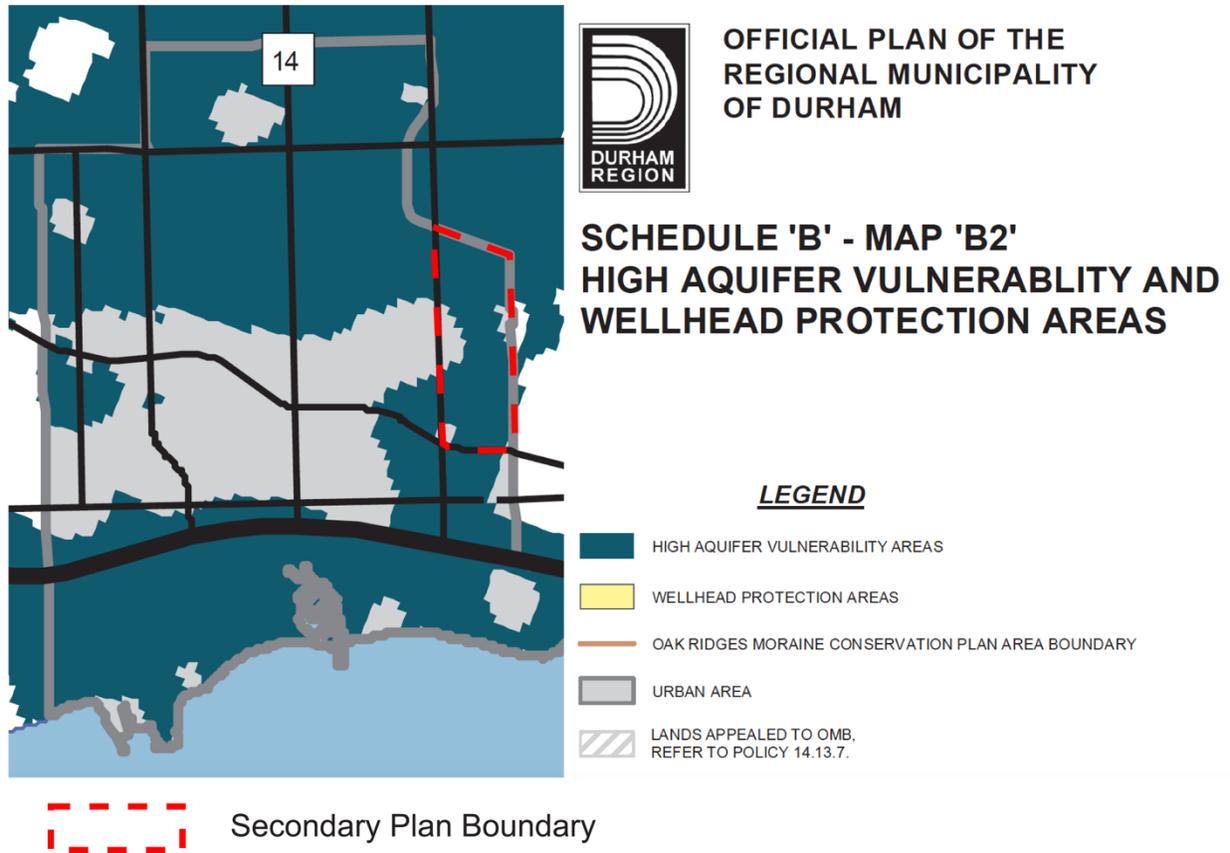


Figure 11: Soper Hills Secondary Plan High Aquifer Vulnerability Areas

Source: Durham Region Official Plan

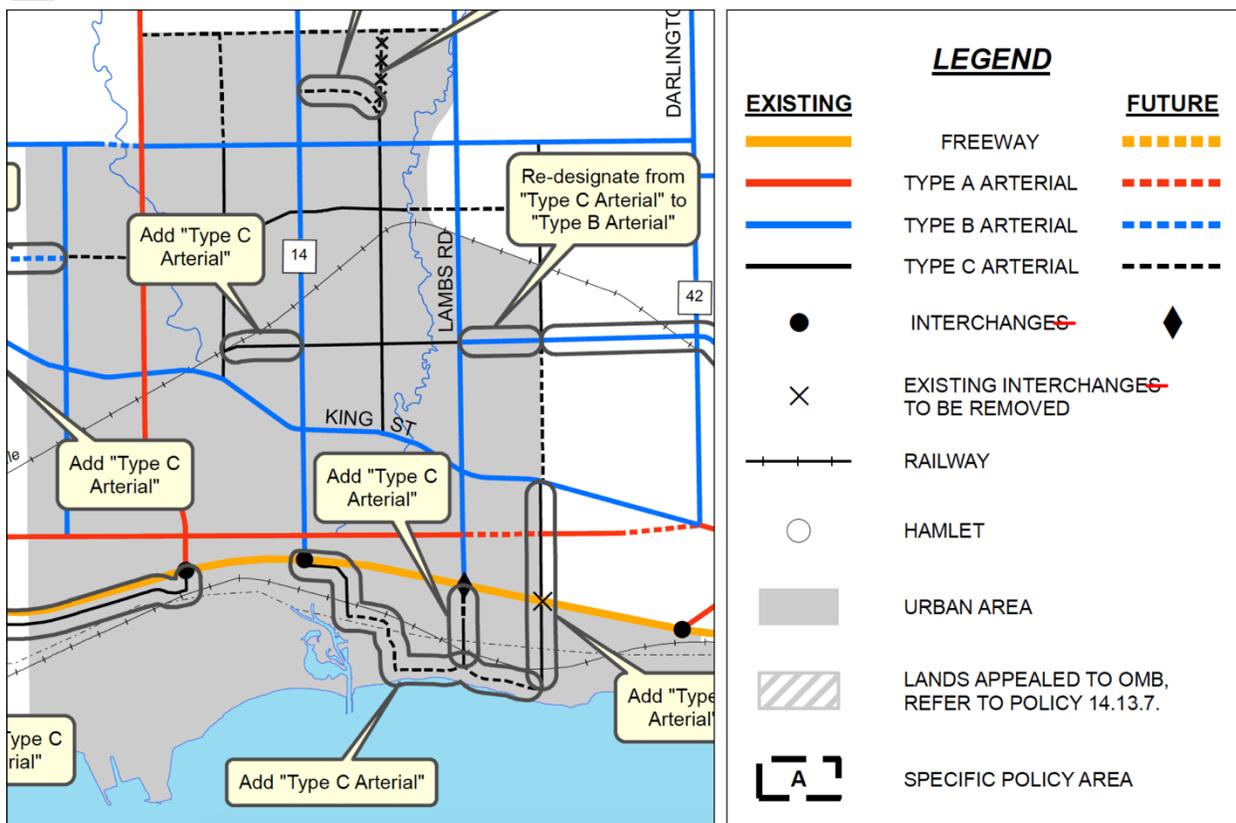


Figure 12: ROPA 171 Road Network Re-Designation

Source: By-law Number 27-2018 of the Regional Municipality of Durham

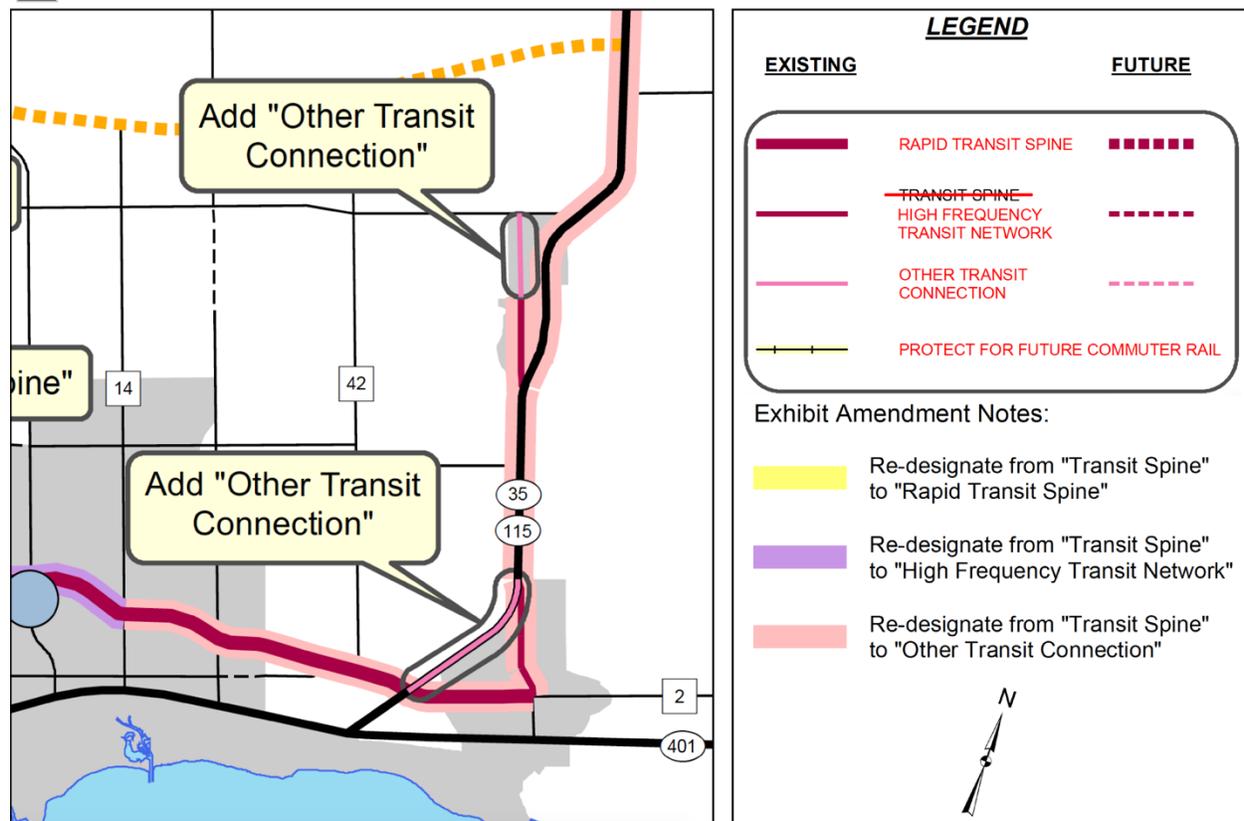


Figure 13: ROPA 171 Transit Network

Source: By-law Number 27-2018 of the Regional Municipality of Durham

In terms of the Economy, Durham Region has set a goal of providing one job in the Region for every two people who lives there, as a way to achieve reduced travel times between home and work for the residents within the Region. While there are no employment areas in the Soper Hills Secondary Plan area, a varied housing supply, in terms of type, size and tenure helps to support a diversified labour force.

The Housing section of the Regional Official Plan, under policy 4.3.9, also sets out that Local Plans shall include:

- “policies for higher density, mixed use development in Regional and locals Centres and Corridors;”
- “maximum unit sizes;”
- “policies to permit the conversion of single detached dwellings into multiple units in Urban Areas;”
- “policies which permit, subject to appropriate criteria and conditions, granny flats/garden suites as a temporary use through mechanisms such as temporary use by-laws and/or site plan control.”

-
- “policies and implementation procedures required to meet the objectives of the Provincial Policy Statement and this Plan, particularly with respect to housing types, density, intensification and affordability;” and
 - “policies to preserve, improve, rehabilitate or redevelop older residential areas, which are in keeping with the cultural heritage resource policies of this Plan and the respective area municipal official plans”.

The Growth Management policies of the Durham Region Official Plan echo that of the Growth Plan, requiring, under section 7.3.9 b), that greenfield development achieve a gross density of 50 residents and jobs per hectare and detailing that the Region will work with local municipality to determine targets for different Living Area and Employment Areas that, together, will attain this target.

The Regional Official Plan, in section 7.3.14, also sets out the following which must be considered when preparing a Secondary Plan:

- the order and sequencing of the development within the Secondary Plan;
- the effects of growth on the “natural, built and cultural environments” ;
- the needs of all modes of transportation;
- the growth management targets previously discussed in this report which must be attained;
- the municipal services and facilities needed to support development of the Study Area;
- opportunities to avoid conflicts related to existing agricultural and planned uses;
- the natural heritage features and hydrologic features and functions and connections between and within these;
- diverse housing mix, including consideration of affordability;
- a compatible land use mix with attractive and vibrant spaces.

In addition to the above, residential uses and other sensitive uses planned within 300 metres of a railway corridor must consider the noise, vibration and safety standards as set out by the Ministry of Environment and Climate Change (policy 2.3.3) and the railway owner. Additionally, a landscape buffer may be required adjacent to railways (11.3.26).

The Durham Official Plan permits trails in all designations, provided there is no adverse impact of natural heritage and hydraulic features, and also discourages the fragmentation of valleylands (policy 2.3.7).

Furthermore, the Durham OP states that community facilities should be accessible and visible and “preferably within walking distance or in close proximity to existing and future transit routes” (policy 5.2.2).

In summary, applicable in the Soper Hills Study area, the Region of Durham Official Plan lays out:

- the overall structure of the Secondary Plan Area with the Regional Corridor along Highway 2 and the remaining area identified as “Living Areas”;
- the densities established for greenfield development within urban areas is planned to achieve an overall minimum gross density of 50 residents and jobs combined per hectare, and Regional Corridors are planned to support an overall, long-term density of at least 60 residential units per gross hectares and a floor space index of 2.5; and
- other directions established and discussed in this section, including those related to type and form or uses along Corridors and arterial roads, connectivity and housing mix.

3.6 Clarington Official Plan

3.6.1 Land Uses

Map A3 of the Clarington Official Plan (COP) establishes the land uses within Bowmanville, including within the Soper Hills Secondary Plan Area (**Figure 14**). On this Map, along the portion within the Secondary Plan area, as well as to the west, Highway 2 is identified as a Regional Corridor. Beyond this, the majority of the Secondary Plan Area is identified as “Urban Residential”, with the exception of an Environment Protection Area along the tributary of Soper Creek and a Community Park, northeast of the intersections of Lambs Road and Concession Street East. The Environmental Protection Area identified on the site matches that identified as Natural Heritage System on Map D1 “Natural Environment” of the Official Plan.

