Environmental Impact Study

Glenelg Phase 3

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1.0 Introduction

SLR Consulting (Canada) was retained by Flato Developments Inc. (Flato) to undertake environmental investigations on two parcels of land, Lot 225 Concession 1 W and part lots 225 and 226 Concession 2 W located in Dundalk, Ontario in support of proposals for residential development within the westernmost portion of these properties ("site", Figure 1). The southeast half of the subject lands fall under the jurisdiction of the Grand River Conservation Authority (GRCA) and the northwest half is under the jurisdiction of Saugeen Conservation (SVCA).

These lands fall within a larger area currently subject to an approved Ministerial Zoning Order (MZO). The development of these subject lands will be phased.

1.1 Goals and Objectives

The purpose of the EIS is to demonstrate that the proposed development has regard for the policies, guidelines and regulations that apply to these lands in the Official Plans of the Township of Southgate and Grey County, the Planning Act and Provincial Policy Statement 2020 and Policies of both the Grand Region Conservation Authority (GRCA) and the Saugeen Valley Conservation Authority (SVCA). The objectives of this study include the following:

- Characterize existing conditions
- Identify significant natural heritage features, functions and sensitivities
- Assess potential effects associated with the proposed development
- Apply mitigation strategies and techniques to minimize potential effects and show consistency with the natural heritage policy and legislative framework that applies to these lands
- Recommend whether the proposed Draft Plan of Subdivision (DPOS) can proceed with appropriate mitigation and/or compensation if required

1.2 Planning context

Development on the site is subject to federal, provincial and local environmental Acts, regulations and policies. These documents provide direction and guidance regarding proposed changes in land use and the protection of natural heritage features and functions.

The applicable natural heritage regulatory and policy framework that applies to the site includes:

- Provincial Policy Statement, 2020
- Federal Fisheries Act, 2019
- Migratory Birds Convention Act, 1994
- Endangered Species Act, 2007
- Federal Species at Risk Act, 2002
- O. Regs. 150/06 and 169/06
- GRCA Planning and Permitting Policies, including GRCA (2015) Policies for the Administration of O. Reg. 150/06
- SVCA (2017) Environmental Planning and Regulations Policies Manual

- Township of Southgate Official Plan (2022)
- Grey County Official Plan (2019)
- GRCA (2005) Environmental Impact Study Guidelines and Submission Standards for Wetlands
- Evaluation, Classification and Management of Headwater Drainage Features Guidelines (Toronto and Region Conservation Authority and Credit Valley Conservation, 2014)

1.3 Site Location and Description

The site is approximately 53 ha and located immediately east of the Grey County CP Rail Trail, west of Highway 10 and north of Todd Crescent. Natural features on the site include:

- Three tributaries to the Saugeen River and Grand River (headwater drainage features [HDF]) and their associated floodplains
- Three unevaluated wetlands.

Development is proposed on approximately 26 ha of the western portion of the site, with connections planned to a development under construction to the south and another to the Carriage House Phase 2 development currently under construction west of the Grey County Rail Trail. Please refer to Figure 1.

Low, medium and high-density residential development is proposed east of an environmental protection area consisting of significant woodlands and unevaluated wetlands.

2.0 Methodology

This EIS includes a summary of the existing conditions based on a review of secondary source material and preliminary field inventories including vegetation mapping, aquatic resource investigations, targeted wildlife surveys and feature staking exercises with representatives from the GRCA (scheduled for September) and Township of Southgate. Existing conditions within the site were evaluated through a review of secondary source material and site investigations by qualified SLR Ecologists between November 2021 and August 2022. Recent aerial photographs of the site were obtained and used to assist in field verification. Data collected were integrated to review the natural environment features and functions and identify environmental constraints to the Draft Plan for Subdivision application.

2.1 Desktop Analysis

A secondary source review was performed to characterize the natural environment of the site and identify known natural heritage features and functions within and adjacent to the site. The information presented in Table 1 was reviewed and used to inform the need for additional field studies and avoid duplication of effort.

Table 1: Information Source Summary and Description

Information Source	Data Description
Aerial Imagery	Google, MNDMNRF imagery from 1954 to 2021
Ontario Geological Survey Mapping (OGS)	Physiography, topography and soil characteristics of the site

Grand River Conservation Authority, Map your Property Application. Accessed on-line for Ontario Regulation 150/06 policies and Watershed Development Guidelines (August 2022) https://maps.grandriver.ca/web-gis/public/?theme=MYP	Policies in accordance with Ontario Regulation 150/06 and GRCA regulation limits
Saugeen Valley Conservation Authority mapping tool. Accessed on-line for Ontario Regulation 169/06 policies and watershed development guidelines (August 2022) https://www.saugeenconservation.ca/en/permits-and-planning/maps-and-gis.aspx	Policies in accordance with Ontario Regulation 169/06 and SVCA regulation limits
Ontario Ministry of Northern Development, Mines, Natural Resources and Forestry, Natural Heritage Information Centre (NHIC), *Element Occurrences* © Queen's Printer for Ontario, 2020, Accessed August 2022	Evaluated and unevaluated wetlands, watercourses, woodlands, Greenlands, ANSIs, rare species occurrences, plant communities, wetlands, and natural areas information
Ontario Ministry of Northern Development, Mines, Natural Resources and Forestry, Land Information Ontario (LIO), *Wetlands, ANSI, Natural Features* © Queen's Printer for Ontario, 2020, Downloaded July 2022	Evaluated and unevaluated wetlands, ANSIs, natural feature and topography
Ontario Breeding Bird Atlas Online. Accessed on-line November 8, 2021 https://www.birdsontario.org/atlas/index.jsp?lang=en	General Avian species and potential Species at Risk
Fisheries and Oceans Canada Distribution Maps for Fish and Mussel Species at Risk (on-line accessed August 22, 2022; modified 2022-08-11	Online mapping resource to identify potential species at risk occurrences and critical habitat
Ontario Species at Risk List (O. Reg. 230/08)	Species at Risk list and current status ratings
Southgate Township Official Plan (2022)	Environmental protection areas, Greenbelt, natural heritage system and schedules
Grey County Official Plan (2019)	Environmental protection areas, Greenbelt, natural heritage system and schedules.

2.2 Field Studies

2.2.1 Terrain and Surficial Geology

To complement the review of Ontario Geological Survey (OGS) mapping, SLR is also completing hydrogeological investigations in support of the proposed project. These investigations are on-going and findings will be reported under a separate cover upon completion.

2.2.2 Natural Environment

Additional information with respect to fisheries, wildlife and Species at Risk (SAR) were obtained through preliminary field reconnaissance and targeted field surveys. This information was used to develop the description of the natural environment and to identify potential impacts related to proposed land use changes. The following table (Table 2) provides a summary of site visits and field tasks completed to date.

Table 2: Summary of Field Surveys

Date	Task	Weather
November 10, 2021	Site Reconnaissance and preliminary vegetation inventory	Sky: partly cloudy; Beaufort wind: 3; Temperature: 10°C
April 20, 2022	Headwater Drainage Feature Assessment	Sky: Clear, Beaufort wind: N/A [1]; Temperature: 5°C
April 24, 2022	Amphibian Surveys	Sky: Cloudy, Beaufort wind: 1; Temperature: 13°C
April 25, 2022	Headwater Drainage Feature Assessment	Sky: Rain, Beaufort Wind: 2-3; Temperature: 13°C
May 2, 2022	Amphibian Surveys	Sky: Cloudy, Beaufort Wind: 2; Temperature: 9°C
May 17, 2022	Vegetation Survey	Sky: Clear, Beaufort Wind: 0; Temperature: 13°
May 25, 2022	Headwater Drainage Feature Assessment	Sky: Cloudy, Beaufort Wind: 3-5; Temperature: 13°C
May 30, 2022	Amphibian Surveys	Sky: Partly cloudy, Beaufort Wind: 1; Temperature: 25°C
June 1, 2022	Amphibian Surveys	Sky: Clear; Beaufort Wind: 2; Air temperature 12°C;
June 14, 2022	Breeding Bird Surveys	N/A
June 28, 2022	Amphibian Surveys	Sky: Partly cloudy; Beaufort Wind: 2; Air Temperature 20°C;
June 30, 2022	Breeding Bird Surveys	N/A
August 9, 2022	Headwater Drainage Feature Assessment	Sky: Rain, Beaufort Wind: 1; Temperature: N/A
August 10, 2022	Natural Feature Boundary Pre-staking and Ecological Land Classification	Sky: partly cloudy, Beaufort Wind: 3; Temperature: 25°C
August 11, 2022	Natural Feature Boundary Pre-staking and Ecological Land Classification	Sky: partly cloudy, Beaufort Wind: 3; Temperature: 25°C

Date	Task	Weather
[1]The Beaufort Wind Scale is a tool used to estimate wind conditions. [0] Air calm, smoke rises vertically [1] Light air movement, smoke drifts, [2] Wind felt on face, leaves rustle [3] Leaves and small twigs in continual motion, wind extends light flags [4] Wind raises dust, loose paper, moves small branches [5] Small trees begin to sway, white crested wavelets form on inland waters [6] Large branches in motion		

2.2.2.1 Fish and Aquatic Habitat

The objective of field investigations was to identify, map, and describe the existing aquatic habitat present on the subject lands.

