PLANNING JUSTIFICATION REPORT

Application for Zoning By-law Amendment
Part Lot 4, Concession 10
19350 Island Road
Township of Scugog – Region of Durham

Prepared for:
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December 2023

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BIRCHWOOD
Luxury Camping

Thorstone Consulting Services, Inc.
Land Use Planning & Development

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PLANNING SYNOPSIS

Based on our review and analysis of the Birchwood Luxury Camping operation on the subject property, it is apparent that the use of the two geodesic domes for overnight accommodation is akin to a Bed and Breakfast establishment providing short term stays as a small-scale tourism activity. It is acknowledged that this type of use, commonly known as "glamping", is relatively new in the Ontario landscape and is not well defined in policy documents. In recent years, this type of tourism has flourished in the area of the Greenbelt both within and near the Greater Toronto Area. As noted by the Ontario Greenbelt Foundation, "*Tourism is a key facet of the Greenbelt's economy; the sector contributes $8.3 billion in GDP to Ontario's economy and supports over 160,000 jobs. It provides economic development opportunities for smaller towns and rural communities in and around the Greenbelt, while ensuring that their natural beauty and character is sustained*". This use serves a niche market looking for a unique outdoor experience similar to camping but includes modern sleeping conveniences.

The subject property is considered a rural residential property and as indicated in the historical and present-day air photography, the lands have not supported any significant agricultural activity. Given the forested area at the rear of the property and expansion of this forested area over the years, this property is not likely to host a viable farming operation in the future. As a rural residential property, the lands are entitled to accessory uses which are naturally and normally incidental to the primary use of the land. In addition, home occupations and home industries are also permitted. Critical in this analysis is the consideration of the size, scale and intensity of the Birchwood operation relative to the existing rural residential use and the other home business uses which are currently permitted as of right.

Based on our review of the applicable planning documents, the rural residential use of the subject property is permitted as an existing lot within a Prime Agricultural Area by the approved Upper Tier and local planning documents. As a permitted rural residential use, the subject property may include a Home Industry use. The purpose of this subject Zoning By-law Amendment application is to permit the Birchwood Luxury Camping operation as a Home Industry and to specifically define the use through the site-specific Zoning Amendment.

This Report will provide a detailed review of the applicable land use policies with a focus on the local Township of Scugog policies and provisions for home-based businesses. In addition, an Environmental Impact Study has been undertaken to address the applicable policies of the Greenbelt Plan and the local and Regional Official Plans.

Section 1 INTRODUCTION

1.1 Background

Thorstone Consulting Services Inc. was retained by the owners of the subject property in June 2023 to assist with the land use planning approval process and to provide professional planning advice and project management services as it relates to the existing Birchwood Luxury Camping operation.

The subject property is a 13.14 hectares (32.4 acres) parcel of land located on the west side of Island Road in the Township of Scugog (refer to Figure 1).

During the pandemic, the owner of the subject property established two separate campsite locations on either side of the existing residence and began the business operation called Birchwood Luxury Camping. In response to zoning and building code violations issued to the property owner by the Township in May of 2023, the ownership contacted Thorstone to provide planning assistance. Thorstone undertook to examine potential planning approvals required to permit the established use and to consider the land use planning merits and public interest considerations.

As part of our assignment for the subject application, we have undertaken the following activities:

- Conducted a site inspection of the subject property and met with the property owner to understand the use of the property and the Birchwood business operations;
- Prepared and submitted a Pre-Consultation application to the Township and attended a Pre-Consultation meeting with the owner and staff form the Township and the Region of Durham;
- Reviewed the matters outlined in the Pre-Consultation meeting held on July 26, 2023 (refer to Appendix B); and,
- Reviewed the applicable land use policies which apply to the subject property.

1.2 Purpose of Report

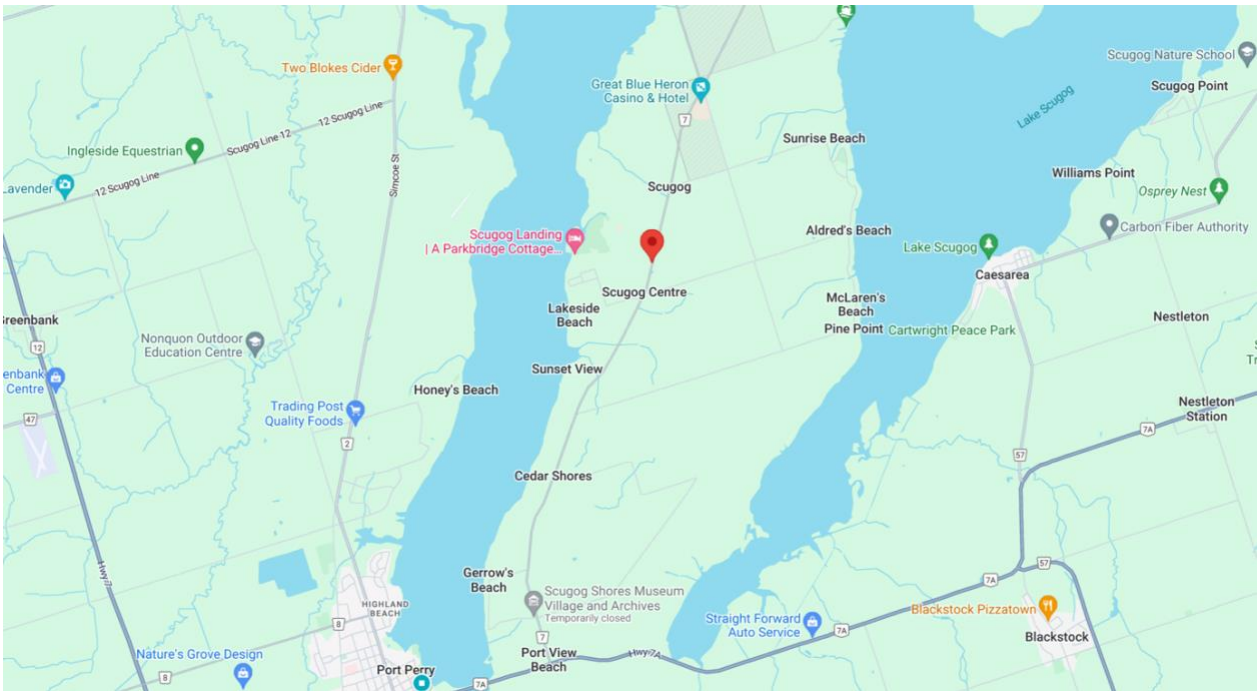
The purpose of this Report is to:

- Provide a detailed description of the proposed rezoning including an analysis of existing site conditions and surrounding land uses;
- Provide a review and analysis of applicable land use planning and policy instruments that apply to the development of the subject lands with a particular focus on the following:
    - Provincial Policy Statement (2020);
    - Greenbelt Plan (2017);
    - Existing Region of Durham Official Plan (1993);
    - Adopted Region of Durham Official Plan (2023);
    - Township of Scugog Official Plan (2009); and,
    - Township of Scugog Zoning By-law 14-14 (2014).
- Provide a professional planning opinion and recommendations with respect to the application for the proposed Zoning By-law Amendment.

This Report also addresses the matters discussed during a Pre-Consultation meeting between the property ownership, Thorstone Consulting and Township staff on July 26, 2023. The Pre-Consultation notes are attached to this Report as Appendix B.

1.3 Subject Property and Surrounding Land Use

As shown on the Air Photograph (Figure 1) and the context map below, the subject property is located on the west side of Island Road. The legal description of the subject property is Part Lot 4, Concession 10 and is municipally known as 19350 Island Road. The subject property is approximately 13.14 hectares (32.4 acres) in area.



Context Map of Subject Property and Surrounding Area

The subject property is located with significant frontage along Island Road, which is the major Durham Region road which leads to the Great Blue Huron Casino from Highway 7. Surrounding land uses include a variety of rural residential and agricultural uses. The lands between Island Road and Lake Scugog are predominantly developed for lakeshore residential uses, rural residential uses, conservation, and limited agricultural uses. The lands opposite of the subject property east of Island Road are predominantly used for agricultural purposes together with limited rural residential lots.

1.4 Existing Site Characteristics

The subject property contains an existing single detached dwelling with a gross floor area of 223 square metres (2,400 square feet) which was constructed in 1985 together with an in-ground pool and pool cabana. The property also supports a detached garage with a floor area of 223 square metres (2,400 square feet) which was constructed in 2011.



Photograph 1: Existing Dwelling



Photograph 2: Existing Detached Garage



Photograph 3: Existing Dwelling and Associated Amenity Area

As indicated in the 2005 aerial photo below, the front portion of the subject property appears to have been cultivated at an earlier time. However, since 2005 and with plantings by the previous owner, the area has matured and the forested area now extends further towards the road frontage, covering majority of the subject property. The current owner has established a Managed Forest Stewardship Plan for the property extending to the year 2029.

In order to re-establish agricultural uses on the subject property, it would be necessary to clear all or a significant portion of the mature vegetation that currently exists on site. Given the size of the subject property, it is likely to remain a rural residential property.



2005 Aerial Photography



2021 Aerial Photography of Existing Conditions

1.5 Birchwood Luxury Camping

In 2009, the property was purchased by the Hunter family who obtained a Building Permit to construct the detached garage. Following the passing of Mr. Hunter, in 2021, the family chose to embark on a small scale business venture with the establishment of the south geodesic dome intended for short term camping opportunities for visitors and tourists to the area. The north geodesic dome was constructed in 2022.

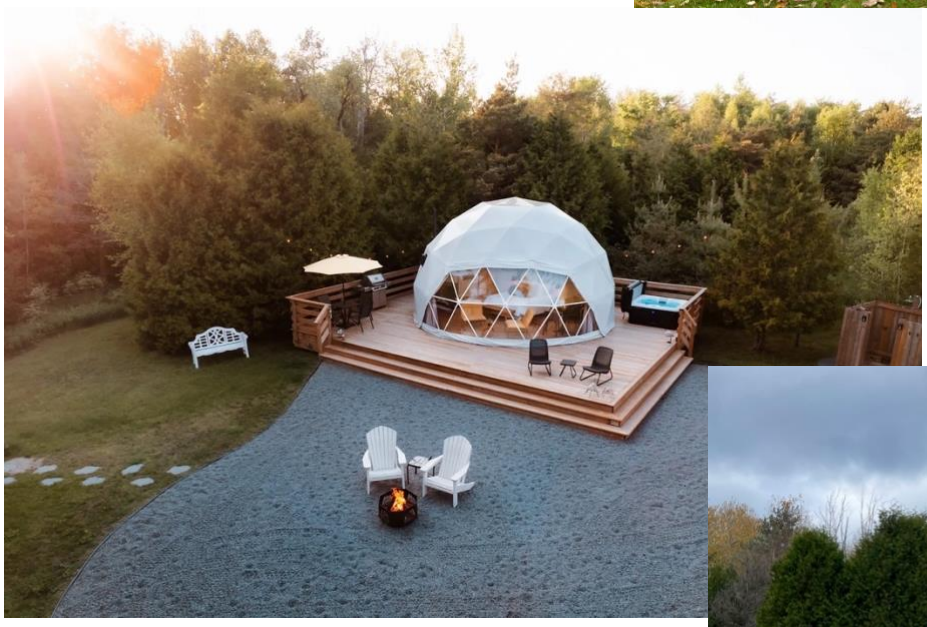
Both of the geodesic dome sites include a pit privy, an outdoor shower and one parking space. The two sites have no direct water connection. Potable water is delivered from the main dwelling and stored on each site. The south dome is approximately 50 square metres (538 square feet) in floor area and is located on a deck with a floor area of 98 square metres (1,054 square feet). The north geodome is approximately 39 square metres (413 square feet) in floor area and is located on a deck with a floor area of 107 square metres (1,054 square feet). The amenity area is limited due to the desire to maintain the natural environment and privacy of the guests.

It is important to note that the small scale camping operation for Birchwood is intended for the quiet enjoyment of the natural settings and allows for accommodation of up to three people per site, but is typically occupied by a couple. Given the limited amenities, the sites are not suitable for families nor are guests permitted to erect additional structures.



North Geodome
and Associated Area







South Geodome
and Associated Area

Section 2 PLANNING CONTEXT & ANALYSIS

2.1 Introduction

This section focuses on the evaluation of the application within a context established by applicable land use planning policies, sound planning principles, and site characteristics.

2.2 Provincial Policy Statement (2020)

The Provincial Policy Statement (PPS) provides policy direction on land use planning and development in order to ensure the protection of resources of provincial interest, public health and safety, and the quality of the natural environment. Section 3 of ***The Planning Act*** establishes that matters of provincial interest will be set out in policy statements issued from time to time and that municipal decisions must be consistent with these policy statements.

The subject property is considered to be within a prime agricultural area as defined by the PPS due to its classification on Schedule A of the Region of Durham Official Plan. It is understood that the Province of Ontario had created prime agricultural areas based on a systems approach. The agricultural system approach was implemented to maintain and enhance the geographic continuity of the agricultural land base. However, the systems approach includes both prime agricultural lands and lands that are more rural in nature, including rural residential properties and do not necessary contain agricultural uses.

Although the PPS does not explicitly list residential uses as a permitted use within prime agricultural areas, the Province of Ontario has created an information webpage about prime agricultural areas on the Ontario website. It is noted that "*Prime agricultural areas may include small pockets of non-agricultural uses within the working agricultural landscape such as golf courses, cemeteries, or commercial and residential lots. Existing non-agricultural uses in prime agricultural areas may have been approved before the current policies were in place*." The existing 13.14 hectares (32.4 acres) lot is much smaller than the typical 40 hectares (100 acres) minimum parcel size for agricultural parcels for farming operations. Considering the small parcel size and naturalized forested areas, it is not likely that the subject property could be used for a viable stand-alone farm operation.

The 223 square metres (2,400 square feet) dwelling was constructed in 1985, prior to the first Provincial Policy Statement that was tabled in 1996. The existing rural residential use is considered to be a permitted principal use on the subject property together with accessory uses. The continuation of the Birchwood small-scale camping operation does not negatively impact the on-going agricultural use of lands in the vicinity (reference made to the policies under Section 2.3 of the PPS).

Prime agricultural areas are also included within Rural areas as specified in Section 1.1.4 of the PPS. The importance of leveraging rural assets and amenities and protecting the environment as a foundation for a sustainable economy is also noted. The following policies are applicable to the subject application:

1.1.4.1 Healthy, integrated and viable *rural areas* should be supported by:

a) building upon rural character, and leveraging rural amenities and assets;

f) promoting diversification of the economic base and employment opportunities through goods and services, including value-added products and the sustainable management or use of resources;
g) providing opportunities for sustainable and diversified tourism, including leveraging historical, cultural, and natural assets;
h) conserving biodiversity and considering the ecological benefits provided by nature; and
i) providing opportunities for economic activities in *prime agricultural areas*, in accordance with policy 2.3.

The small-scale camping operation is located on a rural residential property that contains a managed forest. The mature vegetation provides a rural landscape for the property owner and the short-term occupants of the two small camping sites. This unique use supports the surrounding rural economy as many of the short-term occupants choose to venture out into the local community as part of their stay.

2.4 Greenbelt Plan (2017)

The subject property is located within Protected Countryside of the Greenbelt and therefore the policies of the Greenbelt Plan have been reviewed and analyzed. **Section 1.2.2** outlines Protected Countryside Goals within the Greenbelt Plan. The following subsection is applicable to this subject application:

> **1.d) Provision of the appropriate flexibility to allow for *agricultural*, *agriculture-related* and *on-farm diversified uses*, *normal farm practices* and an evolving agricultural and rural economy;**
>
> **3.c) Enabling continued opportunities for sustainable tourism development.**

As noted in the Planning Synopsis, the Greenbelt Foundation has identified and researched the importance of nature-based tourism to the economy of local communities. The small-scale Birchwood operation provides support for this type of economic activity.

The subject property is within the Greenbelt Natural Heritage System. Section 3.2.2 of the Greenbelt Plan generally prohibits new development or site alteration within the Natural Heritage System. Based on the work undertaken by Terrastory Environmental, which is further discussed under Section 3.3 of this Report, the subject property supports a Key Natural Heritage Feature (KNHF) and more specifically, a significant woodland. Section 3.2.5.1 of the Greenbelt Plan does not permit development or site alteration other than for certain exceptions.

The air photograph below indicates the existing rural residential use of the land as well as the extent of the significant woodland in the rear portions of the property. It is important to note that the locations of the two campsites have been established outside of and along the edge of the significant woodland as it existed in 2005 and in an area where vegetation has been allowed to regenerate.

As noted previously, the subject property contains a rural residential use established in 1985. Section 4.5 of the Greenbelt Plan speaks to existing uses as follows:

4. Expansions to existing buildings and structures, accessory structures and uses and/or conversions of legally *existing uses* which bring the use more into conformity with this Plan are permitted subject to a demonstration of the following:

- **a) Notwithstanding section 4.2.2.2, new municipal services are not required; and**
- **b) The use does not expand into *key natural heritage features* or *key hydrologic features* or their associated *vegetation protection zones*, unless there is no other alternative, in which case any expansion shall be limited in scope and kept within close geographical proximity to the existing structure.**

5. Expansions or alterations to existing buildings and structures for *agricultural uses*, *agriculture-related uses* or *on-farm diversified uses* and expansions to existing residential dwellings may be considered within *key natural heritage features*, *key hydrologic features* and their associated *vegetation protection zones* if it is demonstrated that:

- **a) There is no alternative, and the expansion or alteration in the feature is minimized and, in the *vegetation protection zone*, is directed away from the feature to the maximum extent possible; and**
- **b) The impact of the expansion or alteration on the feature and its functions is minimized and mitigated to the maximum extent possible.**

In consideration of the Greenbelt Plan policy and the condition of the subject lands in 2005, it is apparent that the two campsite locations are situated outside of the KNHF as it existed on the date of the introduction of the Greenbelt Plan. The Greenbelt Plan policy referenced above clearly allows for the expansion of existing uses including accessory structures and goes further to provide opportunities for the expansion of existing residential dwellings to take place within a KNHF and their Vegetation Protection Zones. The work undertaken by Terrastory Environmental and the recommend Woodland Enhancement Plan, will address the Greenbelt Plan policy in this regard with a particular focus on the evaluation of the natural heritage features on the property and the impact of the development proposed.

In the Greenbelt Plan, existing uses are defined as:

- **a) uses legally established prior to the date that the Greenbelt Plan came into force on December 16, 2004; or**
- **b) for the purposes of lands added to the Greenbelt Plan after December 16, 2004, uses legally established prior to the date the Greenbelt Plan came into force in respect of the land on which the uses are established.**



Aerial Image: Subject Property in 2005 – Source: Google Earth

2.5 Existing and Adopted Region of Durham Official Plans (1993 and 2023)

The current Region of Durham Official Plan was approved by the Ministry of Municipal Affairs and Housing in November of 1993. The subject property is designated as **Prime Agricultural Area** on Schedule A – Map A3 to the Region of Durham Official Plan. The Prime Agricultural Area is part of the larger Rural System as identified on Schedule A to the Region of Durham Official Plan.

The existing and proposed use is not considered an agricultural, agricultural-related or on-farm diversified use. The subject lands are considered an existing rural residential property within the Prime Agricultural Area. As an existing residential use, it is recognized that uses accessory to the residential use (i.e. Home Industry) would also be permitted.

The current Region of Durham Official Plan defines Home Industry as *a business that is carried on as a small-scale use that is accessory to a single dwelling or agricultural operation*. Based on the Region's definition, a Home Industry use is not required to be accessory to an agricultural operation. In addition, policy 14.5.4.f) of the Durham Region Official Plan notes that existing uses within the Protected Countryside of the Greenbelt Plan that were lawfully existing as of December 15, 2004 are permitted to continue, expand or enlarge.

The Region of Durham proceeded with their Municipal Comprehensive Review in 2019 to prepare a new Official Plan to replace the 1993 Regional Official Plan. After community and stakeholder engagement and drafts of the new Official Plan, the Region of Durham Official Plan was adopted by Regional Council in May 2023. The Regional Official Plan is current waiting for approval from the Province of Ontario's Ministry of Municipal Affairs and Housing.

As it relates to the new adopted Official Plan, the Plan contains a number of policies that support the subject application, particularly as it relates to supporting the rural economy.

The subject property continues to be designated as **Prime Agricultural Area** on Schedule 'A' to the adopted Region of Durham Official Plan (refer to Figure 3). The subject property is located within a Prime Agricultural Area which is encompassed by the larger Rural System. One of the Rural System's goal is to "**Support a thriving Rural System that supports rural businesses including agriculture, aggregate extraction and tourism**." The online Durham Region Tourism page identifies Birchwood Luxury Camping as an option for a rural temporary stay in the Region (article posted June 28, 2022). As the accessory camping operation is a small-scale tourism use, the use provides economic opportunities for spending in the Township and Region. Therefore, Chapter 2 regarding a Prosperous Region and the following goals are applicable to this application.

> **I. Support the development of a strong, resilient and prosperous economy that maximizes opportunities for business and employment growth, innovation and partnerships.**
>
> **II. Develop the Region to its fullest economic potential while respecting the environmental and social well-being of the region.**

Chapter 2.1 provides General Economic Development Policies as follows:

> **2.1.13.h) supporting the development of strong and prosperous rural communities, while protecting and enhancing Durham's rural character;**
> **2.1.13.i) supporting the continued growth of the rural economy, including the agricultural and agri-food sector along with secondary and compatible on-farm diversified uses, tourism and recreational uses, to provide job opportunities for current and future generations;**

The small-scale accessory camping operation is rural in nature and caters to a niche market where guests are looking for an opportunity for overnight accommodation where they can experience the natural setting within a rural landscape, which is not unlike a Bed and Breakfast establishment.

This home industry further stimulates spending in the area and provides positive economic benefits to the Region. Recognizing and allowing the accessory small-scale camping operation to continue would support the Region's goals to develop a strong and prosperous economy through tourism opportunities. Therefore, the existing small-scale camping operation conforms to the policies of the Regional Official Plan.

2.6 Township of Scugog Official Plan (2009)

The subject property is designated as **Agricultural**, **Natural Core Area** and **Natural Linkage Area** on Schedule A to the Township of Scugog Official Plan. The Township of Scugog Official Plan is structured initially with a set of strategy directions under Section 2. Section 2.7 includes policies that are specific to economic development and the following subsections are noted:

> **Section 2.7 Economic Development**
> **The Township will encourage development that provides opportunities for economic growth that is compatible with the character and environment of the community. This goal will be achieved by:**
>
> **e) Providing opportunities to improve and enhance the quality of tourist facilities and the variety of tourism related business in the Township;**
> **f) Promoting opportunities for overnight accommodation, including bed and breakfast establishments;**

The Birchwood operation is a small-scale home-based business which provides economic growth opportunities which addresses the above noted policies of the Township Official Plan.

Section 3 of the Township's Official Plan is titled General Development Policies and includes a set of policies that apply to all lands within the Township. Section 3 states:

> **The following policies apply to all lands within the Township. All applications for development will be subject to the applicable policies in this section of the Plan. These policies deal with development in a variety of situations, and, therefore, not all of the policies apply to every development.**

Section 3.10 of the Official Plan provides policies regarding Home-Based Businesses and the following is noted:

> **Home-based businesses are permitted in all designations where a dwelling is a principle permitted use. Bed and Breakfast establishments shall be permitted in all designations and where in excess of two rooms, shall be subject to a rezoning.**

The following chart includes the policies and responses to **Section 3.10** of the Official Plan.

SUB-SECTION A) **Within the *Port Perry Urban Area* and the Hamlets and *Shoreline Areas*, be wholly located within a dwelling unit**	
✓	***Response:*** The subject property is not located within the *Port Perry Urban Area* and the Hamlets and *Shoreline Areas* and therefore this policy is not applicable.
SUB-SECTION B) **Be clearly secondary to the primary use of the property as a residence to the person conducting the business, in terms of floor space utilization, and is compatible with surrounding residential uses;**	
✓	***Response:*** The small-scale camping operation includes two geodomes (39 square metres and 50 square metres in size) with associated driveways and small dedicated amenity areas. In comparison to the primary rural residential use as shown on the Site Plan (Figure 6 attached to this Report), the size and scale of the camping operation is much smaller than the area used for the residential dwelling and amenity space. The subject property contains mature vegetation which provides a wide buffer from the geodomes to the adjacent properties and therefore is compatible with the surrounding rural residential uses.
SUB-SECTION C) **Not have a negative impact on the enjoyment and privacy of neighbouring properties;**	
✓	***Response:*** The subject property contains mature vegetation which provides a wide buffer from the geodomes to the adjacent properties and therefore does not negatively impact the neighbouring properties.
SUB-SECTION D) **Preserve the character of the dwelling as a private residence;**	
✓	***Response:*** As shown on the Site Plan (Figure 6 attached to this Report), the existing dwelling and associated amenity space is much larger than the geodome areas. The residence also has a separate driveway which is clearly labelled as such and therefore continues to preserve the character of the dwelling as a private residence.
SUB-SECTION E) **Have no outside storage of goods, materials, equipment, or service vehicles, other than a limited number of cars, vans and light trucks related to the business;**	
✓	***Response:*** The camping operation does not include any outside storage related to the business.

SUB-SECTION F) **Provide adequate on-site parking for the business use, in addition to the parking required for the residential use and in locations compatible with the surrounding residential uses;**	
✓	***Response:*** Each geodome site includes one parking space while the principal residential use has ample parking available in front of the residential dwelling and the detached garage.
SUB-SECTION G) **Be permitted to have a sign identifying the business that is limited in size and in accordance with the Township's Sign By-law;**	
✓	***Response:*** Acknowledged.
SUB-SECTION H) **Ensure the existing wastewater system is acceptable to adequately service the principle residential dwelling and the proposed business;**	
✓	***Response:*** Each geodome area has an outdoor shower and pit privy. The Region of Durham has issued Building Permits for the proposed sewage disposal systems for the north and south geodomes (attached to this Report as Appendix D).
SUB-SECTION I) **Ensure the traffic generated will not impact negatively upon a Township road, Provincial Highway or Regional road; and,**	
✓	***Response:*** The two geodome sites are accessed from existing upgraded farm laneways to the south and north of the principal residential driveway. Given the limited vehicular traffic to the site, impacts to the abutting roads are not anticipated.
SUB-SECTION J) **If located on a Provincial Highway, require the approval of the Ministry of Transportation for entrance and sign permits. The MTO requires the landowner to acknowledge that the use of their existing entrance cannot be converted to a commercial entrance and that an additional entrance will not be permitted to accommodate the home-based business.**	
✓	***Response:*** This policy does not apply to the subject property.

Based on our review of the Township of Scugog Official Plan, the existing small-scale camping operation meets the definition of a home-based business and is secondary to the existing principal rural residential use. Therefore, the existing small-scale camping operation conforms to the policies of the Official Plan and is permitted on the subject property as an accessory use.

As noted above, the subject property is designated as **Agricultural**, **Natural Core Area** and **Natural Linkage Area** on Schedule A to the Township of Scugog Official Plan (refer to Figure 4 of this Report).

As it relates to permitted uses Section 5.1.2 outlines the permitted uses within the Agricultural designation as follows:

> **5.1.2 Permitted Uses**
> **The primary use of land in the *Agricultural* designation shall be agriculture. Additional permitted uses are limited to:**
>
> **e) Farm related commercial/tourism establishments;**
> **h) Home occupations and home industries;**
> **k) Single-detached dwellings on existing lots except where a property has been zoned to prohibit a new dwelling as a result of a previous severance;**

Similarly, for the Natural Core and Natural Linkage Area designation of the Township of Scugog Official Plan, both designations permit single detached dwellings on existing lots of record as well as accessory uses under Section 6.3.2 g) and 6.4.2 g) respectively. In addition, Section 6.5 provides the following policy which is consistent with the Greenbelt Plan.

> **c) Expansions to existing agricultural buildings and structures, residential dwellings and accessory uses may be considered within Key Natural Heritage and Key Hydrologic Features if it is demonstrated that:**
>
> > **i) There is no alternative and the expansion/alteration is directed away from the feature; and,**
> >
> > **ii) The impact of the expansion/alteration is minimized**

The Natural Core Area and Natural Linkage Area are generally reflective of the Greenbelt Plan. The environmental policies of both the Township Official Plan and the Greenbelt Plan are addressed in the Environmental Impact Study undertaken by Terrastory and attached to this Report. These are also discussed in greater detail under Section 3 of this Report.

Section 5.1 of the Official Plan goes further under **Section 5.1.4** to provide General Development Policies designed specifically for home industries under **subsection c)**. These are noted and discussed below.

i) The use shall not have a negative impact on the enjoyment and privacy of neighbouring properties;

The two geodome sites are entirely enclosed with vegetation and are well removed from any adjacent properties. Given the nature of the occupancy, it is not anticipated that there will be any negative impacts to the neighbouring properties.

ii) The use is clearly secondary to the primary residential use or agricultural use on the lot and is compatible with surrounding uses;

The small-scale camping operation includes two geodomes (39 square metres and 50 square metres in size) with associated driveways and small dedicated amenity areas. In comparison to the primary rural residential use as shown on the Site Plan (Figure 6 attached to this Report), the size and scale of the camping operation is much smaller than the area used for the residential dwelling and amenity space. The subject property contains mature vegetation which provides a significant buffer from the two sites to the adjacent properties and therefore is compatible with the surrounding rural residential uses.

iii) The character of the area is preserved;

Given the low impact nature of the use and the secluded location of the two campsites, the use does not change the character of the area.

iv) Adequate on-site parking facilities are provided for the use, in addition to the parking required for the principal use on the property, and such parking is provided in locations compatible with surrounding land uses;

Each geodome site includes one parking space while the principal residential use has ample parking available in front of the residential dwelling and the detached garage.

v) The use will not cause a traffic hazard;

The two geodome sites are accessed from historic field entrances to the south and north of the principal residential driveway. Given the scale of the business operation, vehicular traffic is limited.

vi) The use can be serviced with appropriate water and wastewater systems;

Each geodome area has an outdoor shower and pit privy. The Region of Durham has issued Building Permits for the proposed sewage disposal systems for the north and south geodomes (attached to this Report as Appendix D).

vii) The signage advertising the use is to be designed and located in accordance with the Township's Sign By-law;

Acknowledged. A sign at the entrances to the south and north domes are provided.

viii) The building housing the proposed use is located within the existing farm-building cluster and shall utilize a common driveway with the principal use of the property;

Given the nature of the use, the primary appeal of the Birchwood campsites is seclusion, privacy, and the sense of being immersed in a natural setting.
As such, the campsites, although accessible to the principal residential use, are separated to provide the necessary degree of privacy and are accessed by driveways historically utilized to access farm fields.

ix) The use does not occupy a gross floor area in excess of 200 square metres in an accessory building;

The use, although akin to a Bed and Breakfast, has been termed a Home Industry given that the use is not located within the dwelling and is clearly accessory to the existing residential use. The south geodome is approximately 50m² in floor area while the north geodome is approximately 39m² in floor area. The total floor area of 89m² does not exceed the requirement of this provision.

x) The proposed use is set back from all lot lines by at least 30 metres;

The location of the campsites complies with this provision.

xi) Where permitted, open storage associated with the proposed use shall be screened from view and located within a fenced compound;

There is no open storage associated with the proposed use.

xii) The use has a limited number of employees; and,

The home industry is operated by the property and two cleaning assistants. The property owner's daughter assists with community partnerships and social media.