Urban Residential

Residential uses are the primary uses permitted in the Urban Residential designation. In addition, small scale service and retail commercial uses, home-based business, parks, schools and community facilities are also permitted.

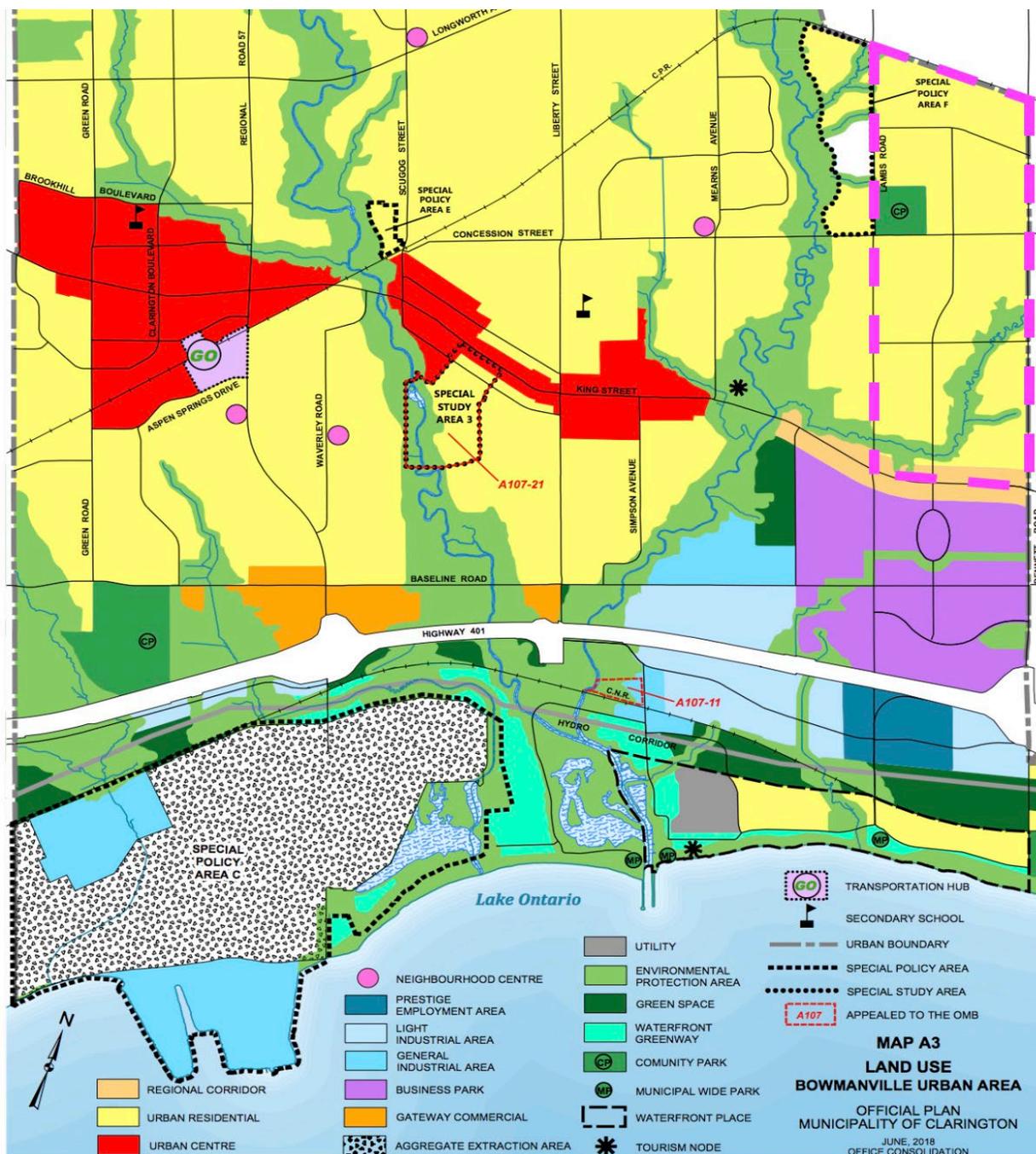
Table 4 –3 establishes density targets and uses for the Living Areas. In the Living Areas, internal to a neighborhood, the minimum net density shall be 13 units per net hectare. These areas are planned for ground-related buildings, including detached and semi-detached dwellings and limited townhouses. At the edge of the neighbourhood and adjacent to arterial roads, the planned minimum density is greater, at 19 units per net hectare and with planned unit types including townhouses, semi-detached dwellings, detached dwellings and limited apartments. Both internal to the Living Area

and at edges and along arterial roads, buildings are planned to have heights of a minimum of one to a maximum of three storeys.

Corridors

On Map B, Urban Structure, Highway 2 is identified as a Regional Corridor and Lambs Road, Concession Street East and Providence Road, to the south of Concession Street East only, are identified as Local Corridors (**Figure 15**).

Corridors extend approximately 100 metres from the boundary of the road right-of-way (10.6.5); in the case of this Study area, 100 metres from the right-of way of Highway 2, Lambs Road, Concession Street East and Providence Road. Corridors will be made up of Commercial and Mixed Used development. The purpose of the Commercial and Mixed-Use Development designation is to support the function of Corridors (and Centres) with higher density, transit supportive, mixed uses. Uses in the Corridors will include residential and mixed uses including “a wide array of uses in order to achieve higher densities and transit oriented development” and “other uses that are contemporary to the intended functions of the Corridor.” (10.6.2). Development in Corridors shall be at least two storeys in height per section 10.3.5 of the Official Plan.



Secondary Plan Area Boundary
Figure 14: Soper Hills Secondary Plan Land Use Designations
 Source: Clarington Official Plan

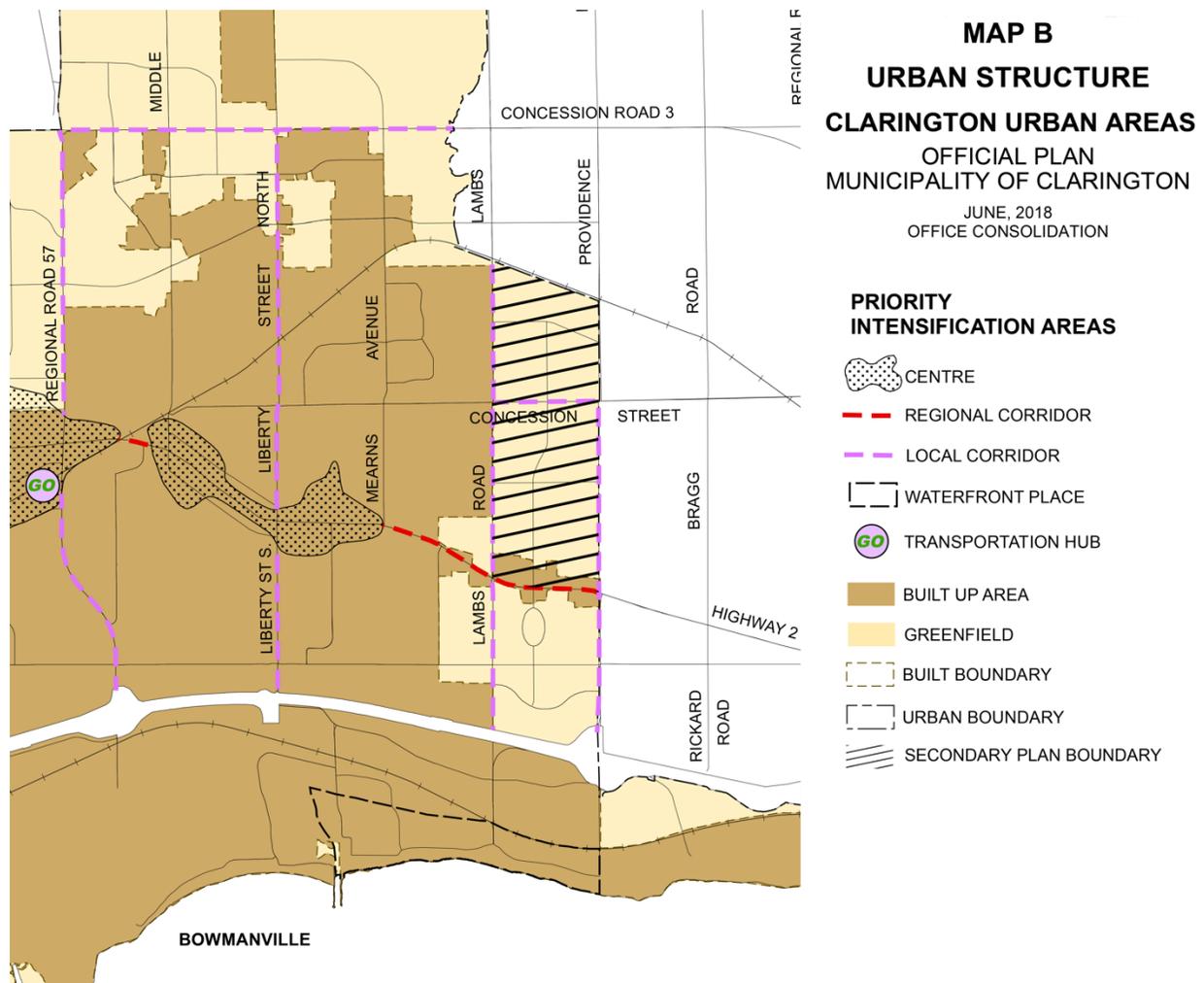


Figure 15: Soper Hills Secondary Plan Urban Structure

Source: Clarington Official Plan

The policies of section 5 also establish that development along Corridors should:

- Create a strong street edge, with buildings close to the street, ground floor uses and visible main entrances that are accessible from the sidewalk;
- Transition to abutting areas of lower density areas and consider matters of light and shadow, privacy and wind;
- Enhance the built and pedestrian environment through massing, articulation, materials and details, awnings and lighting, as well as planting and street furniture; and
- Hide refuse and rooftop mechanical elements.

Regional Corridors

According to tables 4-2 and 4.3, Regional Corridors have a planned minimum gross density of 60 units per gross hectare and a minimum net density of 85 units per net hectare. The floor space index target for Regional Corridors is 2.5. These areas are planned to be a minimum of three storeys in height to a maximum of 12 storeys in height. The built form is to consist of mixed use buildings and apartment buildings, of the following:

- 40%, low-rise buildings, 3 to 4 storeys in height;
- 40% mid-rise buildings, 5 to 6 storeys in height; and
- 20% high rise buildings, 7 to 12 storeys in height.

In Regional Corridors, per Policy 10.6.6, each non-residential use will be a maximum of 600 square metres, with no more than 3,000 square metres for combined non-residential uses on a single site, although more detailed Secondary Plan policies may take precedence.

Local Corridors

The requirements for the Local and Regional Corridors differ in that for Local Corridors, non-residential uses may only occur in mixed use buildings. Local Corridors can also contain no more than 1,500 square metres of non-residential uses per site and no more than 300 square metres per non-residential unit, unless more detailed policies exist in a Secondary Plan (10.6.7).

Per Table 4-2 and 4-3 of the Clarington Official Plan, Local Corridors are expected to achieve a minimum gross density of 30 units per hectare and a minimum net density of 40 units per hectare, as well as be constructed at an FSI of 2.0. In addition, Local Corridors are to be 2-6 storeys in height and be made up of 80% 2-4 storey low rise buildings and 20% 5-6 storey midrise buildings.

An excerpt of Table 4-3 from the COP is shown in **Table 1**.

Table 1: Excerpt of Table 4-3 from the Clarington Official Plan.

Table 4-3 Summary of Urban Structure Typologies			
General Locational Criteria	Minimum Net Density (Units Per Net Hectare)	Standard Minimum and Maximum Height (storeys)	Predominant Residential Built Form and Mix
Regional Corridors	85	3-12	Low Rise: 3-4 storeys (40%) Mid Rise: 5-6 storeys (40%) High Rise: 7-12 storeys (20%) Includes: Mixed use buildings, apartments
Local Corridors	40	2-6	Low Rise: 2-4 storeys (80%) Mid Rise: 5-6 storeys (20%) Includes: Mixed use buildings, apartments, townhouses

3.6.2 Secondary Plan Areas

On Map C, Secondary Plan Areas, the Study Area is identified as a Secondary Plan area for which a Secondary Plan is not yet completed (**Figure 16**).