A review of current and historical aerial imagery of the subject lands identified the potential presence of Headwater Drainage Features (HDF). Drainage features have undergone evaluation in April, May, and August 2022 using the Rapid Method provided in the Evaluation, Classification and Management of Headwater Drainage Features Guideline (TRCA and CVC, 2014). This approach is appropriate for low sensitivity sites and documents the HDF form and flow conditions, riparian vegetation and site features that are important components of habitat. Recommended management options for drainage features derive from information collected according to the HDF guidelines.

2.2.2.2 Vegetation Communities

Aerial photography, and Land Information Ontario data were used to delineate vegetation communities according to principles of the Ecological Land Classification (ELC) for Southern Ontario: First Approximation and its Application (Lee et. al., 1998). Preliminary site investigations were undertaken in November 2021 with confirmatory mapping completed throughout 2022 to collect vegetation data at the community level. A split-spoon soil auger was used to sample soil profiles to determine at what point they exhibit hydric properties, i.e., sufficiently saturated to support greater than 50% wetland species.

2.2.2.3 Feature Staking

The pre-staking of features to delineate the boundaries of wetland features and tree dripline of woodland features within the Study Area was undertaken on August 9, 10 and 11, 2022. Feature Staking verification with GRCA is scheduled for September 2022. The wetland boundary was determined where wetland vegetation dominates the community and the soils exhibit characteristics of at least seasonal saturation as per the definition of wetland in the PPS, 2020.

2.2.2.4 Tree Inventory

An inventory of trees that could be injured or destroyed by the proposed DPOS is planned to assess trees that may be impacted. Trees not protected by a buffer but within 6 m of the property boundary will be included. An arborist report and Tree Inventory and Protection Plan (TIPP) will be prepared under separate cover.

2.2.2.5 Breeding Bird Surveys

The Ontario Breeding Bird Atlas (OBBA) (BSC 2006) was reviewed to compile a master list of potential birds breeding at the site, which was subsequently analyzed against known available suitable supporting habitat to tailor findings specifically to the existing site conditions.

Breeding bird surveys were undertaken within the recognized surveying window in Ontario for breeding birds (typically June and early July) in 2022. Surveys followed standard methodologies and conditions established by the OBBA (BSC 2001) (i.e., between 05:30 and 10:00, low winds, no precipitation, and suitable temperatures). Breeding evidence was recorded and classified as possible, probable, or confirmed (e.g., singing male, pair observed or adult carrying food) in accordance with the standard protocols. Where SAR birds were observed, information including sex, behaviour and interaction with other SAR and non-SAR birds were also recorded.

2.2.2.6 Reptile and Amphibian Surveys

Secondary source literature was reviewed to identify known records of reptiles, amphibians, or both, potentially found within the site, including the NHIC database. Amphibian surveys were undertaken to understand the potential presence of breeding amphibians and presence of SAR (e.g., Western Chorus Frog (*Pseudacris triseriata*)). Targeted surveys for reptiles were not undertaken by SLR as no preliminary triggers were identified.

Calling surveys followed the general methodology of the Marsh Monitoring Program (MMP) (adapted to site conditions), during appropriate seasons and weather conditions. Established methods sponsored by Environment and Climate Change Canada (2017) for detecting Western Chorus Frog were also used. These methods involved daytime surveys where calls of the Western Chorus Frog are more detectable and not drowned out by the loud calls of the Spring Peeper (*Pseudacris crucifer*) which typically call at night.

Survey times were coordinated with several other ecologists throughout Southern Ontario via email circulation to assist surveyors in targeting the prime breeding window for early and late breeders targeting Western Chorus Frog (*Pseudacris triseriata*). As climate change has the potential to shift the incidence of calling amphibians, it is increasingly important to coordinate surveys based on weather conditions and seasonal trends. The Beaufort Wind Scale was used to determine whether wind levels were too strong to hear an accurate representation of amphibians occupying the site. A reference site was used to ensure calling was conducted during appropriate weather conditions and served as a benchmark for amphibian activity (i.e. increase confidence in negative results if calls are not detected at test sites). Calling evidence was recorded on a scale of L0-L3 and interpreted as follows:

- L0 – No calling
- L1 – Individuals can be accurately counted; calls do not overlap
- L2 – Some calls simultaneous, number of individuals can be estimated
- L3 – Full chorus, calls overlap, individuals cannot be estimated

2.2.2.7 Incidental Wildlife

All incidental observations were recorded while ecologists were onsite. Evidence of presence was recorded during various field investigations from direct sightings and indirectly from such indicators as calls, nests, tracks, scats, browse and burrows.

2.2.2.8 Species of Conservation Concern

Aquatic and terrestrial species that are designated federally or provincially and are of regional or local interest (e.g. rare to the watershed or municipality) are collectively identified as Species of Conservation Concern. This category also includes species protected under the ESA, 2007. The Natural Heritage

Information Centre (NHIC) (on-line accessed November 2021) and the Fisheries and Oceans Canada Distribution Maps for Fish and Mussel Species at Risk (on-line accessed November 2021) were consulted for element occurrences. A habitat-based approach was used to evaluate the potential for Species of Conservation Concern to occur within the site.

With the recent addition of several bat species to the ESA list, a cursory review of site conditions was completed to determine potential habitat. This review was scoped to provide information on possible use and presence within the general context of the site.

2.2.2.9 Significant Wildlife Habitat

Using the criteria outlined in the Significant Wildlife Habitat (SWH) Technical Guide and Ecoregion Criterion Schedules 6E (Ministry of Natural Resources and Forestry 2015), SWH was evaluated as part of the field investigations to evaluate the potential to occur on or adjacent to the site. Under the SWH Criteria, constructed habitat is not to be considered as SWH.

3.0 Existing Conditions

The subject properties are characterized by a predominately agricultural landscape containing cultivated lands, with woodland, wetland, and hedgerow features. Three watercourses (HDFs) occur within the boundaries of the subject parcels, while one is present within the Study Area of the proposed DPOS (Figure 1). The following sections describe geological, aquatic and terrestrial site characteristics.

3.1 Terrain and Surficial Geology

Based on a review of surficial geology maps from the Ontario Geological Survey (OGS), the overburden of the area is composed of the Elma Till which consists of sandy silt to silt deposits that are imperfectly drained.

The underlying bedrock is of the Guelph Formation which consists of Silurian fine to medium crystalline, medium to thick-bedded, porous dolostone of a thickness ranging from 4 to 100 m. The Guelph formation is mainly located in the subsurface of southwestern Ontario but is exposed south and west of the Niagara Escarpment from the Niagara River through the Bruce Peninsula (Jagger Hims Limited and Rowell, 2009). SLR is completing hydrogeological investigations in support of the proposed project, under a separate cover.

3.2 Fish and Aquatic Habitat

Agricultural lands predominate on the subject properties. Three drainage features occur within the vicinity of the study area identified as permanent features by Land Information Ontario; site observations show that the features flow intermittently. Data supporting the Headwater Drainage Feature evaluation were completed in the spring and summer of 2022.

Observations made in April, May, and August 2022 to characterize potential headwater drainage feature associated with the proposed DPOS are summarized in Table 3. Surface water was observed at the feature during the April visit, while the feature was dry during subsequent visits. Standing water was present in the feature off site to the north during April and May visits and was dry in August. Based on these observations the assessment of the headwater drainage feature on the site of the proposed DPOS was classified as No Management Required, while the segment occurring immediately off site to the north was classified as Protection (Figure 3) according to the Headwater Features Guidelines (CVC and

TRCA 2014). Management can range from replication of functions through enhanced lot level conveyance measures such as vegetated swales, to mimic online wet vegetation pockets, to constructed wetlands connected to downstream features as appropriate.