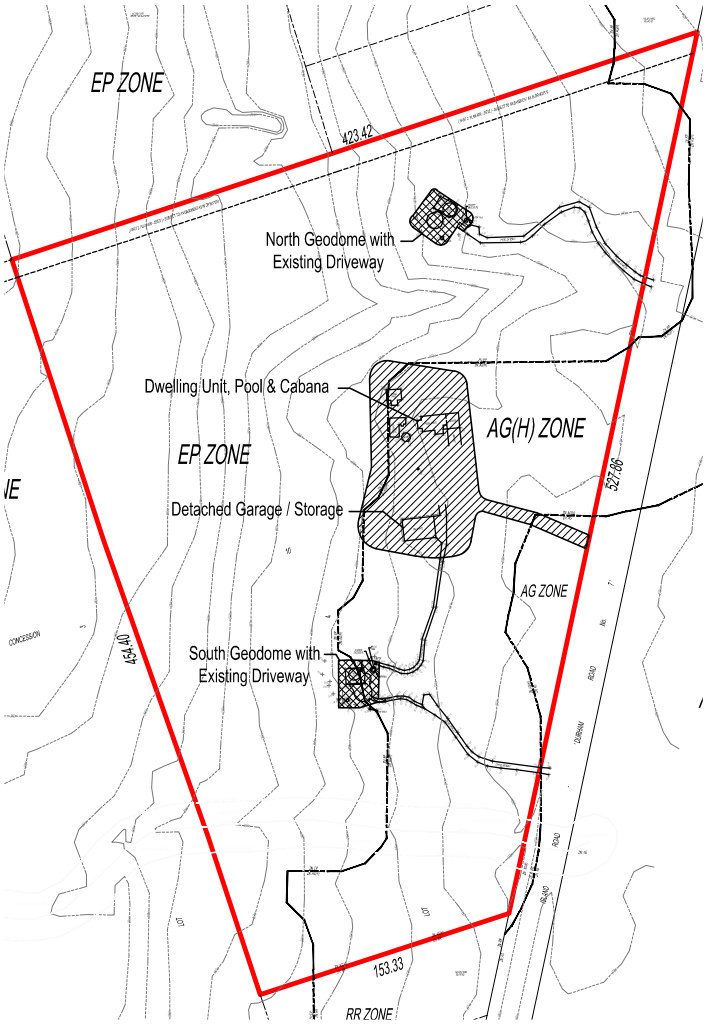
xiii) Retail sales shall be limited to goods or products produced on the property.

There are no retail sales proposed on the subject property.

It is submitted that the proposed use satisfies the General Development policies for Home Industries in the Agricultural designation of the Official Plan under Section 5.1.4.

2.7 Township of Scugog Zoning By-law 14-14 (2014)

The majority of the subject property is zoned **Environmental Protection (EP) and Agricultural Holding (AG(H)),** with a small area at the road frontage being zoned as **Agricultural (AG)** on Schedule A – Map 5 to the Township of Scugog Zoning By-law 14-14 (refer to Figure 5A). The proposal is to recognize the existing small-scale geodome camping operation as a Home Industry on the subject property.



Under Section 7.2 of the Zoning By-law, the following uses are permitted in both the Agricultural and Environmental Protection zones:

- **Agricultural Uses**
- **Conservation Use**
- **Dwelling, Single Detached**
- **Home Industry**
- **Home Occupation**

The Agricultural Zone permits a much larger range of uses including bed and breakfast establishments, private kennels, and private home daycares.

As it relates to the Agricultural Holding zone, the zone category effectively serves as a buffer to the adjacent Environmental Protection zone. It appears that Zoning By-law 14-14 has been amended on several occasions to remove the holding provision from the Agricultural Holding (AG(H)) zone to allow for residential development. The Agricultural Holding (AG(H)) zone requires the following condition for removal as noted under Section 14.1.1 of the Zoning By-law:

> **The Township shall be satisfied that the proposed change in Use, other than Agricultural Uses, will not have an adverse impact on the adjacent natural heritage feature. A report from a qualified professional may be required. A maximum of 56m^2 additional Ground Floor Area shall be permitted following the approval of this By-law without removing the Holding (H) symbol. M. The Use of lands for Agriculture and the construction of Buildings Accessory to an Agricultural Use to a maximum Ground Floor Area of 500m^2 shall be permitted without lifting the Holding (H) symbol or requiring an environmental impact report.**

An Environmental Impact Study has been prepared by Terrastory Environmental and is attached to this Report as Appendix C. The Environmental Impact Study is based on a detailed evaluation of the natural heritage features on the property and the impact of the small-scale camping operation on the features and function of the features. The work completed by Terrastory reviewed the various environmental policies which needed to be addressed with the subject application, as well as the requirement of the Zoning By-law as it relates to the AG(H) zone category. Additional discussion pertaining to the Terrastory work is provided under Section 3.3 of this Report.

2.7.1 Permitted Uses and Definitions

The following section provides a detailed analysis of the permitted uses and the definitions within the Zoning By-law. As noted above, both the Agricultural and Environmental Protection zones permit home industries. Part 3 of the Zoning By-law defines a Home Industry as follows:

> **Home Industry:** An occupation of an industrial nature which is carried on within a Building or part of a Building accessory to a Single Detached Dwelling, that is occupied by the proprietor, including Uses that are supportive of the surrounding agricultural areas such as Farm related Commercial/tourism establishments and Farm related Industrial Uses that directly service and support the agricultural industry and require locations in close proximity to Farming operations.

As noted, a Home Industry as defined above, is permitted as of right in several zone categories including the Agricultural (AG), Environmental Protection (EP) and Rural Residential (RR) zones.

Section 4.7(a) provides a list of specific uses which are permitted as a Home Industry:

1. **A carpenter's shop;**
2. **An electrician's shop;**
3. **A farm animal breeding establishment;**
4. **A farm implement and equipment service establishment;**
5. **A farm related Commercial/Tourism establishment;**
6. **A farrier;**
7. **A plumber's shop;**

8. The sale and storage of grains, feeds, fertilizers and related agricultural products;
9. A saw mill;
10. A tack shop, including the sale and storage of equine products; and
11. A welder's shop.

It is important to consider the relative scale, intensity and impacts of several of the uses such as sawmill, carpenter's shop or farm implement and equipment service establishment, all of which could be potentially disruptive in terms of impacts associated with noise, traffic and hours of operation. In comparison, the Birchwood operation is substantially a less disruptive and intensive use of the property relative to other permitted Home Industry uses.

For additional context, we have also included the following definitions from Part 3 of the Township's Zoning By-law.

> **Bed and Breakfast Establishment:** An establishment that provides sleeping accommodation (including breakfast and other meals, services, facilities and amenities for the exclusive Use of Guests) for the travelling or vacationing Public in up to three rooms within a Single Detached Dwelling that is the principal residence of the proprietor of the establishment.

The Bed and Breakfast Establishment use is permitted in Agricultural (AG), Oak Ridges Moraine – Agricultural (ORM-AG), Rural Residential (RR), Estate Residential (ER), Hamlet Residential – Private Service (HR1), Hamlet Residential – Partial Service (HR2), Shoreline Residential (SR), Oak Ridges Moraine Shoreline Residential (ORM-SR), and Oak Ridges Moraine Rural Residential (ORM-RR) zones. The Birchwood small-scale camping operation is not considered a Bed and Breakfast Establishment based on the definition above. Notwithstanding, it is important to note that a Bed and Breakfast Establishment was previously operated within the existing residence by the previous ownership from 2004 to 2009.

> **Cabin/Cottage Establishment:** An establishment comprising of two or more cabins or cottages owned or leased by the same person.

The Cabin/Cottage Establishment use is only permitted in the Recreational (RE) zone. The use is generally designed to identify such establishments as the principal use of the property. Given its limited size and scale, the Birchwood operation is not considered a Cabin/Cottage Establishment as a principal use of the lands since it functions and operates 3as an accessory use to the principal rural residential use of the subject property.

> **Camping Establishment:** An establishment consisting of at least five Camping Lots and comprising land used or maintained as grounds for the camping or temporary parking of Trailers, motorized Mobile Homes, truck campers, campers or Tents, but does not include parks or camping grounds maintained by a Public Authority.

The Camping Establishment use is only permitted in the Recreational (RE) zone. The Birchwood small-scale camping operation is not considered a Camping Establishment based on the above definition.

Farm Vacation Home: An establishment that provides sleeping accommodation (including participation in Farm activities, meals, services, facilities and amenities for the exclusive Use of Guests) for the traveling or vacationing Public in up to three Guest Rooms with a single Dwelling that is located on a Farm and is the principal residence of the proprietor of the establishment.

The Farm Vacation Home use is not permitted within any zones of the Township By-law. The definition seems to duplicate the definition for a Bed and Breakfast Establishment on an active agricultural property. The Birchwood small-scale camping operation is not considered a Farm Vacation Home based on the above definition.

Tourist Resort Establishment: Any premises operated to provide sleeping accommodation for the travelling Public or sleeping accommodation for the Use of the Public engaging in recreational activities, and includes the services and facilities in connection with which sleeping accommodation is provided, but does not include:

(a) A camp operated by a charitable corporation approved under the Charitable Institutions Act, R.S.O. 1990;
(b) A Summer Camp within the meaning of the regulations made under the Health Protection & Promotion Act, R.S.O. 1990; or,
(c) A club owned by its own members and operated without profit or gain.

The Tourist Resort Establishment use is permitted in the Recreational (RE) and Tourist Commercial (C7) zones. The Birchwood small-scale camping operation is not considered to fall within this definition as there are no recreational activities offer to guests.

The various uses described above provide the context for how the Zoning By-law defines various similar tourism-related uses. In the absence of a definition that better describes the Birchwood operation, and considering its limited size and scale, it is proposed that the use be defined as a Home Industry with site specific provisions that describe the existing use which is more akin to a Bed and Breakfast operated in detached structures.

Section 4.7 of the Zoning By-law also includes a set of specific zoning provisions that apply to any Home Industry use. The chart below includes specific provisions for Home Industry from **Subsections 4.7 (b) to (j)** of the Zoning By-law and the responses to each of those provisions:

SUB-SECTION B) **Such Home Industry shall only be located in an Accessory Building located on a Lot on which a Dwelling is in existence, provided the total Gross Floor Area utilized by the Home Industry does not exceed 200m².**	
✓	***Response:*** The Home Industry is located on a property that has a rural residential use as the property's principal use. The south geodome is approximately 50m² in floor area while the north geodome is approximately 39m² in floor area, which totals to 89m² and does not exceed the requirement of this provision.

SUB-SECTION C) **Such Home Industry shall be clearly Accessory to the Main Residential or Agricultural Use and shall not change the Residential or Agricultural character of the Dwelling or the Lot.**	
✓	***Response:*** The Home Industry is clearly an accessory to the main residential use due to the size and scale of the existing residential use in comparison to the two geodome areas.
SUB-SECTION D) **A maximum of two Persons other than the proprietor may be engaged in the Home Industry at any time.**	
✓	***Response:*** The Home Industry is operated by the property owner with family members assisting on an as-needed basis. In addition, the owner has two part time employees who assist with the operation in terms of the maintenance and cleaning of the geodomes. No other Persons are employed for the Home Industry.
SUB-SECTION E) **Only currently licensed Motor Vehicles, used in the operation of the Home Industry may be parked or stored on the Lot within an Interior Side or Rear Yard. Not more than three Commercial Vehicles shall be permitted on a Lot.**	
✓	***Response:*** There are no Commercial Vehicles associated with the Home Industry.
SUB-SECTION F) **Retail sales of goods processed or produced on the Lot are permitted, but shall not exceed 25% of the Gross Floor Area of the Accessory Building used for the Home Industry.**	
✓	***Response:*** There are no retail sales occurring on the subject property.
SUB-SECTION G) **Home Industry Uses shall not include the generation of or storage of Hazardous Waste, liquid Industrial Waste, or any severely toxic contaminant listed in Schedule 3 to Ontario Regulation 347 RSO, 1990.**	
✓	***Response:*** Acknowledged. The grey and blackwater from the pit privy and outdoor showers have been analyzed by an OBC consultant and a report has been prepared and is attached to this Report as Appendix D.

SUB-SECTION H) **There shall be no Outside Storage of goods, materials or equipment associated with the Home Industry Use.**	
✓	***Response:*** Acknowledged. There is no outdoor storage proposed as part of this accessory use.
SUB-SECTION I) **Parking and Loading associated with the Home Industry Use shall meet the requirements of Part 5 of this By-law.**	
✓	***Response:*** Although the existing camping operation cannot be appropriately defined as a Hotel, Motel, Motor Hotel, Cabin/Cottage Establishment, Tourist Resort Establishment within the Township's Zoning By-law, the parking spaces associated to those such uses would be appropriate to be applied to the existing camping operation. The Zoning By-law requires one parking space for each room, Cottage or Cabin. There is an existing parking space provided for each geodesic dome.
SUB-SECTION J) **Signage shall be in accordance with the Township's Sign By-law.**	
✓	***Response:*** Acknowledged.

The proposed Zoning By-law Amendment would rezone the existing Environmental Protection (EP) and Agricultural Holding (AG(H)) zones to a Rural Residential (RR) zone and a site-specific Environmental Protection zone. The existing small-scale operation would be explicitly defined and included as a permitted use within the site-specific Zoning By-law Amendment (attached as Appendix E to this Report). The special provision for the proposed use to be permitted in the site-specific Environmental Protection zone would be as follows:

- A small scale "Home Industry" consisting of a maximum of two (2) all-season geodesic dome structures with a maximum floor area of 39m^2 and 50m^2 respectively. Each dome is to be equipped with a kitchenette facility, pit privy, outdoor shower, and a private deck. Individual ancillary amenities such as a hot-tub or barbeque are also provided with each unit.

Section 3 LAND USE PLANNING ASSESSMENT

3.1 Prime Agricultural Areas and Nature-Based Tourism

As discussed under Section 2.2 of this Report, the prime agricultural area was created from a systems based approach. Although the predominant land use within the prime agricultural area are agricultural uses, the Province recognizes that prime agricultural areas may contain small pockets of non-agricultural uses such as residential lots. The subject property is an example of one of those non-agricultural uses within the prime agricultural area.

Although the subject property was previously used for minor agricultural purposes prior to the 1980s, with the current forested site conditions and size of the property, there is no indication or expectation that the subject property would revert back to be used for agricultural purposes. The subject property was used as a bed and breakfast establishment from 2004 to 2009 by the previous property owner. However, since the current property owner's purchase in 2009, the subject property was used solely for rural residential purposes. The property owner had installed the south geodome in 2021 and later installed the north geodome in 2022.

These types of tourism opportunities in rural areas are supported by the Province of Ontario as the camping operation leverages the natural scenery of the subject property to showcase the surrounding rural area. This camping operation provides a tourism opportunity to attract visitors from cities in the south to enjoy the rural landscape.

The two geodome areas were also sited to minimize the need to remove a large number of vegetation which retains the surrounding mature vegetation around the geodome areas. The location of the geodomes being deeper into the subject property shields the use from Island Road as well as the adjacent rural residential properties to the north and south.

The target market for a camping experience is focused on couples seeking a quiet experience surrounded by nature in a rural setting. Although the geodome area includes small amenities such as a hot tub and a barbeque grill on the deck, there are no other on-site recreational facilities provided. Therefore, the occupants tend to either stay within the geodome area or choose to visit the surrounding area which supports the local economy. This type of operation leverages the surrounding rural assets and provides an economic opportunity to the rural area while utilizing a small piece of non-agricultural land.

This is differentiated from a larger scale tourist facility operating as a primary or principal use of the lands where a residential use may be required for a caretaker/manager of the commercial operation.

3.2 Existing Land Use and Home-Based Business

The subject property has primarily been used for rural residential purposes. In 2021 and 2022, two small areas on the subject property were developed to host a total of two geodesic domes for a small-scale camping operation. Based on the size of the residential dwelling and amenity space compared to the size of the sites of the two small geodome areas, the geodome areas are considered accessory to the primary residential use.

The geodome areas are operated by the property owner with assistance on an as-needed basis from her family, and involves two part-time cleaning staff for maintenance of the geodomes. As the business is operated from the existing dwelling and on the subject property, the geodome operation can be considered a home-based business.

This Report conducted a detailed review of the policies and zoning provisions for Home Based Businesses and Home Industries in particular. It is important to note that there are serval home industry uses such as sawmills, farm equipment services establishment, and carpenters shop which are considered more intensive and potentially disruptive in terms of potential land use conflicts such as noise and materials storage relative to the proposed small-scale camping operation which is relatively innocuous.

The analysis demonstrates that the proposed camping operation meets all of the requirement of the Official Plan and Zoning By-law and should be accommodated as a Home Industry.

3.3 Natural Heritage Evaluation

As noted earlier, the subject property contains a Key Natural Heritage Feature (KNHF) which is therefore subject to the policies of the Greenbelt Plan and associated policies in both the Region of Durham and Township of Scugog Official Plans. As previously noted, the applicable policies generally prohibit new development and site alteration within a KNHF. The KNHF in this case is a significant woodland and as noted under Section 2.4 of this Report, the extent of the woodland feature has extended substantially as evidenced by the aerial photographs. While it is acknowledged that the two geodesic domes have been constructed within the KNHF as it exists today, the dome sites are outside of the KNHF at the time of the passing of the Greenbelt Plan. The prevailing policy of the Provincial Greenbelt Plan allows for expansions to existing uses under Policies 4.5.4 and 4.5.5 as follows:

> **4. Expansions to existing buildings and structures, accessory structures and uses and/or conversions of legally *existing uses* which bring the use more into conformity with this Plan are permitted subject to a demonstration of the following:**
>
> **a) Notwithstanding section 4.2.2.2, new municipal services are not required; and**
>
> **b) The use does not expand into *key natural heritage features* or *key hydrologic features* or their associated *vegetation protection zones*, unless there is no other alternative, in which case any expansion shall be limited in scope and kept within close geographical proximity to the existing structure.**
>
> **5. Expansions or alterations to existing buildings and structures for *agricultural uses*, *agriculture-related uses* or *on-farm diversified uses* and expansions to existing residential dwellings may be considered within *key natural heritage features*, *key hydrologic features* and their associated *vegetation protection zones* if it is demonstrated that:**
>
> **a) There is no alternative, and the expansion or alteration in the feature is minimized and, in the *vegetation protection zone*, is directed away from the feature to the maximum extent possible; and**
>
> **b) The impact of the expansion or alteration on the feature and its functions is minimized and mitigated to the maximum extent possible.**

An Environmental Impact Study (EIS) was prepared by Terrastory Environmental in support of the Zoning By-law Amendment application and is attached to this Report as Appendix C. The EIS found that the geodomes were constructed within (northern geodome) and adjacent to (southern geodome) the Significant Woodland as defined by the Greenbelt Plan and the Regional and Township Official Plans. The EIS noted that the forest community surrounding the north geodome is young and dominated by the invasive Scots Pine.

It also found that the north geodome and driveway are outside of the mature poplar-cedar mixed forest and therefore the coniferous forest surrounding the north geodome are not considered either a sensitive or high-functioning feature. The EIS identified the south geodome as being located beyond of the limits of the Significant Woodland though situated within the vegetation buffer zone.

The EIS also found that the construction of the geodome and ancillary uses isn't expected to have adversely affected the form and functions of the Significant Woodland. The EIS recommended mitigation measures to be incorporated into the Site Plan application as follows:

- additional native tree plantings will be installed within the manicured grass areas surrounding the geodomes
- a Woodland Enhancement Plan will be prepared as part of a future Site Plan Application and would include the following components at minimum:
    - confirmation that mowing will cease and native trees will be planted
    - detailed Planting Plan consisting of native trees with specifications and notes
    - Verification and Monitoring Plan for the compensatory trees to demonstrate that the plantings were installed consistent with the Plan requirements and are in good condition for the duration of the monitoring period
    - installation of (2) replacement bat roosting structures within the subject property

Terrastory concluded that provided the mitigation measures be carried out in full, no negative impacts or functional impairment associated with the construction and continued use of the geodes are anticipated.

Section 4 CONCLUSIONS AND RECOMMENDATIONS

Based on the discussion outlined in this Report, the following summarizes the planning justification for a Zoning By-law Amendment to recognize and permit the existing small-scale camping operation.

The Province recognizes that the Prime Agricultural Areas may include individual lots that are used for residential purposes. The permitted uses within the Agricultural designation include single detached dwellings as well as home occupations and home industries and other uses which are normally and naturally accessory to the principal residential use.

Based on rationale provided in the previous sections of this Planning Justification Report, the existing small-scale camping operation is accessory to the principal residential use of the property, both in terms of size and scale as well as the intensity of the operation. The subject property has been taken out of agricultural production with the planting of native tree species and vegetation and is also undersized for a viable farming operation. In consideration of the existing site conditions and the surrounding area, the existing small-scale camping operation is clearly secondary to the rural residential use due to the size and scale of the operation.

In terms of economic development, it is important to note that the Provincial Policy Statement, Greenbelt Plan as well as the Region of Durham and Township of Scugog Official Plans all speak to the importance of the rural economy and the importance of tourism.

The proposed land use is considered to provide a contribution to the local economy and is therefore supported by these basic general objectives of the planning policy framework.

Based on information provided by the property owner, the short term occupants are equipped with a built-in itinerary when they make a reservation to encourage everything local. Previous guests have visited trails, farms, the Blue Heron Casino, shops, antique stores, wineries, breweries, restaurants, specialty grocery stores, and of course, Port Perry's main street. The small-scale camping operation has collaborated with 21 local businesses in social media highlights and have directly invested in purchasing their products to welcome and celebrate the upcoming guests. The small-scale camping operation hosts a diverse group of visitors, some of these have been digital media creators, which has given Birchwood Luxury Camping and Port Perry an outreach of 3 million people over all forms of social media.

In summary, the proposed Zoning By-law Amendment application:

- Is consistent with the **Provincial Policy Statement (PPS) 2020**;
- Conforms to the spirit and intent of **the Greenbelt Plan** in terms of the recognition of existing established lawful uses together with accessory uses;
- Considering the implementation of ecological offsetting and restoration, the proposal will ensure that the natural heritage features identified by the Greenbelt Plan are enhanced, improved and will ultimately result in an overall net benefit to the functions of the significant woodland on the lands.
- Conforms with the purpose, intent and policies of the **Existing and Adopted Region of Durham Official Plan**;
- Conforms to the policies of the **Township of Scugog Official Plan**;
- The proposed development satisfies the criteria set out under **Section 34 of the Planning Act for a Zoning By-law Amendment**; and,
- Represents good planning and is in the public interest.

It is recommended that the Zoning By-law Amendment application be approved. We would also recommend a Site Plan Control application be submitted to address any technical municipal requirements and to implement the recommendations of the Environmental Impact Study.

Respectfully submitted,

THORSTONE CONSULTING SERVICES

Prepared and Recommended by:



Bonnie Tang, BES, LEED-GA
Planner
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Reviewed by:



Dan Stone, MCIP, RPP, LEED-GA
Principal
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APPENDIX A



FIGURE 1

LOCATION MAP, AIR PHOTOGRAPHY AND PARCEL FABRIC

19350 Island Road
Town of Scugog
Regional Municipality of Durham

Subject Lands - 13.14 ha

SOURCE OF AIR PHOTOGRAPHY: REGION OF DURHAM 2023

N

Thorstone Consulting Services
Land Use Planning and Development
P.O. Box 116, Sutton, Ontario

PREPARED FOR: BIRCHWOOD
DATE: JUNE 16, 2023
REVISION

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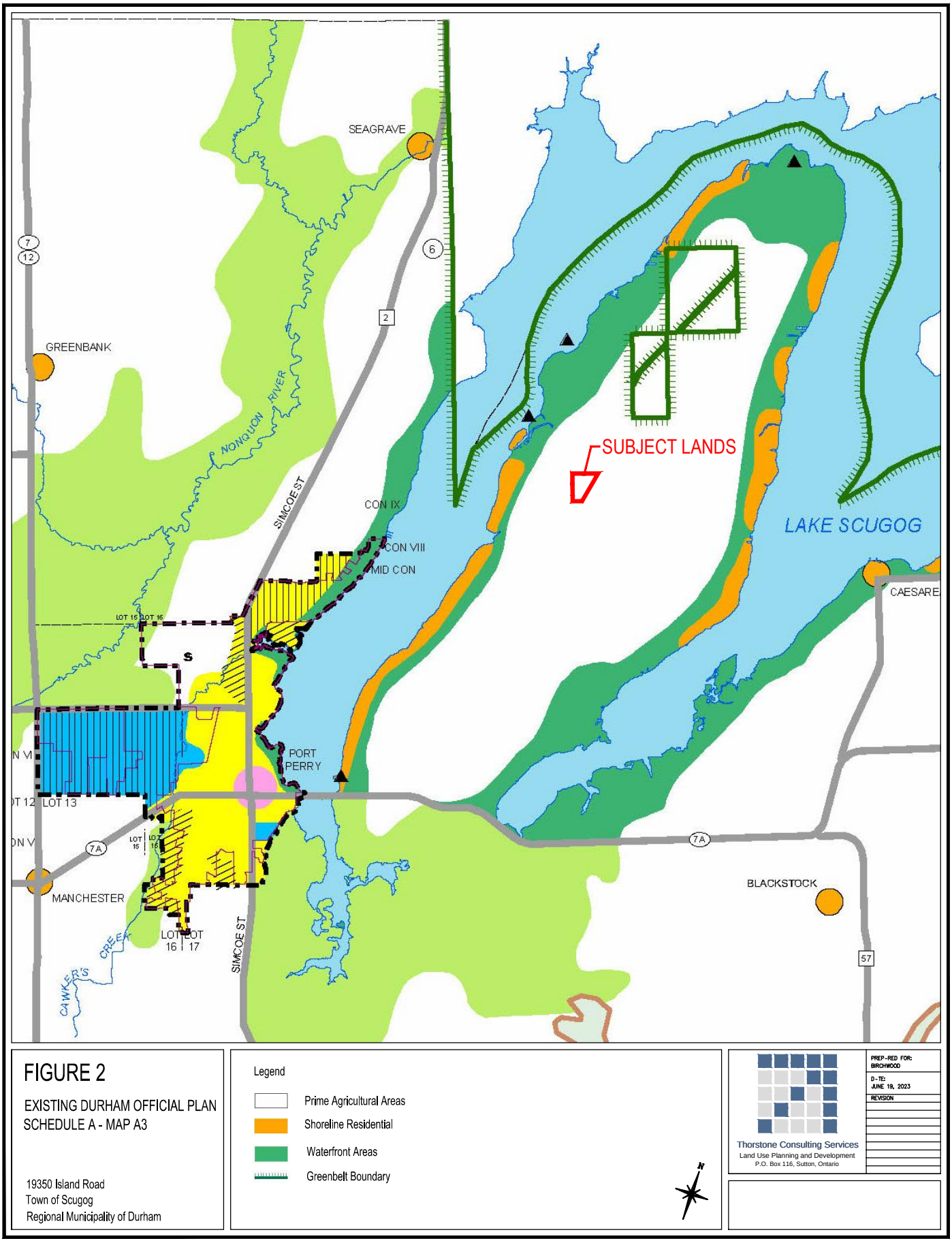


FIGURE 2

EXISTING DURHAM OFFICIAL PLAN
SCHEDULE A - MAP A3

19350 Island Road
Town of Scugog
Regional Municipality of Durham

Legend

- Prime Agricultural Areas
- Shoreline Residential
- Waterfront Areas
- Greenbelt Boundary

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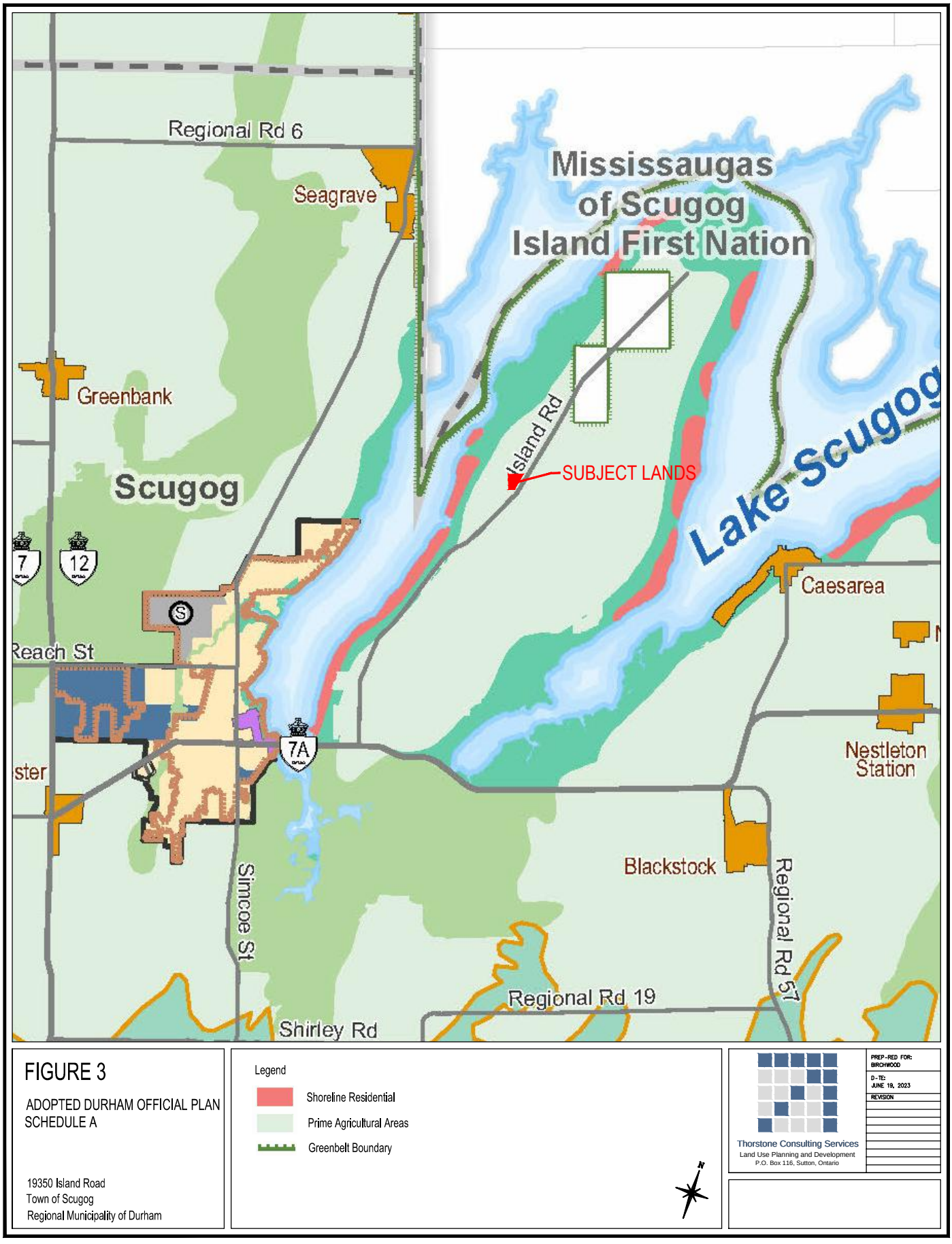