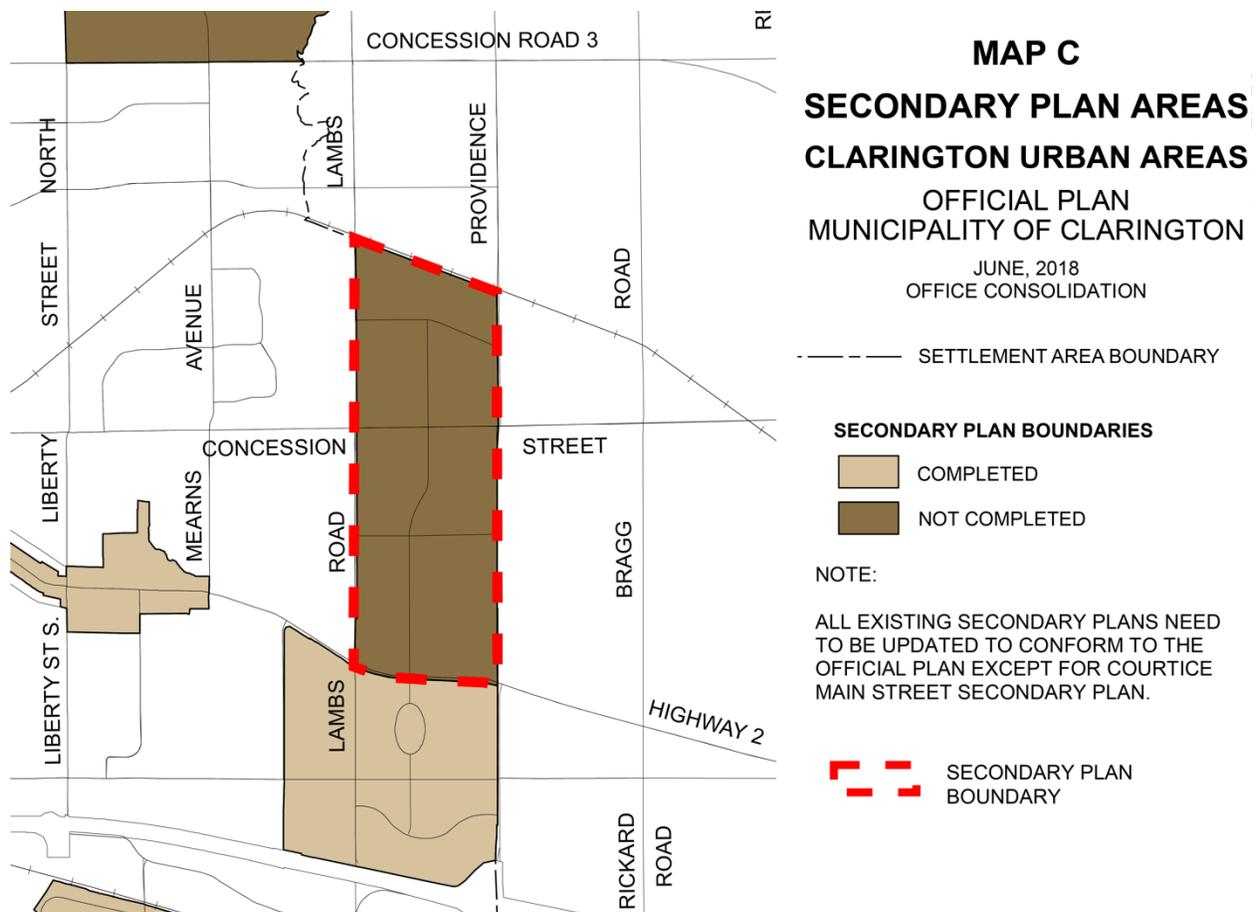


Figure 16: Soper Hills Secondary Plan Area
 Source: Clarington Official Plan

The COP establishes many elements that must be considered when undertaking Secondary Plans and must be included in the Secondary Plan. These are addressed in sections 4.6.5, 4.6.6, 4.6.7 and 23.3.9. The topics covered by these policies are wide ranging, and include requirements for appropriate phasing, sequential growth, meeting density targets, adherence to the Green Development Standards, connected transit supportive environments, minimized changes to the topography, etc.

Like in the Growth Plan and Regional Official Plan, Section 4 of the COP establishes that a minimum of 50 residents and jobs per gross hectare shall be targeted in greenfield areas, which includes the Study area.

3.6.3 Transportation

On Map J3, Transportation Network, Highway 2 is identified as a Type B Arterial road and a transit spine (**Figure 17**). Lamb's Road and Concession Road East are also identified as Type B Arterial roads, although the latter is deferred by the Region. Providence Road and the extension thereto is identified as a Type C Arterial road. The rail line on the northern boundary of the Secondary Plan area is shown to have an

existing grade separation at Providence Road and a proposed grade separation at Lambs Road.

The Transportation policies of the COP put an emphasis on “complete streets” described as “the roadways and adjacent public areas that are designed to accommodate users of all ages and abilities including pedestrians, cyclists, transit users and motorists”. The development of complete streets in Secondary Plan areas shall be context based, designed to allow access to transit, contain short blocks and streets, be accessible and be designed for not only the car, but pedestrians and cyclists as well (19.6.4).

Like the Regional Official Plan, the COP seeks to avoid placing sensitive uses next to railway corridors and requires a noise study for residential or other sensitive uses within 300 metres of a railway and vibration study for any use within 75 metres of it.

3.6.4 Sustainable Communities

Section 5 of the Clarington Official Plan, Creating Vibrant and Sustainable Urban Places, sets out a number of policies relevant to development. These include creating a walkable interconnected grid-like street pattern that: considers natural features and topography, has short streets and blocks, connects frequently to arterial roads, provides a safe space for cyclists, contains sidewalks and avoids window streets, cul-de-sacs and measures that restrict circulation (5.4.2). Policies also include developing neighborhoods that have an identity, have a consistent community character through built form and design, including consideration of building materials, meet applicable architectural design guidelines, contain a mix of housing forms and neighborhood uses, mitigate noisy impact, have sustainable and attractive buildings and landscapes and are accessible and pedestrian-oriented. (5.4.3).

This section also sets out special design elements for Prominent Intersections. The intersection of Highway 2 and Lambs road is identified as a Prominent Intersection and the policy allows for other Prominent Intersections to be identified through the Secondary Plan Process. According to policy 5.4.10, buildings at key intersections should have:

- “Massing and height sufficient to emphasize the significance of the intersection;
- High quality building materials and building articulation on both street frontages;

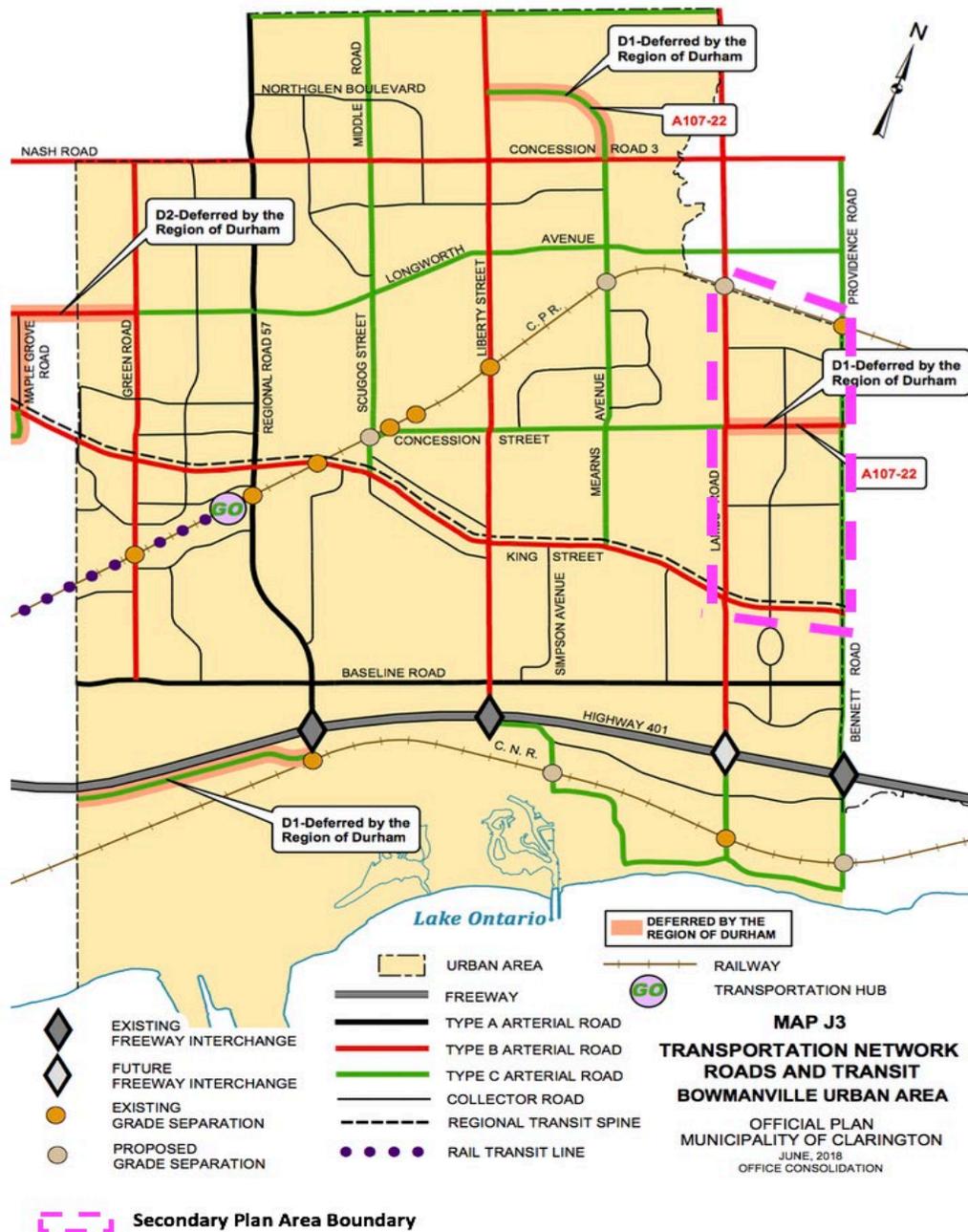


Figure 17: Soper Hills Existing Transportation Network

Source: Clarington Official Plan

- Significant areas of transparent glass;
- Special architectural elements such as corner design, massing and height, awnings, and entrance door features;
- The main public entrance located at the corner; and

- Landscaping, street furniture and where appropriate, public art elements to complement the intersection and the building design.”

While elements of sustainability is weaved throughout the Official Plan, Section 5.5 specifically addresses:

- Conservation and efficiency with regards to energy, water and resources;
- Reduction of emissions and better air quality; and
- Resiliency of buildings and infrastructure.

Some of the mechanisms listed that help achieve these matters include:

- Encouragement of density to efficiently use existing infrastructure;
- Provision of transit and active transportation opportunities early in areas of new development, reduction, reuse and recycling of waste;
- Support of agricultural and employment practices with lessened emissions;
- Permission for uses that provide jobs and residences in Centres and Regional Corridors;
- Green infrastructure and green building design;
- Preservation of mature trees; and
- Use of street trees, landscaping and materials to counter the heat island effect. (Section 5.5.1 and 5.5.2)

3.6.5 Affordability

One of the Goals of the COP is to “encourage a broad range of housing types, tenure, and cost within settlement areas to meet the evolving housing needs for people of all ages, abilities and income groups.” Within the policies of Section 6, the COP sets an objective that a minimum of 30% of the new housing in the urban area be affordable. In Section 6.3.2 of the Official plan, affordable housing is specifically encouraged in Corridors and Centres, in order to support transit and active transportation.

3.6.6 Agricultural policies

The theme of mitigating nuisance between agricultural and non- agricultural uses is described in Section 9, “Liveable Neighbourhoods”. Section 9.3.4 states:

“The existing and potential negative impacts from industrial uses, arterial roads, railways, and agricultural uses on Urban Residential areas and vice versa shall be mitigated to the satisfaction of the Municipality and in accordance with the applicable Provincial guidelines and regulations”.

Section 23, requires that Secondary Plans must include measures to mitigate the potential conflicts between the development of secondary plans and existing agricultural uses (23.3.9h).

3.6.7 Neighbourhood Targets

In Appendix B, the COP also sets out unit targets by Neighbourhood,. As shown in **Figure 18**, the Soper Hills Secondary Plan Area is divided between two neighbourhoods, being Juryvale and Soper Hills. While the table to Appendix B of the COP sets out unit targets by Neighbourhood, the unit targets provided do not include the potential units from the Secondary Plan Areas west of Lambs Road and the COP notes that the unit targets for the neighbourhoods will have to be updated with the completion of the Soper Hills Secondary Plan. Currently, the unit target for Juryvale, includes 51 Low, 15 Medium and 7 High density units for a total of 73 units. For the Soper Hills Neighbourhood, 273 Low and 268 Medium density units are targeted, for a total of 541 units.

One of the outcomes of the Study will be a need to update Appendix B of the COP in order to reflect the growth targets for the Soper Hills Secondary Plan Area. The Study process may also consider any required distinction between the Juryvale and Soper Hills Neighbourhoods as it progresses.