Table 3: Headwater Drainage Feature Observations

Drainage Feature Segment	Hydrology	Hydrology Modifiers	Riparian	Fish Habitat	Terrestrial Habitat	HDF Management Recommendations	Photos
1	Limited or recharge April: Standing Water May: Dry August: Dry	Swale (tilled through)	Limited Function Cropped land	Contributing function allochthonous transport	Limited Function Cropped land	No Management Required	
2	Limited or recharge April: Standing Water May: Dry August: Dry	Swale (tilled through)	Limited Function Cropped land	Contributing function allochthonous transport	Limited Function Cropped land	No Management Required	
3	Limited or recharge April: Standing Water May: Dry August: Dry	Swale (tilled through)	Limited Function Cropped land	Contributing function allochthonous transport	Limited Function Cropped land	No Management Required	
4	Limited or recharge April: Standing Water May: Dry August: Dry	Swale (tilled through)	Limited Function Cropped land	Contributing function allochthonous transport	Limited Function Cropped land	No Management Required	

Drainage Feature Segment	Hydrology	Hydrology Modifiers	Riparian	Fish Habitat	Terrestrial Habitat	HDF Management Recommendations	Photos
5	Limited or recharge April: Standing Water May: Dry August: Dry	Swale (tilled through)	Limited Function Cropped land	Contributing function allochthonous transport	Limited Function Cropped land	No Management Required	
6	Limited or recharge April: Standing Water May: Dry August: Dry	Swale (tilled through)	Limited Function Cropped land	Contributing function allochthonous transport	Limited Function Cropped land	No Management Required	
7	Limited or recharge April: Standing Water May: Dry August: Dry	No defined channel	Limited Function Cropped land	Contributing function allochthonous transport	Limited Function Cropped land	No Management Required	
8	Limited or recharge April: Standing water May: Damp ground August: Dry	No defined channel	Limited Function Cropped land	Contributing function allochthonous transport	Limited Function Cropped land	No Management Required	

Drainage Feature Segment	Hydrology	Hydrology Modifiers	Riparian	Fish Habitat	Terrestrial Habitat	HDF Management Recommendations	Photos
9	Valued or Contributing April: Standing water May: Standing water August: Dry	No defined channel, tile drain outlet	Important function Riparian wetland	Contributing function allochthonous transport	Important Function Wetland with breeding amphibians	Protection	

3.3 Vegetation Communities

Preliminary mapping of the vegetation communities is provided on (Figure 4) classified using Ecological Land Classification (ELC) (Lee et al., 1998). Each unit is named according to the soil and plant attributes and a code is assigned (e.g. Cultural Woodland, CUW). Wetland is delineated by the survey limit staked in the field as determined by the dominance of wetland vegetation and hydric soils. The site is largely agricultural, and wetland and woodland forest communities separate the eastern and western portions. Wetland communities contiguous with those on the site extend north and south of the site. Wetland associated with a watercourse on site occurs in the eastern portion of the site, immediately southwest of Highway 10 along with a farmhouse and associated outbuildings and landscape trees. Deciduous hedgerows occur along some field and site boundaries A botanical inventory is provided in Appendix A.

In addition to the agricultural fields, farm, and residence, the communities dominated by natural vegetation on and immediately surrounding the Study Area include:

- Dry-Fresh Sugar Maple-Beech Deciduous Forest (FOD5-2)
- White Cedar – Hardwood Mineral Mixed Swamp (SWM1-1)
- Red Maple Mineral Deciduous Swamp with Reed Canary Grass Mineral Meadow Marsh inclusion (SWD3-1/MAM2-2)
- Mineral Shallow Marsh Ecosite (MAS2)
- White Cedar Mineral Coniferous Swamp (SWC1-1)
- Reed Canary Grass Mineral Meadow Marsh with Willow Mineral Thicket Swamp inclusion (MAM2-2/SWT2-2)
- Cultural Meadow (CUM1-1)
- Hedgerow (HR)

3.3.1 Dry-Fresh Sugar Maple-Beech Deciduous Forest (FOD5-2)

This community abuts the eastern side of the wetland communities in the center of the site. Species include Sugar Maple (*Acer saccharum*), American Beech (*Fagus grandifolia*), White Ash (*Fraxinus americana*), Choke Cherry (*Prunus virginiana*), with some White Birch (*Betula papyrifera*), Eastern White Cedar (*Thuja occidentalis*) and Balsam Fir (*Abies balsamea*).

3.3.2 White Cedar – Hardwood Mineral Mixed Swamp (SWM1-1)

This swamp community is situated at the center of the site, bisecting the eastern and western portions of agricultural land. The canopy layer consists of Eastern White Cedar, (Green Ash (*Fraxinus pennsylvanica*), Balsam Poplar (*Populus balsamifera*), American Elm (*Ulmus americana*), White Birch, Balsam Fir, and Black Cherry (*Prunus serotina*), with Balsam Poplar, Green Ash, American Elm and Black ash in the sub canopy. Ground cover includes Sensitive Fern (*Onoclea sensibilis*), Spinulose Wood Fern (*Dryopteris carthusiana*), Greater Bladder Sedge (*Carex intumescens*), Common Lady Fern (*Athyrium filix-femina*), Ostrich Fern (*Matteuccia struthiopteris*) and Bittersweet Nightshade (*Solanum dulcamara*).

3.3.3 Red Maple Mineral Deciduous Swamp with Reed Canary Grass Mineral Meadow Marsh inclusion (SWD3-1/MAM2-2)

This community is located in the center of the site near the southern edge of the property boundary. The canopy layer is comprised primarily of Red Maple (*Acer rubrum*), with White Birch and Trembling Aspen, and some Eastern White cedar in the sub canopy. The shrub layer contains Reed Canary Grass, Red-osier Dogwood, Spotted Joe Pye Weed and Woolgrass (*Scirpus cyperinus*), while ground cover consists of Sensitive Fern, Spotted Jewelweed, with some Fox Sedge (*Carex vulpinoidea*) and Retrorse Sedge (*Carex retrorsa*). A small inclusion of Reed Canary Grass Meadow Marsh is present at the northeast of this community.

3.3.4 Mineral Shallow Marsh (MAS2)

This wetland community type occurs over large areas in and adjacent to the north end of the site. The predominate species present are Broad-leaved Cattail (*Typha latifolia*), Reed Canary Grass (), with scattered occurrences of Eastern White Cedar, American Elm, Tamarack, White Birch, Pussy Willow (*Salix discolor*), Bebb's Willow (*Salix bebbiana*). The largest of this community type, at the northernmost end of the site, contains inclusions of White Cedar Mineral Coniferous Swamp (SWC1-1).

3.3.5 White Cedar Mineral Coniferous Swamp (SWC1-1)

This community occurs adjacent to, as well as an inclusion within the large shallow marsh communities in the north end of the site. The canopy is dominated by Eastern White Cedar, with some Balsam Fir (*Abies balsamea*), Tamarack, Balsam Poplar, and White Birch. Ground cover is minimal and includes mosses and forbs.

3.3.6 Reed Canary Grass Mineral Meadow Marsh with Willow Mineral Thicket Swamp inclusion (MAM2-2/SWT2-2)

This community occurs in two locations in the eastern portion of the site, one in association with the easternmost watercourse feature and the other to the west of this feature. Species present include Reed Canary Grass, Spotted Joe Pye Weed, Broad-leaved Cattail, Field Horsetail (*Equisetum arvense*), Dark-green Bulrush (*Scirpus atrovirens*), Purple Loosestrife (*Lythrum salicaria*), Panicled Aster (*Symphyotrichum lanceolatum*), and Swamp Aster (*Symphyotrichum puniceum*). Inclusions of thicket swamp consisting of Pussy Willow and Bebb's Willow are present within these communities.

3.3.7 Cultural Meadow (CUM1-1)

This community type occurs at several locations on the subject lands, primarily in the upland areas situated adjacent to meadow marsh wetlands in the eastern half of the site. Species present are typical of this community type and include Tall Goldenrod (*Solidago altissima*), Reed Canary Grass, Wild Carrot (*Daucus carota*), Tall Meadow Rue (*Thalictrum pubescens*), Stinging Nettle (*Urtica dioica*), Oxeye Daisy (*Leucanthemum vulgare*), Colts-foot (*Tussilago farfara*), and Common Dandelion (*Taraxacum officinale*).

3.3.8 Deciduous Hedgerow (HR-D)

These features are generally present at the borders of agricultural fields or along field access laneways and are comprised of a mix of deciduous and coniferous species including...

3.4 Tree inventory

A tree inventory is planned to assess trees that may be impacted by the proposed DPOS. An arborist report and Tree Inventory and Protection Plan (TIPP) will be prepared under separate cover at a later stage of the application process.

3.5 Breeding Birds

A review of the OBBA map square 17NJ49 yielded 93 results of birds potentially breeding in the area: the map squares measure 10 km by 10 km, with many of the results unlikely to be present within the site due to a lack of suitable supporting habitat. Review of the NHIC online database yielded potential occurrences for seven provincially rare species: Eastern Meadowlark (*Sturnella magna*) and Bobolink (*Dolichonyx oryzivorus*), Bank Swallow (*Riparia riparia*) and Barn Swallow (*Hirundo rustica*) which are provincially ranked as Threatened and Eastern Wood-pewee (*Contopus virens*), Grasshopper Sparrow (*Ammodramus savannarum*) and Canada Warbler (*Cardellina canadensis*), all provincially ranked as Special Concern.