FIGURE 3

ADOPTED DURHAM OFFICIAL PLAN
SCHEDULE A

19350 Island Road
Town of Scugog
Regional Municipality of Durham

Legend

- Shoreline Residential
- Prime Agricultural Areas
- Greenbelt Boundary

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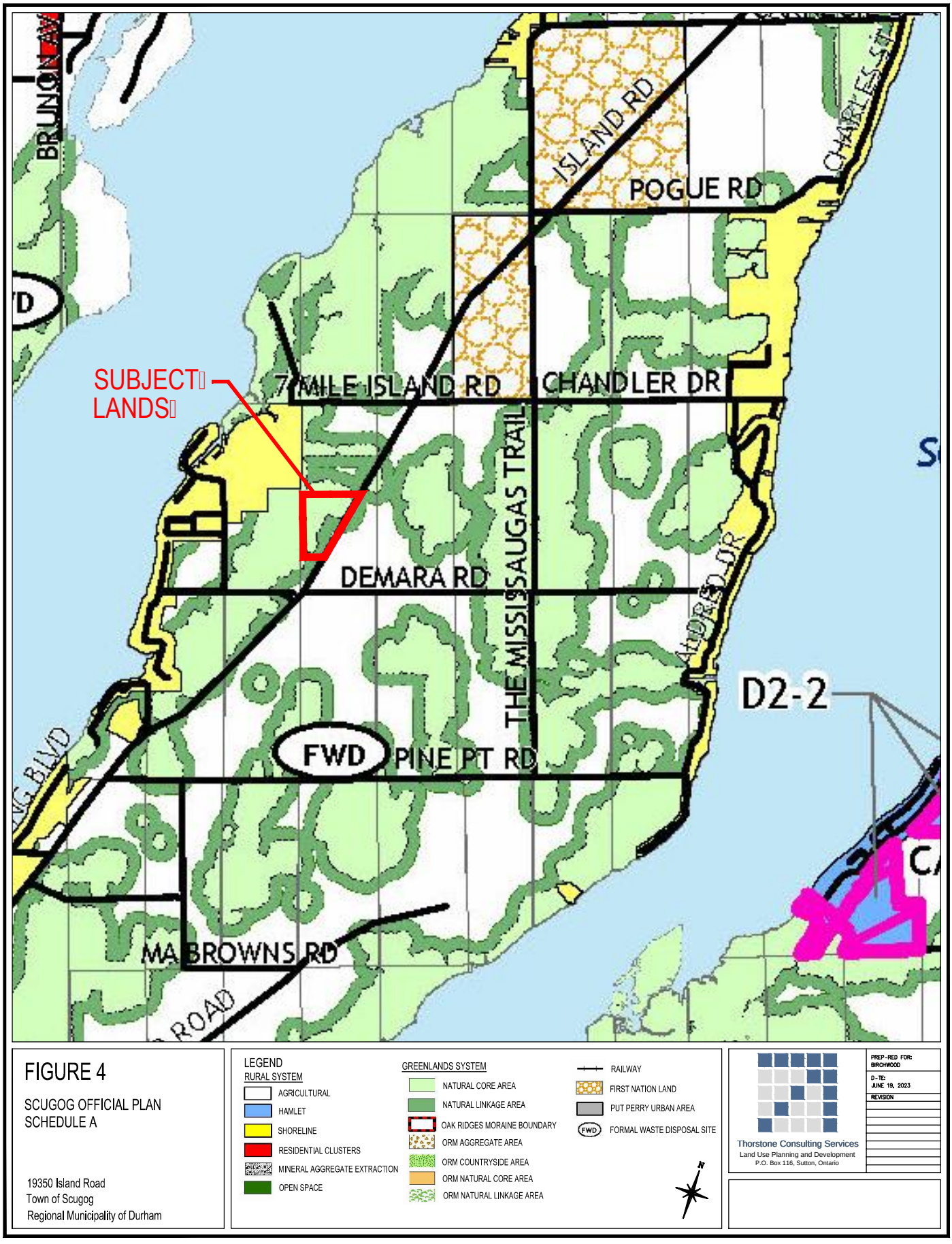


FIGURE 4

SCUGOG OFFICIAL PLAN
SCHEDULE A

19350 Island Road
Town of Scugog
Regional Municipality of Durham

LEGEND

RURAL SYSTEM
- AGRICULTURAL
- HAMLET
- SHORELINE
- RESIDENTIAL CLUSTERS
- MINERAL AGGREGATE EXTRACTION
- OPEN SPACE

GREENLANDS SYSTEM
- NATURAL CORE AREA
- NATURAL LINKAGE AREA
- OAK RIDGES MORAINE BOUNDARY
- ORM AGGREGATE AREA
- ORM COUNTRYSIDE AREA
- ORM NATURAL CORE AREA
- ORM NATURAL LINKAGE AREA

- RAILWAY
- FIRST NATION LAND
- PUT PERRY URBAN AREA
- FWD FORMAL WASTE DISPOSAL SITE

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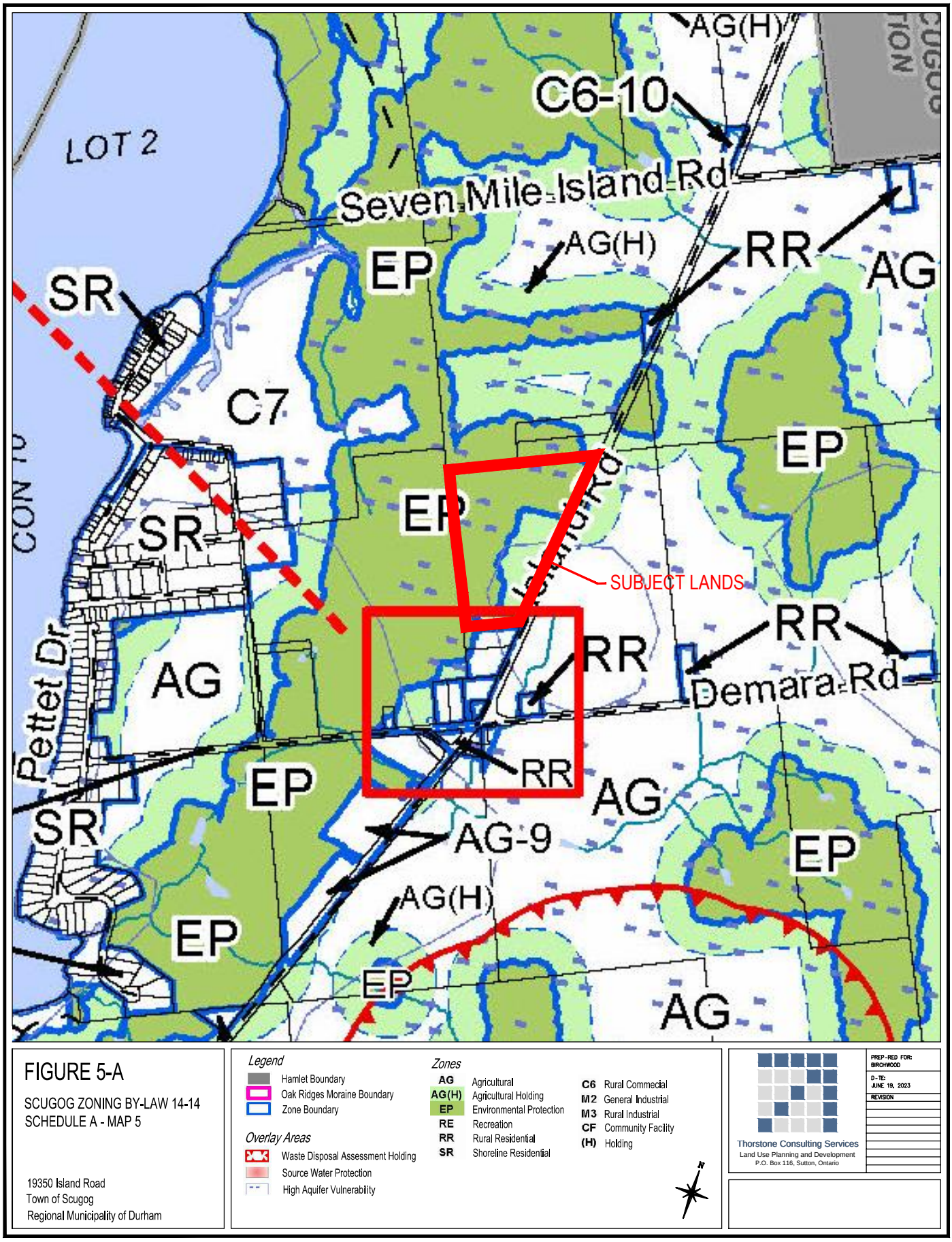


FIGURE 5-A

SCUGOG ZONING BY-LAW 14-14
SCHEDULE A - MAP 5

19350 Island Road
Town of Scugog
Regional Municipality of Durham

Legend

- Hamlet Boundary
- Oak Ridges Moraine Boundary
- Zone Boundary

Overlay Areas

- Waste Disposal Assessment Holding
- Source Water Protection
- High Aquifer Vulnerability

Zones

AG	Agricultural
AG(H)	Agricultural Holding
EP	Environmental Protection
RE	Recreation
RR	Rural Residential
SR	Shoreline Residential
C6	Rural Commecial
M2	General Industrial
M3	Rural Industrial
CF	Community Facility
(H)	Holding

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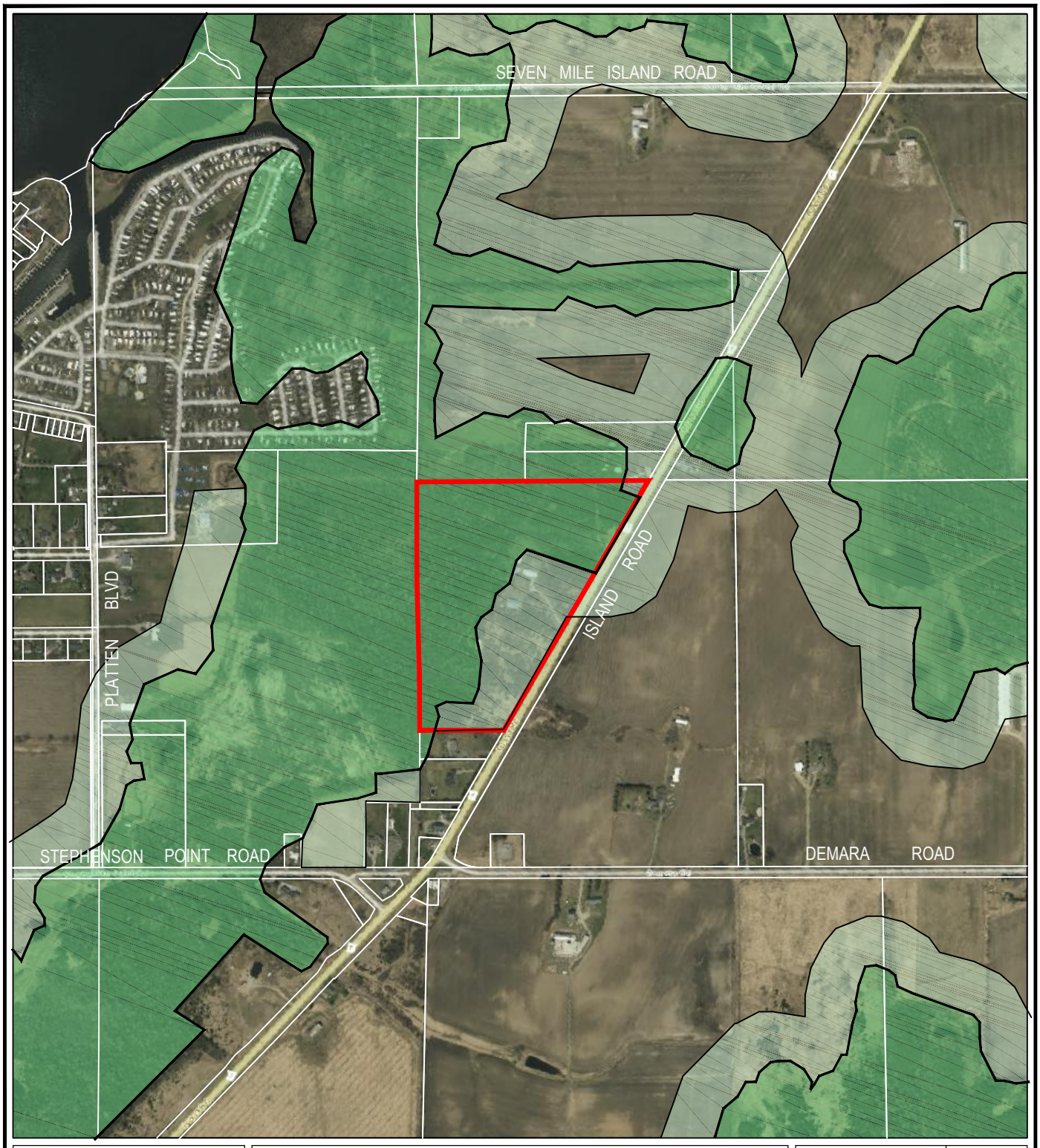


FIGURE 5-B

EP AND AG(H) ZONING OVERLAY

19350 Island Road
Town of Scugog
Regional Municipality of Durham

Subject Lands - 13.14 ha

EP - Environmental Protection

AG(H) - Agricultural Holding

SOURCE OF AIR PHOTOGRAPHY: REGION OF DURHAM 2023

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PREPARED FOR: BIRCHWOOD

DATE: JUNE 16, 2023

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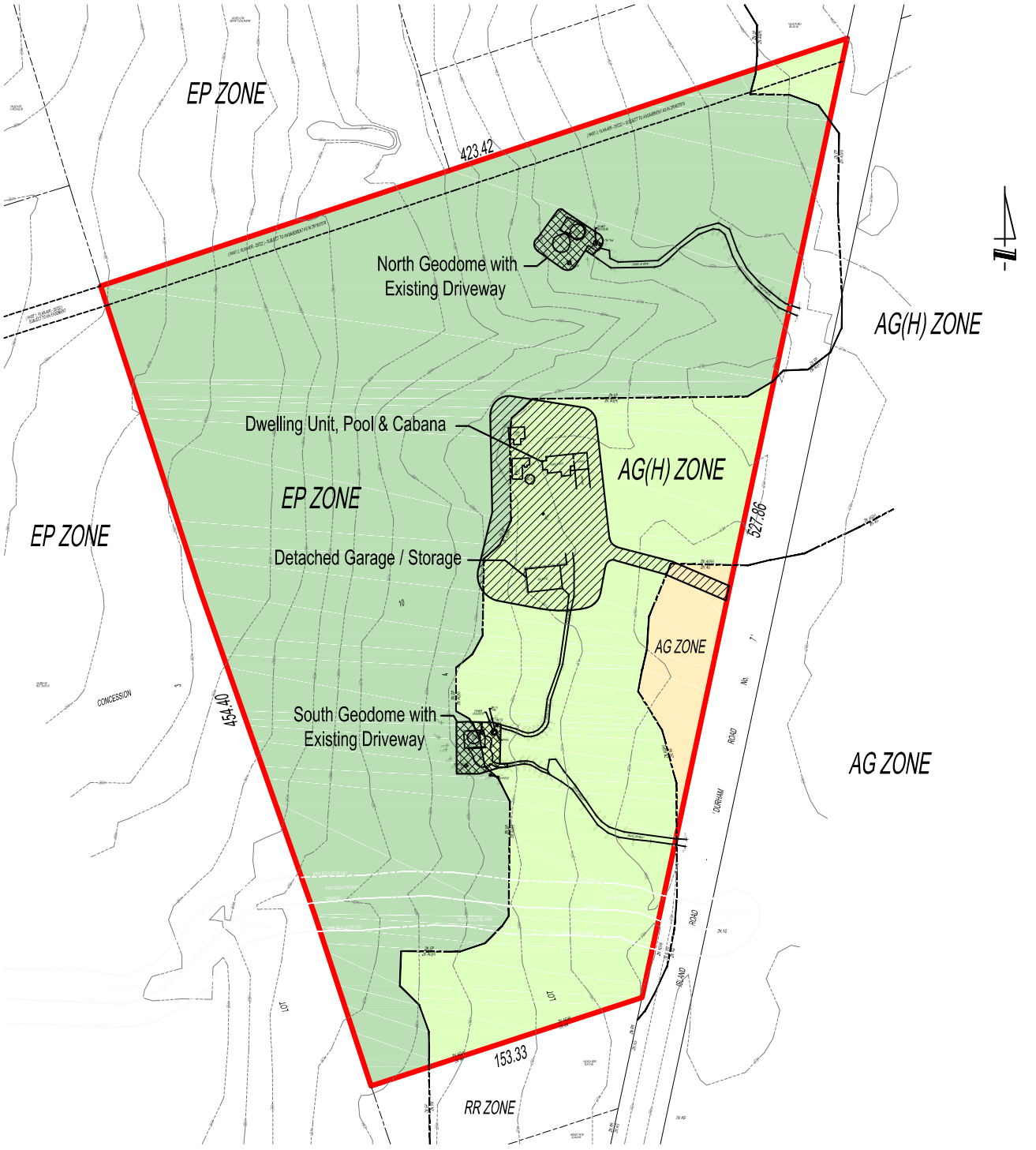


FIGURE 6

CONCEPTUAL SITE PLAN

19350 Island Road
Town of Scugog
Regional Municipality of Durham

Subject Lands - 13.14 ha

Zone Boundaries

Approximate area of site disturbance and clearing

Principal Residential Use - 7300 m2

Accessory Areas - 1340 m2

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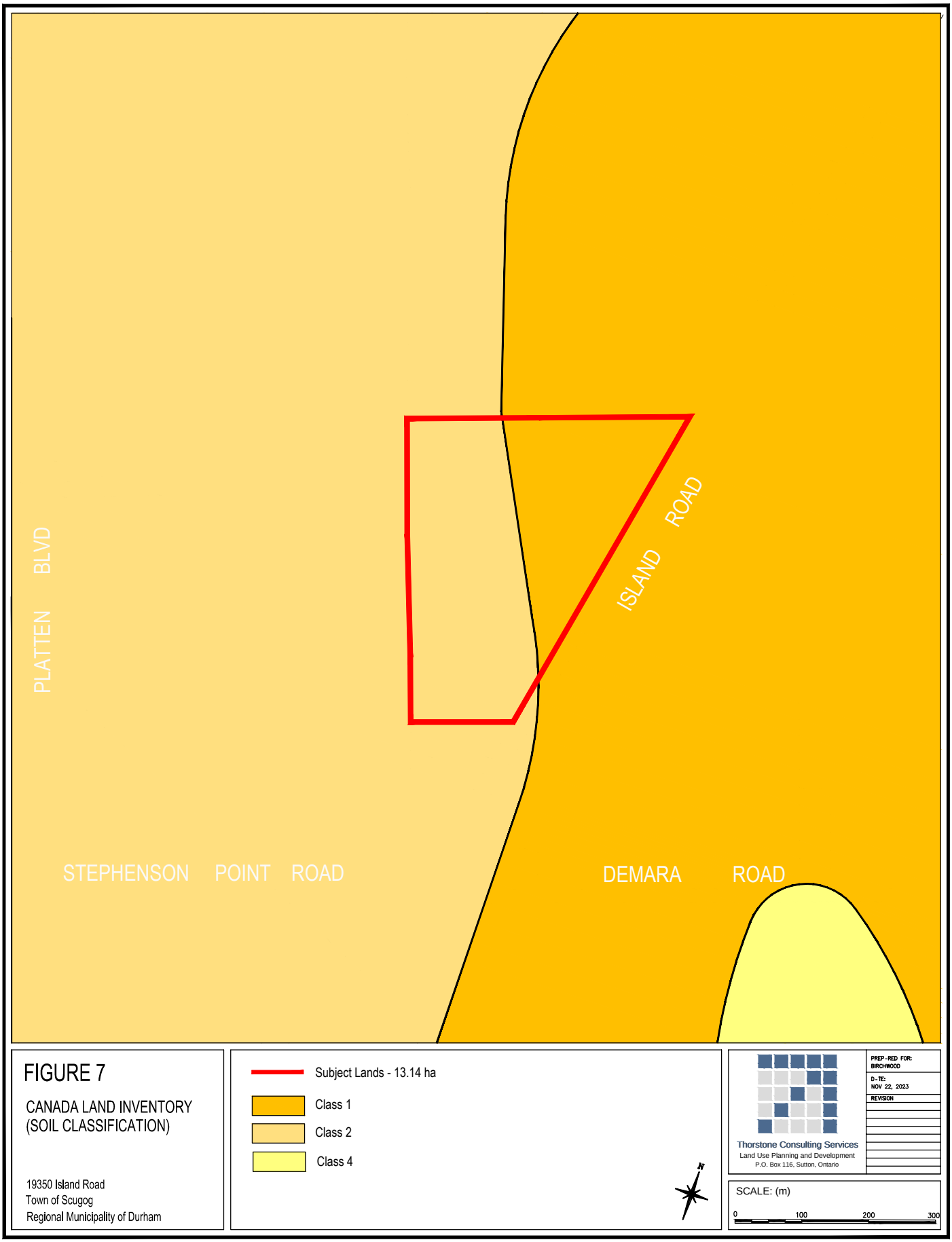
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DATE: NOV 27, 2023

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PLATTEN BLVD
ISLAND ROAD
STEPHENSON POINT ROAD
DEMARA ROAD
FIGURE 7
CANADA LAND INVENTORY
(SOIL CLASSIFICATION)
19350 Island Road
Town of Scugog
Regional Municipality of Durham
Subject Lands - 13.14 ha
Class 1
Class 2
Class 4
N
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P.O. Box 116, Sutton, Ontario
PREP-RED FOR:
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D-TE:
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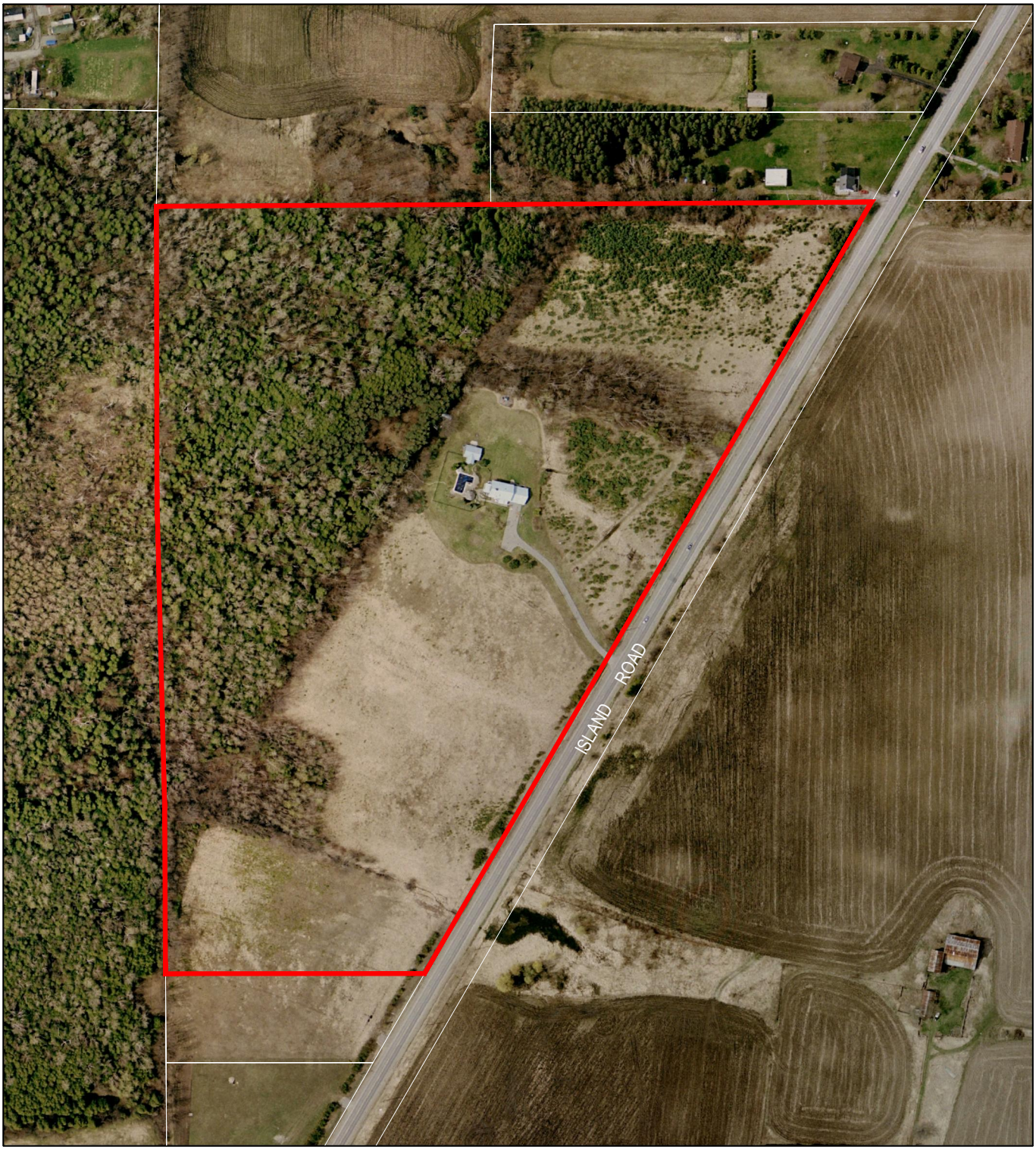


FIGURE 8

2005 AIR PHOTOGRAPHY

19350 Island Road
Town of Scugog
Regional Municipality of Durham

Subject Lands - 13.14 ha

SOURCE OF -IR PHOTOGR-PHY: GOOGLE E-RTH PRO 2005

N

Thorstone Consulting Services
Land Use Planning and Development
P.O. Box 116, Sutton, Ontario

PREP-RED FOR: BIRCHWOOD

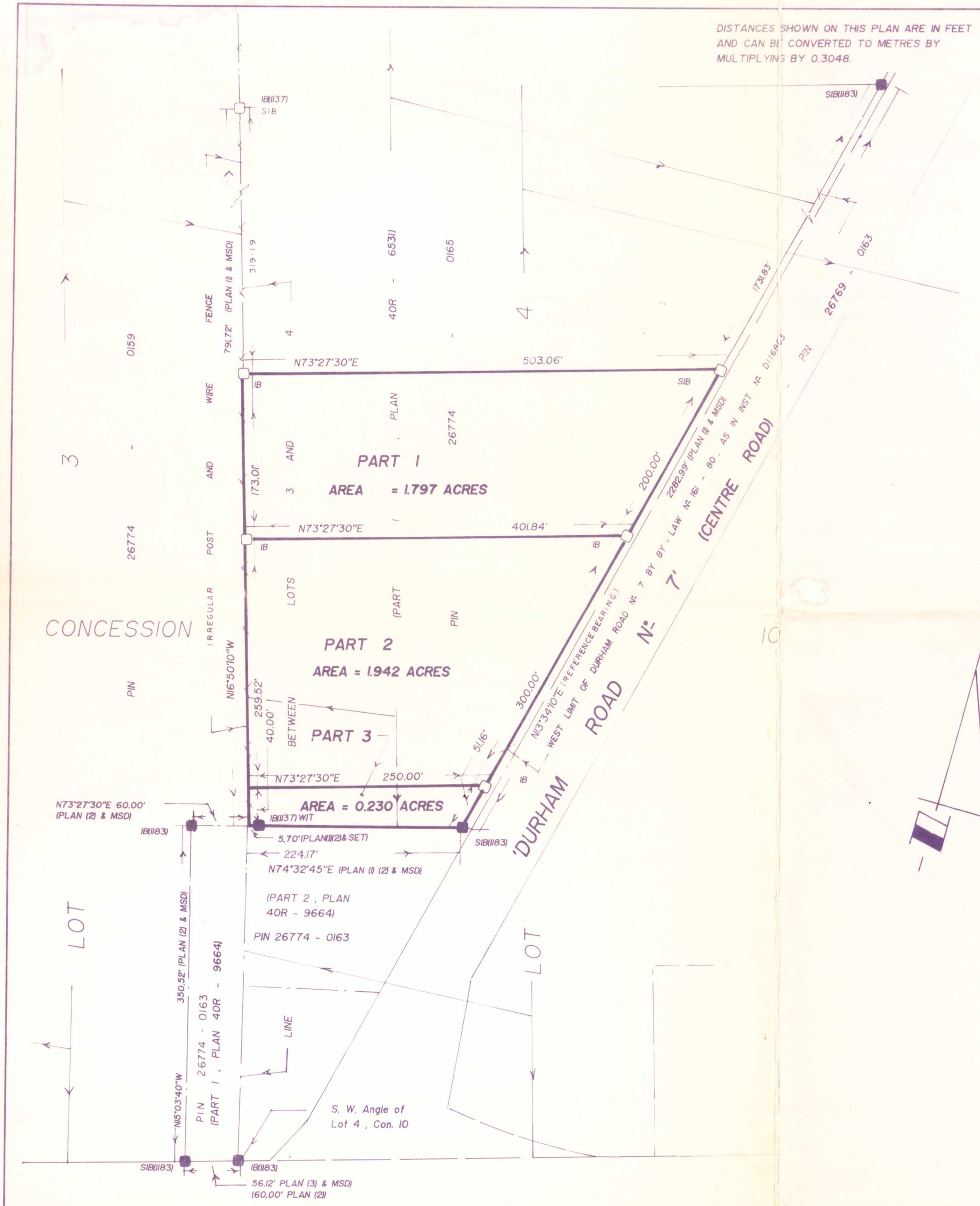
D-TE: NOV 29, 2023

REVISION

SCALE: (m)

0 20 40 60 80

DISTANCES SHOWN ON THIS PLAN ARE IN FEET AND CAN BE CONVERTED TO METRES BY MULTIPLYING BY 0.3048.



ROAD ALLOWANCE BETWEEN CONCESSIONS 9 AND 10

I REQUIRE THIS PLAN TO BE DEPOSITED UNDER THE LAND TITLES ACT.