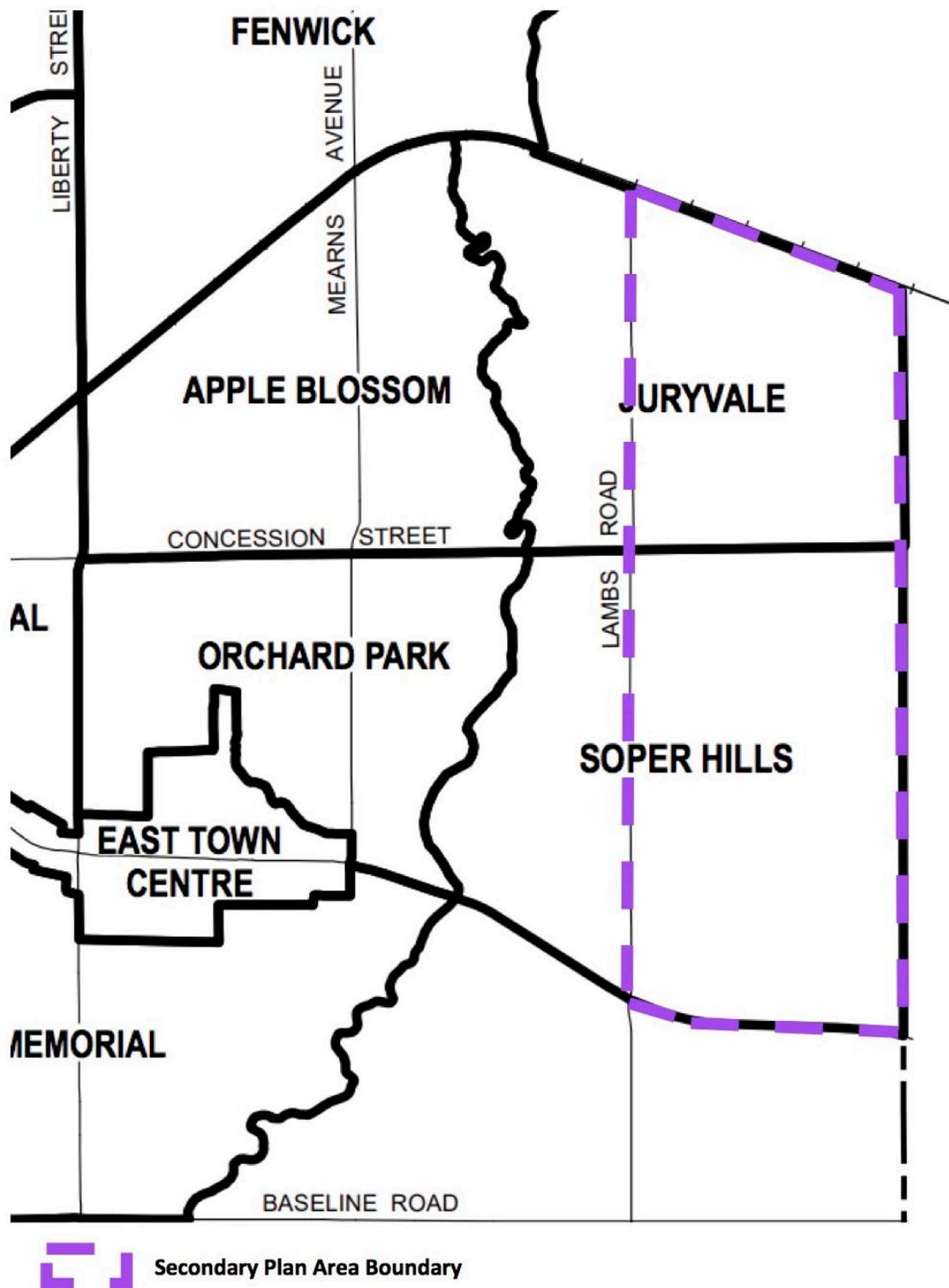


Figure 18: Neighbourhood Areas in Clarington
Source: Clarington Official Plan

3.7 Jury Lands Draft OPA

At the time of writing this report, a draft Official Plan Amendment was proposed for Special Policy Area F – Camp 30, the former Boys Training School, which lies immediately west of the Secondary Plan area north of Concession Street. The OPA and Urban Design Master Plan and Design Guidelines provide for residential development blocks, open space along Soper Creek, the future Jury Lands Park and options for adaptive reuse of the area’s heritage buildings. **Figure 19** portrays both the built form and land use conceptual plans for the area from the Urban Design Guidelines.

The development framework identifies public streets to connect to future development to the east, the Soper Hills lands, private development blocks and streets and an open space network tied to Soper Creek. The site’s stormwater management strategy utilizes the existing drainage courses and features that empty into Soper Creek, designed as landscape features to define the character of the development.

The lands are to be developed with a mix of housing types. The neighbourhood is to be walkable and well-connected to Soper Creek, the Soper Creek trail system, and open space. The planning documents also make reference to pedestrian connections being made to the future development to the east, which would be the Soper Hills Secondary Plan area.

3.8 Durham Community Climate Adaptation Plan

The Durham Community Climate Adaptation Plan (2016) seeks to prepare the Regional community for the effects of a changing climate, proposing programs that involve the contribution of many stakeholders and agencies within Durham and beyond. It is the vision of the plan to remain liveable, resilient and prosperous through goals that will increase the resiliency of community infrastructure, programs and services; improve emergency planning for weather extremes; improve the Region’s sustainability and attraction for a live/work/play environment; and lead to the recognition of Durham as a climate adaptation planning leader. The plan proposes different programs to implement its vision and goals, divided into various sectors. The relevant sectors, objectives and tools of the proposed programs are outlined below.

The objective of the building sector is to improve the resilience of new buildings to future climate conditions. Durham Climate Resilience Standards for both low-rise residential and high-rise residential, industrial, commercial and institutional buildings, prescribe climate resilience features for all new buildings in Durham constructed after 2020. The plan emphasizes adaptation measures to be implemented in the development of new buildings, which are low cost if incorporated at the time of design and construction.



Figure 19: Draft Jury Lands Potential Land Use and Built Form Plans

Source: The Jury Lands, Bowmanville / Special Policy Area F Urban Design Master Plan + Design Guidelines, Municipality of Clarington

The flooding sector objective seeks to reduce the severity and frequency of urban flooding, which involves the implementation of adaptation actions through implementing low impact development (LID) techniques, green infrastructure and methods to help reduce the impervious surfaces of lands. Future development should promote less land consumptive transportation, infrastructure and parking areas; increase the floodplain capacity; avoid development in the floodplain and other hazardous lands; provide floodplain buffers; and conform to planning policy and design standards.

The human health sector objective is to reduce ambient summer temperatures in urban areas in order to reduce heat stress, in part through the “Cool Durham” Heat Reduction Program. Measures relevant to development include reflective roofs; green or vegetated flat roofs; increase urban tree cover on public and private land; shading structures in parks and public spaces; light coloured pavement and buildings; improved

thermal performance in buildings and passive cooling design; and water features in landscaping, including rain gardens and bioswales.

An objective of the roads sector is to improve the performances of roads under extreme heat conditions through resilient asphalt using measures, which can include using resilient asphalt or alternative pavement surfaces, using light coloured asphalt pavement to reduce heat absorption, and increasing urban tree cover to reduce heat impact.

The natural environment sector seeks to enhance natural capital and build climate resilience. Conservation practices should protect, enhance and restore the health and resiliency of the natural environment with specific actions such as tree and shrub planning; forest management; sensitive habitat creation and restoration; and riparian areas and in-stream habitat creation and enhancement. Green infrastructure should be incorporated to protect, enhance and restore the health and resiliency of the natural environment and communities, involving specific actions such as green roofs, rain gardens, soak away pits, permeable groundcovers, and bioswales.

4 Chapter 4: Agricultural Evaluation



4.1 Purpose of this Chapter

This chapter presents the agricultural analysis and assessment that forms part of the background for the Soper Hills Secondary Plan Study. There is a need for an agricultural assessment because the lands planned for urban development in the Soper Hills Study Area have the potential to affect existing agricultural operations north and west of the study area.

The agricultural assessment for Soper Hills is a desktop analysis that:

- provides statistical information for livestock production,
- includes aerial photo interpretation, and
- uses additional mapped information to characterize lands adjacent to the Secondary Plan area.

The assessment describes and evaluates the following:

1. What are the characteristics of the agricultural environment adjacent to the Soper Hills Secondary Plan study area?
2. How have the agricultural characteristics within the study area changed over the past 35 years (based on agricultural census data 1981 - 2016)?
3. What mitigation measures are recommended to mitigate impacts to agriculture operations outside of the Soper Hills Secondary Plan study area to the extent feasible?

The contents of this analysis are framed by policy as well as guidelines and address several agricultural characteristics including Minimum Distance Separation (MDS).

4.2 Context

The Soper Hills Secondary Plan is bordered by lands designated Prime Agricultural Area to the north and west as shown in **Figure 20**. While the current function and uses of the lands within the Secondary Plan area are primarily agricultural, Soper Hills is a designated urban area. This chapter considers the impact of urban development in the Secondary Plan area on existing agricultural operations located to the north and east.

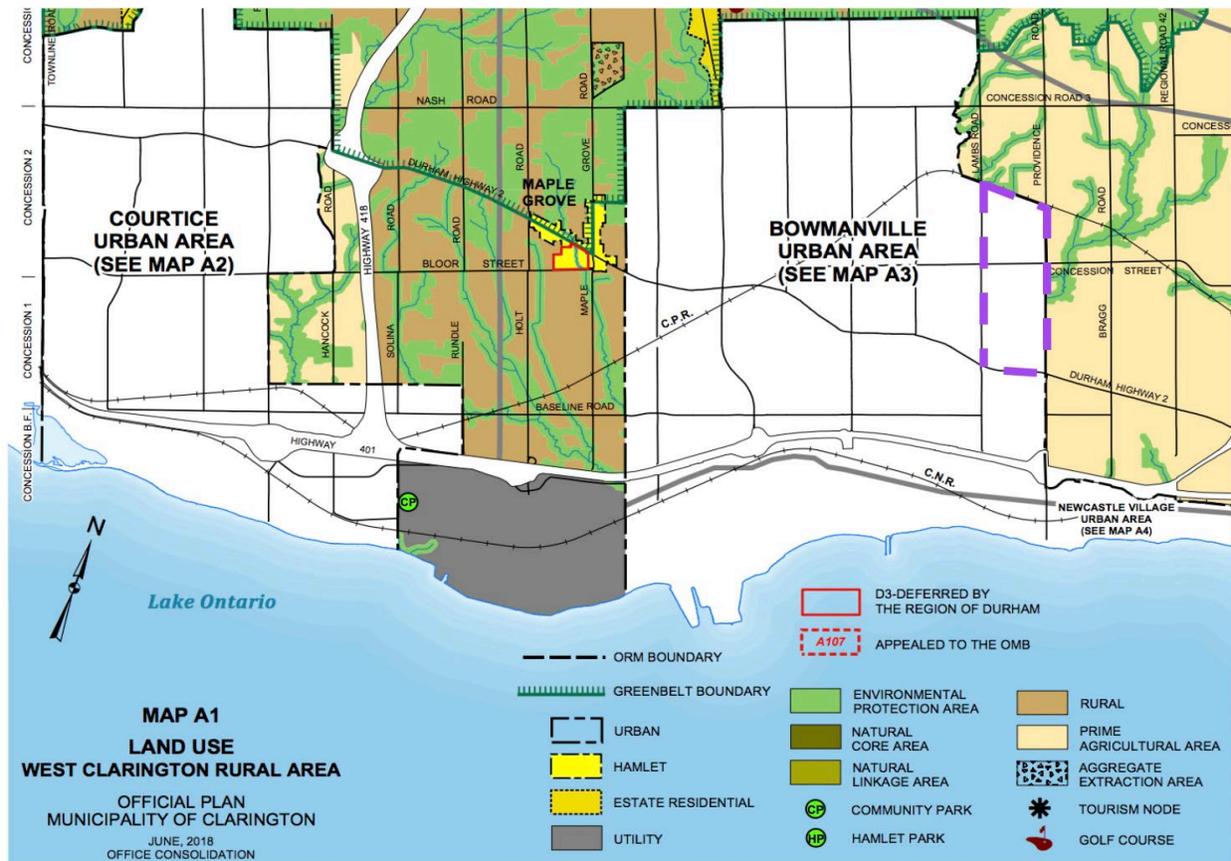


Figure 20: Soper Hills Secondary Plan Area in Relation to Surrounding Land Uses
Source: Clarington Official Plan

4.2.1 Agricultural Impact Assessment (AIA) Guidelines

Agricultural Impact Assessment (AIA) guidance at the Secondary Plan stage has been described by the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA, 2018) in draft guidelines. The draft AIA guidelines refer to secondary plans and state that edge planning tools:

- can be implemented to alleviate land use conflicts between agricultural and non-agricultural uses, and
- include directing traffic away from farming areas, using buffers and providing separation distance.

The Draft Agricultural Impact Assessment (AIA) Guidance Document (OMAFRA, 2018) discusses Secondary Planning together with Subdivision Design and, with reference to secondary plans, states that they may include policies and maps that provide direction

on topics including land use, infrastructure, transportation, design and the natural environment. The Draft Agricultural Impact Assessment (AIA) Guidance Document (OMAFRA, 2018) is more specific regarding subdivision planning, which follows the secondary plan stage, and states that design elements that could be incorporated into subdivision in the fringe areas include:

- Road design to direct traffic away from farming areas;
- Increased lot depths/sizes along the urban-agriculture boundary to allow for greater separation between uses;
- Planting vegetation buffers and/or installing fences to protect residential areas from possible spray drift, dust and noise;
- Recognition that a road right of way may be an adequate buffer and planting vegetation to improve the existing roadway buffer; and
- Increased building setback provisions in the zoning by-law to increase the separation between uses.

Therefore, mitigation measures such as road design, buffers and setbacks are appropriately evaluated and implemented, as is reasonable, at the subdivision design stage rather than at the secondary plan stage. Hence, this report does not contain recommendations related to those mitigation measures which are specific to the subdivision design stage.

While previous references are made to the Draft Agricultural Impact Assessment (AIA) Guidance Document (OMAFRA, 2018), the “Guidance Document” is still a draft and the release date of the final document is unknown (personal communication, 2019, OMAFRA Land Use Planning staff).

4.3 Findings

4.3.1 Livestock and Manure Production Trends

Several data sources have been used at various scales to characterize trends in livestock use. For example, impediments to the construction of new livestock buildings are to be found in government regulation such as the Nutrient Management Act (NMA, 2002) and the Act’s associated Regulation, in addition to the costs associated with the livestock business.

These costs include:

- The requirements of compliance with the NMA. Costs are significant and vary with agricultural industry and are outlined in the paper by Brethour et al. (2004). The poultry business is in a relatively good position to expense those costs.

- Costs for entering supply controlled agricultural industry such as dairy or poultry (which are the livestock industries with a good expectation of high net returns) is high. Combe (2000) estimated that the capital investment (excluding land costs) related to 30,000 units of chicken broiler quota was \$1.609 million. Therefore, the capital investment (excluding land) for the 30,000 units of chicken broiler quota would be in excess of \$1.6 million at year 2000 prices.

Given the level of liability, costs of compliance, hard work and uncertainty associated with livestock production, that production may become a less desirable farming option. For example, livestock farming may not be the favoured choice for an agricultural operation because of externally imposed requirements related to nutrient management, animal welfare, diseases such as BSE and avian flu in addition to the cost of quota associated with supply-controlled industries (chicken, eggs and dairy).