Two breeding bird surveys were completed by SLR on June 14 and 30, 2022, within the designated window. The inventory of wildlife observed on the site is provided in Appendix B. Most of the species recorded are rural/urban tolerant species, typical of cultural and agricultural landscapes and will breed in a variety of disturbed habitats. Observed species include Song Sparrow (*Melospiza melodia*), Red-winged Blackbird (*Agelaius phoeniceus*), and American Robin (*Turdus migratorius*).

Eastern Wood-pewee were observed exhibiting probable breeding evidence within the Mixed Swamp and Sugar Maple-Beech Deciduous Forest communities.

Barn Swallow fledglings were observed near the barn in the northeast portion of the site. A used Barn Swallow nest was also found in the barn, indicating that the species was breeding here, however, it could not be confirmed that the fledglings seen were hatched in the nest observed. This species is known to use old buildings to support nesting behaviour, whereas foraging habitat is typically associated with meadows, marshes and open spaces. Barn Swallow are provincially designated as Threatened and nesting habitat is subject to provisions under the provincial ESA.

3.6 Reptiles and Amphibians

Review of the NHIC online database yielded records of two species of concern: Midland Painted Turtle (*Chrysemys picta marginata*) and Snapping Turtle (*Chelydra serpentina*).

Suitable habitat for amphibians is present on the subject lands, within wooded wetlands and marsh communities.

Amphibian surveys were conducted in April, May and June 2022 at strategic locations on the site in order to provide suitable coverage for detection of calling individuals (Figure 2). SLR conducted separate surveys to capture potential Western Chorus Frog populations as well as a generalized survey to capture all amphibians active during the early and late spring timing windows.

Western Chorus Frog surveys completed detected the presence of populations within or around the property, particularly in association with the large wetland complex that bisects the site and occurs both to the north and south of the site. Species detected during surveys included Spring Peeper (*Pseudacris crucifer*), American Toad (*Anaxyrus americanus*), Gray Tree Frog (*Dryophytes versicolor*) and Green Frog (*Lithobates clamitans*), among others presented in Table 4.

Amphibian observations were also made incidentally and included numerous (19) Green Frogs as well as Western Chorus Frogs associated with the large wetlands situated in the center of the site.

Table 4: 2021 Amphibian Survey Results

Common Name	Call Level		
Survey Date	April 2021	May 2021	June 2021
Spring Peeper	3		
American Toad	3		
Gray Tree Frog		2	
Green Frog			1
Wood Frog	3		
Northern Leopard Frog	2		
Western Chorus Frog	2		

3.7 Other Wildlife

Wildlife observed on site by SLR during the 2020 and 2021 field visits were typical of locations in semi-urban environments and agricultural settings (Appendix B). Evidence of Coyote (*Canis latrans*) and White-tailed Deer (*Odocoileus virginianus*) was observed within the site. At least three Muskrat (*Ondatra zibethicus*) push-ups were observed within the wetland immediately south of Highway 10 associated with the watercourse (HDF).

Evidence of chimney crayfish (i.e., burrows) were observed at several low-lying areas of the site, including at the edges of wetlands and the agricultural fields.

Other species of mammals and birds tolerant of urban environments are expected to occur as suitable habitats are present.

3.8 Species of Conservation Concern and Significant Wildlife Habitat

The MNRF website provided the following Element Occurrence (EO) records* for 1km Squares (17NJ4792, 17NJ4892) in the vicinity of the site:

- Eastern Meadowlark (*Sturnella magna*) provincially designated as Threatened
- Snapping Turtle (*Chelydra serpentina*) provincially designated as Special Concern

Department of Fisheries and Oceans' (DFO) interactive Aquatic Habitat Mapping did not identify the presence of Species at Risk or Critical Habitat within or adjacent to the site.

While no additional element occurrences were recorded for the broad area search there are Species of Conservation Concern that may occur if suitable habitat is present. The species in Table 5 have been identified as having potential habitat affinities within the site.

*Note: Species at Risk Information is accurate and up to date as of this report (September 2022). New species designations under Ontario Regulation 230/08 (Species at Risk in Ontario List) occur periodically. The owner is responsible to ensure that species and habitats regulated under Endangered Species Act (2007) or those described under other policies (i.e. the Migratory Bird Convention Act, Fish and Wildlife Conservation Act) are protected.

Table 5: Species of Conservation Concern Screening Results

Common Name[1]	Scientific Name	Designation	Potential for Habitat Affinities to Occur within or Adjacent to the site
Mammals			
[1] Tri-colored Bat	*Perimyotis subflavus*	Endangered	Yes, suitable habitat in large, open canopied trees exhibiting decay. Potential roosting and foraging (woodland features / hedgerows, trees generally).
[1] Little Brown Myotis	*Myotis lucifugus*	Endangered	Yes, suitable habitat in large, open canopied trees exhibiting decay. Potential roosting and foraging (anthropogenic features, woodland features / hedgerows, trees generally).
[1] Northern Myotis	*Myotis septentrionalis*	Endangered	Yes, suitable habitat in large, open canopied trees exhibiting decay. Potential roosting and foraging (woodland features).
Avifauna			
[1] Canada Warbler	*Cardellina canadensis*	Special Concern	Potential habitat in wooded wetland on and adjacent to the site. Species not observed on site.
[1] Eastern Wood-pewee	*Contopus virens*	Special Concern	Yes, suitable habitat present in woodland features. Species observed in deciduous forest and mixed swamp on site

Common Name[1]	Scientific Name	Designation	Potential for Habitat Affinities to Occur within or Adjacent to the site
[1] Bobolink	*Dolichonyx oryzivorus*	Threatened	Unlikely to breed on site as fields are under cultivation and existing meadow habitat is too small. Species not observed on site
[1, 2] Eastern Meadowlark	*Sturnella magna*	Threatened	Unlikely to breed on site as fields are under cultivation and existing meadow habitat is too small. Species not observed on site
[1] Barn Swallow	*Hirundo rustica*	Threatened	Suitable foraging habitat on site. Anthropogenic structures (nesting) also located on the site. Species confirmed nesting on site.
[1] Grasshopper Sparrow	*Ammodramus savannarum*	Special Concern	Unlikely to breed on site as fields are under cultivation and existing meadow habitat is too small. Species not observed on site
Herptofauna			
[1, 2] Snapping Turtle	*Chelydra serpentina*	Special Concern	Wetlands on and adjacent to the site provide potential habitat and movement corridors. Species not observed on site
[1] Midland Painted Turtle	*Chrysemys picta marginata*	*Designated in 2018 by COSEWIC, not legally listed Provincially	Wetlands on and adjacent to the site provide potential habitat and movement corridors. Species not observed on site
Vegetation			
[1] Butternut	*Juglans cinerea*	Endangered	Potential habitat present in wooded features, hedgerows Species not observed on site.

Common Name[1]	Scientific Name	Designation	Potential for Habitat Affinities to Occur within or Adjacent to the site
Other			
[1] Rusty-patched Bumble Bee (*Bombus affinis*) [1] Gypsy Cuckoo Bumble Bee *(Bombus bohemicus*) [1] Nine-spotted Lady Beetle (*Coccinella novemnotata*) [1] Transverse Lady Beetle (*Coccinella transversoguttata*)		Endangered	Possible however degree of habitat alteration and ploughing makes occurrence unlikely. Habitat generalists. Often overlooked. A range of habitats (meadow successional fields, forests, riparian areas, parks)
[1] Yellow-banded Bumble Bee (*Bombus terricola*)		Special Concern	
[1] Monarch	*Danaus plexippus*	Special Concern	Habitat present – meadows suitable for foraging Species not observed on site.

Source: (1) MNRF, SARO List, SLR expertise; (2) NHIC (2022)
Designation Status
Provincial Status - Species at Risk in Ontario list maintained by the Ontario Ministry of Natural Resources and Forestry, O.Reg. 230/08. Endangered Species Act Regulation OMNR S.O. 2007, Chapter 6. Schedules 1 thru 5.4. O. Reg. 242/08.
Regional or Local

Provincial (or Subnational) ranks are used by the Natural Heritage Information Centre (NHIC). S3 [Vulnerable] Vulnerable in the nation or state/province due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation.

3.9 Significant Wildlife Habitat

The significance of an area as wildlife habitat is often difficult to determine at the site-specific level, as the assessment must incorporate information from a wide geographic area and consider other factors such as regional resource patterns and landscape effects. Therefore, under the PPS, the planning authorities have the responsibility to identify and designate Significant Wildlife Habitat (SWH). Wildlife habitat significance includes:

- Seasonal concentration areas (e.g. conifer forests for deer wintering)
- Rare vegetation communities or specialized habitats for wildlife
- Habitats of species of conservation interest, excluding the habitats of endangered and threatened species which are protected under the 2020 PPS and 2007 ESA
- Animal movement corridors

The Township of Southgate does not identify SWH within their Official Plan Schedules although it is within their responsibility under the PPS, 2020 to do so. To address this habitat function, criteria for evaluating significant wildlife habitat for Eco-region 6E have been provided by MNRF (2015). Field investigations

completed to date identified habitat for Special Concern and Rare Wildlife Species for Eastern Wood-pewee.