DEC 17, 2002
DATE

H. F. GRANDER

PLAN 40 R-21651
RECEIVED AND DEPOSITED

December 18/2002
DATE

M. W. Ong Asst. Dep.
LAND REGISTRAR FOR THE LANDTITLES DIVISION OF DURHAM (№ 40)

SCHEDULE

PART	LOT	CONCESSION	PIN
1, 2 & 3	PTS 4	10	PTS 26774 - 0165

PLAN OF SURVEY

OF PARTS OF LOT 4, CONCESSION 10 GEOGRAPHIC TOWNSHIP OF SCUGOG, COUNTY OF ONTARIO NOW IN THE

TOWNSHIP OF SCUGOG

REGIONAL MUNICIPALITY OF DURHAM

SCALE 1" = 100' 0' 100' 200' FEET

H. F. GRANDER O. L. S. 2002.

NOTES.

BEARINGS ARE ASTRONOMIC AND ARE REFERRED TO THE WEST LIMIT OF DURHAM ROAD № 7 AS SHOWN ON PLAN 6531 HAVING A BEARING OF N13°34'10"E

SIB - STANDARD IRON BAR 48" LONG
SSIB - SHORT STANDARD IRON BAR 24" LONG
IB - IRON BAR 5/8" square 24 " LONG
IBϕ - IRON BAR 3/4" round 24" LONG
-●- DENOTES FOUND -○- DENOTES PLANTED
MSD - MEASURED
WIT - WITNESS
- x——x——x - FENCE
PLAN (1) - PLAN 40R - 6531
PLAN (2) - PLAN 40R - 9664
PLAN (3) - PLAN OF SURVEY BY H. F. GRANDER O.L.S. DATED APRIL 19, 1996.

SURVEYOR'S CERTIFICATE.

I CERTIFY THAT:
1. THIS SURVEY AND PLAN ARE CORRECT AND IN ACCORDANCE WITH THE SURVEYS ACT, THE SURVEYORS ACT AND THE LAND TITLES ACT AND THE REGULATIONS MADE UNDER THEM.
2. THE SURVEY WAS COMPLETED ON THE 17th DAY OF DECEMBER, 2002.

DECEMBER 17, 2002.

ONTARIO LAND SURVEYOR
H. F. GRANDER

PROJECT No. 61137 - 2

H. F. GRANDER Co. Ltd.
ONTARIO LAND SURVEYOR
1575 HWY 7A WEST, UNIT 2A
POST OFFICE BOX 616
PORT PERRY, ONTARIO
TELEPHONE (905) 985 - 3600
FAX. (905) 985 - 2347 / L9L 1A6

APPENDIX B

PRE-CONSULTATION & COMPLETE APPLICATION SUBMISSION REQUIREMENTS

Pre-Consultation Meeting Date:	July 26, 2023
Pre-Consultation Record Date:	September 27, 2023
Owner(s)/Applicant(s):	Kelley Hunter
Agent	Dan Stone Thorstone Consulting
Roll No:	182003000129000
Address and Location:	19350 Island Road
Proposed Use(s):	To permit a small-scale limited tourist commercial use as a secondary home-based business for two geodesic domes
Application Type(s):	Regional Official Plan Amendment; Official Plan Amendment and Zoning By-law Amendment

The purpose of this letter is to confirm that a pre-consultation meeting was conducted in anticipation of the submission of an Regional Official Plan, Scugog Official Plan, and Zoning By-law Amendments to permit the proposed use. The details of that meeting are as follows:

Township Staff and Outside Agencies:

- Valerie Hendry, Township of Scugog (Planning) – vhendry@scugog.ca
- Kevin Heritage, Township of Scugog (Development Services) – kheritage@scugog.ca
- Ahasar Syed, Township of Scugog (Planning) – asyed@scugog.ca
- Justin Mishko, Township of Scugog (Public Works) – jmishko@scugog.ca
- Nick Dawkins, Township of Scugog (Chief Building Official) – ndawkins@scugog.ca
- Denise Stephenson, Township of Scugog (By-law)- dstephenson@scugog.ca
- Lori Riviere-Doersam, Region of Durham (Planning Department) – Lori.Riviere-Doersam@durham.ca
- Lesley Kennedy, Region of Durham (Health Department) – Lesley.Kennedy@durham.ca
- Kurt Niles, Region of Durham (Works Department) – Kurt.Niles@durham.ca
- Harmanpreet Kaur, Kawartha Conservation Authority - Hkaur@krca.com

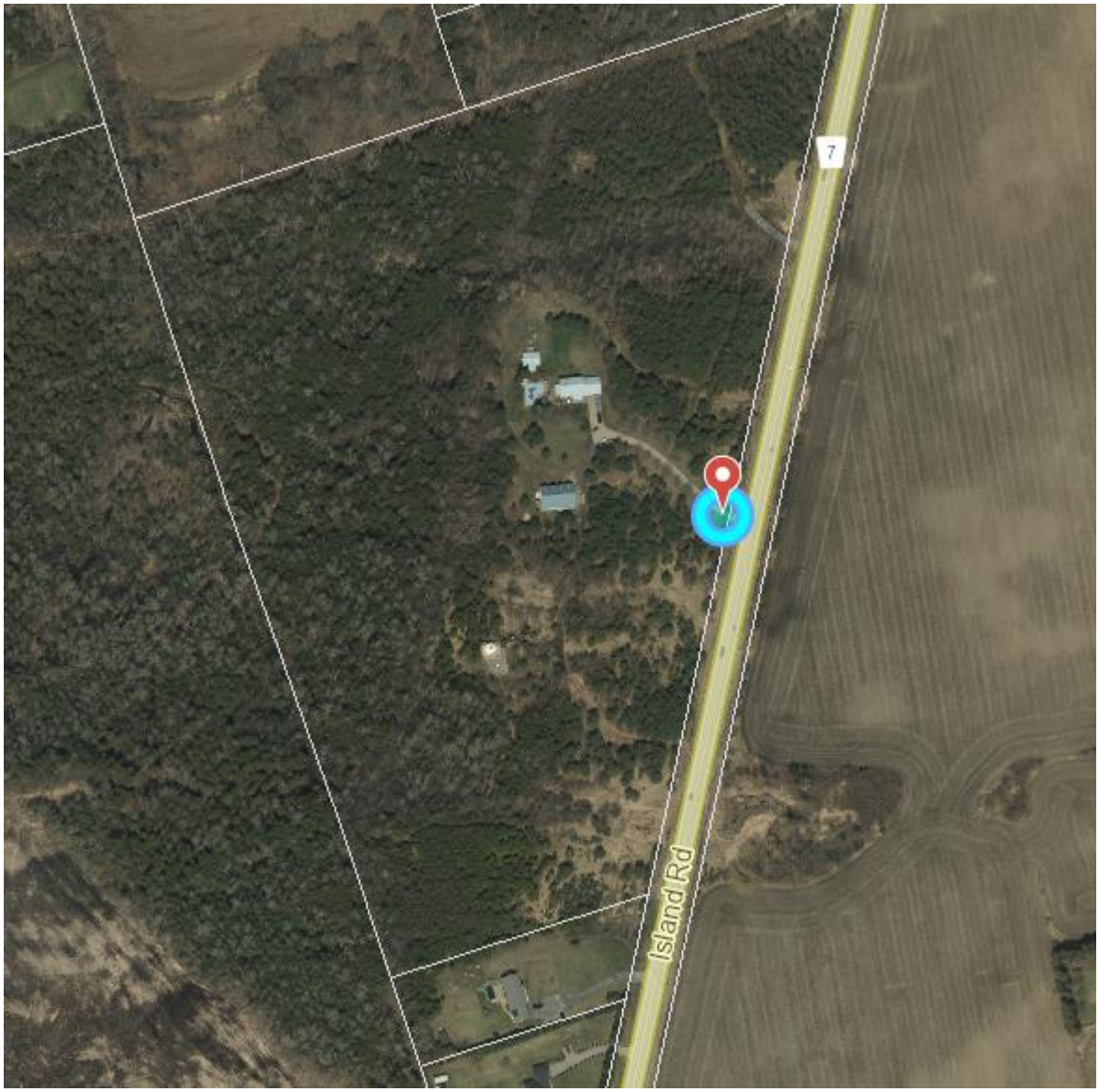
Greenbelt Plan: **Protected Countryside**

Region Official Plan: **Prime Agricultural Areas**

Scugog Official Plan: **Agricultural, Natural Core Area and Natural Linkage Area**

Zoning By-law 14-14: **Agricultural (AG), Agricultural with a holding provision (AG(H)) and Environmental Protection (EP)**

Map of Subject Lands



Proposed Plan



COMMENTS

Conservation Authority - KRCA

- No concerns. The subject site is outside of the KRCA's regulated area. No permit is required.

Region of Durham - Planning

- The subject site is designated as Prime Agricultural Area in the Regional Official Plan. Within Prime Agricultural Areas a full range of agricultural, agricultural-related and secondary uses shall be permitted. The establishment of non-agricultural uses in Prime Agricultural Areas shall be strictly limited to forest, fish and wildlife management, conservation, infrastructure, aggregate extraction, and existing uses, in accordance with the policies of this Plan, and the Greenbelt Plan.

- Although the ROP policy 9A.2.6 permits bed and breakfasts and farm vacation homes in Prime Agricultural Areas, these uses must be in the principal residence of the proprietor.

- The proposed use is also not considered to be a home-based business.

- The proposed use does not conform to the Regional Official Plan. The meeting held on July 26, 2023 will serve as the Regional Pre-consultation meeting.

- A new Regional Official Plan was adopted by Regional Council in May 2023. The new ROP maintains the Prime Agricultural Area designation on Map 1. A portion of the site (where the domes are located) are designated Natural Heritage System on Map 2a of the new ROP.

- As part of a complete application, Regional Planning would require:
  - Planning Justification Report – this report must address Provincial, Regional and Area Municipal plans and policies.
  - A Site Screening Questionnaire or a Phase 1 Environmental Site Assessment. If a SSQ is submitted it must be signed by a Qualified Person. If a Phase 1 ESA is submitted it must be no more than 18 months old, prepared in accordance with the Provincial Brownfield's Regulation and accompanied by the Regional Reliance Letter and Certificate of Insurance.
  - Noise Study – these units are considered a noise sensitive use and Island Road is a Type B Arterial Road. As such, a Noise Study, using the STAMSON Model, that identifies any mitigation measures/warning clauses is required. Traffic data should be obtained from the Regional Planning Division (**noiserequests@durham.ca**).
  - Archaeological Assessment – the subject site is an area of high archaeological potential. An Archaeological Assessment is required.

- Environmental Impact Study – Key Natural Heritage Features are located on the subject site. In accordance with the ROP, an Environmental Impact Study is required. This study may be peer reviewed at the applicant's expense, to the Region and Township's satisfaction.
- Agricultural Impact Assessment – this should address the Province's guidelines and also include a Minimum Distance Separation calculation. This study may be peer reviewed at the applicant's expense.
- Servicing Brief – to discuss how the domes are serviced

Region of Durham - Works Department

- Should a Site Plan Application be required, the Region typically requires a 30m ROW, 15m from centre of road allowance which would result in a road widening of approx. 2m.
- The proposed accesses are existing field entrances and therefore would need to be upgraded to Regional standards for residential driveway, including CSP culverts, appropriate widths and materials and sight distance reviews in the form of a traffic letter.
- In-principle we have no major concerns, but the applicant will be required to fulfill this requirement and enter into a permit for both entranceways.

Region of Durham – Health Department

- Consider the wastewater from the outdoor showers and contents from "dry sink" sewage as defined by the Ontario Building Code (OBC).
- Class 1 sewage systems (i.e., outhouse) do not require a building permit however please refer to Part 8 of the OBC for construction requirements.
- Require a detailed site plan illustrating all structures, well(s), and components of private sewage disposal system(s) and proposed system(s). If the proposal includes the construction of a private sewage disposal system, the detailed system review will take place at the time of the building permit stage.

Township of Scugog (Planning)

- The subject site contains an existing dwelling, accessory building, natural heritage features and two geodesic domes being rented out to tourists.

- **Scugog Official Plan** designates the subject lands as *Agricultural, Natural Core Area and Natural Linkage Area* in the Official Plan.

- **Zoning By-law 14-14:** The subject site is zoned Agricultural (AG), Agricultural with a holding provision (AG(H)) and Environmental Protection (EP).

- Section 5.1 of the Official Plan specifies that areas designated as Agricultural shall be the primary activity and land use.

- Section 6.3 and 6.4 of the Official Plan specifies that the Natural Core Area and the Natural Linkage Area are intended to preserve and maintain the environmental features and functions and vegetative protective buffer area.

- The proposed use is not considered to be a home occupation or home industry as defined by Zoning By-law 14-14 or the Scugog Official Plan:
    - The proposed use does not comply with the permitted types of Home Occupations. Home occupations must also be located within the primary dwelling and occupy no more than 25% of the Gross Floor Area, among other criteria.

    - The proposed use also does not comply with the permitted types of Home Industries or a Commercial/Tourism Establishment because the property is not farmed, or in an accessory or farm building within the farm cluster, among other criteria.

- The proposed use is also not considered to be a Bed and Breakfast use. Bed and Breakfasts are defined, in part, in up to three rooms with a Single Detached Dwelling that is the principal residence of the proprietor of the establishment. The location of the geodesic domes are also located in/partially within the EP Zone where a bed and breakfast use is not permitted.

- A site-specific amendment to the Zoning By-law will be required to permit a Tourist Resort Establishment for two geodesic domes in the EP and/or AG-H Zones, on the subject site.

- A Tourist Resort Establishment is defined in Zoning By-law 14-14, in part, as any premise operated to provide sleeping accommodation for the traveling Public or sleeping accommodation for the Use of the Public engaging in recreational activities, and includes the services and facilities in connection with which sleeping accommodation is provided.

- The boundaries of the Agricultural and the Natural Core and Natural Linkage designations and zoning boundaries shall be determined in consultation with other agencies and the review of an Environmental Impact Study/Natural Heritage Evaluation (EIS/NHE) submission.

- Prior to submission of an application for a site-specific Official Plan Amendment and Zoning By-law Amendment, the proponent should review the Greenbelt Plan, the Regional Official Plan, and Section 5 (Rural System), 5.1 (Agricultural) and Section 6 (Greenlands System) of the Township's Official Plan. The applicant will need to demonstrate how the objectives and policies of Provincial and Regional Policy and the Township

Official Plan, including section 6.3.1 and section 6.4.1 have been achieved for the proposed use.

- **Peer Review Consulting Services**
  - The applicant was advised that the Township may require the services of external consulting services (planning, engineering, or environmental), with the associated fees would be borne by the Applicant.

- **Required Plans/Reports**
  - Outlined in a summary at the end of these minutes.

- **Development Charges:**
  - To be determined at the Building Permit Stage.

Township of Scugog (Public Works)

- No comments

Township of Scugog (Building)

- No comments at this time.

Township of Scugog (Fire Dept.)

- Fire safety plan outlining fire department access to gates (keys on site, gates open when occupied, alternate access, etc.)
- Adequate signage for different entrances to property (example: 19350A, 19350B, 19350C)
- Smoke and carbon monoxide alarms must be installed in domes. Fire extinguishers are strongly recommended.
- Recommend owner keep detailed logs of monthly smoke/CO alarm tests, extinguisher checks, wood stove maintenance, etc.
- Specialty Burn permit (oversize permit) required to allow burning at accessory structures

SUMMARY OF REQUIRED PLANS/REPORTS (MUST BE SIGNED BY A QUALIFIED PERSON):

Application Forms
Site Survey
Site Plan showing all dimensions of buildings, parking area, accessory buildings and structures.
Elevation Plans (including any proposed signage)
Site Screening Questionnaire or a Phase One Environmental Site Assessment
Planning Justification Report
Noise Study
Archaeological Assessment
Natural Heritage Evaluation or Environmental Impact Statement and zoning schedule showing the proposed uses location to Key Natural Heritage Features.
Agricultural Impact Assessment

Servicing Brief

Number of Copies Required:
All Reports and Large sets of Plans: 2 copies of each set (large plans to be folded to 8.5 x 11)
Electronic files (PDF) on USB via electronic file transfer
Ensure plans are shown in metres.

Regional Application and Agency Review Fees:

Region of Durham Planning (certified cheque or money order payable to the Region of Durham)
2023 Regional Official Plan Amendment: $20,000 plus $1000 publication fee.
Scugog: $5,690 (cheque payable to the Township of Scugog)

Scugog Official Plan and Zoning By-Law Application and Agency Review Fees:

2023 Combined Official Plan Review fee: $3,500 for an exempt Official Plan for $5,000 for non-exempt Official Plan approval fee.
Region of Durham Health (cheque payable to the Region of Durham Health Department): $287
KRCA: N/A but to be confirmed prior to submission

Township of Scugog (cheque payable to Township of Scugog)
2023 Zoning By-law Amendment Fee - $7,980 (Zoning)
Township of Scugog Consulting and/or Peer Review Fees
The Township may require the services of external consultant services (planning, engineering, legal) as part of the review and approval process for these applications. The Applicant will be invoiced for any associated consulting fees incurred by the Township.
Additional Fees
There will be additional fees associated with the required building permit application and entrance application. Here is a link to the current Development Charge rates: Development Charges | Township of Scugog

*Notwithstanding the fees noted above, all fees are payable based upon the rate in the fee schedule by-law in effect on the date the application is received. Contact Township staff, Region of Durham and KRCA to confirm fees prior to application submission as the fees are subject to periodic review and change.

Please review these notes at your earliest convenience and advise of any errors or omissions. Please note that if applications are not filed within 12 months of the date of this letter, another pre-consultation meeting and checklist of complete application requirements may be required.

Please note that the Township Planning Act application process is subject to modification pending implementation of Bill 109. The applicant is requested to confirm the process prior to submission of any development application.

Valerie Hendry

Valerie Hendry, MCIP, RPP
Manager of Planning

APPENDIX C

The Regional Municipality of Durham

200-181 Perry St , Port Perry, ON, L9L 1B9
Phone:(905) 985-4889 Fax:(905) 982-0840

HEALTH DEPARTMENT

Building Permit for Sewage Disposal System

BP23-216687

This Permit is valid for 12 months from date of issue

Property Owner

Name: Birchwood Luxury Camping **Address:** 19350 Island Rd

Port Perry ON L9L 1B9

Phone: (416) 579-3430

Associate File Number: Building Permit (North Dome) **Date Received:** 01-Dec-23
Site Address: 19350 Island Rd, Port Perry ON L9L 1B9 **Community:** Port Perry
Class Type: Class 2

Applicant (when applicable)

Name:	Owen Design Consultants Ltd	Phone:	6475003483	Type:	Agent

Description Of Property

Region:	Region of Durham	Township:	Scugog
Lot:	Pt Lot 4	Concession:	7
Plan:	-	Sublot:	-
Roll No.:	-	Floor Area (sq. m):	48.1
Lot Area:	-	Building Use:	Residential

Installation Information

Purpose:	Install	Sewage System Class:	2
No. People Served:	-	No. Bedroom:	1
No. Flush Toilets:	-	No. Wash Basins:	1
No. Dishwashers:	-	No. Clothes Washer:	-
No. Tubs/Showers:	1	No. Laundry Units:	-
No. Kitchen Sinks:	1	No. Bathroom Group:	-

Water Supply

Municipal Water Source:	No	Water Supply:	Existing
Well Type:	Dug/Bored		

Inspection Data

Bed System Type:	Class 2 - Greywater System	Inspection Date:	08-Dec-2023
Inspector:	Crystal Willems	Contact Area (Sand) in m²:	4.6 x 3.4 = 15.64m2
Working Capacity (L):	-	Effective (Stone) in m²:	-
Length of Dist. Pipe (m):	-	Loading Area in m²:	-

Permeability

On Basis of Fill (min/cm):	-	Of Existing Soil (min/cm):	20

Rock/GWT(m)	Depth(m)	Soil Type
-	*0-0.3*	*Topsoil*
-	*0.3-0.6*	*Sandy silt, some clay*
-	*0.6-1.8*	*Clay, Silt*

Conditions for Approval and reasons where proposal not acceptable:

Class 2 greywater system - 2 rows of 3 Ecoblocs to be installed 1.2m apart.

PROPERTY OWNER/AGENT SHALL CONTACT THE DURHAM REGION HEALTH DEPARTMENT FOR A FINAL INSPECTION OF THE EXPOSED SEWAGE SYSTEM PRIOR TO BACKFILLING AS PER CLAUSE 1.3.5.1.(2) (M) OF THE ONTARIO BUILDING CODE (ONTARIO REGULATION 332/12)

Inspected and Recommended by:

Crystal Willems

Crystal Willems, CPHI(C), I/CBO-SS

Issued: Chief Building Official

Date: 12-Dec-2023

White - Owner Yellow - Office

Pink - Building Department Goldenrod - Installer

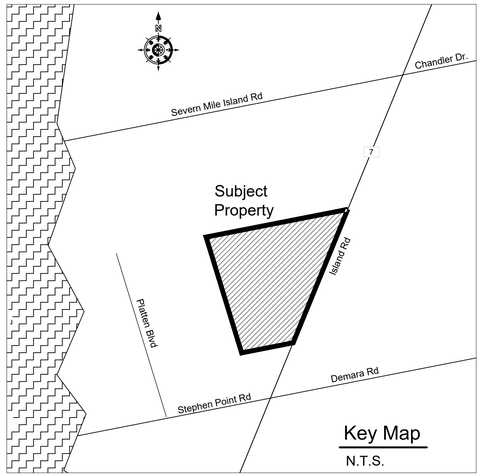
Part of Lot 4, Concession 10,
Geographic Township of Cartwright

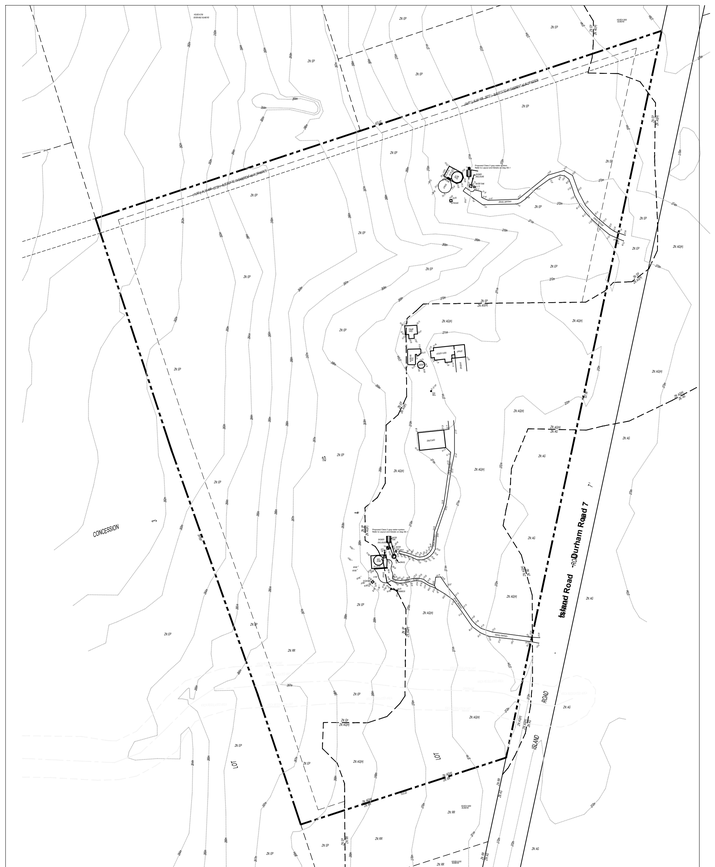
Township of Scugog

Regional Municipality of Durham

Surveyor
Site Plan based on information provided by H.F. Grander Co. Ltd., Ontario Land Surveyors, 1575 Highway 7A West, Unit 24
Port Perry, Ontario L9L 1A6, File No.8380-SP(AB) dated August 7, 2023.

Conversion
Distances shown on this plan are in metres and can be converted to feet by dividing by 0.3048

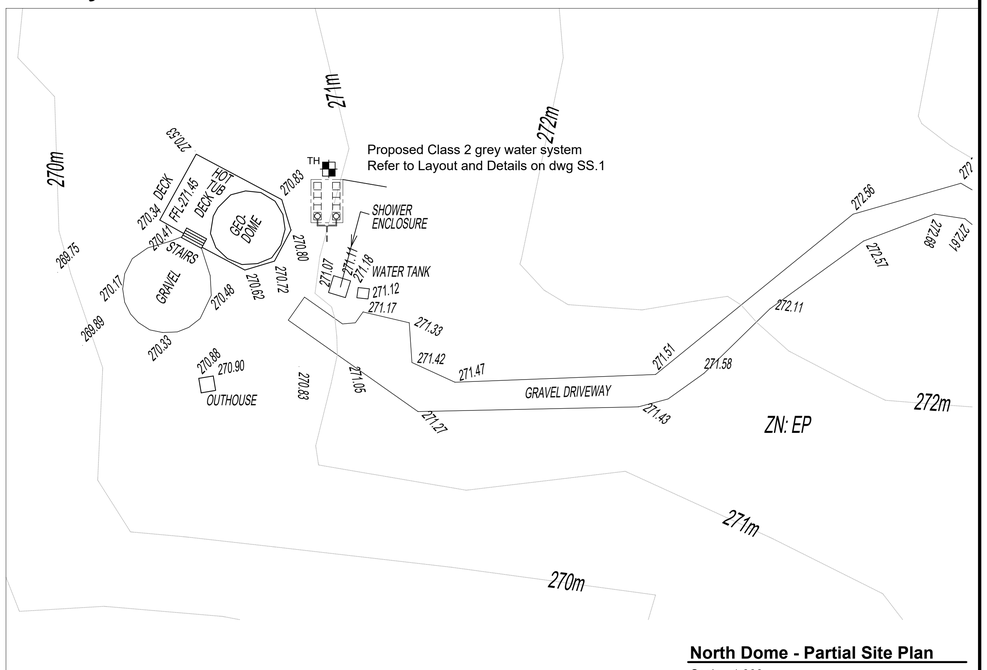




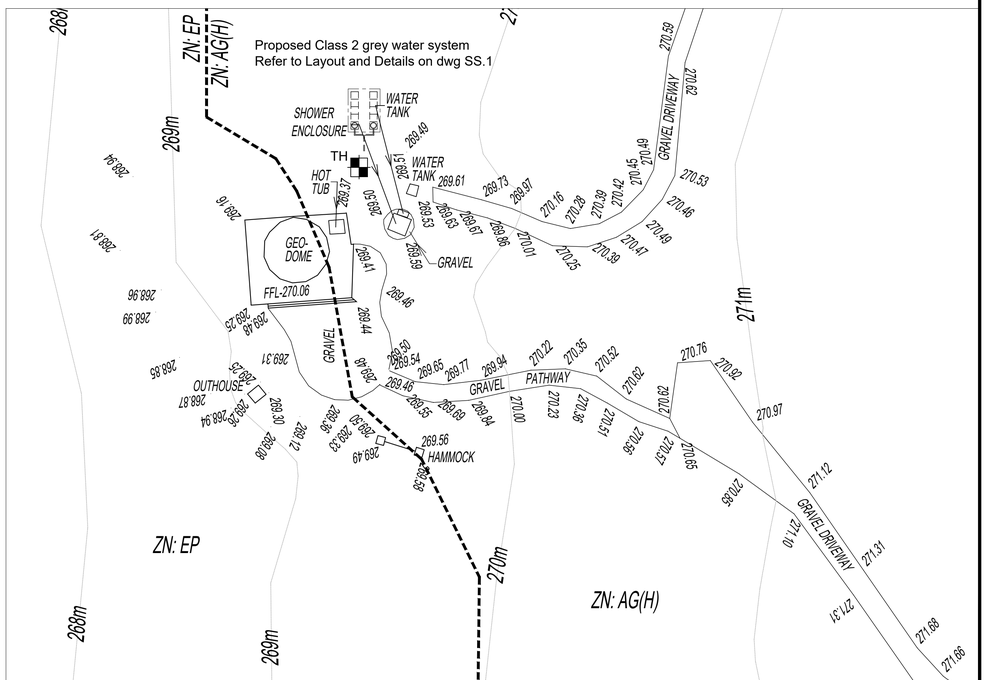
Site Plan
Scale - 1:2000

APPROVED
By Crystal Willems at 11:22 am, Dec 12, 2023

Crystal Willems



North Dome - Partial Site Plan
Scale - 1:300



South Dome - Partial Site Plan
Scale - 1:300

GENERAL NOTES

1. These drawings & specifications are prepared by the designer on the basis of information obtained from on site inspections, and data supplied by the owner. All hidden/concealed construction features of existing building/structures (if applicable) were assumed to be in accordance with conventional building standards and accepted construction practices.
2. Contractor shall report any error or omissions to OWEN DESIGN CONSULTANTS LTD. prior to commencement of construction.
3. Contractor must verify all information and dimensions prior to proceeding with construction. Dimensions always take precedent over scale measurements. Do not scale drawings.
4. Contractor and owner to observe all local zoning by-laws, Ontario Building Code as amended and all other applicable laws during the course of construction.
5. The release of these drawings does not give the owner and/or contractor the right to deviate from the approved building permit. All changes must be approved by the appropriate municipal body and designer prior to construction or alteration.
6. Owner to obtain plumbing, heating, mechanical, electrical and mail other permits necessary for completion of work as indicated on building permit.
7. All drawings, sketches, plans and copies are the property of OWEN DESIGN CONSULTANTS LTD.

DESIGNER
John Owen, BCIN 12838

REVISIONS
Aug 24/23 - Issued for building permit
Oct 23/23 - Revisions per municipal requests
Nov 20/23 - Issued for health approval and building permit

STAMPS

The undersigned has reviewed and takes responsibility for this design, and has the qualifications and meets the requirement set out in the Ontario Building Code to be a designer.