This perspective of diminished interest in livestock production is supported by information that indicates that less livestock is being produced within Durham Region and Clarington. Because the number of census farms and census farm area has changed over time, nutrient units (amount of manure) has been calculated proportionate to census farm number and census farm area. Statistics Canada information, which tracks changes every five years, shows diminishing levels of nutrient units (formerly animal units) and manure production (**Figures 21 to 26**) as follows:

- total nutrient units in Durham Region and Clarington per census farm and per census farm hectare have diminished from 1981 to 2016 (**Figures 21 and 22**),
- when total nutrient units are multiplied by the odour factor (an “unpleasantness” rating), per census farm as well as per census farm hectare, Clarington’s and Durham’s levels have decreased between 1981 and 2016 (**Figures 23 and 24**)
- Clarington’s total nutrient units as a proportion of Durham Region’s total nutrient units have decreased from 1981 to 2016 (**Figure 25**),
- when farms reporting manure and the amount of manure reported are summarized from 1991 to 2016, (data are only available from 1991 to the present census) Clarington farms reporting, and amount of manure reported, as a proportion of the amounts reporting/reported within Durham Region, has diminished (**Figure 26**).

The diminishing number of farms reporting livestock as well as the diminishing amount of manure reported support the conclusion that there is a lower probability of manure odour.

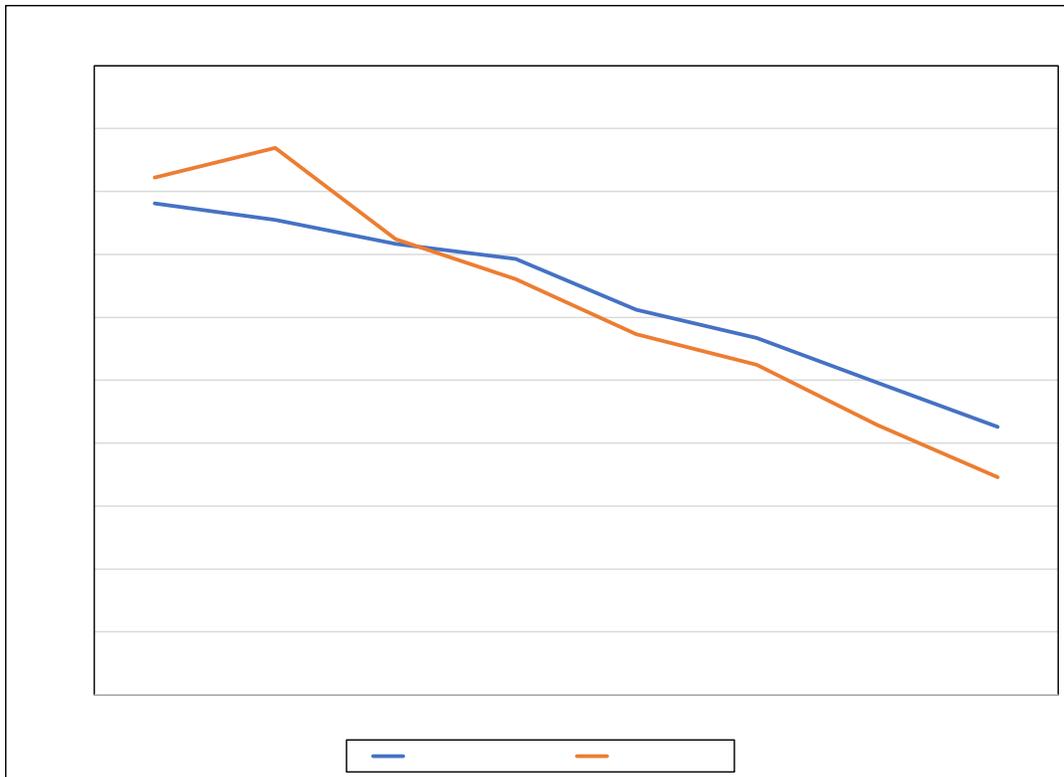


Figure 21: Change in Nutrient units per farm hectare over time



Figure 22: Change in Nutrient units per farm over time

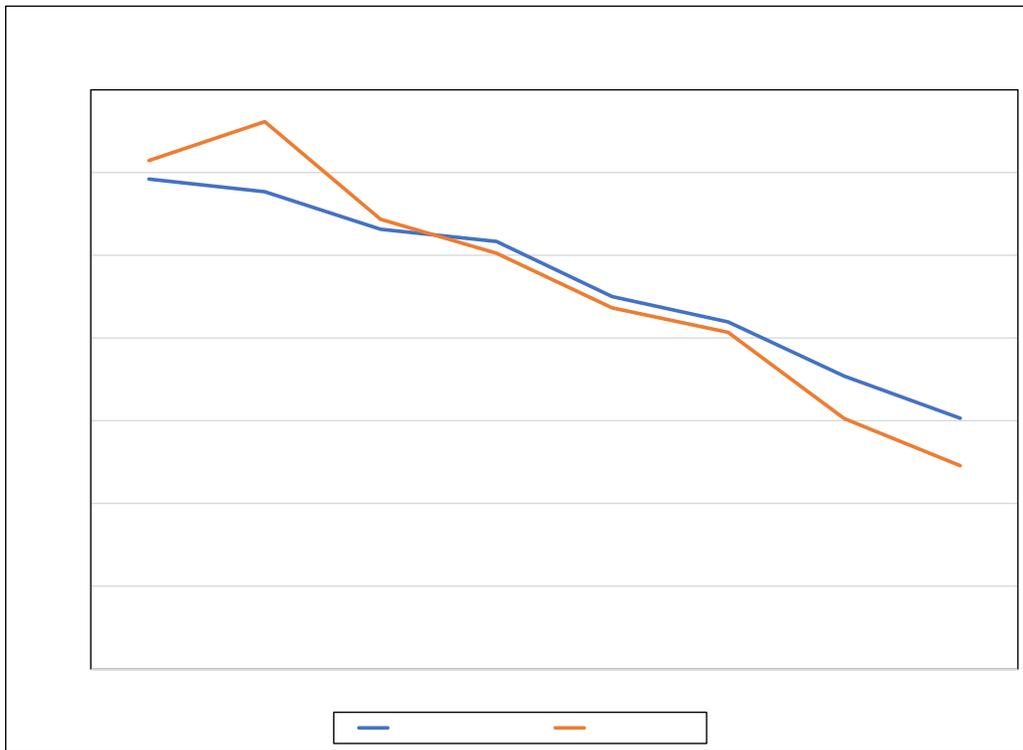


Figure 23: Change in Nutrient units time odour factor per farm hectare over time



Figure 24: Change in Nutrient unit times odour factor per census farm over time

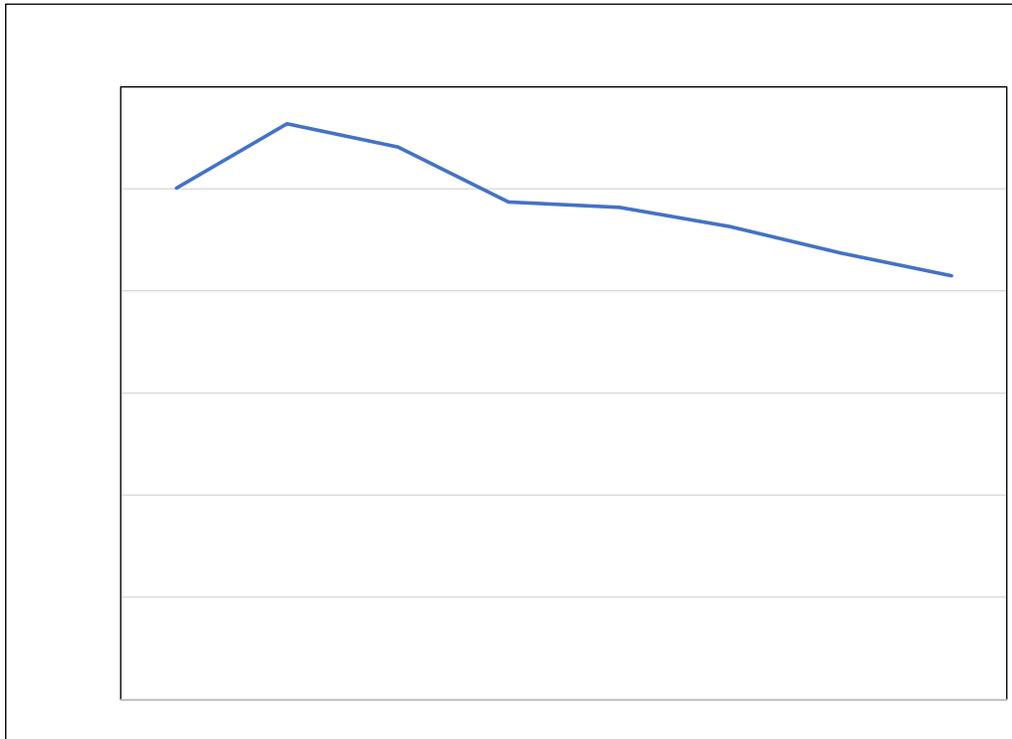


Figure 25: Change in nutrient in Clarington as proportion of Durham over time

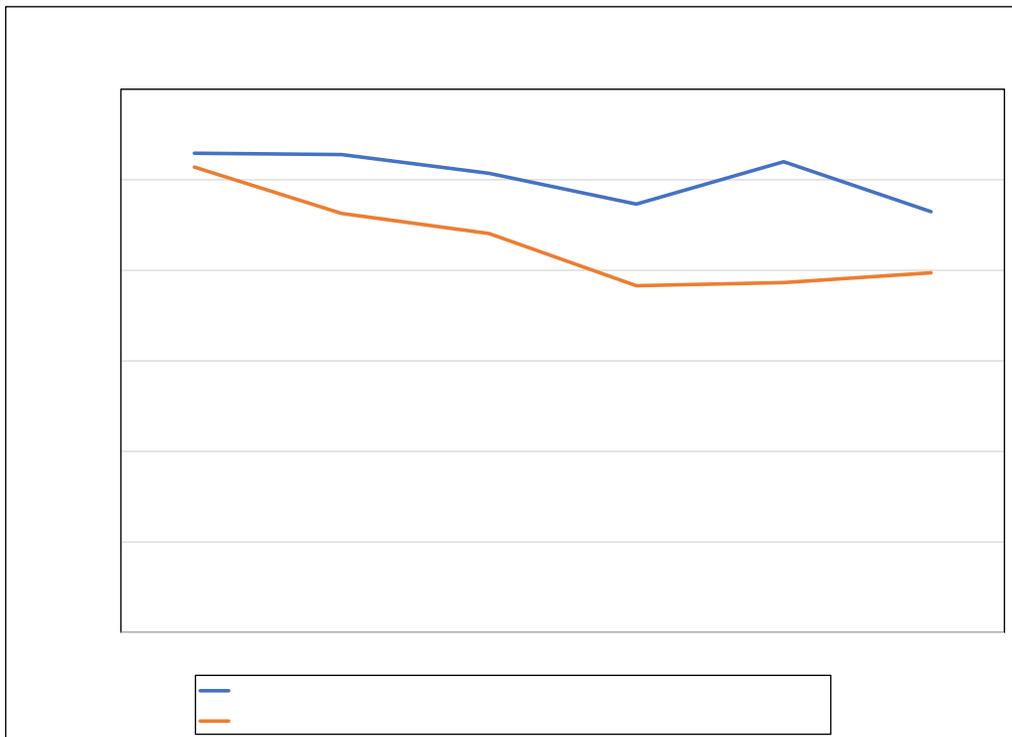


Figure 26: Change in farm area relative to Durham over time

4.3.2 Minimum Distance Separation (MDS II) Analysis and Results

The Minimum Distance Separation (MDS) Formulae Document produced by the Ministry of Agriculture, Food and Rural Affairs (Ontario) guides the application of the Minimum Distance Separation Formulae with the intent, as stated on page 1 of the document, to “prevent land use conflicts and minimize nuisance complaints from odour.”

The purpose of the Minimum Distance Separation (MDS) Formulae is to determine setback distances between livestock barns, manure storages or anaerobic digesters and surrounding land uses. Municipalities are responsible for ensuring MDS setbacks are met. The Ontario MDS Document outlines the two separate formulae:

- “MDS I – provides the minimum distance separation between proposed new development and any existing livestock barns, manure storages and/or anaerobic digesters”. This formula is used for the setback of a new use to an existing relevant agricultural use.
- MDS II – provides the minimum distance separation between proposed new, expansion of remodelled livestock barns, manure storages and/or anaerobic digesters and existing or approved development”. This MDS formula is used when there is a new relevant agricultural use to other uses around it.

The MDS Document only applies in prime agricultural areas and rural areas thus the formulae would not apply to any new development in the Soper Hills Secondary Plan. However, outside of the Secondary Plan Area, any new, expanded or remodelled livestock barns, manure or anaerobic digesters would have to meet the MDS II, including anything that would be planned within the Secondary Plan area. In this report, the MDS II is applied to livestock operations near the Secondary Plan area, to understand how they may be impacted by future development.

There is some probability that there may be MDS II conflicts if farms near to Soper Hills wish to expand their operations. As a result, farms actively engaged in livestock production were identified and MDS II calculations were made.

The MDS II calculations procedure was as follows:

1. Barns capable of housing livestock within 1.5 km of Soper Hills boundary were identified and measured using aerial photography. Limited field reconnaissance from the roadside was also completed.
2. Total barn area per farm was calculated based on the photographic measurements.
3. Barn area was used in the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) AgriSuite software (version 3.4.0.18) to calculate maximum housing capacity.

4. Livestock and manure handling system was ascertained, where possible, based on photo interpretation.
5. MDS II calculations were completed assuming:
 - the current manure handling system,
 - an increase in barn size or new barn to accommodate twice as many livestock as current maximum housing capacity,
 - that no building permits for barns had been issued within the past 3 years.

Calculations were completed for 3 livestock facilities on 3 separate properties (**Figure 27**).