4.0 Description of Development

The proposed DPOS consists of single detached (369 units), semi-detached (18 units), townhouses (72 units), as well as parkland, open space and stormwater management facilities, all planned within the western portion of the site bounded on the east by wetlands and on the west by the Grey County CP Rail Trail. A future road right-of-way is planned to connect the west and east portions of the site.

5.0 Impact Assessment

5.1 Direct Impacts

Direct impacts include those that have an immediate effect on natural features and are generally associated with site preparation and construction activities, such as vegetation clearing and grubbing, grading, excavation, paving and building of structures.

5.1.1 Environmental Constraints

The DPOS was overlaid on the features and constraints mapping to determine whether residual impacts remain (Figure 5). As the boundary delineation of natural features has not yet been verified, development setbacks from the current limits of the features are variable and range from 0 m to 9 m. In some instances, the plan appears to encroach upon natural features near the northeast end of the site. Following the verification of the boundaries in the field with GRCA, the application of buffers required through applicable municipal, GRCA and SVCA policy frameworks will occur, with updates to be provided at the next stage of the application process. These features and recommended buffers are presented in Table 6.

Table 6: Recommended Buffers to Natural Features and Structures

Policy	Woodland	Wetland	Watercourse	Top of Bank	Floodplain[1]	Hedgerow Trees
Grey County OP	Not specified	30 m	30 m (less with rationale/no negative impacts)	30 m (less with rationale/no negative impacts)	Not identified in the OP	Not identified in the OP
Township of Southgate OP	Not identified in the OP	Not identified in the OP	15 m, or 30 m for coldwater stream	Defers to Conservation Authority	Not identified in the OP	Not identified in the OP
GRCA	Not specified	30 m (less with rationale/no negative impacts)	15 m (Superseded by floodplain)	15 m	15 m	GRCA does not regulate individual trees except within the regulatory limit
SVCA	Not specified	30 m (less with rationale/no negative impacts)	15 m (Superseded by floodplain)	15 m	15 m	SVCA does not regulate individual trees except within the regulatory limit

Policy	Woodland	Wetland	Watercourse	Top of Bank	Floodplain[1]	Hedgerow Trees
buffers recommended	10 m	30 m (less with rationale/no negative impacts)	Not represented because other buffers extend further	15 m	15 m	Estimate 3 m but could change with detailed tree preservation report

[1] *A buffer would also be applied to the watercourse however the floodplain and wetland plus buffers far exceeds that constraint therefore it is not illustrated.*

Note: grading is generally not allowed within the buffers unless approved. Development is expected to meet existing grades at the limit of the buffer.

5.1.2 Fish and Aquatic Habitat

The watercourses identified on site were assessed as HDFs. No fish were observed during field investigations and all of the features were found to be dry during the August 2022 assessment. Due to either their contribution to downstream fish habitat through allochthonous transport, or their association with important riparian or terrestrial habitat (e.g. wetlands), appropriate management recommendations are applied to each feature to allow their primary functions to be maintained (see Figure 3). The proposed DPOS would remove a portion of the HDF to accommodate development. This feature was not identified as a watercourse and instead as a shallow, non vegetated swale providing overland flow to offsite wetlands to the north. As flow to these features is to be maintained through the outlet of the proposed stormwater management facility, which would implement appropriate quality control measures, impacts to fish and fish habitat are not expected.

5.1.3 Terrestrial Habitat

The DPOS is situated in agricultural lands and is generally set back from natural feature constraints. The plan overlies the HDF located in the center of the agricultural field that provides flow to offsite wetlands. The stormwater management facility for the DPOS is planned for the northernmost portion of this HDF and will outlet to the same wetlands. Therefore, as water flow to the wetlands will be maintained, it is anticipated that wetland functions will also be maintained, provided appropriate pre and post quality controls are implemented.

The proposed future road right-of-way that will connect the western and eastern portions of the site will bisect the wetlands located in the center of the site. When an approved alignment is confirmed (i.e. when development of the eastern portion of the site is planned), impacts to the wetland features can be minimized through the implementation of appropriate erosion and sediment control measures, and the avoidance of sensitive timing windows for birds and bats (April 1st-September 30th). Tree removals required for construction will occur in accordance with the *Grey County Forestry Management By-law #4341-06*, and restoration of disturbed areas are to be planted and seeded as per a future landscape restoration plan.

The DPOS also overlies portions of hedgerows that occur along the northern and southern boundaries of the site. These proposed removals are to be addressed under the applicable by-law. A tree preservation plan will be prepared to the satisfaction of the appropriate authority to support the Site Plan Application.

Small portions of the planned residential lots appear to encroach within the southwestern edge of the wetland natural features as they are currently delineated. Following field verification of feature boundaries with the GRCA, applicable municipal, GRCA and SVCA setbacks will be applied with subsequent updates to the setbacks and plan. These updates will be provided at the next stage of the application process.

5.1.4 Species of Conservation Concern

To date, three SAR (Eastern Wood-pewee, Barn Swallow, and Western Chorus Frog) have been detected on site, and there is the likelihood for SAR bats to occur as well. Foraging habitat for Monarch is present in meadow and meadow marsh communities on site and any removals can be restored within the setbacks of protected natural features. For the current DPOS, the plan is, for the most part, set back from

wetland habitat for Western Chorus frog as well as habitat for Eastern Wood-pewee, and removal of the outbuilding providing Barn Swallow nesting habitat is not proposed, therefore, impacts to these species or their habitat are not anticipated. The verification of feature boundaries with review agencies, and subsequent updates to setbacks (if required) will ensure adequate protection for these species and their habitat. To avoid potential impacts to bats that may be utilizing trees on site, removal of trees should occur outside of the active season for bats which typically occurs between April 1st and September 30th.

5.2 Indirect Impacts

Indirect impacts may occur from the residential occupation of the development and could include the dumping of refuse, encroachment of yards into natural features, and unsanctioned use of natural features for recreation (e.g., trails, parties, etc.). Off-leash or unconfined household pets may disturb the natural features and impact the natural function through disrupting sensitive breeding behaviours or predation of native fauna (e.g., cats hunting wild birds). Stormwater runoff from built-up impermeable areas including roads may contain sediments and pollutants such as oils and hydrocarbons. Overall, these indirect impacts could result in damage to the ecological functions of the natural features through the removal of native species, the introduction and spread of non-native or invasive flora or fauna, and degradation due to pollution.

In order to minimize the potential for these indirect impacts, mitigations can be implemented to provide physical barriers (i.e. fences), create awareness (education through interpretive signage), provide appropriate avenues for recreation (sanctioned trail system) and enforcement of applicable by-laws. Setbacks identified in the EIS should be restored to provide a buffer to the existing natural features and ultimately result in an increase in natural area. The use of low impact developments (LID) in the design of the proposed development would aid in the reduction of stormwater runoff and appropriately pre-treat any runoff prior to entry into the stormwater management facility.

6.0 Policy Review and Conformity

The following section describes policies relevant to the natural environment and describes how the natural heritage features identified within this EIS have been addressed. Policy conformity is summarized in Table 7.

Table 7: Summary of Policy Conformity

POLICY	CONFORMITY	RATIONALE
Provincial Policy Statement (PPS, 2020)	In compliance	• No features of provincial interest identified on the site (significant woodlands, significant wildlife habitat) or adjacent lands will be negatively affected should mitigation recommendations be implemented (avoidance/setbacks)
Grey County Official Plan (2019)	In compliance with natural heritage policies	• EIS describes the features and functions of the subject lands and confirms there are no significant/natural heritage features that will be negatively affected by the proposed DPOS
Township of Southgate Official Plan (2022)	In compliance with natural heritage policies	• DPOS is set back from features identified in OP section 6 such that negative impacts are not anticipated should mitigation recommendations be implemented • Tree removals will be subject to the appropriate municipal by-law
Ontario Regulation 150/06 (GRCA)	Permit for development in a regulated area required	• Minor encroachment into wetland features • Feature boundaries require field verification by conservation authority in order to determine appropriate setbacks and mitigation
Ontario Regulation 169/06 (SVCA)	Permit for development in a regulated area required	• Alteration to a mapped watercourse and regulated area is proposed to accommodate the DPOS • Minor encroachment into wetland features • Feature boundaries require field verification by conservation authority in order to determine appropriate setbacks and mitigation
Endangered Species Act (ESA, 2007)	Compliant with the implementation of recommended mitigation	• Potential for SAR bats to occur • Should it be deemed necessary, consultation with MECP regarding these impacts will be coordinated during subsequent phase of development

POLICY	CONFORMITY	RATIONALE
Migratory Birds Convention Act (MBCA, 1994)	Compliance with the implementation of recommendation	• Vegetation clearing will not occur within the breeding bird period provided under Environment Canada guidance for periods of highest nesting probability (i.e. cannot occur generally between April 1st and August 31st) and may be extended to September 30th in consultation with MECP for mitigation of interference with SAR bats
Fisheries Act (2019)	Conforms	• No fish habitat identified on site of proposed DPOS • Flow input to downstream habitat to be maintained

7.0 Conclusions and Recommendations

Completion of this section will be deferred until natural feature boundaries are verified in the field by the GRCA, following which, appropriate setbacks are applied. This will allow for a more accurate determination of impacts which will inform the proper mitigation measures and recommendations.