QUALIFICATION INFORMATION - Required unless design is exempt under 3.2.5.1. Division "C" of the Ontario Building Code

John Owen		12838
NAME	SIGNATURE	BCIN

QUALIFICATION INFORMATION - Required unless design is exempt under 3.2.5.1. Division "C" of the Ontario Building Code

Owen Design Consultants Ltd.	16770
FIRM NAME	BCIN

FOLD

Owen Design Consultants Ltd.
Drawing Solutions since 1977

Firm BCIN 16770
Owen Design Consultants Ltd.
Uxbridge, Ontario
L9P 1R2
Phone: 647-500-3483
Email: john@owendesign.ca

CLIENT
Birchwood Luxury Camping
19350 Island Road
Scugog, Ontario
L9L 1B6

PROJECT
North and South
Geodesic Dome Building
Part of Lot 4, Concession 10
Township of Scugog
Regional Municipality of Durham

TITLE
Site Plan, Key Map
Zoning and Building Statistics

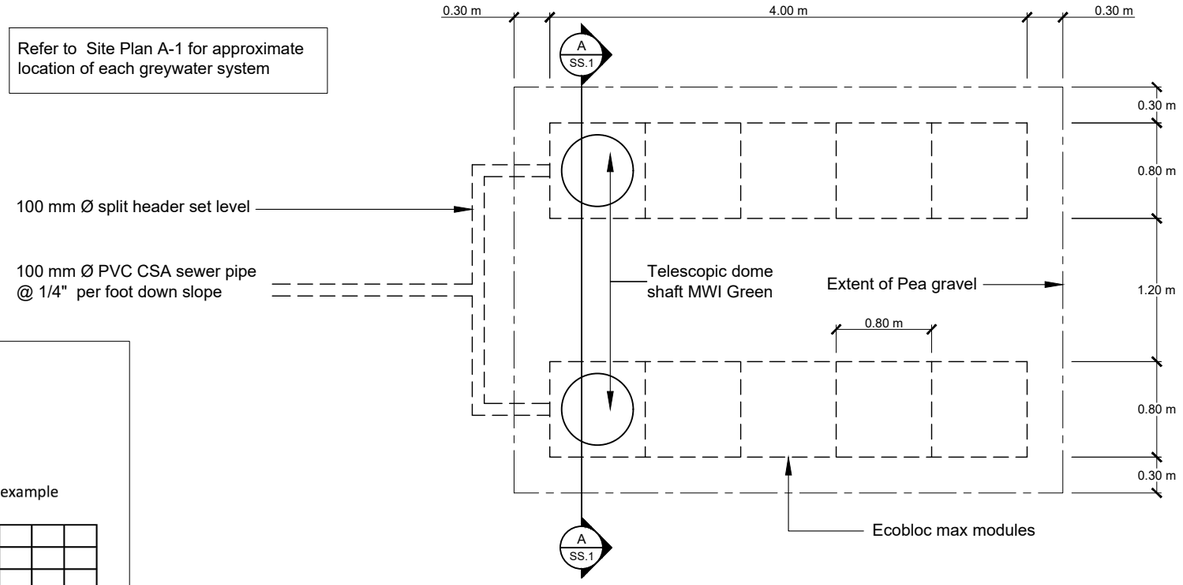
DATE August 2023

SCALE As Noted

DRAWING A - 1

O:\1 - Client Files\Birchwood\1 - Site Plan\Birchwood A1-Rev 3.dwg

Refer to Site Plan A-1 for approximate location of each greywater system



EcoBloc Greywater Layout

Scale - 1:75

Design Criteria

Grey Water — One sink and one shower equal 3 fixture units.

Note:
No pressurized water supply, therefore 125 L / fixture

Q = Fixture count X 200 liters

side wall example

Fixture Count 3 125 L Q = 375 liters

Lr = 400/T 400 T = 20 Lr = 20 L/D

Side Wall Exfiltration = Q / Lr 375 20 18.75 M2

top view eample

Number of Ecoblocs used

to calculate side height always use this number

	Row 1 end	Height in mm	Width in mm
base plate	1	40	800
Ecoblocs	3	330	800

to calculate side width always use this number

	Row 1 side	Width	Height
base plate	1	40	800
Ecoblocs	5	330	800

end view example

Row 1 Row 2

Formula, Add total blocks per row. Total sidewall X 2, plus total end wall X 2

	End Height	End Width	End Total	Side Height	Side Width	Side Total
Row 1 End	1030	800	0.824	1030	4000	4.12

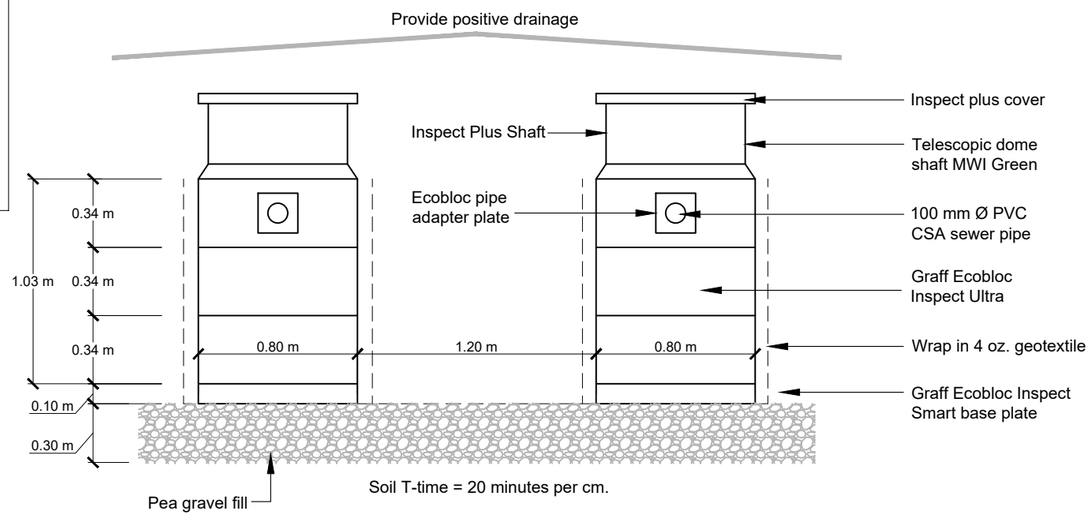
Each row has two sides and two ends 9.888 m2 per row

How many m2 are required? 18.75 m2

How many rows are required? 2 19.776 m2

APPROVED
By Crystal Willems at 11:24 am, Dec 12, 2023

Crystal Willems



A **Cross Section**

Scale - 1:30

GENERAL NOTES

1. These drawings & specifications are prepared by the designer on the basis of information obtained from on site inspections, and data supplied by the owner. All hidden/concealed construction features of existing building/structures (if applicable) were assumed to be in accordance with conventional building standards and accepted construction practices.
2. Contractor shall report any error or omissions to OWEN DESIGN CONSULTANTS LTD. prior to commencement of construction.
3. Contractor must verify all information and dimensions prior to proceeding with construction. Dimensions always take precedent over scale measurements. Do not scale drawings.
4. Contractor and owner to observe all local zoning by-laws, Ontario Building Code as amended and all other applicable laws during the course of construction.
5. The release of these drawings does not give the owner and/or contractor the right to deviate from the approved building permit. All changes must be approved by the appropriate municipal body and designer prior to construction or alteration.
6. Owner to obtain plumbing, heating, mechanical, electrical and mall other permits necessary for completion of work as indicated on building permit.
7. All drawings, sketches, plans and copies are the property of OWEN DESIGN CONSULTANTS LTD.

DESIGNER
John Owen, BCIN 12838

REVISIONS
Nov 20/23 - Issued for building permit

STAMPS
12838

The undersigned has reviewed and takes responsibility for this design, and has the qualifications and meets the requirement set out in the Ontario Building Code to be a designer.

QUALIFICATION INFORMATION - Required unless design is exempt under 3.2.5.1. Division "C" of the Ontario Building Code

John Owen — NAME — SIGNATURE — BCIN

QUALIFICATION INFORMATION - Required unless design is exempt under 3.2.5.1. Division "C" of the Ontario Building Code

Owen Design Consultants Ltd. — FIRM NAME — BCIN

FOLD

Owen Design Consultants Ltd.
Drawing Solutions since 1977

Firm BCIN 16770
Owen Design Consultants Ltd.
Uxbridge, Ontario
L9P 1R2
Phone: 647-500-3483
Email: john@owendesign.ca

CLIENT
Birchwood Luxury Camping
19350 Island Road
Scugog, Ontario
L9L 1B6

PROJECT
On-Site Sewage
for North and South Domes
Part of Lot 4, Concession 10
Township of Scugog
Regional Municipality of Durham

TITLE
Grey Water Layout and Cross Section
Design Criteria

DATE November 2023

SCALE As Noted

DRAWING SS-1

O:\1 - Client Files\Birchwood\1 - Site Plan\Birchwood A1-Rev 3.dwg

The Regional Municipality of Durham

200-181 Perry St , Port Perry, ON, L9L 1B9
Phone:(905) 985-4889 Fax:(905) 982-0840

HEALTH DEPARTMENT

Building Permit for Sewage Disposal System

BP23-216689

This Permit is valid for 12 months from date of issue

Property Owner

Name: Birchwood Luxury Camping **Address:** 19350 Island Rd

Port Perry ON L9L 1B9

Phone: (416) 579-3430

Associate File Number: Building Permit (South Dome) **Date Received:** 01-Dec-23
Site Address: 19350 Island Rd, Port Perry ON L9L 1B9 **Community:** Port Perry
Class Type: Class 2

Applicant (when applicable)

Name:	Owen Design Consultants Ltd	Phone:	647 500 3483	Type:	Agent

Description Of Property

Region:	Region of Durham	Township:	Scugog
Lot:	-	Concession:	7
Plan:	-	Sublot:	Pt lot 4
Roll No.:	-	Floor Area (sq. m):	37.3
Lot Area:	-	Building Use:	Residential

Installation Information

Purpose:	Install	Sewage System Class:	2
No. Bedroom:	1	No. Flush Toilets:	-
No. Wash Basins:	1	No. Dishwashers:	-
No. Clothes Washer:	-	No. Tubs/Showers:	1
No. Laundry Units:	-	No. Kitchen Sinks:	1
No. Bathroom Group:	-		

Water Supply

Municipal Water Source:	No	Water Supply:	Existing
Well Type:	Dug/Bored		

Inspection Data

Bed System Type:	Class 2 - Greywater System	Inspection Date:	08-Dec-2023
Inspector:	Crystal Willems	Type of Tank:	Unanswered
Contact Area (Sand) in m²:	4.6x3.4=15.64m2	Working Capacity (L):	-
Effective (Stone) in m²:	-	Length of Dist. Pipe (m):	-
Loading Area in m²:	-		

Permeability

On Basis of Fill (min/cm):	-	Of Existing Soil (min/cm):	20

Rock/GWT(m)	Depth(m)	Soil Type
1.2	*0-0.3*	*Topsoil*
1.2	*0.3-0.8*	*Silty sand, some clay*
1.2	*0.8-1.2*	*Clay, silt*

Conditions for Approval and reasons where proposal not acceptable:

Class 2 greywater system. 2 rows of 3 Ecoblocs to be installed 1.2m apart.

PROPERTY OWNER/AGENT SHALL CONTACT THE DURHAM REGION HEALTH DEPARTMENT FOR A FINAL INSPECTION OF THE EXPOSED SEWAGE SYSTEM PRIOR TO BACKFILLING AS PER CLAUSE 1.3.5.1.(2) (M) OF THE ONTARIO BUILDING CODE (ONTARIO REGULATION 332/12)

Inspected and Recommended by:

Crystal Willems

Crystal Willems, CPHI(C), I/CBO-SS

Issued: Chief Building Official

Date:

White - Owner Yellow - Office

Pink - Building Department Goldenrod - Installer

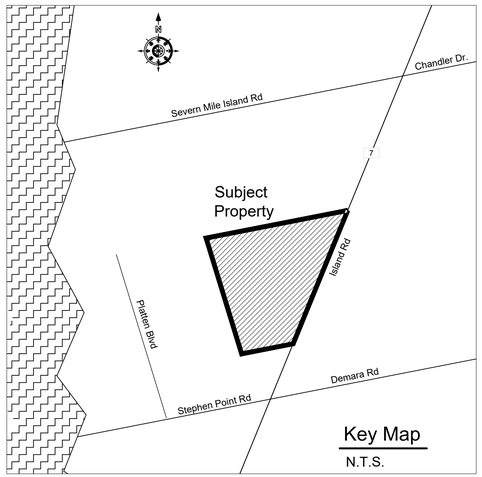
Part of Lot 4, Concession 10,
Geographic Township of Cartwright

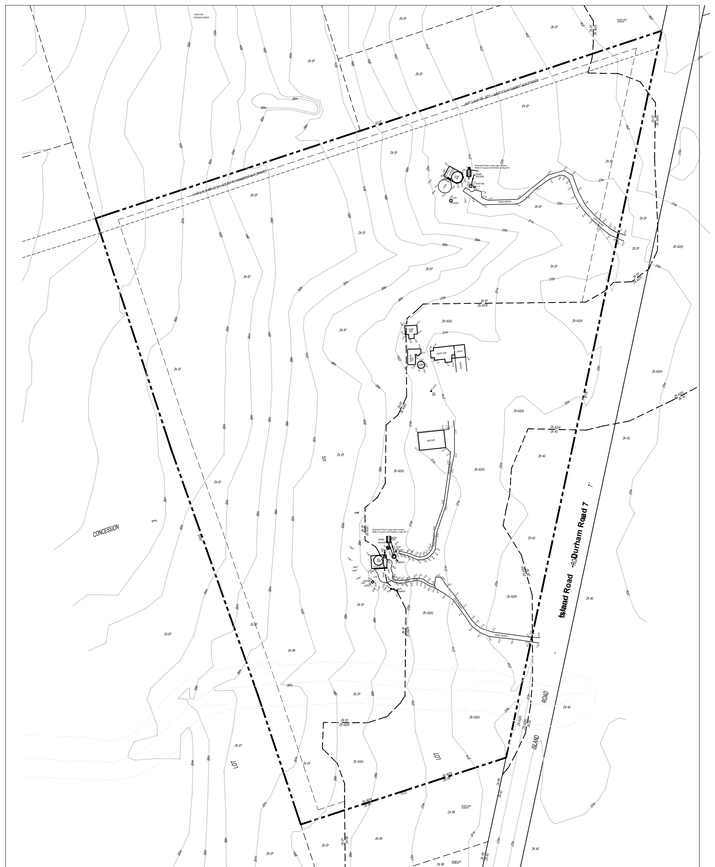
Township of Scugog

Regional Municipality of Durham

Surveyor
Site Plan based on information provided by H.F. Grander Co. Ltd., Ontario Land Surveyors, 1575 Highway 7A West, Unit 24
Port Perry, Ontario L9L 1A6, File No.8380-SP(AB) dated August 7, 2023.

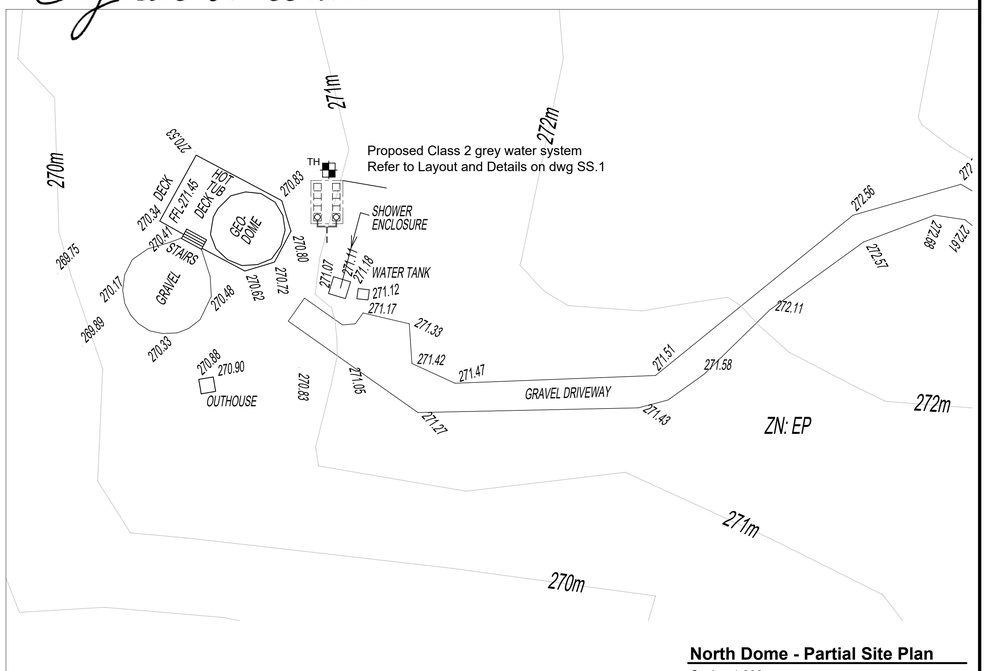
Conversion
Distances shown on this plan are in metres and can be converted to feet by dividing by 0.3048

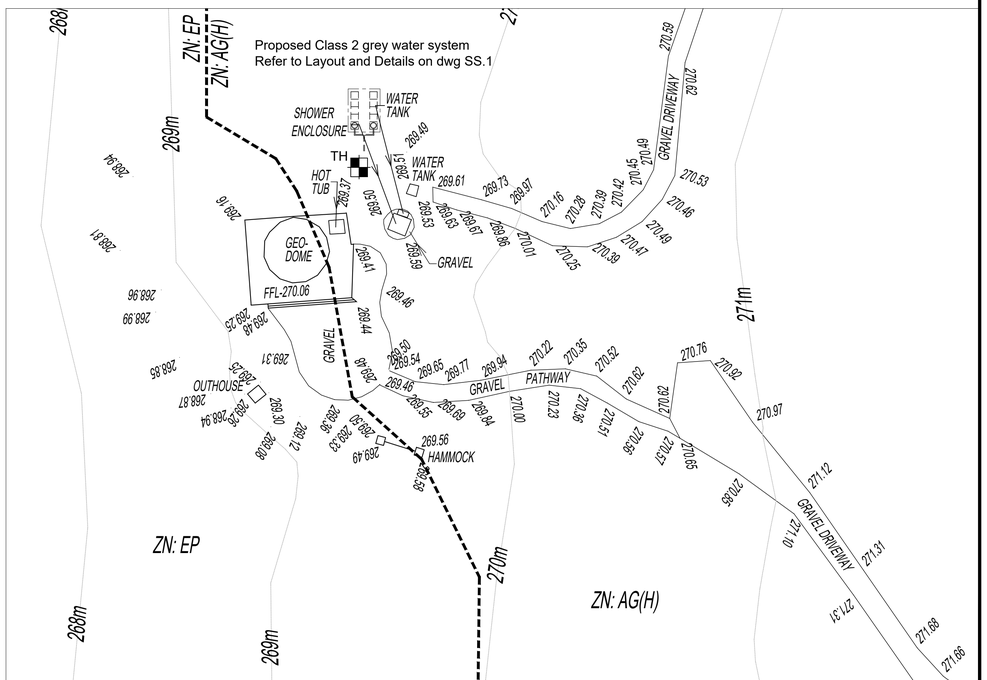




APPROVED
By Crystal Willems at 11:58 am, Dec 12, 2023

Crystal Willems





GENERAL NOTES

1. These drawings & specifications are prepared by the designer on the basis of information obtained from on site inspections, and data supplied by the owner. All hidden/concealed construction features of existing building/structures (if applicable) were assumed to be in accordance with conventional building standards and accepted construction practices.
2. Contractor shall report any error or omissions to OWEN DESIGN CONSULTANTS LTD. prior to commencement of construction.
3. Contractor must verify all information and dimensions prior to proceeding with construction. Dimensions always take precedent over scale measurements. Do not scale drawings.
4. Contractor and owner to observe all local zoning by-laws, Ontario Building Code as amended and all other applicable laws during the course of construction.
5. The release of these drawings does not give the owner and/or contractor the right to deviate from the approved building permit. All changes must be approved by the appropriate municipal body and designer prior to construction or alteration.
6. Owner to obtain plumbing, heating, mechanical, electrical and mail other permits necessary for completion of work as indicated on building permit.
7. All drawings, sketches, plans and copies are the property of OWEN DESIGN CONSULTANTS LTD.

DESIGNER
John Owen, BCIN 12838

REVISIONS
Aug 24/23 - Issued for building permit
Oct 23/23 - Revisions per municipal requests
Nov 20/23 - Issued for health approval and building permit

STAMPS

The undersigned has reviewed and takes responsibility for this design, and has the qualifications and meets the requirement set out in the Ontario Building Code to be a designer.

QUALIFICATION INFORMATION - Required unless design is exempt under 3.2.5.1. Division "C" of the Ontario Building Code

John Owen		12838
NAME	SIGNATURE	BCIN

QUALIFICATION INFORMATION - Required unless design is exempt under 3.2.5.1. Division "C" of the Ontario Building Code

Owen Design Consultants Ltd.	16770
FIRM NAME	BCIN

FOLD

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Firm BCIN 16770
Owen Design Consultants Ltd.
Uxbridge, Ontario
L9P 1R2
Phone: 647-500-3483
Email: john@owendesign.ca

CLIENT
Birchwood Luxury Camping
19350 Island Road
Scugog, Ontario
L9L 1B6

PROJECT
North and South
Geodesic Dome Building
Part of Lot 4, Concession 10
Township of Scugog
Regional Municipality of Durham

TITLE
Site Plan, Key Map
Zoning and Building Statistics

DATE August 2023

SCALE As Noted

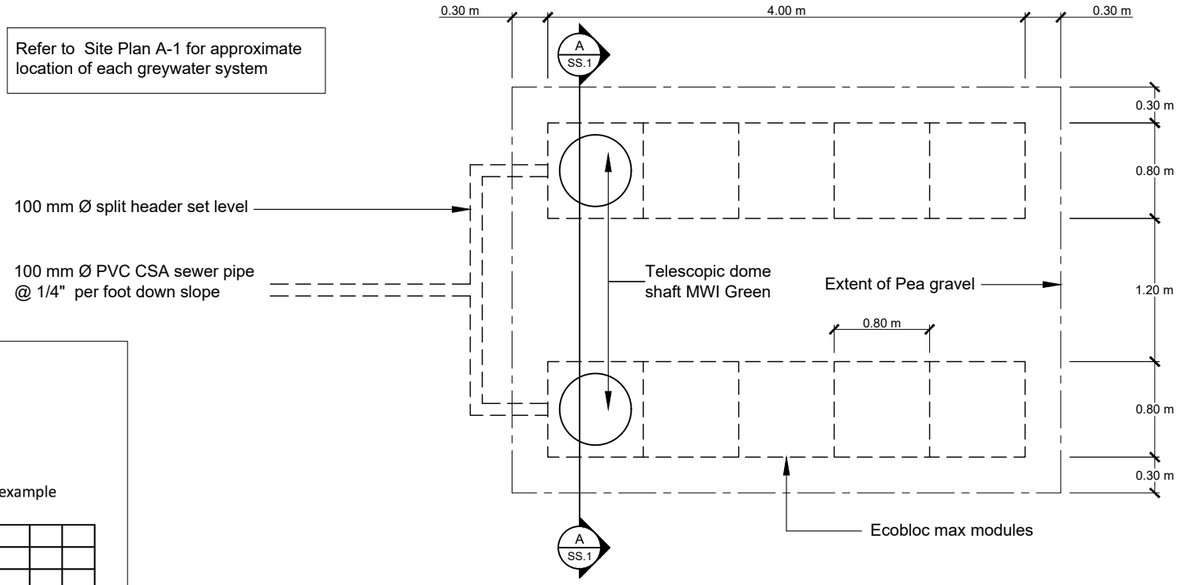
DRAWING A - 1

O:\1 - Client Files\Birchwood\1 - Site Plan\Birchwood A1-Rev 3.dwg

APPROVED
By Crystal Willems at 11:59 am, Dec 12, 2023

Crystal Willems

Refer to Site Plan A-1 for approximate location of each greywater system



EcoBloc Greywater Layout

Scale - 1:75

Design Criteria

Grey Water — One sink and one shower equal 3 fixture units.

Note:
No pressurized water supply, therefore 125 L / fixture

Q = Fixture count X 200 liters

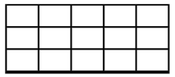
Fixture Count 3 — 125 L — Q = 375 liters

Lr = 400/T — 400 — T = 20 — Lr = 20 L/D

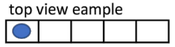
Side Wall Exfiltration = Q / Lr — 375 — 20 — 18.75 M2

Number of Ecoblocs used

side wall example



top view eample



to calculate side height always use this number

	Row 1 end	Height in mm	Width in mm
base plate	1	40	800
Ecoblocs	3	330	800

to calculate side width always use this number

	Row 1 side	Width	Height
base plate	1	40	800
Ecoblocs	5	330	800

end view example

Row 1 Row 2

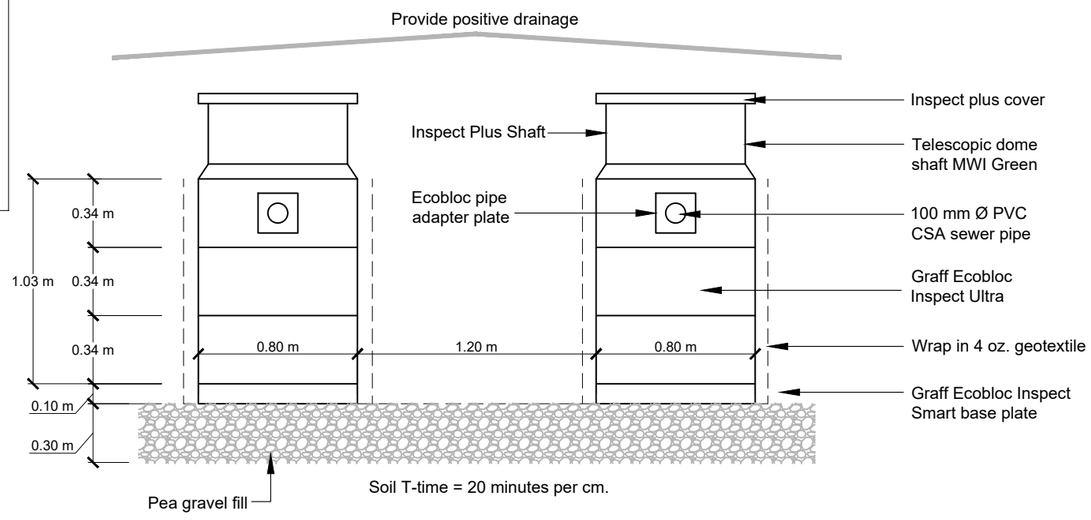
Formula, Add total blocks per row. Total sidewall X 2, plus total end wall X 2

	End Height	End Width	End Total	Side Height	Side Width	Side Total
Row 1 End	1030	800	0.824	1030	4000	4.12

Each row has two sides and two ends — 9.888 m2 per row

How many m2 are required? — 18.75 m2

How many rows are required? — 2 — 19.776 m2



A **Cross Section**

Scale - 1:30

GENERAL NOTES

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7. All drawings, sketches, plans and copies are the property of OWEN DESIGN CONSULTANTS LTD.

DESIGNER
John Owen, BCIN 12838

REVISIONS
Nov 20/23 - Issued for building permit

STAMPS
12838

The undersigned has reviewed and takes responsibility for this design, and has the qualifications and meets the requirement set out in the Ontario Building Code to be a designer.

QUALIFICATION INFORMATION - Required unless design is exempt under 3.2.5.1. Division "C" of the Ontario Building Code

John Owen — NAME — SIGNATURE — BCIN

QUALIFICATION INFORMATION - Required unless design is exempt under 3.2.5.1. Division "C" of the Ontario Building Code

Owen Design Consultants Ltd. — FIRM NAME — BCIN

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Uxbridge, Ontario
L9P 1R2
Phone: 647-500-3483
Email: john@owendesign.ca

CLIENT
Birchwood Luxury Camping
19350 Island Road
Scugog, Ontario
L9L 1B6

PROJECT
On-Site Sewage
for North and South Domes
Part of Lot 4, Concession 10
Township of Scugog
Regional Municipality of Durham

TITLE
Grey Water Layout and Cross Section
Design Criteria

DATE November 2023

SCALE As Noted

DRAWING SS-1

O:\1 - Client Files\Birchwood\1 - Site Plan\Birchwood A1-Rev 3.dwg

APPENDIX D



ENVIRONMENTAL IMPACT STUDY

Zoning By-law Amendment

19350 Island Road, Township of Scugog

15 December 2023

TERRASTORY
environmental consulting inc.

ENVIRONMENTAL IMPACT STUDY

Zoning By-law Amendment
19350 Island Road, Township of Scugog

Prepared for:

Birchwood Luxury Camping
19350 Island Road
Port Perry ON L1J 4N9

Prepared by:

Terrastory Environmental Consulting Inc.
171 Glen Road
Hamilton, ON L8S 3N2
905.745.5398

Rob Aitken, B. Sc.
Senior Ecologist | GIS Specialist

Tristan Knight, M.E.S., M.Sc., I.S.A., C.E.R.P.
Senior Ecologist | President

Project No.: 23190
15 December 2023

This report has been prepared by Terrastory Environmental Consulting Inc. (hereinafter "Terrastory") for the client. All information, conclusions, and recommendations contained in this report are subject to the scope and limitations set out in the agreement between Terrastory and the client and qualifications contained in this report. This report shall not be relied upon by any third parties without the prior written consent of Terrastory. Terrastory is not responsible for any injury, loss, or damages arising from improper use of this report by third parties. Excerpts of this report or alterations to this report taken without the authorization of Terrastory invalidates the report and any conclusions therein.

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1 INTRODUCTION

1.1 Study Background

Terrastory Environmental Consulting Inc. (hereinafter "Terrastory") was retained by Birchwood Luxury Camping (hereinafter "the Applicant") to prepare this Environmental Impact Study (EIS) in support of a Zoning By-law Amendment (ZBA) application at 19350 Island Road (hereinafter "Subject Property") in the Township of Scugog. The Subject Property is an approximately 13 hectare (32 acre) parcel bounded by Island Road (east), rural residential parcels (north and south), and wooded areas (west and north). The Subject Property consists of several built features including an existing residence on private servicing and detached garage surrounded by amenity space. Two geodomes were constructed in 2021 (north geodome) and 2022 (south geodome) which are accessed via separate driveway entrances from Island Road (and can also be accessed from the primary dwelling). The remainder of the Subject Property is in a naturalized state and consists of wooded areas, small wetlands, and regenerating fields. The location of the Subject Property within its broader landscape setting is shown in **Figure 1**.

The Subject Property is situated within the "Protected Countryside" area of the Greenbelt Plan made pursuant to the *Greenbelt Act*. The western and northern portions of the Subject Property are also situated within the Greenbelt Natural Heritage System (NHS) as indicated on Map 25 of the Greenbelt Plan. Schedule A (Regional Structure), Map A3 of the Regional Municipality of Durham's Official Plan (OP) designates the Subject Property as "Prime Agricultural Area". Wooded areas within the Subject Property generally correspond to the "Key Natural Heritage and Hydrologic Feature" overlay per Schedule B (Greenbelt Natural Heritage System and Key Natural Heritage and Hydrologic Features), Map B1c of the Regional OP, which also spatially illustrates the Greenbelt NHS boundary.

The Subject Property further contains portions of the Township's "Rural System" and "Greenlands System" per Schedule A (Rural Land Use) of the Township's OP, including "Agricultural", "Natural Core Area" and "Natural Linkage Area" designations. The "Natural Core Area" designation generally algins with the wooded portions of the Subject Property and has a configuration similar to the boundaries of the Greenbelt NHS. The "Natural Linkage Area" designation represents a buffer zone surrounding the "Natural Core Area". Per Schedule E (Environmental Features) of the Township's OP, woodlands within the Subject Property represent "Significant Forest Areas". The Subject Property is further zoned Agricultural (AG), Agricultural with a holding provision (AG(H)), and Environmental Protection (EP) per the Township's Zoning By-law (#14-14).