Farms A and B were determined to contain cattle, while Farm C was determined to contain a limited number of horses.

Farm A currently has an estimated livestock barn area of 5,574 square metres. It is assumed that if this facility were to double, it would have a livestock barn area of 11,148 square metres. Based on MDS II for Type B Land Uses, the minimum livestock barn setback distance is 620 metres, and the minimum manure storage setback distance is 758 metres.

Farm B currently has an estimated livestock barn area of 2,207 square metres. If this facility were to double, it would have an area of 4,414 square metres. Based on MDS II for Type B Land Uses, the minimum livestock barn setback distance is 392 metres, and the minimum manure storage setback distance is also 392 metres.

Farm C was identified to contain a single horse, with an existing estimated livestock barn area of 513 square metres, that is not used for the horse on site. Rather, only a small shelter is provided on site. It is assumed that if the existing structure was filled, it could accommodate a maximum of 17 horses, which is what could occur without a building permit, since the existing single horse in a shelter doesn't count as a livestock operation under the guidelines. Based on MDS II, the minimum livestock barn setback distance for 17 horses is 233 metres, and the minimum manure storage setback distance is 277 metres.

Two of the 3 livestock facilities (farms A and B, **Figure 28**) could double their current livestock housing capacity without MDS conflict. The barns immediately adjacent to the Soper Hills eastern boundary (farm C) had relatively few livestock and could increase that livestock based on existing housing capacity. Given the trends to lower livestock production in Clarington and the MDS II calculations, opportunities are available to increase livestock numbers without limitations due to MDS.

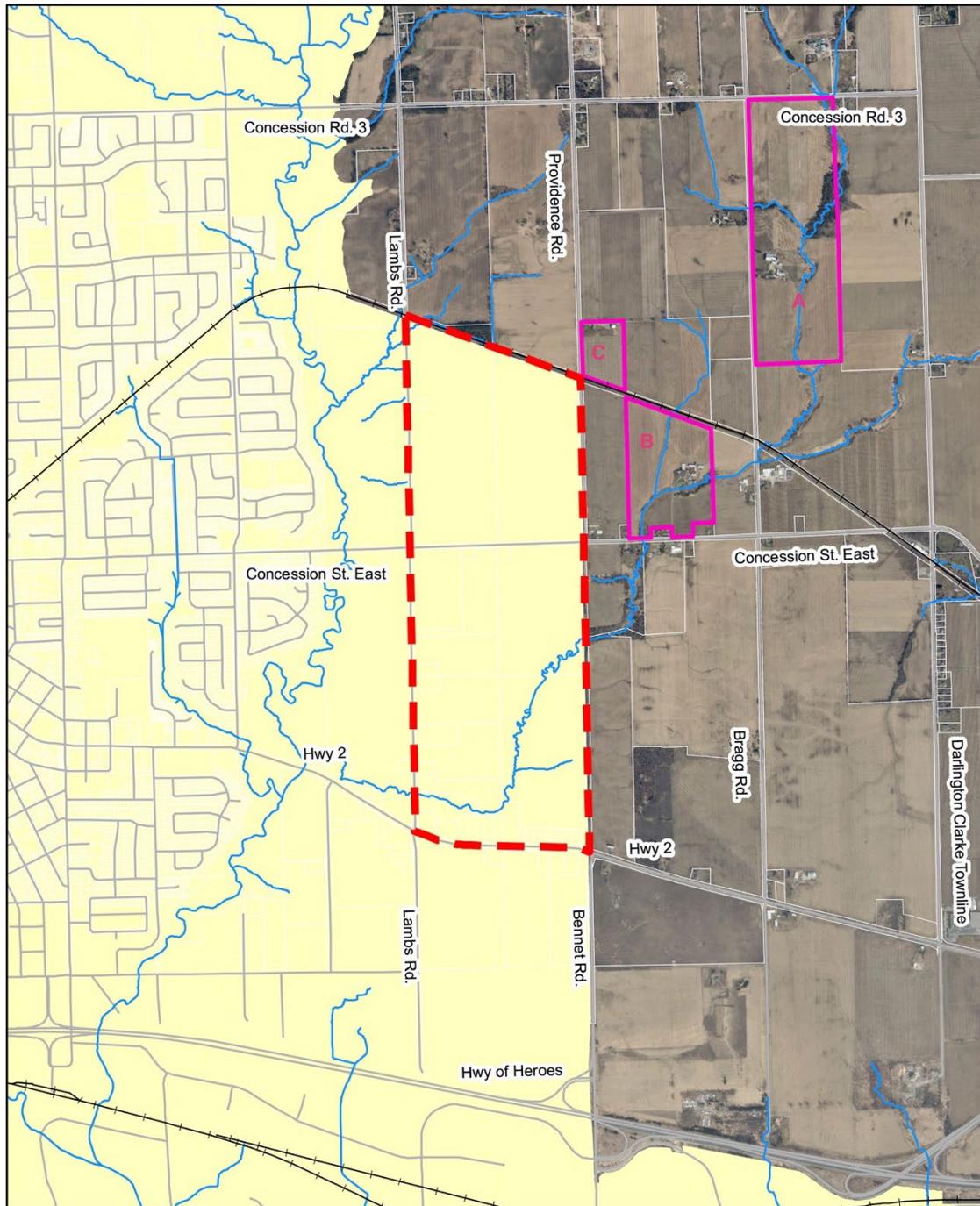
4.3.3 Mitigation

The following discussion on mitigation is presented to provide an indication of the kinds of approaches to mitigation between agriculture and non-agricultural uses that have

been applied and documented. However, given the direction of the Draft Agricultural Impact Assessment (AIA) Guidance Document (OMAFRA, 2018), most of the mitigation described in the following is best considered and implemented as reasonable later in the planning process at the subdivision design stage.

There is much qualitative literature describing possible conflict between agriculture and urban uses where that conflict is related to dust, pesticides, noise, light, transportation, odour, trespass, vandalism, farm management, animal care and other matters and expectations associated with, agricultural versus urban areas. It is not the intent of this report to review that literature extensively. OMAFRA does not have documents that describe mitigation measures and their efficacy but have provided information prepared by some municipalities within southern Ontario (London, Mississippi Mills) and to government papers available for British Columbia (OMAFRA, 2018). The literature from British Columbia is more extensive. Published literature generally provides information with respect to subdivision design and other recommendations intended to reduce urban/rural conflict. This literature has found that:

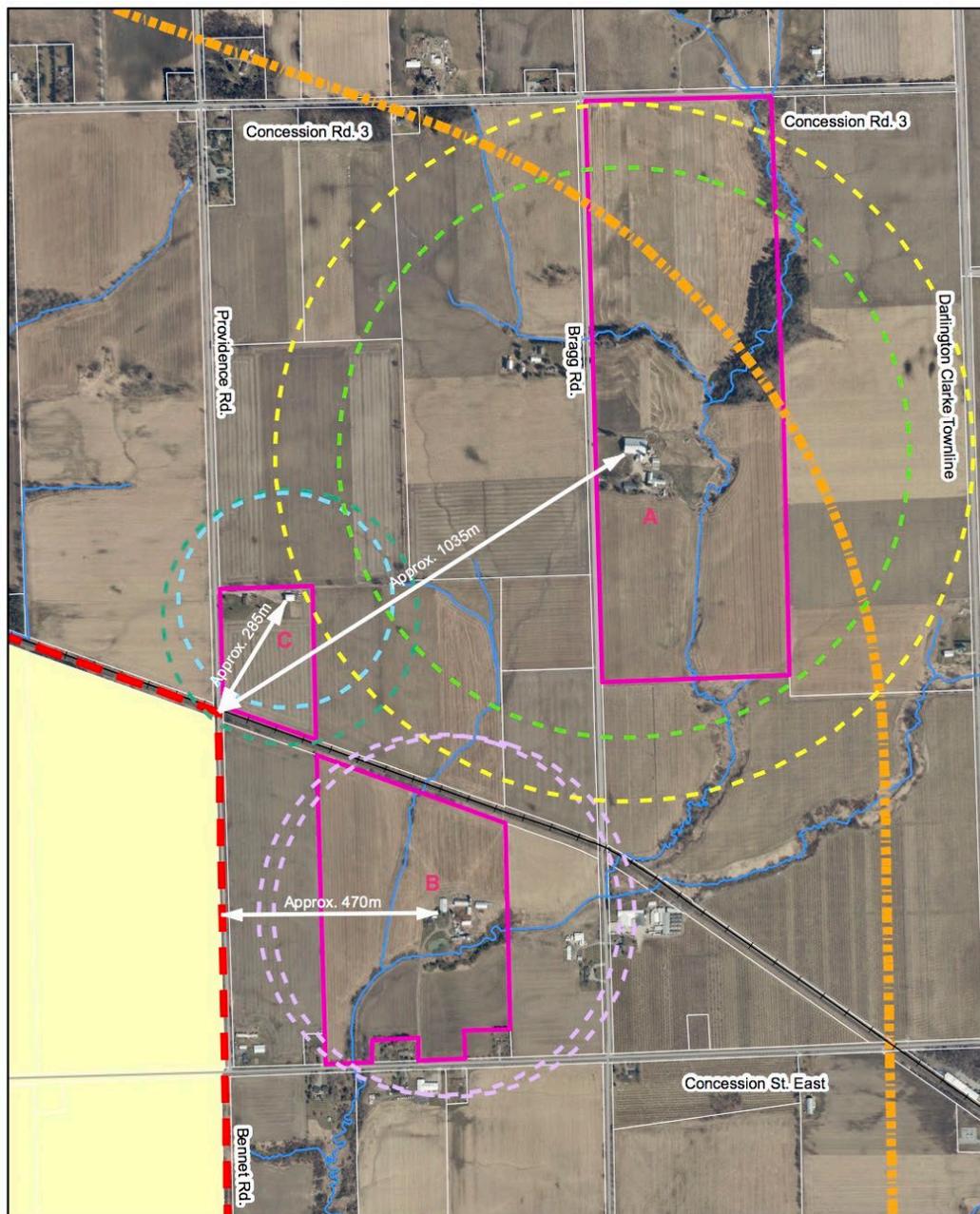
- Roads at the boundary between agricultural and urban areas should be designed to accommodate large, wide, slow-moving farm machinery (by use of wider road surfaces including paved shoulders; by placement of road markers, signage, mail boxes away from the road edge, for example); and
- Visual barriers provided by tree plantings within the agricultural and urban areas would potentially reduce some impacts related to light and noise.
- Areas of lower agricultural importance/priority should be chosen for non-agricultural development where that proposed non-agricultural development has a boundary adjacent to relatively lower priority agricultural lands.



-  Secondary Plan Area Boundary
-  Farm With Livestock
-  Urban Boundary



Figure 27: Locations of farms containing livestock in proximity to the Secondary Plan area



- | | |
|---|--|
|  Secondary Plan Area Boundary |  Buffer: 758m |
|  1.5km Buffer |  Buffer: 620m |
|  Farm With Livestock |  Buffer: 233m |
|  Urban Boundary |  Buffer: 277m |
| |  Buffer: 392m |



Figure 28: MDSII Arcs for hypothetical expansion of existing livestock

The literature shows that mitigation can take the form of:

- physical separation (buffer strips),
- berms,
- fencing,
- screening through use of vegetation,
- insertion of low-density uses between high-density urban uses and farm land,
- specialized zoning of buffer strips to prevent structures, storage, and removal of vegetation,
- clauses attached to land title which warn that adjacent uses include farm land where normal farm practices are protected and where those practices include the production of dust, vibration, odours, light, noise etc. and the use of fertilizers and pesticides, and
- any combination of the aforementioned.

The need for, as well as the form or characteristics of, that mitigation can depend on several factors such as:

- the relative importance of the farmland as defined by planning policy;
- the kind and scale/size of agricultural operations (livestock versus fruit production, for example);
- the probability of impacts to agriculture and the severity of those impacts if they should occur;
- the probability that mitigation in any, or of a specific form, can significantly reduce probable impacts; and
- the relative positive impacts of residential development adjacent to farm land compared to negative impacts associated with the juxtaposition of residential and agricultural development.

The literature tends to emphasize the negative interactions at the urban/agricultural interface. However, there are some positive impacts and these are outlined by Sokolow (Chapter 12, no date).

The common generalization from several studies is that urban proximity can provide profit-making opportunities as well as problems for farmers, considering the potential for direct marketing, other forms of access to urban consumers, and off-farm income for operators. (Edelman, et al., 1999). But only certain kinds of intensely-cultivated farms, including vegetable producers, seem to benefit from such locations (Larson, et al., 2001). A USDA review of the available information on farms in metropolitan areas characterizes them as smaller, producing more per acre, more diverse, and more

focused on high-value production than farms in non-metropolitan areas (U.S. Department of Agriculture, 2001).

Mitigation must also consider the fact that agriculture includes a diversity of farm types and farm management. Agriculture includes the production of nursery crops which can be a source for “horticultural plantings” and some “invasive plants” relative to other kinds of agricultural production. Regardless, there is currently no requirement for buffer areas between farms producing nursery crops and other types of farms within prime agricultural areas.

The mitigation options available are based on several sources of literature. Much of the Canadian literature is from the province of British Columbia and has been put in place relative to their Agricultural Land Reserve (ALR). Landscaped buffer specifications (Agricultural Land Commission, 1993) start with a minimum buffer width of 3 m. Other specifications suggest that berms may be added to the buffer.

Different fencing types are described as part of Agricultural Land Commission buffer specifications. Specialized zoning and a restrictive covenant are present because of discussions in papers such as those by the British Columbia Ministry of Agriculture, Fisheries and Food (1996) and Curran (2005).