To date, field investigations and analysis have determined that the site of the proposed DPOS is primarily agricultural lands, with principal constraints consisting of large areas of wetland present within the northeast portion of the site as well as adjacent to the north boundary of the site. A headwater drainage feature located in the center of the proposed plan will be removed to accommodate the development, although flow input to downstream features will be maintained through stormwater outlet.

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9.0 Statement of Limitations

This report has been prepared and the work referred to in this report has been undertaken by SLR Consulting (Canada) Ltd. (SLR) for Flato Developments Inc., hereafter referred to as the "Client". The report has been prepared in accordance with the Scope of Work and agreement between SLR and the Client. It is intended for the sole and exclusive use of Client. Other than by the Client and as set out herein, copying or distribution of this report or use of or reliance on the information contained herein, in whole or in part, is not permitted unless payment for the work has been made in full and express written permission has been obtained from SLR.

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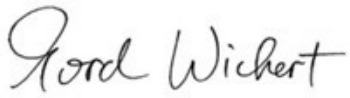
The Client may submit this report to related environmental regulatory authorities or persons for review and comment purposes.

10.0 Closure

Prepared and Reviewed By:

SLR Consulting (Canada) Ltd.



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Figures

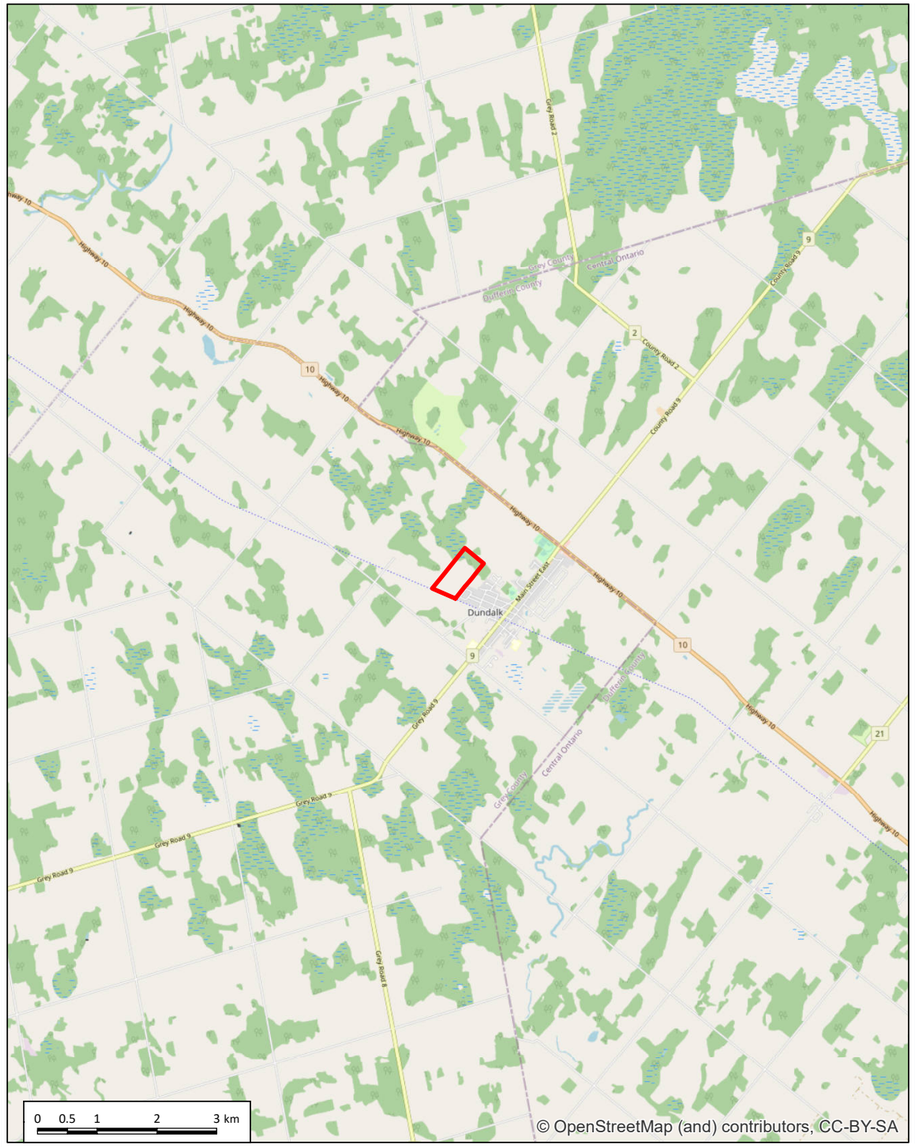
Environmental Impact Assessment

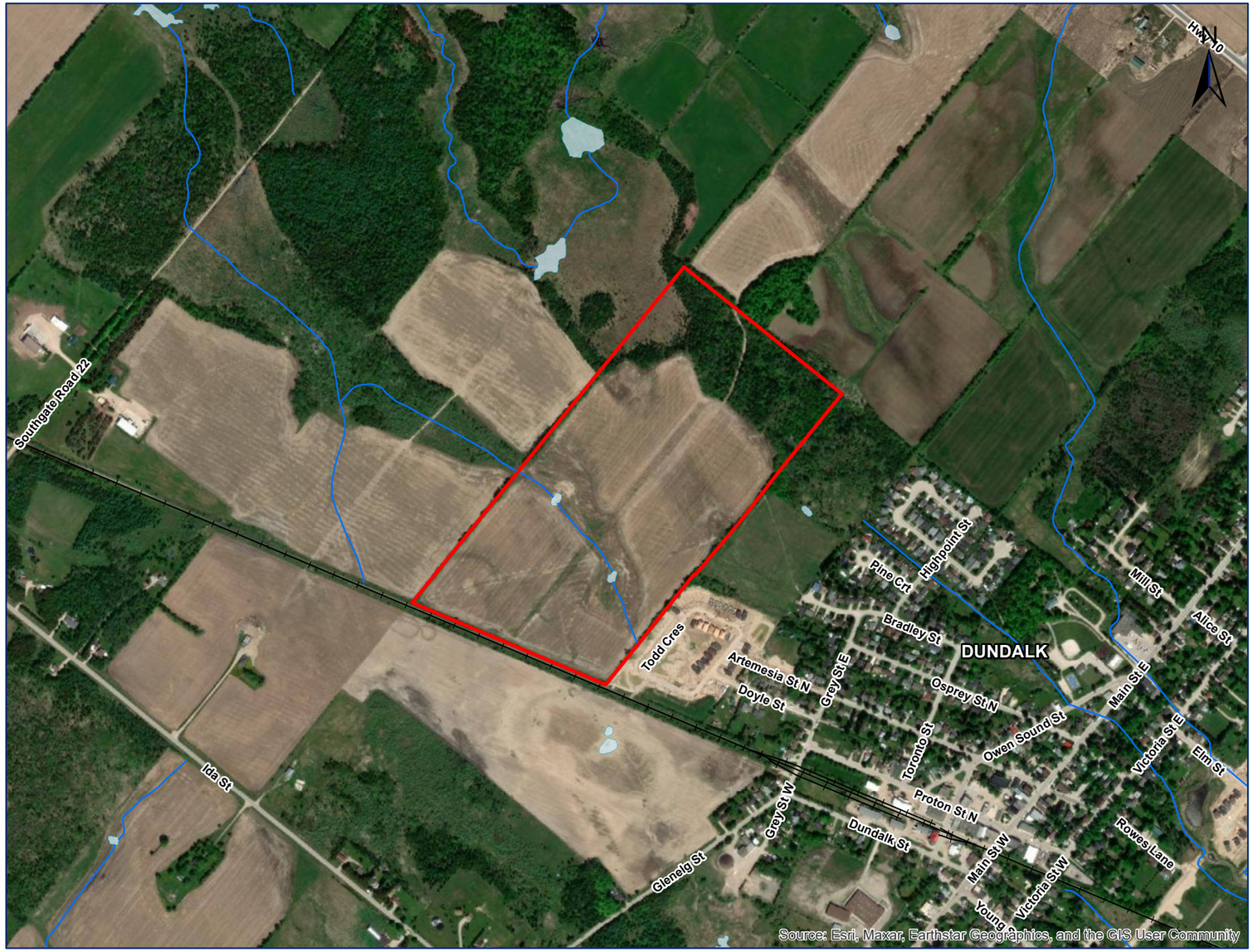
Glenelg Phase 3, Dundalk, Ontario

Flato Developments Inc.