It is understood that the two geodomes were constructed without the necessary planning approvals and building permits, and thus were deemed non-compliant with the Township's Zoning By-law pursuant to a violation order dated May 2023. The purpose of the rezoning application is therefore to bring the geodomes into conformity with zoning. A Pre-consultation Meeting with agency staff was held on 26 July 2023, the results of which were summarized in a 27 September 2023 Pre-consultation Record. The Pre-consultation Record stipulates the need for a supporting EIS to inform and guide the rezoning application. The Study Area for this EIS consists of all areas within 120 m of the two geodomes and their associated amenity space (see **Figure 1**), which includes most of the Subject Property and portions of abutting parcels to the north and south.

1.2 Study Purpose

The purpose of this EIS is to present a biophysical characterization of the Study Area as a means to assess for adverse effects on the natural environment and natural heritage features stemming from the previously constructed geodomes and ancillary uses. The scope and approach of this study address the reporting requirements of Policy 3.7 (Environmental Impact Studies) of the Township's OP, Policy 2.3.43 (Environmental Impact Studies) of the Regional OP, and Policy 3.2.5.6 of the Greenbelt Plan. It is understood that this report will form part of the rezoning application package to be submitted for consideration by the Township and Region. It is noted that Kawartha Conservation ("KRCA") previously expressed no concerns with the rezoning application as outlined in the September 2023 Pre-consultation Record.

2 APPROACH AND METHODS

This study is composed of five (5) discrete components which are bulleted below and further described in the following sections.

1. **Acquire background biophysical information and mapping** available for the local landscape surrounding the Study Area (see **Section 2.1**).
2. **Conduct a site assessment and ecological surveys** to field-verify the accuracy of the acquired background biophysical information and collect additional biophysical information as necessary (see **Section 2.2**).
3. **Assess the significance** of the biophysical information collected and natural features identified within the context of applicable natural heritage and environmental policies (see **Section 2.3**).
4. **Predict the effects** of the application on the identified significant natural features and natural environment, particularly the net effects once mitigation measures and technical recommendations are implemented (see **Section 2.4**).
5. **Determine whether the proposed application addresses applicable natural heritage and environmental policies** at municipal, provincial, and federal levels (see **Section 2.5**).

2.1 Background Biophysical Information Assessment

This study is supported by background biophysical information and mapping acquired and reviewed from a variety of sources which are listed below in **Table 1**.

Table 1. Background Biophysical Information Acquired and Reviewed.

Type of Information Acquired	Description
Ortho-rectified Aerial Photographs	• 1954, 2005, 2009, 2013, 2016, 2021.
Natural Feature Mapping	• Township of Scugog Official Plan (September 2017 Office Consolidation) Schedules A and E. • Regional Municipality of Durham Official Plan (May 2020 Office Consolidation) Schedules A and B. • Land Information Ontario (LIO) accessed via the "Make a Map: Natural Heritage Areas" web-based platform (last accessed 29 November 2023).

Type of Information Acquired	Description
	• Kawartha Region Conservation Authority (KRCA) regulation mapping (last accessed 29 November 2023).
Physiographic Resource Mapping and Datasets	• Topographic Survey of the Subject Property. • Ontario Base Mapping produced by MNR (1:10,000) with 5 m contours. • Provincial Digital Terrain Model (LiDAR-derived). • Ontario Well Records (publicly-available). • Soil Survey of Ontario County (Olding et al. 1956). • Agricultural Information Atlas (last accessed 29 November 2023). • Surficial Geology of Southern Ontario (Ontario Geological Survey 2010). • Physiography of Southern Ontario (Chapman and Putnam 1984).
Ecological Resource Mapping and Datasets	• Natural Heritage Information Centre (NHIC) database accessed via the "Make a Map: Natural Heritage Areas" web-based platform (squares: 17PJ6791, 17PJ6792, 17PJ6892, 17PJ6891, 17PJ6890, 17PJ6790, 17PJ6690, 17PJ6691, 17PJ6692 last accessed 29 November 2023). • Critical Habitat for SAR National Dataset (last accessed 29 November 2023). • iNaturalist "(NHIC) Rare species of Ontario" project (last accessed 29 November 2023). • Ontario Breeding Bird Atlas (OBBA) database and the Atlas of the Breeding Birds of Ontario, 2001–2005 (Cadman et al. 2007) (square: 17PJ69). • eBird (last accessed 29 November 2023). • iNaturalist "Herps of Ontario" project and Ontario Reptile & Amphibian Atlas (last accessed 29 November 2023). • Ontario Butterfly Atlas database (square: 17PJ69; last accessed 29 November 2023). • iNaturalist "Ontario Odonata" project (last accessed 29 November 2023). • Bumble Bee species distribution maps from iNaturalist and Bumble Bee Watch. • Aquatic Species at Risk Maps produced by Fisheries and Oceans Canada (last accessed 29 November 2023). • Atlas of the Mammals of Ontario (Dobbyn 2005).

2.2 Site Assessment and Surveys

The acquired background information per **Table 1** helped direct a site assessment carried out by Terrastory staff (C. Wegenschimmel) on 7 November 2023. The site assessment centred on characterizing the land use (e.g., historical development patterns, existing built features, land maintenance, etc.), physiographic (e.g., topography, drainage, surface water features, etc.), and ecological (e.g., vegetation, wildlife, habitats, etc.) conditions and features of the Study Area. All land-use, physiographic, and ecological information described for Adjacent Lands was collected from either current aerial photographs or observations from inside the Subject Property and/or publicly-accessible areas (e.g., rights-of-way, etc.). The locations and boundaries of significant natural features and/or habitats were recorded on-site with a high-accuracy GPS supported by representative photographs.

In addition to collecting general biophysical information, the following targeted assessments (i.e., feature- or species-specific surveys) were undertaken:

- **Vegetation Mapping according to Ecological Land Classification (ELC):** Vegetation communities on the Study Area were characterized and mapped according to Ecological Land Classification (Lee et al. 1998) and the 2008 update to the Vegetation Type List (Lee 2008). Vegetation communities were initially identified based on current aerial photographs and then verified and refined (as necessary) on-site. ELC mapping was scaled to the finest level of resolution deemed appropriate (i.e., either Ecosite or Vegetation Type). Vegetation communities mapped on Adjacent Lands were delineated predominantly via aerial photograph interpretation.
- **Natural Feature Boundaries:** Where wetlands were identified via ELC, their boundaries were delineated consistent with the "50% wetland vegetation rule" and presence of hydric soils per the procedures of the Ontario Wetland Evaluation System (OWES) (OMNRF 2014). It is noted that the wetland delineation was undertaken outside of the preferred season for mapping wetland boundaries; therefore, all wetland limits shown herein are considered approximate. Where forests/woodlands were identified via ELC, their boundaries were delineated based on the dripline. All wetlands and forests/woodlands mapped on Adjacent Lands were delineated via aerial photograph interpretation.
- **Vascular Plant Survey:** Vascular plants were recorded based on an area search ("wandering transects") within naturally-occurring (i.e., non-planted) or naturalizing areas of vegetation. Particular effort was paid to areas with the greatest potential to support significant vascular plants (i.e., designated Species at Risk, provincially rare, etc.) and areas with the greatest potential for impact based on the construction of the geodomes. Nomenclature and common names for the recorded vascular plant species are generally consistent with the Southern Ontario Vascular Plant Species List (Bradley 2013) except where a name change has more recently been adopted by NHIC. As the site assessment was conducted in November, which is outside of the primary growing season, the vascular plant species recorded represents a generalized portrait of plant assemblages which are expected to occur within the Study Area.

2.3 Significance Assessment

2.3.1 Definitions and Criteria

"Significant natural features" as described herein represent natural features and habitats that have recognized status (and therefore policy significance) within the planning jurisdiction in which a development application is proposed. Significant natural features are defined herein to include all Key Natural Heritage Features (KNHFs) and Key Hydrologic Features (KHFs) identified in section 3.2.5 of the Greenbelt Plan, namely:

- **Key Natural Heritage Features**
  - Habitat of Endangered and Threatened Species;
  - Fish Habitat;
  - Wetlands;
  - Life Science Areas of Natural and Scientific Interest (ANSIs);
  - Significant Valleylands;
  - Significant Woodlands;
  - Significant Wildlife Habitat;
  - Sand Barrens, Savannahs, and Tallgrass Prairies; and
  - Alvars.
- **Key Hydrologic Features**
  - Permanent or Intermittent Streams;
  - Lakes and their littoral zones;

- Seepage Areas and Springs; and
- Wetlands.

The presence or absence of the above KNHFs and KHFs is determined through application of the *Technical Definitions and Criteria for Key Natural Heritage Features in the Natural Heritage System of the Protected Countryside Area* (MNR 2012). Additional criteria for establishing presence/absence of certain KNHFs are also considered from the Natural Heritage Reference Manual (MNR 2010) and (for Significant Wildlife Habitat) the Ecoregion 6E Criteria Schedule (MNRF 2015).

Defining "significant natural features" pursuant to the Greenbelt Plan is considered warranted as such features are also captured under Section 2.1 of the Provincial Policy Statement (PPS) and form part of the Township and Regional Greenlands Systems.

Apart from Greenbelt Plan-derived significant natural features, this study also seeks to determine whether any natural features or hazards regulated by KRCA pursuant to O. Reg. 182/06 occur within the Study Area. KRCA regulated features and hazard lands include:

- Wetlands (significant, evaluated, or identified);
- Watercourses and their associated meanderbelts and floodplains;
- Valleylands;
- Steep slopes and other hazard lands; and
- Shorelines.

Like significant natural features, "significant species" represent individuals of wild species which have recognized status (and therefore policy significance) within the planning jurisdiction in which an application is proposed. Significant species are defined herein to include:

- Species designated Endangered, Threatened, or Special Concern under O. Reg. 230/08 pursuant to the provincial *Endangered Species Act, 2007*.
- Species designated Provincially Rare (i.e., S1, S2, or S3) by NHIC.

2.3.2 Determination

After collecting the background biophysical information and conducting the site assessment, the data was interpreted to determine whether any significant natural features (i.e., KNHFs and KHFs), natural features/hazards regulated by KRCA, and/or significant species occur on the Study Area. If a natural feature or species met the significance criteria, it is considered "confirmed". If a natural feature or species may be present on the Study Area given the prevailing biophysical or habitat conditions but was not confirmed based on either background or site-specific biophysical data, it is considered potential or "candidate". Candidate significant natural features and species are treated as confirmed where no additional information is available.

2.4 Effects Assessment and Mitigation

The potential ecological effects of an application can be understood spatially as zones that radiate outward from the direct project footprint (e.g., building envelope, etc.) and associated areas of site alteration (e.g., grading, etc.). While the greatest potential for effects typically occurs within areas

directly subject to development or disturbance, surrounding areas may also be affected indirectly. Such indirect effects can include light or noise pollution that affects wildlife communities on Adjacent Lands, or degradation of water quality within a downstream receptor resulting from sediment runoff during construction.

The following five-pronged approach is employed herein to assess the effects of an application on significant natural features and species and (where warranted) the natural environment in general:

1. **Scope** the effects assessment to environmental components that warrant consideration. The effects assessment herein centres principally on significant natural features and species (i.e., those that have policy significance within the planning jurisdiction, as defined in **Section 2.3**) but may also consider general environmental effects where warranted.
2. **Identify the predicted direct and indirect effects** of the application on each significant natural feature or species during all project stages (i.e., pre- to -post-development) in the absence of mitigation. Direct effects are those where there is a cause-effect relationship between a proposed activity and an effect on a natural feature or species (e.g., tree clearance within a building footprint, etc.). Indirect effects result when an activity is linked to a direct effect through a chain of foreseeable interactions or steps.
3. **Evaluate the significance** of the predicted effects for each environmental component based on their attributes (i.e., spatial extent, magnitude, timing, frequency, and duration) and likelihood (i.e., high, medium, low).
4. Where the potential for negative effects are anticipated, **recommend ecologically-meaningful mitigation measures** to avoid such impacts first (where possible), and where impacts cannot be avoided to minimize, compensate, and/or enhance as appropriate.
5. **Identify the predicted residual or net effect**s of the application assuming implementation of all recommended mitigation measures.

Per step 4, mitigation measures are offered where the potential for negative effects are anticipated to a degree that cannot be supported given the prevailing policy context. Whenever possible, Terrastory works iteratively with the project team as a means to identify development plan options that avoid negative effects first; options that would minimize or mitigate such negative effects are less preferred and considered secondarily. In general, avoidance measures that have already been incorporated into the application or project design are not duplicated as technical recommendations herein. The effects assessment and any recommended mitigation measures are provided in **Section 5**.

2.5 Natural Heritage Policy Context

There is an overlapping municipal, provincial, and federal policy framework respecting the protection of natural heritage features and areas across southern Ontario. These requirements include objectives, policies, and directives which are principally contained in federal and provincial statutes, regulations, policy statements, Official Plans, and guidance documents. The overarching natural heritage policy framework directing development activities within the Study Area is outlined below in **Table 2**. A determination of whether the application considered herein addresses such policies is provided in **Section 6**.

Table 2. Applicable Natural Heritage Policies.

Level of Government	Natural Heritage or Environmental Policy Requirements
Municipal	Township of Scugog Official Plan (March September 2017 Office Consolidation) Durham Regional Official Plan (May 2020 Office Consolidation)
Provincial	Provincial Policy Statement 2020, pursuant to the *Planning Act*, R.S.O. 1990, c. P.13, including: • Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement, 2005 (MNR 2010). • Significant Wildlife Habitat Technical Guide (MNR 2000). • Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E (MNRF 2015). • Significant Wildlife Habitat Mitigation Support Tool (MNRF 2014). Greenbelt Plan 2017, pursuant to the *Greenbelt Act*, S.O. 2005, c. 1, including: • Technical Definitions and Criteria for Key Natural Heritage Features in the Natural Heritage System of the Protected Countryside. *Conservation Authorities Act*, R.S.O. 1990, c. C.27, including: • Ontario Regulation 182/06 – Kawartha Region Conservation Authority Development, Interference with Wetlands and Alterations to Shorelines and Watercourses Regulation. *Endangered Species Act* (ESA), S.O. 2007, c. 6, including: • Ontario Regulation 230/08 – Species at Risk in Ontario List • Ontario Regulation 242/08 – General • Ontario Regulation 832/21 – Habitat *Fish and Wildlife Conservation Act,* S.O. 1997, c. 41.
Federal	*Fisheries Act*, R.S.C. 1985, c. F-14, including: • Fish and Fish Habitat Protection Policy Statement (DFO 2019). *Migratory Birds Convention Act*, S.C. 1994, c. 22, including: • Migratory Birds Regulations, C.R.C., c. 1035.

3 EXISTING BIOPHYSICAL CONDITIONS

The following is a description of the biophysical features and conditions of the Study Area, which are shown spatially on **Figure 2**. Representative photographs are provided in **Appendix 1**.

3.1 Land-use and Landscape Setting

The Study Area is situated near the community of Scugog Centre north of the intersection of Demara Road and Island Road. Parcels immediately adjacent to the Subject Property are maintained for agricultural uses (mostly cash cropping) and often contain extensive natural features (woodland). A seasonal cottaging community at Scugog Landing near Lake Scugog occurs to the west.

3.2 Physical Setting

3.2.1 Surficial Geology and Soils

The Study Area is comprised of coarse sands and silts of nearshore and/or deltaic glaciolacustrine origin, which were laid down near the terminus of the previous glacial age (Ontario Geological

Survey 2010). Lake Scugog (along with the other "Kawartha Lakes") represents a glacial spillway, where erosive glacial meltwaters cut deep but narrow channels into the prevailing limestone bedrock as they flowed northward from the Oak Ridges Moraine. Lake Scugog was historically a shallow, sluggish, marshy waterbody; today, lake levels are artificially elevated and controlled, and the lake forms part of the Trent Severn Waterway.

A soil sample taken during the site assessment confirmed that underlying soils are primarily composed of sand. The main soil type on site is Dundonald Sandy Loam which is described as calcareous sand over a loam till. There may also be Brighton Sandy Loam towards the western end of the Study Area. Dundonald Sandy Loam is well drained and used for general farm crops. The soil is medium in fertility and prone to drought. If the soil is left bare, wind erosion can be very serious. Brighton Sandy Loam is composed of coarse sand and gravel. It is low in fertility, well drained, and prone to drought (Olding et al. 1956).

3.2.2 Topography and Drainage

As described in **Section 3.2.1**, the Study Area gradually slopes in a northwestern direction. Available topographic contours indicate a greater than 14 m topographic gradient between the topographic high in the northeast corner of the Study Area (274 m above sea level [mASL]) and topographic low in the northwest corner of the Study Area (~260 mASL). Overall, surface runoff is shed in a predominantly westerly to northwesterly direction based on the topographic contours.

There are two surface water drainage features present within the Study Area (see **Figure 2**). The northern drainage feature flows from Island Road into a swamp community (SWM1-1) west of the northern geodome. This drainage feature is overgrown with Common Buckthorn (*Rhamnus cathartica*) and no flow or standing water was observed during the November 2023 site assessment. No aquatic vegetation was observed within this feature; however, some water was documented near the surface of the ground in a hole near where it outlets into the wetland (swamp) at the western edge of the Study Area. The northern drainage feature lacks a discrete channel, and serves to concentrate surface runoff through a narrow and ill-defined trough.

The southern drainage feature appears to commence in a wetland east of Island Road, flowing westward beneath Island Road via culvert. No flow or standing water was observed within the southern drainage feature during the site assessment. Like the northern drainage feature, the southern drainage feature lacks channel definition through the wooded area.

3.3 **Ecological Setting**

3.3.1 Vegetation Communities

3.3.1.1 Terrestrial and Upland Habitats

The largest vegetation community in the Study Area by spatial extent is a Dry – Fresh White Cedar – Poplar Mixed Forest (FOMM4-2). Parts of this community are visible in air photos dating from 1954. The canopy is dominated by Eastern White Cedar (*Thuja occidentalis*), Trembling Aspen (*Populus tremuloides*) and Paper Birch (*Betula papyrifera*). Other species that occasionally occur within the canopy include White Ash (*Fraxinus americana*), Black Cherry (*Prunus serotina*), Northern Red Oak (*Quercus rubra*), and American Beech (*Fagus grandifolia*). The subcanopy was almost entirely composed of Eastern White Cedar with the occasional Paper Birch and Trembling Aspen. The understory is generally sparse with pockets of Allegheny Blackberry (*Rubus allegheniensis*), Alternate-leaved

Dogwood (*Cornus alternifolia*), and Common Buckthorn (*Rhamnus cathartica*). The ground layer is comprised of a mixture of tree seedlings with Spinulose Wood Fern (*Dryopteris carthusiana*), Evergreen Wood Fern (*Dryopteris intermedia*), Hooked Agrimony (*Agrimonia gryposepala*), and Herb-Robert (*Geranium robertianum*). Violets (*Viola* spp.*)* and Sedges (*Carex* spp.) were also common in the ground layer but could not be identified to species due to time of year.

Wooded areas adjacent to cedar-poplar forest in the northern half of the Study Area consist of a regenerating and immature Dry - Fresh Pine Coniferous Forest (FOC1). The canopy of this community consists primarily of non-native Scots Pine (*Pinus sylvestris*), with occasional Eastern White Pine (*Pinus strobus*), Norway Spruce (*Picea abies*), and White Spruce (*Picea glauca*). The subcanopy and understory of this community are largely comprised of Eastern White Cedar, Scots Pine, and to a much lesser extent Paper Birch saplings. Due to the density of the canopy and subcanopy the ground layer is sparsely vegetated with some Common Dandelion (*Taraxacum officinale*) and Tall Goldenrod (*Solidago altissima*), which are concentrated along the sunlit margins. Aerial photographs from 2005 indicate that this area was previously meadow with pockets of immature coniferous trees; the area has succeeded to young forest over the past 20 years or so.

East of the southern geodome and southeast of the residence is a Coniferous Savanna (SVC). The canopy of this vegetation community is composed of a sparse layer of Scots Pine. The subcanopy has a mix of Eastern White Cedar and Scots Pine with the occasional Paper Birch and Bebb's Willow (*Salix bebbiana*). Understory species include Common Buckthorn, Choke Cherry (*Prunus virginiana*), Cranberry Viburnum (*Viburnum opulus* ssp. *opulus*), and Tartarian Honeysuckle (*Lonicera tatarica*). Open areas were dominated by Tall Goldenrod, Smooth Brome (*Bromus inermis*), Kentucky Bluegrass (*Poa pratensis*), and Canada Bluegrass (*Poa compressa*).

Goldenrod Forb Meadow (MEFM1-1) occurs near the driveway entrance to the northern geodome. The ground layer is composed of Tall Goldenrod, Smooth Brome, New England Aster (*Symphyotrichum novae-angliae*), and Canada Bluegrass, with some scattered Scots Pine.

There are also two Fresh - Moist Poplar Deciduous Woodland (WODM5-1) communities within the Study Area. They are located southwest of the south geodome and southeast of the north geodome. These two communities appear to have a history of disturbance as the trees are young to mid-aged. Furthermore, both communities appear to be influenced by two drainage features which flow westward through them (see **Section 3.2.2** above). The canopy is composed of Trembling Aspen and Paper Birch with the occasional White Elm (*Ulmus americana*) and Green Ash (*F. pennsylvanica*). The understory is mainly dominated by Common Buckthorn with Green Ash, Trembling Aspen, and Paper Birch seedlings. Ground layer species include avens (*Geum* spp.), Tall Goldenrod, White Panicled Aster, and Wild Strawberry (*Fragaria virginiana*).

A Fresh - Moist White Cedar Coniferous Thicket (THCM2-1) community is located along the southern boundary of the Study Area. This community is almost entirely composed of young Eastern White Cedar with some dense patches of Common Buckthorn located along its eastern edge. A small Buckthorn Deciduous Shrub Thicket (THDM2-6) is located along the drainage feature directly south of the north geodome. This community is dominated by Common Buckthorn with the occasional Trembling Aspen and dead Green Ash present in the canopy.

3.3.1.2 Wetland Habitats

The smallest vegetation community with the Study Area is White Cedar - Hardwood Mineral Mixed Swamp (SWM1-1) located about 75 m west of the north geodome. This community is partially fed by the drainage feature in the north portion of the Study Area. This community has a canopy/subcanopy composed of young Eastern White Cedar, Green Ash, and Trembling Aspen, with some Black Ash (*Fraxinus nigra*). Occasional White Elm and Eastern Cottonwood (*Populus deltoides*) are also present in the canopy/subcanopy. The understory is composed of regenerating Green Ash, Black Ash, and Eastern White Cedar. Ground layer species include Field Horsetail (*Equisetum arvense*), Fowl Bluegrass (*Poa palustris*), Sensitive Fern (*Onoclea sensibilis*), and Spotted Jewelweed (*Impatiens capensis*).

A second wetland occurs within the upstream section of the southern drainage features adjacent to Island Road, which is dominated by Reed Canary Grass (*Phalaris arundinacea*), Redtop (*Agrostis gigantea*), and White Panicled Aster (*Symphyotrichum lanceolatum*).

3.3.2 Vascular Plants

A total of 71 vascular plant species were recorded within the Study Area (see **Appendix 2**). Of these, approximately 42 (59.2%) are considered native to Ontario and 29 (40.8%) are exotic.

Black Ash, which is listed as Endangered both provincially and federally, was documented within the White Cedar – Hardwood Mineral Mixed Swamp (SWM1-1). This species is discussed further in **Section 4.1.1**.

3.3.3 Incidental Wildlife Recorded

Wildlife documented incidentally by Terrastory during the November 2023 site assessment included:

- One amphibian species: Spring Peeper (*Pseudacris crucifer*).
- Sixteen bird species: American Robin (*Turdus migratorius*), Black-capped Chickadee (*Poecile atricapillus*), Blue Jay (*Cyanocitta cristata*), Cedar Waxwing (*Bombycilla cedrorum*), Common Raven (*Corvus corax*), Golden-crowned Kinglet (*Regulus satrapa*), Hairy Woodpecker (*Leuconotopicus villosus*), Dark-eyed Junco (*Junco hyemalis*), Northern Cardinal (*Cardinalis cardinalis*), Pileated Woodpecker (*Dryocopus pileatus*), Pine Siskin (*Spinus pinus*), Red-bellied Woodpecker (*Melanerpes carolinus*), Rusty Blackbird (*Euphagus carolinus*), and Wild Turkey (*Meleagris gallopavo*).
- Four mammal species: Gray Squirrel (*Sciurus carolinensis*), Red Squirrel (*Sciurus vulgaris*), Star-nosed Mole (*Condylura cristata*), and White-tailed Deer (*Odocoileus virginianus*).

Rusty Blackbird, which is listed as Special Concern per O. Reg. 230/08 under the ESA, is a species of conservation concern. This species breeds in the boreal forest; the individual documented would have been migrating through the Study Area to wintering grounds in the mid-Atlantic and/or midwestern United States.

4 SIGNIFICANCE ASSESSMENT

Based on the biophysical information collected during background information gathering (per **Table 1**) and the results of Terrastory's site assessment (per **Sections 2.2** and **3**), **Table 3** below provides a determination of the presence (or potential presence) of each significant natural feature considered herein. Shaded rows denote features which were confirmed or may be present within the Study Area and are considered further as part of the effects assessment in **Section 5**. Significant natural feature

mapping is provided in **Figure 3**. Features absent from the Study Area will not be affected by the geodomes and are not considered further herein unless further information is warranted.

Table 3. Summary of the Assessment of Significant Natural Features within the Study Area.

Significant Natural Feature	Status within the Study Area
Key Natural Heritage Features (KNHFs)	
Habitat of Endangered and Threatened Species (per ESA)	**Confirmed/Candidate**. See **Section 4.1**.
Fish Habitat (per *Fisheries Act*)	**Absent**.
Wetlands	**Confirmed**. See **Section 4.2.**
Life Science Areas of Natural and Scientific Interest	**Absent.**
Significant Valleylands	**Absent**.
Significant Woodlands	**Confirmed**. See **Section 4.3.**
Significant Wildlife Habitat	**Candidate**. See **Section 4.4.**
Sand Barrens, Savannahs, and Tallgrass Prairies	**Absent**.
Alvars	**Absent**.
Key Hydrologic Features (KHFs)	
Permanent or Intermittent Streams	**Absent**. See **Section 4.5**.
Lakes and their littoral zones	**Absent.**
Seepage Areas and Springs	**Absent.**
Wetlands	**Confirmed**. See **Section 4.2.**
Conservation Authority Regulated Features and Hazard Lands	
Wetlands, watercourses, valleylands, meanderbelts, floodplains, steep slopes, and shorelines.	**Confirmed.** See **Section 4.5**.

4.1 Habitat of Endangered and Threatened Species

An assessment of the likelihood that any Endangered and Threatened species or their habitats occur within the Study Area is provided in **Appendix 3**. A total of five Endangered or Threatened species are considered to have a possible likelihood of occurrence on the Study Area (or were confirmed) given their habitat associations and current distribution in southern Ontario:

1) Black Ash (*Fraxinus nigra*)
2) Little Brown Myotis (*Myotis lucifugus*)
3) Northern Myotis (*Myotis septentrionalis*)
4) Tri-colored Bat (*Perimyotis subflavus*)
5) Red-headed Woodpecker (*Melanerpes erythrocephalus*)

A general description of each Endangered/Threatened species and their habitat is offered below. An assessment of potential effects to these Endangered/Threatened species associated with the development is provided in **Section 5.2.1**.

4.1.1 Black Ash

Black Ash is designated as Endangered in Ontario per O. Reg. 230/08 pursuant to the ESA. In Ontario, Black Ash is predominantly found in wetlands but may also occur in moist woodlands, floodplains and riparian areas, seepages, and fens. Like most Ash species (*Fraxinus* spp.), Black Ash has been negatively impacted by larval feeding activities by Emerald Ash Borer (*Agrilus planipennis*).

Per O. Reg. 23/33, Sections 9 (1) and 10 (1) of the ESA – which prohibit killing, harming, possessing, transporting, etc. living or dead species and/or damaging or destroying their habitats – have been suspended until 26 January 2024. As such, the protections afforded Threatened and Endangered species under the ESA are currently not applicable to Black Ash. The Province is currently considering extending the temporary exemption for an additional year (i.e., until January 2025) per a regulatory proposal posted to the Environmental Registry of Ontario (ERO) on 18 September 2023. The ERO posting also proposes that a healthy Black Ash tree will be defined as one that *"appears to have survived exposure to Emerald Ash Borer, remains in a healthy condition ("lingering condition"), and has a trunk diameter at breast height of at least 8 cm"*. A decision on the ERO posting has not been made by the Province.

Per the assessment in **Appendix 3**, Black Ash were identified within the White Cedar - Hardwood Mineral Mixed Swamp (SWM1-1) west of the northern geodome. As the Black Ash trees are situated a considerable distance from the northern geodome and the species- and habitat-protection provisions of the ESA are not currently applicable to Black Ash.

4.1.2 Bats

Little Brown Myotis, Northern Myotis, and Tri-colored Bat are designated Endangered in Ontario per O. Reg. 230/08 pursuant to the ESA and are federally designated Endangered under Schedule 1 of the federal *Species at Risk Act* (SARA). Little Brown Myotis and Northern Myotis form maternity colonies that roost in large-diameter trees with cracks, crevices, and/or exfoliating bark; Little Brown Myotis will also frequently roost in buildings (e.g., attics, barns, etc.). Roosting sites for Tri-colored Bat maternity colonies are less understood but have been documented in dead or dying leaf clusters of oaks (*Quercus* spp.) and maples (*Acer* spp.), along with live foliage and buildings (Humphrey and Fotherby 2019). Individuals (i.e., non-reproductive females and males) of all three bat species may roost in smaller diameter trees and other spaces (e.g., beneath house siding, etc.) which are not occupied by maternity colonies. Overwintering habitat includes caves and mines that maintain temperatures above 0°C. White Nose Syndrome (a fungal disease caused by an introduced pathogen) has devastated populations of each species across their ranges. The fungus causes hibernating individuals to become dehydrated, leading to excessive arousal, depleted fat reserves, and ultimately emaciation and/or death.

Per the assessment in **Appendix 3**, Little Brown Myotis, Northern Myotis, and Tri-colored Bat have the potential to roost and forage within the Study Area. Habitat within the Study Area that has the highest probability of providing maternity roost habitat for endangered myotis species overlaps with the cedar-poplar forest (FOMM4-2) within the western half of the Study Area. This vegetation community represents the largest and oldest wooded area in the Study Area; aerial imagery from

1954 shows that much of this area was treed at that time. Other wooded areas within the Study Area, including the Dry - Fresh Pine Coniferous Forest (FOC1) where the northern geodome is located, are young and regenerating. Aerial imagery from 2005 shows that much of this area was meadow with patches of scattered, immature trees. Due to the age and species composition of the Dry - Fresh Pine Coniferous Forest (FOC1), tree cavities and other roosting sites (e.g., cracks, loose bark) are limited.