All of the literature search related to buffers at the agriculture/urban interface provided very little quantitative information and this viewpoint is expressed by Sokolow et al. (2010):

It [edge conflict] appears in many other parts of the nation where urbanization extends into commercial agricultural areas (Jackson-Smith and Sharp 2008; Abdalla and Kelsey 1996; Larson et al. 2001; Van Driesche et al. 1987). These accounts are usually anecdotal or prescriptive in nature, lacking a systematic examination of the causes and effects of agricultural-residential conflicts, especially one that builds on a comparison of different edge situations.

Sokolow concludes his research with the question:

What is the relative effectiveness of various public policy measures - such as grievance procedures, right-to-farm ordinances, required buffers for new development and zoning - in avoiding or reducing edge conflicts?

Englund (2003) evaluated 27 buffers in British Columbia by use of survey research. Buffers varied in their length (40 m to 900 m), width (1 m to 350 m), density (20% to 95%) and species composition. As well, the positive and negative elements of the vegetated buffers were viewed differently. For example, some survey respondents classified the shade provided as a positive element while others saw it as negative. The fact that the buffer provided habitat for wildlife as well as provided for the screening of views was also viewed both positively and negatively by respondents to the survey. The sample size of 27 buffers, given the variation in the characteristics of the buffers, as

well as in the characteristics of the survey respondents, renders any form of conclusion with respect to the study as tentative.

Finally, there has recently been an impetus for agricultural production within urban areas. For example, the Ontario planning Journal (Volume 26 (4), 2011) provides information that urban agriculture is being studied at York and Queens Universities as well as the Universities of Toronto and Guelph. OMAFRA provides information related to urban agriculture on several websites (OMAFRA 2015) and includes discussions on livestock production within urban areas. OMAFRA does mention the use of Minimum Distance Separation (MDS) in urban areas but, within its own MDS Document (2017), leaves any requirement for the application of MDS within the urban settlement areas up to individual upper and/or lower tier municipalities.

In the review of the literature, no requirement for buffers between agricultural uses and urban uses within urban settlement areas was mentioned.

4.4 Recommendations

Based on the on the MDS analysis, the existing livestock operations in proximity to Soper Hills (1.5 km) are not expected to be impacted or restricted from expanding as a result of the development of the Soper Hills Secondary Plan Area.

OMAFRA's draft Agricultural Impact Assessment Guidelines (2018) indicate that the majority of impacts at the urban/agricultural interface are best minimized at the plan of subdivision stage rather than at the current secondary plan stage. Given the age of the literature related to mitigation and on the lack of quantitative analysis concerning the success of the mitigation, the literature on mitigation is limited. Therefore, the following recommendations are made.

Recommendation 1:

Policies should be included in the Secondary Plan which require consideration of the urban agricultural interface, within and along the boundary of the Secondary Plan, during the preparation of the draft plan of subdivision stage.

Recommendation 2:

The literature on mitigation related to the urban agricultural interface should be newly reviewed at the time of subdivision planning. Any known beneficial mitigation at the interface between urban and agricultural uses should be applied at that time.

5 Chapter 5: Land Budget

5.1 Purpose of this Chapter

The purpose of this chapter is to establish the potential capacity of the Secondary Plan for population and employment.

5.2 Land Budget Analysis

The Growth Plan, under policy 2.2.7.1, requires a minimum density of 50 residents and jobs per hectare in designated greenfield areas, such as the Study Area. While, under the policies of the Growth Plan, this density target is to be measured over all designated greenfield areas in Durham Region, it is applied to the Soper Hills Secondary Plan area for the purpose of the land budget. The total developable area for the Secondary Plan study area, exclusive of the areas designated as Environmental Protection Area, is 175.14 hectares. At 50 residents and jobs per hectare, the Soper Hills Secondary Plan should be planned to accommodate approximately 8,750 residents and jobs.

The Durham Region Official Plan targets a minimum of 60 units per gross hectare along Regional Corridors. The area of the Regional Corridor within the Soper Hills Secondary Plan study area is 7 hectare. At 60 units per gross hectare, a minimum of 420 units could be accommodated in the Regional Corridor.

The persons per unit (PPU) for new units for townhouses is estimated at 2.43¹. Applying this PPU to the anticipated units in the Regional Corridor achieves approximately 1,000 people. It is difficult at this time to estimate the number of jobs that would be accommodated in the Regional Corridor, without a detailed land use plan. For the purposes of this exercise, 100 jobs are estimated. Thus, the Regional Corridor is estimated to accommodate approximately 1,100 residents and jobs.

Of the 8,750 gross residents and jobs located in the Soper Hills area, 1,100 would be within the Regional Corridor, leaving approximately 7,650 residents and jobs to be accommodated in the Living Area.

5.3 Affordability

As discussed in previous sections of this report, affordability is an important component of the Clarington Official Plan. Housing affordability is influenced by the housing market. However, there are connections between local policy and the housing market

¹ PPU taken from Clarington's Development Charges Background Study, June 2015 prepared by Hemson Consulting

as it relates to the rate at which housing becomes available, as well as the type of housing that is permitted and encouraged in an area.

With the realities of the present housing market in the GTHA, many of the larger units, such as single detached dwellings, are often un-affordable. However, one of the mechanisms through which affordability can be increased in a market, is through a broadened range of unit types and sizes, including smaller units that are within the affordable threshold of residents.

The Region's document: At Home in Durham, Durham Housing Plan 2014-2024 sets out four goals for the Region:

- End Homelessness in Durham
- Affordable Rent for Everyone
- Greater Housing Choice
- Strong and Vibrant Neighbourhood

Under some of these goals, the plan speaks to:

- “diversif[iy]ing options by type, size and tenure”;
- “[improv[ing] access to safe and secure housing that supports the needs of a diverse community”;
- “strengthening the social housing sector”; and
- “supporting an energy efficient, environmentally sustainable rental housing stock”.

A number of the mechanisms listed in the document that are intended to help achieve these goals relate to land use planning and policy and are applicable in the Soper Hills Secondary Plan Study Area. These include:

- Promoting higher density;
- Encouraging partnerships and innovative building techniques to support development of affordable housing;
- Supporting secondary and garden suites;
- Ensuring affordable housing is barrier free/includes universal design;
- Enabling affordable housing and protecting conversion of rental to condominium tenure;

While some of these elements may take the form of policies in a Secondary Plan document, such as policies supporting garden suites, the land use plan and associated permitted densities and housing types influence what can actually be built and the ability to achieve the intent of providing options in housing type, size and tenure in an area.

As such, as the alternative options for the Soper Hills Secondary Plan area are prepared while considering the minimum density targets discussed in the previous section of this report, an element of the analysis will be considering which options do or do not support achieving a mix of housing forms, densities and types with the intent of improving affordable housing options.

The Municipality of Clarington also has a toolkit to encourage affordability. The following is a summary of Clarington's Affordable Housing Toolkit.

The toolkit describes affordability, at 80% market rent in Clarington, as

- \$656 per month for Bachelor apartments;
- \$826 per month for 1-Bedroom apartments;
- \$835 per month for 2- Bedroom apartments; and
- \$1,044 per month for 3-Bedroom apartments.

Affordability, in terms of ownership, is not addressed.

The Affordable Housing Toolkit has identified that the Municipality of Clarington can incentivize change using three methods:

- Municipal Regulatory and Process Tools,
- Land Based Incentives; and
- Financial Incentives

Municipal regulatory and process tools include expedited approvals processes, better community outreach, a reduction in parking requirements, encouraging secondary suites, permitting garden suites, and the use of inclusionary zoning.

Land based incentives consist of the provision of land for affordable housing projects, including land leases, donations, and/or sale (below market value).

Financial incentives seek to reduce the financial burden on a project, and can be realized through phasing, deferring or waiving development charges. Specific approaches include waiving security requirements, implementing property tax rebates, and implementing community benefit charges instead of development charges.

Not all of these can be addressed at the secondary plan level. However, policy support for these initiatives, in particular elements of reduced parking requirements, permission and encouragement for secondary suites and garden suites as well as inclusionary zoning can be addressed at the policy level.

6 Chapter 6: Urban Design and Sustainability Principles



6.1 Purpose of this Chapter

The purpose of this chapter is to establish urban design and sustainability principles for the preparation of the Secondary Plan. These principles will provide the framework for the development of a healthy complete community with a strong sense of place fostered through good urban design.

6.1.1 Urban Design and Sustainability Principle Directions

Section 3.5.4 and 3.7 of this report begins to set the framework from the Clarington Official Plan (COP) for the development of sustainable communities that form the foundation for the Urban Design and Sustainability Principles (UDSP). Just as sustainability is woven throughout the COP, the UDSP will be integrated throughout the Secondary Plan. The Soper Hills Secondary Plan, through these principles will promote a positive image and foster a strong sense of place. The goal for creating vibrant and sustainable urban places as stated in Section 5 of the COP is:

“To create a built environment that celebrates and enhances the history and character of Clarington, fosters a sense of place for neighbourhoods and communities, promotes a positive image of the Municipality, demonstrates a high quality of sustainable architectural design, and enhances the well-being of residents, both present and future.”

In addition to the COP, the Priority Green Clarington initiative provides a green framework and implementation plan for future development. The document sets out a strong vision for growth in Clarington prioritizing sustainability, innovation, and improved air quality. Supporting the plan, the Priority Green initiative outlines a variety of strategies including but not limited to protecting and enhancing natural heritage and open spaces, optimizing opportunities for infill, creating accessible spaces, and the integration of green infrastructure. The Priority Green strategies for creating livable communities in Clarington informed and are incorporated within the UDSP.

The Urban Design and Sustainability Principles found within this chapter reflect the vision and framework set out by the COP and Clarington’s Priority Green Plan. The UDSP principles reflect the Priority Green checklist for secondary plans. These principles will be used to inform the evaluation of the concept plans, prepare Secondary Plan policies and inform the development of the Sustainable Urban Design Guidelines that will help to guide the implementation of the Soper Hills Community.

6.1.2 Urban Design and Sustainability Goal and Principles

Goal:

To facilitate the creation of built environments that celebrate and enhance the history and character of Clarington, while moving towards a net zero community.

DESIGN PRINCIPLES

 <p>BUILT ENVIRONMENT</p>	<ul style="list-style-type: none"> • Promote the efficient use and preservation of land through the creation of compact complete communities • Provide for a variety of housing forms and tenures that contribute to the creation of a diverse housing market • Conserve and integrate cultural features into the overall design of the community • Foster a sense of place • Design the community for all ages and abilities 	
 <p>MOBILITY</p>	<ul style="list-style-type: none"> • Identify a transportation network that prioritizes sustainable modes of travel 	
 <p>NATURAL ENVIRONMENT & OPEN SPACE</p>	<ul style="list-style-type: none"> • Preserve and enhance the natural heritage system 	
 <p>INFRASTRUCTURE & BUILDINGS</p>	<ul style="list-style-type: none"> • Implement stormwater management techniques that utilize natural drainage patterns to minimize the risk of flooding • Ensure infrastructure and buildings are designed and built to be energy efficient and adaptable 	

Figure 29: Illustrated Urban Design and Sustainability Principles

The urban design and sustainability goal is articulated through the following principles.

Built Environment

The built environment refers to human made spaces that residents live, work and play in. As such, the built environment has a strong impact on the quality of life for residents. The following provides further details regarding principles for creating healthy and sustainable built environments.

Promote the efficient use and preservation of land through the creation of compact, complete, connected and walkable communities.



Walkable complete communities encourage sustainable modes of transportation and minimize trips (**Figure 30**). The Soper Hills Secondary Plan will encourage street designs and layouts that contribute to a sense of place, while preserving natural heritage features. Streets and blocks will be designed based on a walkable, grid patterns to facilitate connections within and to other neighborhoods.

Figure 30:
Example of walking distances
to central areas
Source: Studio for Spatial Practice

Provide for a variety of housing forms and tenures that contribute to the creation of a diverse housing market.



Residential land uses within the Soper Hills Secondary Plan will include a variety of built forms such as townhouses, singles, semis and multi-unit dwellings. Diverse housing markets better accommodate residents with a range of housing needs and improves affordability (**Figure 31**).

Figure 31: Townhouses Clarington

Source: Point2 Homes

**Conserve and integrate cultural heritage features into the overall design of the community.**

The conservation and adaptive re-use of heritage buildings provides many sustainable and design benefits to a community. The character of a neighbourhood is enhanced by the story of the past. The adaptive re-use of buildings, as well preservation of associated landscapes reduces the impact on the environment (**Figure 32**).

Figure 32: The Jury Lands cafeteria taken in 1930

Source: City of Clarington

To Foster a sense of place.

A sense of place is a collection of characteristics and qualities such as cultural, social, visual and environmental that give meaning to a location. A sense of place is what makes one place different from another. Soper Hills will implement a high quality public realm, vibrant public spaces, public art, placemaking, wayfinding techniques, and reflect on its agricultural roots and proximity to the Natural Heritage to create that sense of place.

Figure 33: Bowmanville Applefest

Source: Bowmanville BIA

Ensure the community is designed for all ages and abilities.

By incorporating universal design principles into the built environment and public spaces Soper Hills will be a safe and enjoyable community that people of all ages and abilities can be a part of. Places designed and built to accommodate all, improves the quality of life and enhances people's ability to use the municipality's mobility network and public spaces. (Figure 34).

Figure 34: Accessible streetscape infrastructure

Source: Durham Regional Police

Mobility

Mobility refers to the ease of movement for individuals with varying abilities and modes of travel. This section will outline designs intended to create a sustainable transportation network and inclusive spaces.

Identify a transportation network that prioritizes sustainable modes of travel.

Identify a transportation network that prioritizes sustainable modes of transportation including walking, cycling and transit as an alternative to private automobiles (refer to Figure 35).



Local roads within Soper Hills are to have sidewalks on both sides of the street to encourage active transportation and improve safety.

Incorporate Complete Streets design principles within the transportation network.

Figure 35: Dedicated bike lanes Clarington

Source: Clarington

Further expand the active transportation network (including bicycle lanes and multi-trails) within the municipality and its connectivity (refer to **Figure 36**).