SLR Project No. 209.30125.00003

September 9, 2022





NOTES:
DATA SOURCE: LAND INFORMATION ONTARIO

LEGEND
SITE BOUNDARY

0 50 100 200 300 m

SCALE 1:10,000
PAGE SIZE 11 x 17
NAD 1983 UTM Zone 17N
THIS MAP IS FOR CONCEPTUAL PURPOSES ONLY
AND SHOULD NOT BE USED FOR NAVIGATION

MHBC PLANNING, URBAN DESIGN & LANDSCAPE ARCHITECTURE
GLENELG
DUNDALK, ONTARIO, CANADA

GLENELG PHASE 3
ENVIRONMENTAL IMPACT STUDY

SITE LOCATION

SLR

FIGURE NO:
1

DATE: September 7, 2022
PROJECT NO: 209.30125.00003

LEGEND

- SITE BOUNDARY
- MONITORING WELL
- MINI-PIEZOMETER
- CARTOGRAPHIC WETLAND
- WATERBODIES
- PERMANENT WATERCOURSE
- RAILWAY

NOTES:

DATA SOURCE: LAND INFORMATION ONTARIO

0 25 50 100 150 m

Scale 1:3,500
PAGE SIZE 11 x 17
NAD 1983 UTM Zone 17N

MHBC PLANNING, URBAN DESIGN & LANDSCAPE ARCHITECTURE
GLENELG
DUNDALK, ONTARIO, CANADA

GLENELG PHASE 3
ENVIRONMENTAL IMPACT STUDY

HYDROGEOLOGICAL INVESTIGATIONS

SLR

FIGURE NO:
2

DATE: September 7, 2022

PROJECT NO: 209.30125.00003

547183 547683 548183

4891536

N

9

1-8

Pine Crt

Bradley St

Grey St E

Osprey St N

Todd Cres

Artemesia St N

Doyle St

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

547183 547683 548183

4891536

LEGEND

- SITE BOUNDARY
- CARTOGRAPHIC WETLAND
- WATERBODIES
- PERMANENT WATERCOURSE
- RAILWAY

HEADWATER DRAINAGE FEATURE

- NO MANAGEMENT
- PROTECTION
- OBSERVATION LOCATION

NOTES:

DATA SOURCE: LAND INFORMATION ONTARIO

0 25 50 100 150 m

Scale 1:3,500

PAGE SIZE 11 x 17

NAD 1983 UTM Zone 17N

MHBC PLANNING, URBAN DESIGN & LANDSCAPE ARCHITECTURE
GLENELG
DUNDALK, ONTARIO, CANADA

GLENELG PHASE 3
ENVIRONMENTAL IMPACT STUDY

HEADWATER DRAINAGE FEATURES

SLR

FIGURE NO:
3

DATE: September 7, 2022

PROJECT NO: 209.30125.00003

LEGEND

- SITE BOUNDARY
- WATERBODIES
- PERMANENT WATERCOURSE
- RAILWAY
- ECOLOGICAL LAND CLASSIFICATION (SLR CONSULTING, 2022)

ELC Code	ELC Description
Ag	Agriculture
CUM1-1	Cultural Meadow
FOD5-2	Dry-Fresh Sugar Maple-Beech Deciduous Forest
HR	Hedgerow
MAM2-2/SWT2-	Reed Canary Grass Mineral Meadow Marsh with Willow Thicket Swamp inclusion
MAS2	Mineral Shallow Marsh Ecosite
MAS2/SWC1-1	Mineral Shallow Marsh with White Cedar Coniferous Swamp inclusion
SWC1-1	White Cedar Mineral Coniferous Swamp
SWD	Mineral Deciduous Swamp
SWD3-1/MAM2-2	Red Maple Mineral Deciduous Swamp with Reed Canary Grass Mineral Meadow Marsh inclusion
SWM1-1	White Cedar - Hardwood Mineral Mixed Swamp
SWT2-2	Willow Mineral Thicket Swamp

NOTES:

DATA SOURCE: LAND INFORMATION ONTARIO

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Scale 1:3,500
PAGE SIZE 11 x 17
NAD 1983 UTM Zone 17N

MHBC PLANNING, URBAN DESIGN & LANDSCAPE ARCHITECTURE
GLENELG
DUNDALK, ONTARIO, CANADA

GLENELG PHASE 3
ENVIRONMENTAL IMPACT STUDY

ECOLOGICAL LAND CLASSIFICATION

SLR

FIGURE NO:
4

DATE: September 7, 2022

PROJECT NO: 209.30125.00003

547183 547683 548183

4891536

4891036

547183 547683 548183

LEGEND

- SITE BOUNDARY
- SITE PLAN (MHBC, AUGUST 18, 2022)
- CONSERVATION AUTHORITY ADMIN AREA
- APPROXIMATE SCREENING AREA (SVCA)
- RAILWAY
- WATERBODIES
- PERMANENT WATERCOURSE
- CARTOGRAPHIC WETLAND
- SIGNIFICANT WOODLANDS (GREY COUNTY OFFICIAL PLAN (2018))
- WOODED ECOLOGICAL LAND CLASSIFICATION
- WETLAND ECOLOGICAL LAND CLASSIFICATION

NOTES:

DATA SOURCE: LAND INFORMATION ONTARIO

0 25 50 100 150 m

Scale 1:3,500
PAGE SIZE 11 x 17
NAD 1983 UTM Zone 17N

MHBC PLANNING, URBAN DESIGN & LANDSCAPE ARCHITECTURE
GLENELG
DUNDALK, ONTARIO, CANADA

GLENELG PHASE 3
ENVIRONMENTAL IMPACT STUDY

ENVIRONMENTAL CONSTRAINTS AND SITE PLAN

SLR

FIGURE NO:
5

DATE: September 7, 2022

PROJECT NO: 209.30125.00003

Appendix A Botanical Inventory

Environmental Impact Assessment

Glenelg Phase 3, Dundalk, Ontario

Flato Developments Inc.

SLR Project No. 209.30125.00003

September 9, 2022

GLENELG PHASE 3, DUNDALK, ON		
Common Name	**Scientific Name**	**SRank[1]**
Balsam Fir	*Abies balsamea*	S5
Red Maple	*Acer rubrum*	S5
Sugar Maple	*Acer saccharum*	S5
Canada Anemone	*Anemone canadensis*	S5
Common Lady Fern	*Athyrium filix-femina*	S5
Paper Birch	*Betula papyrifera*	S5
Bladder Sedge	*Carex intumescens*	S5
Retrorse Sedge	*Carex retrorsa*	S5
Fox Sedge	*Carex vulpinoidea*	S5
Red-osier Dogwood	*Cornus sericea*	S5
Wild Carrot	*Daucus carota*	SNA
Spinulose Wood Fern	*Dryopteris carthusiana*	S5
Field Horsetail	*Equisetum arvense*	S5
Spotted Joe Pye Weed	*Eutrochium maculatum*	S5
American Beech	*Fagus grandifolia*	S4
White Ash	*Fraxinus americana*	S4
Black Ash	*Fraxinus nigra*	S4
Green Ash	*Fraxinus pennsylvanica*	S4
Fowl Mannagrass	*Glyceria striata*	S5
Spotted Jewelweed	*Impatiens capensis*	S5
American Larch	*Larix laricina*	S5
Garden Bird's-foot Trefoil	*Lotus corniculatus*	SNA
Purple Loosestrife	*Lythrum salicaria*	SNA
Ostrich Fern	*Matteuccia struthiopteris*	S5
Common Evening Primros	*Oenothera biennis*	S5
Sensitive Fern	*Onoclea sensibilis*	S5
Reed Canary Grass	*Phalaris arundinacea*	S5
Common Timothy	*Phleum pratense*	SNA
Common Reed	*Phragmites australis*	SU
Balsam Poplar	*Populus balsamifera*	S5
Trembling Aspen	*Populus tremuloides*	S5
Black Cherry	*Prunus serotina*	S5
Choke Cherry	*Prunus virginiana*	S5
Bebb's Willow	*Salix bebbiana*	S5
Pussy Willow	*Salix discolor*	S5
Shining Willow	*Salix lucida*	S5
Dark-green Bulrush	*Scirpus atrovirens*	S5
Cottongrass Bulrush	*Scirpus cyperinus*	S5
Climbing Nightshade	*Solanum dulcamara*	SNA
Tall Goldenrod	*Solidago altissima*	S5
Panicled Aster	*Symphyotrichum lanceolatum*	S5
Swamp Aster	*Symphyotrichum puniceum*	S5
Eastern White Cedar	*Thuja occidentalis*	S5
Colt's-foot	*Tussilago farfara*	SNA
Broad-leaved Cattail	*Typha latifolia*	S5
American Elm	*Ulmus americana*	S5
Tufted Vetch	*Vicia cracca*	SNA

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[2]**SARA** - Species at Risk Act (S.C. 2002, c. 29) Act current to 2022-02-23 and last amended on 2022-02-03.COSEWIC (Committee on the Status of Endangered Wildlife in Canada)

[3]**SARO** - ONTARIO REGULATION 230/08 under the Endangered Species Act, 2007 species at risk in Ontario list. Act current 2022-01-26.