Much of the Study Area also provides generalized feeding habitat for bats.

4.1.3 Red-headed Woodpecker

Red-headed Woodpecker is designated as Endangered in Ontario per O. Reg. 230/08 pursuant to the ESA and is also listed as Threatened on Schedule 1 of the federal SARA. It is a medium sized bird (20 cm in length) that occurs in Canada and the United States. The Canadian breeding range of the species, which comprises approximately 6% of its global breeding distribution, extends to the southern portions of Saskatchewan, Manitoba, Ontario and Quebec. The species occurs in open deciduous forests and other sparsely treed habitats.

The primary stresses to the Canadian population of Red-headed Woodpecker consist of loss of nesting sites and degradation of suitable habitat (from a variety of sources, including residential and commercial development, annual and perennial non-timber crops, and logging and wood harvesting), as well as a reduction in its food supply (including reduced abundance and diversity of insects due to insecticide use in the agricultural sector, and reduced abundance of tree nuts due to non-native tree diseases). Other threats may include direct mortality from collisions with buildings, vehicles, utility towers, and power lines; competition with the introduced European Starling; and predation by the domesticated cat and native Cooper's Hawk and Sharp-Shinned Hawk.

The federal Recovery Strategy for the Red-Headed Woodpecker (Environment and Climate Change Canada 2021) provides direction for how critical habitat for this species should be delineated under SARA. Red-headed Woodpecker and its habitat is also protected provincially under the ESA.

Per the assessment in **Appendix 3**, portions of the Study Area having the highest probability of providing nesting habitat for Red-headed Woodpecker are restricted to the cedar-poplar forest (FOMM4-2). This vegetation community represents the largest and oldest wooded area in the Study Area, and imagery from 1954 shows that much of this area was treed at that time. Other wooded areas within the Study Area, including the Dry - Fresh Pine Coniferous Forest (FOC1) where the northern geodome is located, are young to regenerating. The coniferous forest generally lacks available larger-diameter trees with cavities; this habitat therefore contains limited suitability for nesting by Red-headed Woodpecker.

4.2 **Wetlands**

A cedar-hardwood mixed swamp (SWM1-1) was mapped by Terrastory in the northwestern portion of the Study Area (see **Figure 3**). This feature is located approximately 67 m to the west of the northern geodome. A second meadow marsh (MAMM1) wetland community is present where the southern drainage feature is conveyed onto the Subject Property from Island Road.

Both wetlands are sufficiently set back from the geodomes and their associated driveway entrances. The geodomes are low-intensity use structures and alterations to the landscape (and associated water

balance) associated with their construction was minor. On this basis, the potential for impacts to the wetlands during construction of the geodomes is considered negligible and are not considered further herein.

4.3 Significant Woodlands

"Significant Woodlands" are defined under the Greenbelt Plan consistent with the PPS definition:

> **Woodlands:** Means treed areas that provide environmental and economic benefits to both the private landowner and the general public, such as erosion prevention, hydrologic and nutrient cycling, provision of clean air and the long-term storage of carbon, provision of wildlife habitat, outdoor recreational opportunities, and the sustainable harvest of a wide range of woodland products. Woodlands include treed areas, woodlots or forested areas and vary in their level of significance at the local, regional and provincial levels. Woodlands may be delineated according to the *Forestry Act* definition or the Province's Ecological Land Classification system definition for "forest" (Provincial Policy Statement, 2014).
>
> **Significant:**
>
> > b) in regard to woodlands, an area that is ecologically important in terms of features such as species composition, age of trees and stand history; functionally important due to its contribution to the broader landscape because of its location, size or due to the amount of forest cover in the planning area; or economically important due to site quality, species composition, or past management history. The Province (Ministry of Natural Resources and Forestry) identifies criteria relating to the forgoing.

The Township and Regional OPs provide similar technical definitions for the identification of "Woodlands" and "Significant Woodlands" as provided under the Greenbelt Plan.

Woodlands within the Study Area are identified as "Significant Forest Areas" per Schedule E (Environmental Features) of the Township's OP. Based on the criteria provided in the *Technical Definitions and Criteria for Key Natural Heritage Features in the Natural Heritage System of the Protected Countryside Area* (MNR 2012), the contiguous wooded area (comprised of forest and woodland communities) within the Study Area represents a "Significant Woodland" as it is greater than 10 ha in size.

An assessment of potential effects to the Significant Woodland associated with the development is provided in **Section 5.2.2**.

4.4 Significant Wildlife Habitat

An assessment of the likelihood that any candidate or confirmed SWH types occur within the Study Area is provided in **Appendix 4**. Based on the results of this assessment, seven SWH types are considered further through this study:

- Seasonal Concentration Areas of Animals
    1. Bat Maternity Colonies
    2. Reptile Hibernaculum
- Rare Vegetation Communities or Specialized Habitats for Wildlife

3. Old Growth Forest
4. Woodland Raptor Nesting Habitat
5. Amphibian Breeding Habitat (Woodland)
6. Woodland Area-Sensitive Bird Breeding Habitat

- Habitat of Species of Conservation Concern
    7. Special Concern and Rare Wildlife Species

Also based on this assessment, a total of seven Special Concern or provincially rare species are considered to have at least a possible likelihood of occurrence on the Study Area given their habitat associations and current distribution in southern Ontario:

1) Eastern Wood-pewee (*Contopus virens*)
2) Golden-winged Warbler (*Vermivora chrysoptera*)
3) Wood Thrush (*Hylocichla mustelina*)
4) American Bumble Bee (*Bombus pensylvanicus*)
5) Monarch (*Danaus plexippus*)
6) Yellow-banded Bumblebee (*Bombus terricola*)
7) Pringle's Coralroot (*Corallorhiza odontorhiza pringlei*)

An assessment of potential effects to the identified candidate SWH types and Special Concern/provincially rare species associated with the development is provided in **Section 5.2.3**.

4.5 Permanent and Intermittent Streams

"Permanent and intermittent streams" are defined by the Greenbelt Plan as follows:

> **Permanent stream:** Means a stream that continually flows in an average year.
>
> **Intermittent streams:** Means stream-related watercourses that contain water or are dry at times of the year that are more or less predictable, generally flowing during wet seasons of the year but not the entire year, and where the water table is above the stream bottom during parts of the year.

Both the northern and southern drainage features (see **Figure 2**) were found to lack flow (and standing water) during the November 2023 site assessment, and therefore would not be considered "Permanent Streams". Both drainage features also exhibited ill-defined channels, with flows broadly concentrated in a diffuse trough or low-point. Given the lack of channel definition, neither drainage feature is appropriately considered an "Intermittent Stream".

4.6 Conservation Authority Regulated Areas

KRCA regulates development and site alteration (including fill placement and grade changes) within wetlands and within 30 m of "Other Wetlands" less than 2 hectares in size pursuant to clause 2(1)(c) and 2(1)(d) under O. Reg. 182/06.

5 EFFECTS ASSESSMENT AND MITIGATION

The purpose of this EIS is to present a biophysical characterization of the Study Area as a means to identify the potential for adverse effects on the natural environment and natural heritage features stemming from previous construction of the geodomes and related uses (e.g., driveway entrances).

Several significant natural features and species were documented (or may occur) within the Study Area pursuant to the assessments presented in **Section 4**.

The following post-facto effects assessment provides an evaluation of the potential for the previous development activities to have resulted in negative effects to such environmental components and offers technical recommendations to mitigate such effects where warranted. Certain technical recommendations offered herein apply to several natural features and/or species simultaneously; as such, all technical recommendations should be read and considered in their entirety. The baseline or existing conditions against which the application is assessed are treated as the state of the Study Area at the time of the site assessment. As the intent of this assessment is to also assess negative effects stemming from the already constructed geodomes consideration of conditions prior to their construction has also been included as part of this assessment to the extent possible. The effects assessment herein is based on the design drawings provided in **Appendix 5**.

5.1 Development Plan

Development and site alteration activities associated with previous construction of the geodomes consisted of the following elements:

- Site preparation, including clearance of vegetation within the proposed driveway and development envelopes;
- Installation of two separate entrances from Island Road, and construction of gravel and/or compacted dirt driveways to access the geodomes;
- Construction of the geodomes and associated decking;
- Installation of pit privies (Class 1 sewage system) for both geodomes and outdoor showers;
- Installation of electrical servicing to the geodomes from the existing residence; and,
- Establishment of amenities in close proximity to the geodomes (e.g., fire pit, manicured grass).

The only new development feature proposed is the installation of a Class 2 greywater system to control and manage water from the outdoor showers at each geodome. The greywater system was requested by Durham Region, with building permits issued on 12 December 2023.

Portions of the driveway allowing vehicular access to the northern geodome (see **Appendix 6**) overlapped with an informal and open access route and trail network that existed prior to the construction. Aligning the driveway through this previous access route allowed the Applicant to minimize necessary tree and vegetation removal. Much of the driveway for the southern geodome also overlapped with a previously existing informal trail. The creation and maintenance of these trails are referenced within the Stewardship Plan that was prepared for the Applicants as part of a Managed Forest Plan which secured enrollment into the Managed Forest Tax Incentive Program (MFTIP). It is further emphasized that both geodomes were constructed within areas of young, regenerating trees (northern geodome) or semi-open areas (southern geodome), outside of the mature and higher functioning cedar-poplar mixed forest to the west. The result was that development was restricted from the more ecologically significant and sensitive habitats within the Subject Property.

As described in the Planning Justification Report (PJR) by Thorstone Consulting Services, the concept of geodome use – commonly known as "glamping" – is relatively new to Ontario and is not well defined in policy documents. The PJR identifies the existing small-scale camping operation as

an "accessory use" to the principal residential use of the Subject Property. It also identifies the use as a Home Industry, which is permitted along with single-detached dwellings within the Agricultural designation, with site-specific provisions that describe the existing use which is akin to a Bed and Breakfast. The draft Zoning Schedule that accompanies the PJR proposes to rezone the entirety of the Subject Property (beyond the existing residential area) to a site-specific EP zone that permits a maximum of two all-season geodesic dome structures as a Home Industry (accessory to the principal rural residential use).

Given the foregoing, a post-facto effects assessment associated with construction of the geodomes is provided below.

5.2 Feature-based Effects Assessment and Technical Recommendations

5.2.1 Habitat of Endangered and Threatened Species

Per the assessment in **Appendix 4**, a total of five (5) Endangered or Threatened species are considered to have a possible likelihood of occurrence within the Study Area given their habitat associations and current distribution in southern Ontario:

1) Black Ash (*Fraxinus nigra*)
2) Little Brown Myotis (*Myotis lucifugus*)
3) Northern Myotis (*Myotis septentrionalis*)
4) Red-headed Woodpecker (*Melanerpes erythrocephalus*)
5) Tri-colored Bat (*Perimyotis subflavus*)

As the Black Ash trees are situated a considerable distance from the northern geodome and the species- and habitat-protection provisions of the ESA are not currently applicable to Black Ash, this species is not considered further herein.

5.2.1.1 Endangered Bats

Tree removals to accommodate the northern geodome were limited to an immature, Scot's Pine dominated, regenerating forest; aerial imagery from 2005 shows this area as meadow with scattered groupings of small trees (see **Appendix 6**). Tree removals to accommodate the southern geodome were generally limited to scattered trees within a Coniferous Savannah (SVC). Given the lack of large-diameter trees with cavities and/or cracks and loose bark, the limited removal of trees from the aforementioned communities and low-intensity uses associated with the geodomes is not expected to have adversely affected roosting or feeding habitat for Little Brown Myotis or Northern Myotis bats. Tri-colored Bat roosts in mature maple and oak trees; thus, the geodomes do not overlap with this species' habitat.

The Study Area still provides generalized roosting and feeding habitat for Endangered Bats which may be occupied periodically. The following measures are recommended to minimize the potential for impacts to Endangered bats during use of the geodomes :

- **Any lighting incorporated into the geodomes and related amenity space must be "dark sky friendly" and directed downward (i.e., towards the ground) to the extent practicable.**

5.2.1.2 Red-headed Woodpecker

The northern and southern geodomes generally do not overlap with potential nesting habitat for Red-headed Woodpecker due to the immature conditions of trees within these areas. Notwithstanding this, the more mature cedar-poplar mixed forest to the west has greater potential to support Red-headed Woodpecker nesting, and is situated in relatively close proximity to both geodomes. Implementation of other overlapping mitigation measures recommended herein, including those offered in **Sections 5.2.1** and **5.2.4**, are considered sufficient to protect Red-headed Woodpecker within the Subject Property.

5.2.2 Significant Woodlands

Where development and/or site alteration activities occur within or adjacent to forests or woodlands, adverse effects may occur via the following pathways:

- Direct vegetation removal (e.g., trees, shrubs, herbaceous vegetation), resulting in loss of woodland area and functions (e.g., wildlife habitat, carbon sequestration, runoff attenuation).
- Exposure of the woodland edge to new biophysical conditions following direct vegetation removal (i.e., edge effects), which may modify the prevailing light regime (e.g., increasing the potential for sunscald injuries to woody vegetation), wind regime (e.g., increasing the potential for windthrow and/or structural concerns due to greater wind velocities), and/or moisture regime.
- Mechanical injury to the trunk, roots, branches, and/or foliage of retained woody vegetation.
- Smothering or exposure of roots due to changes in grade.
- Soil compaction from the use of heavy machinery.
- Noise and/or light pollution that may adversely affect the ability of woodland wildlife to successfully carry out their life processes (e.g., breeding, feeding, etc.).
- Increased human activity (i.e., encroachment) within or adjacent to the woodland which may result in soil compaction, dumping, etc.
- Increased susceptibility to establishment by invasive species either directly or indirectly and including both animals and plants.

Approximately 0.050 ha. (0.12 ac.) of the Dry – Fresh Pine Coniferous Forest (FOC1) was removed to accommodate construction of the northern geodome and driveway (outside of the previously-existing informal access route). The forest community surrounding the northern geodome is young (having regenerated over the past 20 years), dominated by the invasive Scots Pine, and occurs outside of the mature poplar-cedar mixed forest to the west. Overall, the coniferous forest surrounding the northern geodome is neither considered a sensitive nor high-functioning feature. The southern geodome is situated beyond the limits of the Significant Woodland though is situated within the buffer.

As the geodomes are already constructed, mitigation measures must focus on loss of woodland area and function (rather than . The following measures are recommended:

- **The area of woodland removed during construction of the northern geodome will be replaced with an equivalent area through cessation of mowing and native tree planting in the areas shown on Figure 3.**

- **Additional native tree plantings will be installed within the manicured grass areas surrounding the geodomes as noted on Figure 3.**

- **A Woodland Enhancement Plan will be prepared as part of a future Site Plan Application and is to include the following components (minimum):**

    - **Confirmation that mowing will cease and native trees will be planted in the areas indicated on Figure 3.**

    - **A detailed planting plan consisting of native trees with specifications and notes related to species composition, sizing, densities, etc.**

    - **A Verification and Monitoring Plan for the compensatory trees to demonstrate that the plantings were installed consistent with the Plan requirements and are in good condition for the duration of the monitoring period.**

    - **Installation of (2) replacement bat roosting structures ("Bat Rocket Boxes") within the Subject Property.**

As described in **Section 5.1**, the only new development feature proposed is the installation of a Class 2 greywater system to control and manage water from the outdoor showers at each geodome. The greywater system was requested by Durham Region, with building permits issued on 12 December 2023. The following measure is recommended in relation to siting the greywater pits:

- **The Class 2 greywater system will be located within the existing development envelope and amenity space surrounding the geodomes.**

- **In the event that a tree (or small number of trees) require removal to install the Class 2 greywater system, necessary tree removals will be completed outside the primary bird nesting and bat activity periods (i.e., to be completed between October 1 and March 31). If limited tree removal is required during this period, a survey will be conducted by a qualified Ecologist within two (2) days of the commencement of tree removal activities to determine habitat suitability and/or confirm the presence/absence of nesting birds and roosting bats.**

5.2.3 Significant Wildlife Habitat

Per the assessment in **Section 4.4**, a total of seven candidate SWH types were considered further through this study:

- Seasonal Concentration Areas of Animals
    1. Bat Maternity Colonies
    2. Reptile Hibernaculum
- Rare Vegetation Communities or Specialized Habitats for Wildlife
    3. Old Growth Forest

4. Woodland Raptor Nesting Habitat
5. Amphibian Breeding Habitat (Woodland)
6. Woodland Area-Sensitive Bird Breeding Habitat

- Habitat of Species of Conservation Concern
    7. Special Concern and Rare Wildlife Species

Also based on this assessment, a total of seven Special Concern or provincially rare species have at least a possible likelihood of occurrence on the Subject Property given their habitat associations and current distribution in southern Ontario (or were confirmed based on the site assessment):

1) Eastern Wood-pewee (*Contopus virens*)
2) Golden-winged Warbler (*Vermivora chrysoptera*)
3) Wood Thrush (*Hylocichla mustelina*)
4) American Bumble Bee (*Bombus pensylvanicus*)
5) Monarch (*Danaus plexippus*)
6) Yellow-banded Bumblebee (*Bombus terricola*)
7) Pringle's Coralroot (*Corallorhiza odontorhiza pringlei*)

As discussed in **Appendix 4**, given the limited nature of development associated with the construction of the geodomes and condition of the areas in which they were built (i.e., young to mid-aged regenerating habitats with an abundance of non-native species), it unlikely that the construction of the geodomes has adversely affected candidate SWH types occurring within the site. Recreational uses of the geodomes and associated areas are light and often restricted to weekends. As discussed in **Section 5.1**, access driveways to the geodomes followed informal access routes that already existed. Implementation of the overlapping mitigation measures identified in **Sections 5.2.1**, **5.2.2**, and **5.2.4** will demonstrate no net loss or functional impairment to candidate SWH types occurring on-site.

5.2.4 Other Natural Environment Considerations

To further minimize potential adverse effects to the natural environment and breeding birds associated with the light recreational uses associated with the geodomes, the following measures are recommended:

- **No additional removal of trees or naturalized vegetation will occur surrounding the geodomes except where such removals address hazardous trees that pose an unacceptable risk to human life or property.**

- **No expansion of existing manicured grass surrounding the geodomes will occur, while native tree species will be installed within the manicured grass to establish an overarching tree canopy.**

- **Incorporation of Bird-Friendly Guidelines into the existing geodomes design such as those published in City of Toronto's "Best Practices for Bird-Friendly Glass" (e.g. installation of window film) and "Best Practices for Effective Lighting" (e.g. dark sky compliant fixtures) should be implemented where possible.**

- **Any additional trees or landscaping surrounding the geodomes should consist exclusive of species native to the local landscape.**

5.2.5 Summary of Technical Recommendations

All technical recommendations provided in **Section 5.2** are reiterated in **Appendix 7**.

6 APPLICABLE NATURAL HERITAGE AND ENVIRONMENTAL POLICIES

The following sections summarize the various municipal, provincial, and federal environmental policies that may apply to the proposed development plan and describe how the recommendations provided in this EIS will address these policies (where applicable).

6.1 Township of Scugog Official Plan (office consolidation September 2017)

The Township's OP is a legal document prepared as required under section 14.7(3) of the *Planning Act*. An OP sets out goals, objectives, and policies that direct and manage land-use and future development activities and their effects on the social and natural environment of a municipality. Provincial plans that offer direction on matters of provincial interest are implemented principally through the Township's OP. Provided herein is a description of relevant environmental and natural heritage policies contained within the Township's OP and an assessment of whether the applications addresses such policies.

The Subject Property contains portions of the Township's "Rural System" and "Greenlands System" per Schedule A (Rural Land Use) of the Township's OP, including "Agricultural", "Natural Core Area" and "Natural Linkage Area" designations. The "Natural Core Area" designation generally algins with the wooded portions of the Subject Property and has a configuration similar to the boundaries of the Greenbelt NHS. The "Natural Linkage Area" designation appears to represent a 120 m buffer zone surrounding the "Natural Core Area". Per Schedule E (Environmental Features) of the Township's OP, woodlands within the Subject Property represent "Significant Forest Areas". Schedule E further indicates the Greenbelt NHS extending through the western portion of the Subject Property.

The Township's Greenlands System policies are outlined in Section 6 of their OP. A summarized and condensed list of key natural heritage provisions of the Township's OP that pertain to the applications considered herein is provided below.

- **Policy 6** identifies that the Greenlands System includes "Natural Core Area" and "Natural Linkage Area" designations within the Greenbelt Plan area.
- **Policy 6.2 f)** states that development will not be approved where an EIS, Natural Heritage Evaluation or Hydrological Evaluation identifies unacceptable negative impacts on the natural heritage system. Policy 6.2f) further establishes that an EIS may identify a Vegetation Protection Zone (VPZ) which:
    - Is of sufficient width to protect the KNHF or KHF and its functions from the impacts of the proposed change and associated activities that may occur before, during and after construction, and where possible, restore or enhance the feature and/or its functions, and

    - Is a minimum of 30 m wide and is established to achieve and maintained as natural self-sustaining vegetation.
- **Policy 6.3** identifies that the "Natural Core Area" designation is comprised of the following KNHFs and KHFs:
    - Significant habitat of Endangered species, Threatened species, and Special Concern species;
    - Fish habitat;
    - Wetlands;
    - Life Science ANSIs;
    - Significant Valleylands;
    - Significant Woodlands;
    - SWH;
    - Sand barrens, savannahs and tall grass prairies, and alvars;
    - Permanent and intermittent streams;
    - Lakes;
    - Seepage areas, springs, and wetlands; and
    - A minimum 30 m VPZ around these features.
- **Policy 6.3.1** identifies the objectives of the "Natural Core Area" designation, which are to:
    - Prohibit development and site alteration within a KNHF, KHF, and their related VPZ.
    - Preserve and maintain the environmental features and functions of the vegetative protective buffer area.
- **Policy 6.3.2** lists permitted uses within the "Natural Core Area" designation, which includes single-detached dwellings and accessory uses on existing lots of record if it is demonstrated that:
    - There is no alternative, and the expansion, alteration or establishment is directed away from the feature to the maximum extent possible; and
    - The impact of the expansion or alteration on the feature and its functions is minimized to the maximum extent possible.
- **Policy 6.4** clarifies that the "Natural Linkage Area" designation applies to lands located in the Greenbelt that form a vegetative buffer zone for KNHFs in the Natural Heritage System.
- **Policy 6.4.1** lists the objectives of the Natural Linkage Area designation, which are to:
    - Preserve and maintain the environmental features and functions of the linkages;
    - Continue with stewardship, remediation, and appropriate park and trail initiatives which maintain and enhance the ecological features and functions found in these linkages; and
    - Prohibit development within other significant natural heritage and hydrologic features unless it is demonstrated through an EIS approved by the Township and Region in consultation with the appropriate Conservation Authority that there will be no negative impacts on the feature or their related ecological functions.
- **Policy 6.4.2** lists permitted uses within the Natural Linkage Area designation, which includes single-detached dwellings and accessory uses on existing lots of records if it is demonstrated that:
    - There is no alternative and the expansion, alteration or establishment is directed away from the feature to the maximum extent possible; and

    - The impact of the expansion or alteration on the feature and its functions is minimized to the maximum extent possible.
- **Policy 6.5 a)** clarifies that all existing uses lawfully used in the Greenlands System within the Greenbelt prior to the Greenbelt Plan coming into effect are permitted to continue to exist.
- **Policy 6.5 c)** clarifies that expansion to existing buildings and structures, accessory structures and uses and/or conversions of legally existing uses are permitted subject to no new municipal servicing being required and the use does not expand into a KNHF or KHF.

Terrastory reviewed the potential for impacts to the identified significant natural features – including potential and confirmed habitat for Endangered and Threatened Species, Wetlands, Significant Woodlands, and Candidate SWH – in **Section 5.2** of this EIS.

As noted in **Section 5.1**, the supporting planning report by Thorstone sees the existing small-scale, camping operation (i.e., geodomes) as an accessory use to the principal residential use. It also identifies the use as a Home Industry, which is permitted along with single-detached dwellings on existing lots of record. Policy 6.3.2 of the Township's OP permits accessory uses within the "Core Natural Area" designation associated with single-detached dwellings on existing lots of records where there is no alternative, the establishment is directed away from the features to the extent possible, and the impact of the expansion or alteration on the feature and its functions is minimized to the extent possible.

The geodomes were constructed within (northern geodome) or adjacent to (southern geodome) a Significant Woodland, which is considered a KNHF under the Township OP (and Greenbelt Plan). Notwithstanding this, the age (young, regenerating) and composition (i.e., dominated by the invasive Scots Pine) of the Significant Woodland surrounding the northern geodome are such that minor development and associated low-intensity "glamping" uses are not expected to engender functional impairment to the woodland or its habitats. Other factors substantiating this determination are described in **Section 5.1**, such as the fact that the driveways to the geodomes were aligned though existing, open access routes and trails. This determination further relies upon the fact that an equivalent amount of wooded area removed to construct the northern geodome will be replaced through the cessation of routine maintenance (grass mowing) and installation of native tree plantings, along with other technical recommendations summarized in **Appendix 7**. No further development is proposed or permitted given that the draft Zoning Schedule seeks to rezone the entire Subject Property (outside of the existing residential area) as a site-specific EP zone. The Subject Property will continue to naturalize (facilitated by the proposed EP zoning), eventually resulting in expansion of the Significant Woodland eastward to Island Road over the next few decades.

Given the foregoing and implementation of all recommended mitigation measures (summarized in **Appendix 7**), it is concluded that the development meets the spirit and intent of the natural heritage protection provisions of the Township's OP.

6.2 Durham Region Official Plan (May 2020 office consolidation)

A summarized and condensed list of key provisions from Durham Region's OP that pertain to the protection of natural heritage features and areas are provided below.

- **Policy 2.1** identifies some of the goals for the Region's natural environment, which includes:

  - To ensure the preservation, conservation and enhancement of the Region's natural environment for its valuable ecological functions and for the enjoyment of the Region's residents.
- **Policy 2.2.1** states that in the planning and development of the Region, the natural environment, which includes the Greenbelt Natural Heritage System and KNHF and KHFs, shall be given paramount consideration in light of their ecological functions and scientific, educational and health values.
- **Policy 2.2.2** states that in the planning and development of the Region the cumulative impact on the environment shall be taken into account matters such as, but not limited to, the capacity of the natural environment to accommodate development, particularly ground and surface water resources, the maintenance of connected natural systems, and the impacts on environmental features and functions.
- **Policy 2.2.3** requires woodlands, wetlands and peat bogs to be protected and managed to provide environmental, recreational, and economic benefits to the Region.
- **Policy 2.3.13** identifies that the Greenbelt Natural Heritage System is shown on Schedule B – Map B1 of the Region's OP.
- **Policy 2.3.14** identifies that the general location of KNHFs and KHFs is shown on Schedule B Map B1 of the Region's OP. It also states that the location and extent of KNHFs and KHFs may be confirmed through appropriate studies (e.g. an EIS) in accordance with Policy 2.3.43.
- **Policy 2.3.15** states that development or site alteration is not permitted in KNHFs and/or KHFs, including any associated VPZs, with a few exceptions that includes minor recreation uses such as trails, footbridges, picnic facilities, and existing uses.
- **Policy 2.3.17** identifies that outside of Urban Areas and Rural Settlements, an EIS, in accordance with Policy 2.3.43 of the Region OP, is required for any development or site alteration within 120 m of a KNHF or KHF to identify a VPZ which:
  - Is of sufficient width to protect the feature and its function from the impacts of the proposed changes and associated activities that may occur before, during and after construction.
  - Where possible, will restore or enhance the feature and/or its function; and
  - Will maintain natural self-sustaining vegetation.
- **Policy 2.3.17** also requires the VPZ for wetlands, seepages areas and springs, fish habitat, permanent and intermittent streams, lakes, and significant woodlands to be a minimum of 30 m wide, as measured from the outside boundary of the feature.
- **Policy 2.3.19** identifies that the Region will, in cooperation with area municipalities, conservation authorities and other agencies having jurisdiction, participate in managing the woodlands in the Region. It lists several ways it will work to do this including:
  - Requiring studies to be carried out on the impact of development on significant woodlands, in accordance with Policy 2.3.43 of it's OP.
  - Encouraging landowners to take advantage of programs of the MNRF and conservation authorities in the management of forests and woodlots.
- **Policy 2.3.43** identifies that any proposal for development or site alteration in proximity to KNHFs or KHFs shall be required to include an EIS as part of the application. It identifies that the EIS may be reviewed by subject to a peer review at the Applicant's expense and lists the topics that it should address.
- **Policy 10.** identifies some of the goals of the Greenlands System, which includes:

  - To protect significant habitats of plants, fish and wildlife within natural, built and cultural environments.
  - To provide opportunities for a variety of compatible recreational activities.
  - To protect the ecological and hydrological features and functions of the Greenbelt Protected Countryside
- **Policy 10.2.1** states that Regional Council shall, in cooperation with the Provincial Government, the area municipalities and conservation authorities, make every effort to preserve the ecological benefits and biodiversity of the Greenlands System including groundwater resources, air purification, habitats for plants, fish and wildlife, flood and erosion control, and scenic and recreational values.
- **Policy 10.2.4** states that prior to the consideration of any development proposals in the Greenlands System, the proponent shall provide evidence that the proposal is, and has been designed in keeping with the intent of Policy 10.2.1.
- **Policy 10.2.5** identifies that in the event that portions of KNHF or KHFs are damaged or destroyed by unauthorized development or site alteration, these areas and the ecological features, functions and/or landform will continue to be subject to all the relevant KNHF or KHF policies of Sections 2.3 and 10 A of the Regional OP.

Durham Region's natural heritage policies are generally consistent with the Township's policies as described in **Section 6.1**.

Policy 2.3.15 (referenced above) permits the construction of trails, footbridges, and picnic facilities within KNHFs and their associated VPZs. It is highlighted that the construction and uses associated with the geodomes would appear to be broadly similar to that of a pavilion associated with a picnic facility. The Regional OP further offers a policy framework highlighting the protection of the natural environment while balancing enjoyment of the natural environment by Durham residents (Policy 2.1) and the provision of recreational and economic benefits to the Region (Policy 2.2.3).

Consistent with the conformity assessment provided in relation to the Township's OP above (see **Section 6.1**), it is concluded that the development meets the spirit and intent of the natural heritage protection provisions of the Regional OP.