Figure 36: Off road trails

Source: Claringtoncyclingclub.ca

Natural Environment and Open Space

The natural environment has many intrinsic values related to the well-being of society. This section provides greater detail into the strategies and benefits of preserving the Municipality's vast natural features.

Preserve and enhance the natural heritage system.

Enhance and preserve the Natural Heritage System including the creation of parks, open spaces and trails (refer to Figure 37).



Local roads are to be designed with street trees on both sides to enhance the public realm, and improve tree canopy coverage (refer to **Figure 38**).

Opportunities for the integration of community gardens within public parks and open spaces will be encouraged.

Enhance the urban forest system by ensuring development minimizes impacts to existing Natural Features, the area's topography, soils and enhances the tree canopy (refer to **Figure 38**).

Figure 37: Old Swamp Road Walking Trail
Source: doorsopenclarington.wordpress.com



Preserve and incorporate views of natural heritage features specifically the creek, through view corridors and window streets.

Encourage public access to the creek and natural heritage features through public connections.

Figure 38: Street trees planted in boulevards to promote walkability

Source: oufc.org

Infrastructure and Buildings

Infrastructure and buildings' have an influence on our environment and can positively shape spaces. This section outlines design principles for creating sustainable, healthy and safe spaces.

Implement stormwater management techniques that utilize natural drainage patterns to minimize the risk of flooding.

Implement Stormwater Management techniques that utilize natural drainage patterns to minimize the risk of flooding (refer to **Figure 39**).

Identify best practices for stormwater management, water and wastewater (refer to **Figure 39**).

Figure 39: Bioswale in Bowmanville



Source: clarington.net

Maximize water and energy conservation to ensure the development of resilient systems and communities.

Identify and implement best practices for green buildings to reduce the demands for energy, water and wastewater (refer to **Figure 40**).

Encourage the use of natural and resilient building materials to ensure longevity of buildings.

Figure 40: Residential green roof

Source: Global News

Ensure infrastructure and buildings are designed and built to be energy efficient and adaptable.

Ensure buildings are designed to be flexible and can adapt over time to accommodate changing land uses and community needs.

Encourage energy efficient designs for buildings, infrastructure and transportation reducing energy consumption (refer to **Figure 41**).



Figure 41: Solar panels on residential roof

Source: sbccounty.gov

7 Chapter 7: Summary of Cultural Heritage and Archaeological Reports



7.1 Cultural Heritage Resource Assessment Study Existing Conditions Report

Archaeological Services Inc. (ASI) undertook a Cultural Heritage Resource Assessment for the Soper Hills Secondary Plan both within and abutting the Secondary Plan area. The report provides an inventory of potential cultural heritage resources.

The report identifies twelve existing and potential municipal heritage resources within or adjacent to the Soper Hills Secondary Plan Study Area. These potential heritage resources include:

- Four potential cultural heritage resources located within the Study Area which merit evaluation under Ontario Regulation 9/06;
- The Bowmanville POW Camp which is a designated property under Part IV of the Ontario Heritage Act;
- Five properties included on the Municipality of Clarington's Heritage Inventory, three as Primary Properties, one as a Secondary Property and one as having "Heritage Merit"; and
- Two identified during ASI's study as potential cultural heritage resources.

The assessment recommended that;

- The Soper Hills Secondary Plan should incorporate policies that promote the conservation of existing cultural heritage resources and consider the presence of the potential cultural heritage resources identified in [the] report;
- Any proposed development on or adjacent to an identified existing or potential cultural heritage resource should require a heritage impact assessment to further assess the cultural heritage value of the identified potential cultural heritage resources under Ontario Regulation 9/06, and to ensure that the existing cultural heritage resources in the study area are conserved; and
- The report should be circulated to the Clarington Heritage Committee for its consideration.

7.2 Stage 1 Archaeological Assessment

Archaeological Services Inc. (ASI) undertook a Stage 1 Archaeological Assessment within the Soper Hills Secondary Plan area. The report identifies that 70% of the Study Area exhibits potential for the presence of Indigenous and/or Euro-Canadian archaeological resources. The following recommendations are made in the Stage 1 report:

- Any future developments within the study area must be preceded by a Stage 2 Archaeological Assessment. Such assessment(s) must be conducted in accordance with the Ministry of Tourism, Culture and Sport's 2011 Standards and Guidelines for Consultant Archaeologists. All active or formerly worked agricultural lands must be assessed through pedestrian survey. Woodlots and other non-arable lands must be assessed by means of test pit survey. Areas deemed to be disturbed or of no potential due to factors of slope or drainage during the Stage 2 assessment process must be appropriately documented. This work is required prior to any land disturbing activities in order to identify any archaeological resources that may be present. It should be noted that the archaeological assessment of any proposed development (e.g., a draft plan of subdivision) must be carried out on all lands within that particular study area, not simply those lands identified as exhibiting potential in this study; and
- During any further archaeological assessments, meaningful engagement with Indigenous communities should be conducted, as outlined in Section 35 of the Standards and Guidelines for Consultant Archaeologists and the Engaging Aboriginal Communities in Archaeology Technical Bulletin.

8 Chapter 8: Summary of Functional Servicing Report and Transportation Report



The Municipal Infrastructure Group (TMIG) prepared a Transportation and Functional Servicing Study Report in support of the Soper Hills Secondary Plan Study. The report examines the existing conditions with regards to water distribution and planned water system improvements, existing sanitary services and planned sanitary systems improvements, the existing road network and existing traffic data and transit availability.

A summary of some of the key takeaways include:

Servicing:

- There are no existing water services within or adjacent to the study area. The existing water services end at approximately King St E / Highway 2 and Haines Street, which is west of the Study Area;
- Planned Regional DC Project 307 would bring water to the western limit of the Study Area as a feeder main from the Zone 1 reservoir;
- A new 300 mm watermain is proposed on King Street East and up Lambs Road for another development (Timber Trails), but it would provide water for the Soper Hills Secondary Plan Area;
- There are no existing sanitary sewers within or adjacent to the study area. The existing sanitary services end at approximately King St E / Highway 2 and Haines Street, which is west of the Study Area;
- Planned Regional DC Project 303 would bring a trunk sewer planned to connect to the south-east corner of the Secondary Plan Area;
- The Timber Trails development would also need a sanitary connection which would extend to Lambs Road and has allowance for development east of Lambs Road;
- There are four existing intersections in the study area. Under existing conditions, the intersections are operating well overall, and “the road network operates under excellent conditions, with all individual movements experiencing minor delays, low v/c ratios, good levels of service, and short queue lengths. No changes are recommended to the road network based on existing traffic volumes”;

Transportation:

- In terms of potential for active transportation, there are no sidewalks or paved shoulders along Lambs Road, Concession Street East, and Providence Road;

- Durham's Transportation Master Plan includes intersection improvements planned by the Region at Highway 2 and Lambs Road, for 2023 but details have yet to be determined and Highway 2 is planned to be widened to 4 lanes beyond 2031;
- Active transportation improvements in the Durham's Transportation Master Plan include a Regional Cycling Plan Network that would connect along Lambs Road and along Regional Highway 2 with paved shoulders along Regional Highway 2; and
- The closest Regional bus stop is 900 metres from the intersection of Concession Street East and Lambs Road while GO Transit Bus offers stops along Highway 2.

9 Chapter 9: Constraints and Opportunities Analysis



The opportunities and constraints identified through the Phase One work are illustrated graphically on **Figure 42**. This figure highlights important takeaways from the background reviewed in this report, including from the Functional Servicing, Transportation, Cultural Heritage and Archaeological Reports. Contextual elements are illustrated, including opportunities to be considered during planning of the area, as well as constraints that will need to be accommodated.

Within **Figure 42**, natural heritage features, as well as additional wooded areas are shown conceptually. The natural heritage features depicted on **Figure 42** matches the Environmental Protection Area designation in the COP. Some additional wooded areas are shown, based on aerial photography. These features are identified for information only, recognizing that any development constraints related to significant natural heritage features or physical hazards will be identified in the Soper Creek Subwatershed Study. While these areas are shown for informational purposes, the actual development constraints for the Study area will rely on the work completed in the Subwatershed Study.

A number of opportunities have been identified as part of this analysis, including, among others:

- Large portions of lands that are free from environmental constraints²;
- Some natural areas, which contribute to the aesthetic of the area, may be appropriate for trails³; and
- Opportunities exist for density in strategic locations along Regional and Local Corridors.

A number of constraints have been identified as part of this analysis, including, among others:

- Transition Soper Hills Secondary Plan area abuts agricultural lands, employment lands or a rail corridor;
- The limited existing and planned active transportation infrastructure and transit availability in and around the Secondary Plan area;
- The watercourse that will be a constraint to development and potentially connectivity in the community;
- The potential delay for sanitary servicing in the southeastern area of the site; and
- Parcel consolidation along Highway 2 during development of the Corridor.

² Pending the outcome of the subwatershed study.

³ Pending the outcome of the subwatershed study.

Illustrated Opportunities and Constraints Analysis

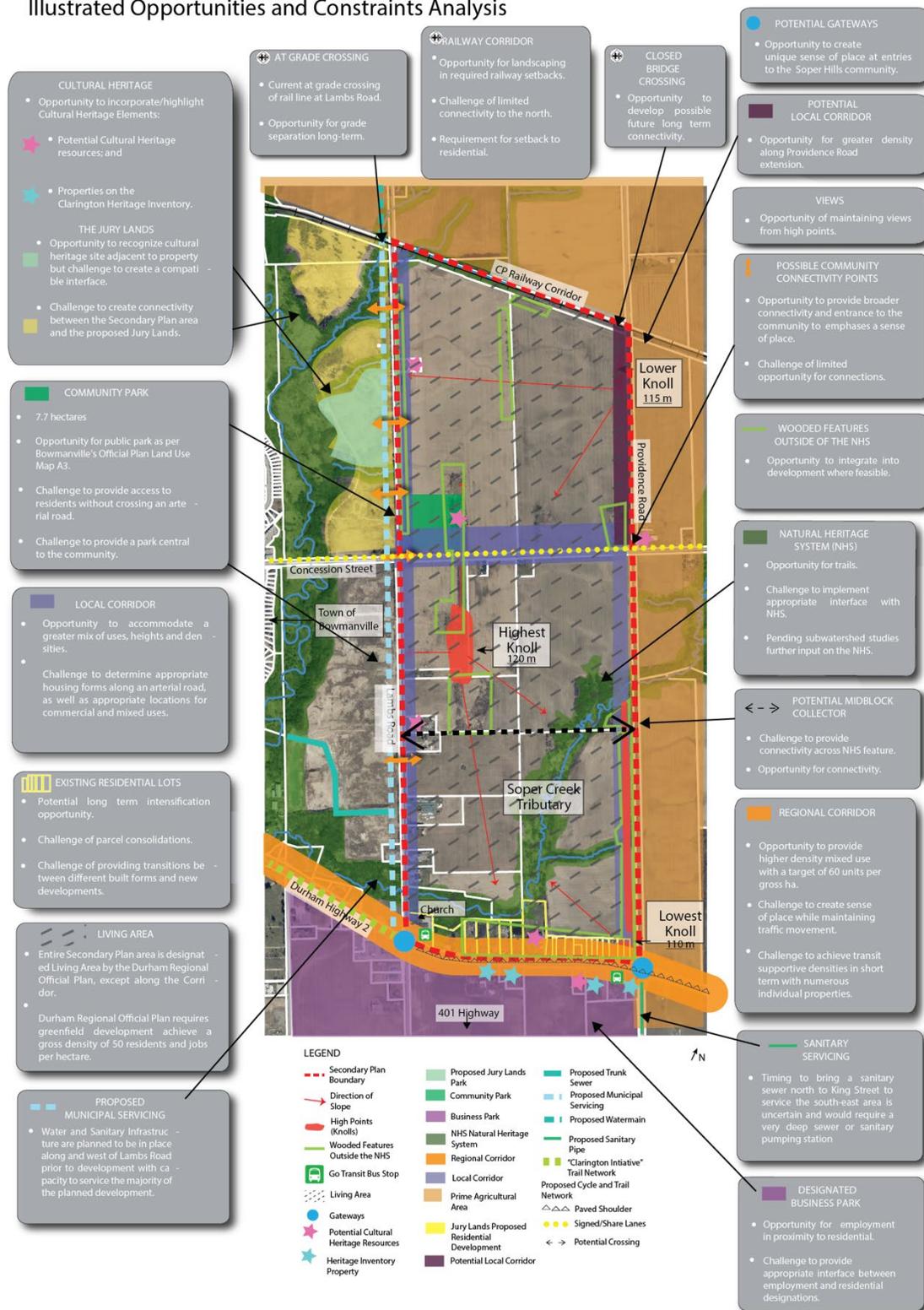


Figure 42: Illustrated Opportunities and Constraints Analysis

The key strategies will be explored through the preparation and evaluation of the alternative concepts in Phase 2 to take advantage of the opportunities and to address and mitigate the constraints.

Possible strategies to address the opportunities and constraints include:

- Incorporating gateway features to identify an entrance to the community;
- Accommodating CP Rail's setback requirements in the consideration and design of appropriate land use;
- Incorporating development types that will support transit;
- Understanding the level of sensitivity of natural heritage features and opportunities of integrating these natural heritage features in the design of the Secondary Plan Area;
- Considering phasing to address servicing constraints; and
- Identifying realistic land use and design solutions for the small landowners abutting Highway 2 .

10 Chapter 10: Next Steps



This report concludes the Phase 1 work for the Soper Hills Secondary Plan area. Phase 2 of the Secondary Plan study entails the preparation of two to three land use concepts. Evaluation criteria will be developed to critically evaluate the alternative concepts from a land use, transportation, servicing, natural heritage, cultural heritage and agricultural perspective. During Phase 2, a Public Information Centre (PIC) will be hosted on the alternative concepts prior to the identification of the preferred option. The evaluation will result in a preferred land use concept.