[4]**L Ranks** Toronto and Region Conservation Authority (TRCA). 2017. Scoring and Ranking TRCA's Vegetation Communities, Flora, and Fauna Species.
L+ Exotic; not native to the TRCA jurisdiction; includes hybrids between a native species and an exotic. **L5** Able to withstand high levels of disturbance; generally secure. **L4** Able to withstand some disturbance; generally secure in rural matrix; of concern in urban matrix.**L3** Able to withstand minor disturbance; generally secure in natural matrix; considered to be of regional concern. **L2** Unable to withstand disturbance; some criteria are very limiting factors; generally occur in high-quality natural areas, in natural matrix; probably rare in the TRCA jurisdiction; of concern regionally. **L1** Unable to withstand disturbance; many criteria are limiting factors; generally occur in high-quality natural areas in natural matrix; almost certainly rare in the TRCA jurisdiction; of concern regional.

Appendix B Wildlife Observations

Environmental Impact Assessment

Glenelg Phase 3, Dundalk, Ontario

Flato Developments Inc.

SLR Project No. 209.30125.00003

September 9, 2022

Common Name	Scientific Name	SRank[1]	SARA[2] COSEWIC	SARO[3]	Highest Breeding Evidence Observed[4]	Comments
Avifauna						
Alder Flycatcher	*Empidonax alnorum*	S5B			T	
American Crow	*Corvus brachyrhynchos*	S5B,SZN			H	
American Goldfinch	*Carduelis tristis*	S5B,SZN			P	
American Redstart	*Setophaga ruticilla*	S5B			P	
American Robin	*Turdus migratorius*	S5B,SZN			CF	
American Woodcock	*Scolopax minor*	S4B			D	Detected during amphibian breeding surveys
Barn Swallow	***Hirundo rustica***	**S5B,SZN**	**THR SCH 1 THR**	**THR**	NU	
Black-and-white Warbler	*Mniotilta varia*	S5B			S	
Black-capped Chickadee	*Poecile atricapillus*	S5			FY	
Blue Jay	*Cyanocitta cristata*	S5			H	
Brown-headed Cowbird	*Molothrus ater*	S4B			H	
Brown Thrasher	*Toxostoma rufum*	S4B			S	
Cedar Waxwing	*Bombycilla cedrorum*	S5B,SZN			H	
Chipping Sparrow	*Spizella passerina*	S5B			T	
Common Grackle	*Quiscalus quiscula*	S5B,SZN			CF	
Common Yellowthroat	*Geothlypis trichas*	S5B			P	
Eastern Kingbird	*Tyrannus tyrannus*	S4B			T	
Eastern Wood-Pewee	***Contopus virens***	**S4B**	**SC SCH 1 SC**	**SC**	T	
European Starling	*Sturnus vulgaris*	SNA			S	
Gray Catbird	*Dumetella carolinensis*	S4B			T	
Green Heron	*Butorides virescens*	S4B			H	
House Wren	*Troglodytes aedon*	S5B,SZN			T	
Indigo Bunting	*Passerina cyanea*	S4B			A	
Mallard	*Anas platyrhynchos*	S5			H	
Mourning Dove	*Zenaida macroura*	S5			S	
Nashville Warbler	*Leiothlypis ruficapilla*	S5B			S	
Northern Cardinal	*Cardinalis cardinalis*	S5			T	
Northern Flicker	*Colaptes auratus*	S4B			P	
Ovenbird	*Seiurus aurocapilla*	S5B			S	
Pileated Woodpecker	*Dryocopus pileatus*	S5			H	
Pine Warbler	*Setophaga pinus*	S5B			T	
Purple Finch	*Haemorhous purpureus*	S5			T	
Red-breasted Nuthatch	*Sitta canadensis*	S5			H	
Red-eyed Vireo	*Vireo olivaceus*	S5B,SZN			T	
Red-winged Blackbird	*Agelaius phoeniceus*	S4			CF	
Rose-breasted Grosbeak	*Pheucticus ludovicianus*	S4			T	
Savannah Sparrow	*Passerculus sandwichensis*	S4B			T	
Sedge Wren	*Cistothorus stellaris*	S4B			S	
Song Sparrow	*Melospiza melodia*	S5B,SZN			CF	
Swamp Sparrow	*Melospiza georgiana*	S5B,S4N			A	
Tree Swallow	*Tachycineta bicolor*	S4B			H	
Turkey Vulture	*Cathartes aura*	S5B			X	
Veery	*Catharus fuscescens*	S5B			S	
Warbling Vireo	*Vireo gilvus*	S5B,SZN			T	
White-throated Sparrow	*Zonotrichia albicollis*	S5			S	
Wild Turkey	*Meleagris gallopavo*	S5			H	
Wilson's Snipe	*Gallinago delicata*	S5B			D	Detected during amphibian breeding surveys
Winter Wren	*Troglodytes hiemalis*	S5B,S4N			T	
Yellow-bellied Sapsucker	*Sphyrapicus varius*	S5B			P	
Yellow-rumped Warbler	*Setophaga coronata*	S5B,S4N			S	
Yellow Warbler	*Setophaga petechia*	S5B			CF	
Herptiles						
American Toad	*Anaxyrus americanus*	S5			Calling	
Gray Treefrog	*Dryophytes versicolor*	S5			Calling	
Green Frog	*Lithobates clamitans*	S5			Calling	
Northern Leopard Frog	*Lithobates pipiens*	S5			Calling	
Spring Peeper	*Pseudacris crucifer*	S5			Calling	
Western Chorus Frog	***Pseudacris maculata pop. 1***	**S4**	**THR SCH 1 THR**	**NAR**	**Calling**	
Wood Frog	*Lithobates sylvaticus*	S5			Calling	
Mammals / Other						
Coyote	*Canis latrans*	S5			Howling	
Muskrat	*Ondatra zibethicus*	S5			Individuals and push-ups observed	
White-taield Deer	*Odocoileus virginianus*	S5			Tracks	

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S2 Imperiled—Imperiled in the nation or state/province because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the nation or state/province.
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SX Apparently extirpated from Ontario, with little likelihood of rediscovery. Typically not seen in the province for many decades, despite searches at known historic sites.
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[3]**SARO** - ONTARIO REGULATION 230/08 under the Endangered Species Act, 2007 species at risk in Ontario list. Act current to 2018-08-01. COSEWIC (Committee on the Status of Endangered Wildlife in Canada)
EXT Extinct - A species that no longer exists.
EXP Extirpated - A species no longer existing in the wild in Canada, but occurring elsewhere.
END Endangered - A species facing imminent extirpation or extinction.
THR Threatened - A species likely to become endangered if limiting factors are not reversed.
SC Special Concern (formerly vulnerable) - A species that may become a threatened or an endangered species because of a combination of biological characteristics and identified threats.
NAR Not At Risk - A species that has been evaluated and found to be not at risk of extinction given the current circumstances.
DD Data Deficient (formerly Indeterminate) - Available information is insufficient to resolve a species' eligibility for assessment or to permit an assessment of the species' risk of extinction.
* - Species on Schedule 1 of Species At Risk Act (SARA)

[4]**Highest Breeding Evidence Ontario Breeding Bird Atlas: Breeding Evidence Codes**
X - Present **XX** - Heard but not expected to be breeding (e.g. using habitat - foraging)
POSSIBLE
H *- Species observed in its breeding season in suitable nesting habitat.*
S *- Singing male(s) present, or breeding calls heard, in suitable nesting habitat in breeding season.*
PROBABLE
P - Pair observed in suitable nesting habitat in nesting season
T - Permanent territroty presumed through registration of territorial behaviour (song, etc.) on at least two days, a week or more apart, at the same place
D - Courtship or display, including interaction between a male and a female or two males, including courtship feeding or copulations
V - Visiting probably nest site
A - Agitated behabiour or anxiety calls of an adult
B - Brood patch on adult female or cloacal protuberance on adult males
N - Nest building or excavation of nest hole
CONFIRMED
DD - Distraction display or injury feigning **CF -** Adult carrying food for young **NE -** Nest containing eggs
NY - Nest with young seen or heard **NU -** Used nest or egg shells found (occupied or laid within the period of the survey) **FY -** Recently fleged young (nidicolous species) or downy young (nidifugous species), including incapable of sustained flight
AE - Adult leaving or entering nest sites in circumstancing indicating occupied nest **FS -** Adult carrying fecal sac