6.3 Provincial Policy Statement 2020, pursuant to the *Planning Act*, R.S.O. 1990, c. P. 13

The Provincial Policy Study (PPS) is promulgated under the authority of the *Planning Act* and came into effect on 1 May 2020. The PPS provides direction to municipalities on land-use matters of provincial interest and sets the policy framework for regulating the use and development of land. Municipal OP's must be consistent with the PPS. Per its preamble, the PPS *provides for appropriate development while protecting resources of provincial interest, public health and safety, and the quality of the natural and built environment*.

The principal PPS policies that apply to natural heritage protection are outlined in section 2.1. While recognizing that the natural heritage protection framework is not intended to limit the ability of agricultural uses to continue (Policy 2.1.9), the PPS instructs that *natural features and areas shall be protected for the long term* (Policy 2.1.1) and that their diversity and connectivity be *maintained, restored or, where possible, improved* (Policy 2.1.2). In Ecoregions 6E the PPS separates significant features into three categories:

1) Those in which development and site alteration are not permitted, including 1) Provincially Significant Wetlands and 2) Significant Coastal Wetlands (Policy 2.1.4);
2) Those in which development and site alteration are not permitted unless it can be demonstrated that no negative impacts on the significant natural feature and/or its functions will occur, including: 1) Significant Woodlands, 2) Significant Valleylands, 3) Significant Wildlife Habitat, 4) Significant Areas of Natural and Scientific Interest, 5) Non-significant Coastal wetlands, and 6) Adjacent Lands (Policy 2.1.5 and 2.1.8).
3) Those in which development and site alteration are not permitted except in accordance with federal/provincial requirements, including: 1) fish habitat (Policy 2.1.6) and 2) habitat of Endangered and Threatened Species (Policy 2.1.7).

In considering the aforementioned PPS policies, it has been determined that the proposed development plan addresses relevant natural heritage provisions of the PPS for the following reasons:

- Per **Table 3** of this report, no Significant Areas of Natural or Scientific Interest, Fish Habitat, or Significant Valleylands are present within the Study Area.
- Per **Section 5.2** of this report, no negative impacts to the Significant Woodlands or candidate Significant Wildlife Habitat are anticipated to have resulted from the development provided that the mitigation measures recommended through this study are implemented in full.
- Per **Section 5.2** of this report, Endangered/Threatened species habitat will be protected in accordance with provincial and federal requirements.

6.4 Greenbelt Plan 2017, pursuant to the *Greenbelt Act*, S.O. 2005, c. 1

The Greenbelt Plan guides development in the Golden Horseshoe region by identifying areas where development is most suitable. There are four general land-use designations provided by the Plan: 1) Oak Ridges Moraine, 2) Niagara Escarpment, 3) Parkway Belt West, and 4) Protected Countryside. The Study Area is situated within the Protected Countryside, which itself contains three types of land-use policies: 1) Agricultural System, 2) Natural System, and 3) Settlement Areas.

The Study Area is located within the Protected Countryside of the Greenbelt Plan, whereas the Greenbelt NHS overlaps with the western portions of the Study Area (including both geodome locations). Relevant policies pertaining to development applications within the NHS are found in policy 3.2.2 of the Greenbelt Plan. Policy 3.2.2.3 requires that *"new development or site alteration within the Natural Heritage System*" must demonstrate the following:

a) There will be no negative effects on key natural heritage features or key hydrologic features or their functions;
b) Connectivity between key natural heritage features and key hydrologic features is maintained, or where possible, enhanced for the movement of native plants and animals across the landscape;
c) The removal of other natural features not identified as key natural heritage features and key hydrologic features should be avoided. Such features should be incorporated into the planning and design of the proposed use wherever possible; and
d) *The disturbed area of any site does not exceed 25 percent, and the impervious surface does not exceed 10 percent, of the total developable area, except for uses described in and governed by sections 4.1.2 and 4.3.2.*

Policy 3.2.5.1 prohibits development and site alteration within KNHFs and KHFs, including their minimum VPZs, save and except for certain uses. Notwithstanding this, Policy 4.5.4 allows for expansions to existing buildings and structures, accessory structures and uses which bring the use into greater conformity with the Greenbelt Plan subject to demonstration that:

a) *Notwithstanding section 4.2.2.2, new municipal services are not required; and*
b) *The use does not expand into key natural heritage features or key hydrologic features or their associated vegetation protection zones, unless there is no other alternative, in which case any expansion shall be limited in scope and kept within close geographical proximity to the existing structure.*

As noted in **Section 5.1**, the supporting planning report by Thorstone sees the existing small-scale, camping operation (i.e., geodomes) as an accessory use to the principal residential use. The planning report also identifies the use as a Home Industry, which is permitted along with single-detached dwellings on existing lots of record.

The geodomes were constructed within (northern geodome) or adjacent to (southern geodome) a Significant Woodland, which is considered a KNHF under Greenbelt Plan. Development and site alteration generally prohibited in KNHFs in the Greenbelt NHS. Notwithstanding this, the following is emphasized:

- The geodomes are small structures used in a manner akin to short-term overnight camping via an RV or camper van.
- Driveway accesses to both geodomes were aligned through previously-existing open access routes and trails (see **Appendix 6**).
- The woodland surrounding the northern geodome is young and regenerating, having emerged over the past two decades following cessation of farming activities and being dominated by the invasive Scots Pine.
- The area of woodland removed to construct the northern geodome and associated driveway will be replaced with an equivalent amount of new woodland through the recommended Woodland Enhancement Plan (see **Figure 3**).
- Additional ecological enhancement measures will be specified through the aforementioned Woodland Enhancement Plan to be prepared at Site Plan Approval (e.g., installation of bat rocket boxes).
- No further development or site alteration activities will occur, and the entirety of the Subject Property will be rezoned to a site-specific EP zone (outside of the existing residential area).
- Establishment of an EP zone will facilitate continued succession of open portions of the Subject Property to woodland conditions, which will result in expansion of the Significant Woodland eastward to Island Road over time.

Given the foregoing and implementation of all recommended mitigation measures (summarized in **Appendix 7**), it has been determined that the development as constructed meets the spirit of the natural heritage provisions of the Greenbelt Plan.

6.5 Kawartha Region Conservation Authority Regulation 182/06 pursuant to the *Conservation Authorities Act*, R.S.O. 1990, c. C.27

KRCA regulates development and site alteration (including fill placement and grade changes) within wetlands and within 30 m of "Other Wetlands" less than 2 hectares in size pursuant to clause 2(1)(c) and 2(1)(d) under O. Reg. 182/06. KRCA previously expressed no concerns with the rezoning application as noted in the September 2023 Pre-consultation Record.

6.6 Provincial *Endangered Species Act*, S.O. 2007, c. 6

The *Endangered Species Act* (ESA) is administered by MECP and protects designated Endangered and Threatened species in Ontario from being killed, harmed, or harassed (s. 9) or having their habitat damaged or destroyed (s. 10). The protection afforded to Endangered and Threatened species "habitat" is either prescribed by O. Reg. 832/21, or (for those species that lack regulated habitat) is defined as *an area on which the species depends, directly or indirectly, to carry on its life processes, including life processes such as reproduction, rearing, hibernation, migration or feeding.* Development activities that constitute habitat damage and/or destruction typically require permitting under section 17 of the ESA, or proceed through registration of the activity as a conditional exemption under O. Reg. 242/08 or O. Reg. 830/21 (where applicable).

A detailed assessment of potential and confirmed Endangered and Threatened habitat within the Subject Property is provided in **Appendix 4**. Per this assessment, and provided that relevant technical recommendations outlined in **Section 5.2** are implemented in full, it has been determined that the development is consistent with the species and habitat protection provisions of the ESA.

6.7 Federal *Fisheries Act*, R.S.C. 1985, c. F-14

The amended federal *Fisheries Act* (Bill C-68) received Royal Assent in June 2019 while the updated fish and fish habitat protection provisions came into force in August 2019. Subsection 34.4(1) of the amended *Fisheries Act* prohibits all work, undertaking, or activity from causing the death of fish (other than fishing). Subsection 35(1) requires that project activities not result in the "*harmful alteration, disruption or destruction of fish habitat*" (HADD) unless undertaken in accordance with the requirements of a statutory exemption per subsection 35(2). Based on the Fish and Fish Habitat Protection Policy Statement (August 2019), HADD is interpreted by DFO to include "*any temporary or permanent change to fish habitat that directly or indirectly impairs the habitat's capacity to support one or more life processes of fish*".

No in-water works or fill placement below the high-water mark of a surface water feature containing fish habitat is proposed through this application. Consistent with the assessment carried out in **Section 5.2** it has been determined that the proposed development plan is consistent with the fish and fish habitat protection provisions outlined in the *Fisheries Act*.

6.8 Federal *Migratory Birds Convention Act*, S.C. 1994, c. 22

Section 5 of the Migratory Birds Regulations (2022) under the *Migratory Birds Convention Act, 1994* (MBCA) prohibits the disturbance or destruction of viable eggs, active nests, or nest shelters of a migratory bird. The provincial *Fish and Wildlife Conservation Act, 1997* (FWCA) extends the protection of bird nests and eggs to certain species not listed under the Migratory Birds Regulations (e.g., Corvids, Strigids, Accipitrids, etc.).

Provided that the recommendations outlined in **Section 5.2** are implemented in full (i.e., prohibition on vegetation removal during the bird breeding season), no impacts to breeding birds or bird nests protected by the MBCA or FWCA are anticipated.

7 CONCLUSIONS

In accordance with relevant natural heritage policies, the preceding EIS provides a detailed characterization of the natural environment occurring in the vicinity of two recently constructed geodomes at 19350 Island Road in the Township of Scugog. This EIS has been prepared in support of a rezoning application submitted to bring the geodome construction into conformity with the Township's Zoning By-law. Included herein is a comprehensive approach to identifying the presence or absence of several significant natural features afforded varying degrees of protection by applicable environmental policies. Potential negative impacts to the identified significant natural features are described with mitigation measures and technical recommendations offered to avoid or minimize such impacts and/or offer enhancements as appropriate.

Based on the findings presented in this report, the following natural features with ecological and/or policy significance have been identified:

- Wooded areas within the Subject Property represent **Significant Woodlands** per relevant technical criteria under the Greenbelt Plan.
- Two **wetlands** were documented, which are hydrologically supported by two separate **surface water drainage features** flowing westward through the Subject Property.
- Various **Candidate Significant Wildlife Habitat** types were documented, most of which overlap with the mature cedar-poplar mixed forest in the western portion of the Subject Property.
- The **Endangered Black Ash** was documented within a wetland in the western portion of the Study Area, while potential habitat for three **Endangered bats** (Little Brown Myotis, Northern Myotis, and Tri-colored Bats) and **Red-headed Woodpecker** is also present (and largely restricted to the cedar-poplar mixed forest to the west).

The two geodomes were constructed within (northern geodome) and adjacent to (southern geodome) the Significant Woodland, which is a Key Natural Heritage Feature pursuant to the Greenbelt Plan and Township/Regional Official Plans. While development and site alteration is generally prohibited in KNHFs and their minimum Vegetation Protection Zones, construction of the geodomes (and associated ancillary uses) is not expected to have adversely affected the form and functions of the Significant Woodland for the following reasons:

- The geodomes are small structures used in a manner akin to short-term overnight camping via an RV or camper van.
- Driveway accesses to both geodomes were aligned through previously-existing open access routes and trails (see **Appendix 6**).
- The woodland surrounding the northern geodome is young and regenerating, having emerged over the past two decades following cessation of farming activities and being dominated by the invasive Scots Pine.

- The area of woodland removed to construct the northern geodome and associated driveway will be replaced with an equivalent amount of new woodland through the recommended Woodland Enhancement Plan (see **Figure 3**).
- Additional ecological enhancement measures will be specified through the aforementioned Woodland Enhancement Plan to be prepared at Site Plan Approval (e.g., installation of bat rocket boxes).
- No further development or site alteration activities will occur, and the entirety of the Subject Property will be rezoned to a site-specific EP zone (outside of the existing residential area).
- Establishment of an EP zone will facilitate continued succession of open portions of the Subject Property to woodland conditions, which will result in expansion of the Significant Woodland eastward to Island Road over time.

Provided that Terrastory's recommended mitigation measures (as summarized in **Appendix 7**) are carried out in full, no negative impacts associated with construction and continued use of the geodomes are anticipated, while the prevailing natural heritage conditions of the Subject Property will be enhanced and expanded over time. It is advised that such technical recommendations be incorporated into any necessary approvals that permit the application.

8 REFERENCES

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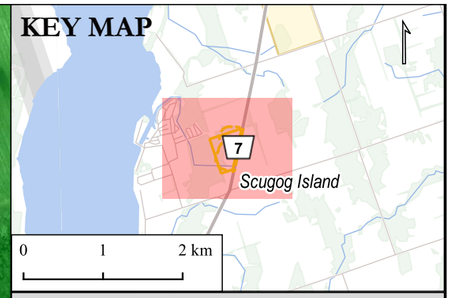
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Legend

Area of Assessment
- Subject Property
- Adjacent Lands/Study Area

Administrative Boundaries
- Greenbelt Natural Heritage System

GENERAL NOTES:
-Features depicted herein should not be used in place of a professional survey.
-Numeric scale is for a 11x17 inch print.

TERRASTORY
environmental consulting inc.
info@terrastoryenviro.com 905.745.5398

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Location:
19350 Island Road,
Township of Scugog

Project No.: 23190

Date: 2023-12-15

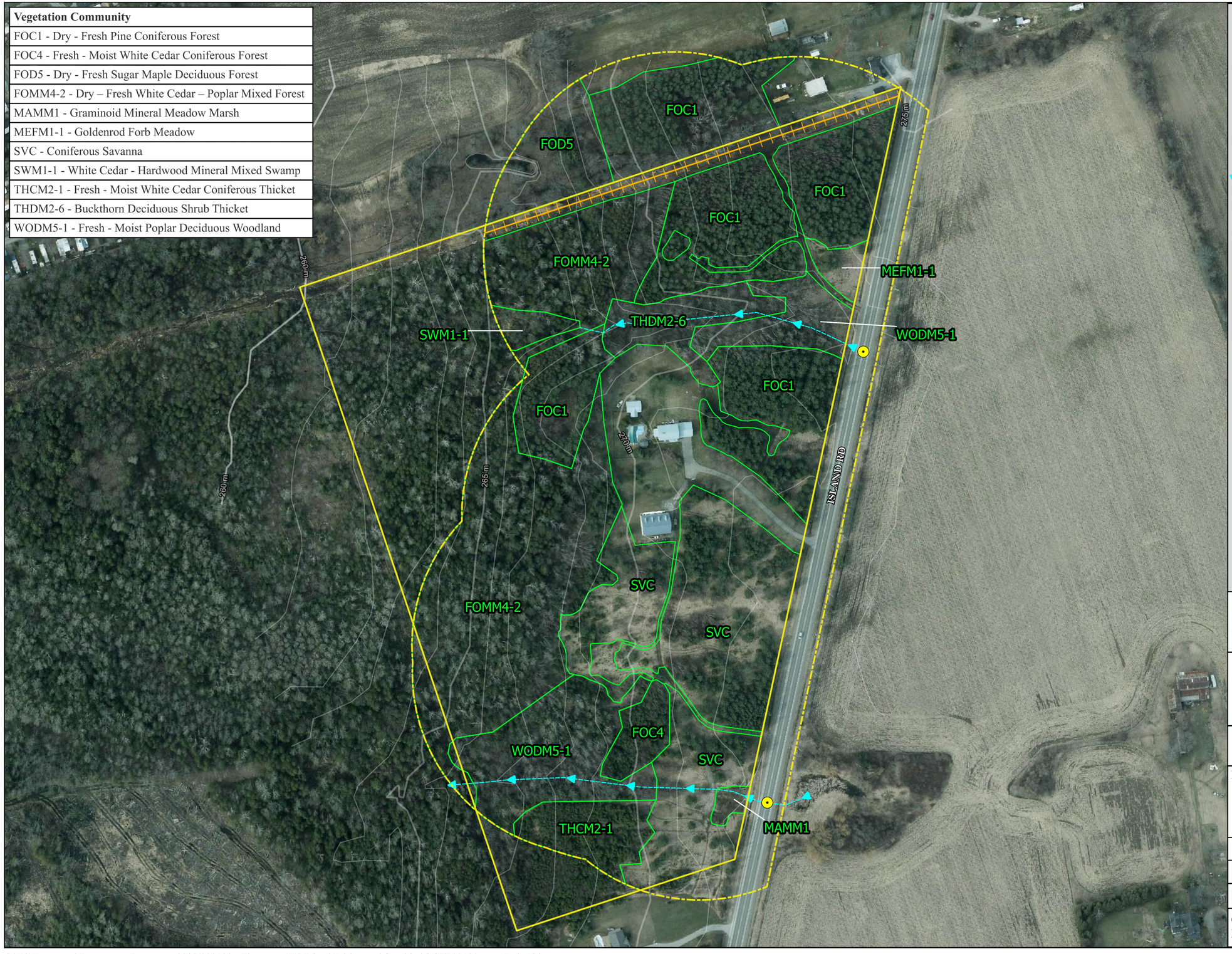
By: CW **Checked:** RA

Orthophotograph Date: Kawartha Lakes, 2018

Figure 1:
Location of the Subject Property and Study Area

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Vegetation Community
FOC1 - Dry - Fresh Pine Coniferous Forest
FOC4 - Fresh - Moist White Cedar Coniferous Forest
FOD5 - Dry - Fresh Sugar Maple Deciduous Forest
FOMM4-2 - Dry – Fresh White Cedar – Poplar Mixed Forest
MAMM1 - Graminoid Mineral Meadow Marsh
MEFM1-1 - Goldenrod Forb Meadow
SVC - Coniferous Savanna
SWM1-1 - White Cedar - Hardwood Mineral Mixed Swamp
THCM2-1 - Fresh - Moist White Cedar Coniferous Thicket
THDM2-6 - Buckthorn Deciduous Shrub Thicket
WODM5-1 - Fresh - Moist Poplar Deciduous Woodland



Legend

Area of Assessment
- Subject Property
- Adjacent Lands/Study Area

Built Structures and Infrastructure
- Hydro Corridor
- Culvert

Biophysical Features and Conditions
- Topographic Contours (from survey)
- Surface Water Drainage Feature
- Vegetation Communities

GENERAL NOTES:
-Features depicted herein should not be used in place of a professional survey.
-Numeric scale is for a 11x17 inch print.

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Location:
19350 Island Road,
Township of Scugog

Project No.: 23190

Date: 2023-12-14

By: CW **Checked:** RA

Orthophotograph Date:
Kawartha Lakes, 2018

Figure 2:
Biophysical Features and Conditions

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Legend

Area of Assessment
- Subject Property
- Adjacent Lands/Study Area

Built Structures and Infrastructure
- Geodomes and Accessory Features/Areas
- Hydro Corridor
- Culvert

Key Natural Heritage and Key Hydrological Features
- Significant Woodland
- Wetlands

Other Features
- Surface Water Drainage Feature

Setbacks Prescribed by the Greenbelt Plan
- Significant Woodlands + 30 m VPZ
- Wetlands + 30 m VPZ

Mitigation Measures Recommended
- Area to be planted and become Natural Self-sustaining Vegetation (~0.12 ha)
- Rocket Box for Bat Roosting

GENERAL NOTES:
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N | 1:2,500 | 0 15 30 45 60 75 90 m

Location:
19350 Island Road,
Township of Scugog

Project No.: 23190
Date: 2023-12-14
By: CW **Checked:** RA
Orthophotograph Date: Kawartha Lakes, 2018

Figure 3:
Significant Natural Features with Development Overlay

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Appendix 1. Representative Photographs



Photo 1. Northern geodome (7 November 2023).



Photo 2. Northern geodome (7 November 2023).



Photo 3. Coniferous forest along driveway to the northern geodome (7 November 2023).



Photo 4. Dry – Fresh White Cedar – Poplar Mixed Forest (FOMM4-2) west of the northern geodome (7 November 2023).



Photo 5. Southern geodome (7 November 2023).



Photo 6. Pathway heading east from southern geodome to the principal residence (7 November 2023).



Photo 7. Pathway heading west towards the southern geodome (7 November 2023).



Photo 8. Coniferous Savanna (SVC) east of the southern geodome (7 November 2023).



Photo 9. Areas of meadow vegetation and scattered trees near the southern geodome (7 November 2023).



Photo 10. Northern drainage feature south of the northern geodome (7 November 2023).



Photo 11. Dry – Fresh White Cedar – Poplar Mixed Forest (FOMM4-2) on the west side of the Subject Property (7 November 2023).



Photo 12. Swamp with Black Ash (*Fraxinus nigra*) west of the northern geodome (7 November 2023).



Photo 13. Culvert and southern drainage feature (7 November 2023).



Photo 14. Fresh - Moist White Cedar Coniferous Thicket (THCM2-1) (7 November 2023).



Photo 15. Coniferous forest (FOC1) along the northeast side of the Subject Property (7 November 2023).



Photo 16. Mid-aged cedar forest west of northern geodome (7 November 2023).

Appendix 2. Vascular Plant List

Scientific Name	Common Name	Family	S-Rank (per NHIC)	Coefficient of Conservatism	Coefficient of Wetness
Acer saccharum	Sugar Maple	Aceraceae	S5	4	3
Agrimonia gryposepala	Hooked Agrimony	Rosaceae	S5	2	3
Agrostis gigantea	Redtop	Poaceae	SNA	n/a	-3
Alliaria petiolata	Garlic Mustard	Brassicaceae	SNA	n/a	0
Berberis thunbergii	Japanese Barberry	Berberidaceae	SNA	n/a	3
Betula papyrifera	Paper Birch	Betulaceae	S5	2	3
Bromus inermis	Smooth Brome	Poaceae	SNA	n/a	5
Catalpa speciosa	Northern Catalpa	Bignoniaceae	SNA	n/a	3
Cornus alternifolia	Alternate-leaved Dogwood	Cornaceae	S5	6	3
Cornus stolonifera	Red-osier Dogwood	Cornaceae	S5	2	-3
Cynanchum rossicum	Honeyvine	Asclepiadaceae	SNA	n/a	0
Daucus carota	Wild Carrot	Apiaceae	SNA	n/a	5
Dryopteris carthusiana	Spinulose Wood Fern	Dryopteridaceae	S5	5	-3
Dryopteris intermedia	Evergreen Wood Fern	Dryopteridaceae	S5	5	0
Equisetum arvense	Field Horsetail	Equisetaceae	S5	0	0
Equisetum scirpoides	Dwarf Scouring-rush	Equisetaceae	S5	7	0
Euthamia graminifolia	Grass-leaved Goldenrod	Asteraceae	S5	2	0
Eutrochium maculatum var. *maculatum*	Spotted Joe Pye Weed	Asteraceae	S5	3	-5
Fagus grandifolia	American Beech	Fagaceae	S4	6	3
Fragaria virginiana	Wild Strawberry	Rosaceae	S5	2	3
Fraxinus americana	White Ash	Oleaceae	S4	4	3
Fraxinus nigra	Black Ash	Oleaceae	S4	7	-3
Fraxinus pennsylvanica	Green Ash	Oleaceae	S4	3	-3
Gaillardia pulchella	Fire-wheel Blanket-flower	Asteraceae	SNA	n/a	5
Galeopsis tetrahit	Common Hemp-nettle	Lamiaceae	SNA	n/a	3
Geranium robertianum	Herb-Robert	Geraniaceae	S5	2	3
Impatiens capensis	Spotted Jewelweed	Balsaminaceae	S5	4	-3
Inula helenium	Elecampane	Asteraceae	SNA	n/a	3
Juncus tenuis	Path Rush	Juncaceae	S5	0	0
Lamium maculatum	Spotted Dead-nettle	Lamiaceae	SNA	n/a	5
Larix laricina	Tamarack	Pinaceae	S5	7	-3
Leucanthemum vulgare	Oxeye Daisy	Asteraceae	SNA	n/a	5
Lolium arundinaceum	Tall Fescue	Poaceae	SNA	n/a	3
Lonicera tatarica	Tartarian Honeysuckle	Caprifoliaceae	SNA	n/a	3
Lotus corniculatus	Garden Bird's-foot Trefoil	Fabaceae	SNA	n/a	3
Onoclea sensibilis	Sensitive Fern	Dryopteridaceae	S5	4	-3
Oxalis stricta	Upright Yellow Wood-sorrel	Oxalidaceae	S5	0	3
Phalaris arundinacea	Reed Canary Grass	Poaceae	S5	0	-3
Phragmites australis ssp. australis	European Reed	Poaceae	SNA	n/a	-3
Picea glauca	White Spruce	Pinaceae	S5	6	3
Pinus resinosa	Red Pine	Pinaceae	S5	8	3
Pinus strobus	Eastern White Pine	Pinaceae	S5	4	3

Scientific Name	Common Name	Family	S-Rank (per NHIC)	Coefficient of Conservatism	Coefficient of Wetness
Pinus sylvestris	Scots Pine	Pinaceae	SNA	n/a	3
Plantago lanceolata	English Plantain	Plantaginaceae	SNA	n/a	3
Plantago major	Common Plantain	Plantaginaceae	SNA	n/a	3
Poa compressa	Canada Bluegrass	Poaceae	SNA	n/a	3
Poa palustris	Fowl Bluegrass	Poaceae	S5	5	-3
Poa pratensis ssp. *pratensis*	Kentucky Bluegrass	Poaceae	SNA	n/a	3
Populus tremuloides	Trembling Aspen	Salicaceae	S5	2	0
Prunus serotina	Black Cherry	Rosaceae	S5	3	3
Prunus virginiana	Choke Cherry	Rosaceae	S5	2	3
Pteridium aquilinum var. latiusculum	Eastern Bracken Fern	Dennstaedtiaceae	S5	2	3
Quercus rubra	Northern Red Oak	Fagaceae	S5	6	3
Rhamnus cathartica	Common Buckthorn	Rhamnaceae	SNA	n/a	0
Rubus allegheniensis	Allegheny Blackberry	Rosaceae	S5	2	3
Rudbeckia hirta	Black-eyed Susan	Asteraceae	S5	0	3
Salix bebbiana	Bebb's Willow	Salicaceae	S5	4	-3
Solanum dulcamara	Bittersweet Nightshade	Solanaceae	SNA	n/a	0
Solidago altissima	Tall Goldenrod	Asteraceae	S5	1	3
Solidago rugosa ssp. rugosa	Northern Rough-stemmed Goldenrod	Asteraceae	S5	4	0
Symphyotrichum lanceolatum	Panicled Aster	Asteraceae	S5	3	-3
Symphyotrichum novae-angliae	New England Aster	Asteraceae	S5	2	-3
Taraxacum officinale	Common Dandelion	Asteraceae	SNA	n/a	3
Thuja occidentalis	Eastern White Cedar	Cupressaceae	S5	4	-3
Tilia americana	American Basswood	Tiliaceae	S5	4	3
Tussilago farfara	Colt's-foot	Asteraceae	SNA	n/a	3
Ulmus americana	American Elm	Ulmaceae	S5	3	-3
Valeriana officinalis	Common Valerian	Valerianaceae	SNA	n/a	3
Viburnum opulus ssp. *opulus*	Cranberry Viburnum	Caprifoliaceae	SNA	n/a	-3
Vicia cracca	Tufted Vetch	Fabaceae	SNA	n/a	5
Vitis riparia	Riverbank Grape	Vitaceae	S5	0	0

Appendix 3. Endangered and Threatened Species Assessment

Species	Status per O. Reg. 230/08 of the ESA	Rationale for Consideration in this Study	General Description of Habitats and Features which the Species is Known to Occupy within the Ecoregion in which this Study is Located	Likelihood that the Species Occupies the Study Area	Likelihood that Negative Effects to the Species or its Habitat (i.e., "Damage" or "Destruction" as defined in the ESA) will occur based on the Development and any related Site Alteration Activities
Birds					
Bank Swallow (*Riparia riparia*)	THR	OBBA	• Nests in natural or anthropogenically derived exposed, sandy substrates on vertical or steep surfaces. • Forages in a variety of open areas including agricultural lands, meadows, prairies, woodland clearings, marshes, and above waterbodies.	**Negligible.** While this species may forage over open areas on the Study Area for brief periods during migration or forays from adjacent breeding sites, suitable breeding sites within the Study Area are absent.	--
Bobolink (*Dolichonyx oryzivorus*)	THR	NHIC	• Breeds and forages in hayfields, pastures, meadows, grasslands, and prairies which are often (but not always) greater 4 ha. • May be found in more marginal habitats (e.g., shrubby fields, smaller fields, etc.) during migration or following disturbance to breeding habitats (e.g., hay cutting).	**Negligible.** While this species may forage over open areas on the Study Area for brief periods during migration or forays from adjacent breeding sites, suitable breeding sites within the Study Area are absent.	--
Chimney Swift (*Chaetura pelagica*)	THR	OBBA	• Nests in large, uncapped chimneys and (historically) tree cavities. • May forage above a wide variety of anthropogenic (e.g., cities, towns) and natural (e.g., fields, forests) areas.	**Negligible.** While this species may forage over open areas on the Study Area for brief periods during migration or forays from adjacent breeding sites, suitable breeding sites within the Study Area are absent.	--
Eastern Meadowlark (*Sturnella magna*)	THR	NHIC	• Breeds and forages in hayfields, savannahs, pastures, meadows, grasslands, prairies, and shrubby fields.	**Negligible.** While this species may forage over open areas on the Study Area for brief periods during migration or forays from adjacent breeding sites, suitable breeding sites within the Study Area are absent.	--
Least Bittern (*Ixobrychus exilis*)	THR	NHIC	• Breeds and forages in marshes dominated by robust emergent vegetation containing areas of open water (i.e., interspersion).	**Negligible.** Suitable habitat is absent from the Study Area.	--
Red-headed Woodpecker (*Melanerpes erythrocephalus*)	END	Critical Habitat for Species at Risk National Dataset – Canada, OBBA	• Breeds and forages in open forests, savannahs, and forest edges that tend to contain large, mature trees.	**Possible.** Suitable forest (containing mature trees) and other treed habitats are present within the Study Area.	**Negligible.** This species is rare to very rare in the local landscape. Portions of the Study Area with the greatest potential to support nesting are associated with the mature cedar-poplar mixed forest to the west. Removal of young, regenerating, conifer (Scots Pine) trees to accommodate construction of the northern geodome were limited (see **Appendix 6**). Tree removals to accommodate the southern geodome were generally limited to scattered trees within a relatively open, Coniferous Savannah (SVC). Limited removals of trees from the aforementioned communities and light "camping" uses associated with the geodomes will not negatively affect breeding habitat for this species.
Insects					
Nine-Spotted Lady Beetle (*Coccinella novemnotata*)	END	Species distribution and on-site habitats	• Occupies a range of open natural areas, including gardens, parks, meadows and agricultural areas. • Distribution is driven by prey availability, typically feeding on aphids which colonize crops and orchards.	**Negligible**. Nine-Spotted Lady Beetle has not been documented in Ontario since 1987. Additionally, the prevalence of non-suitable plants on the site suggests that aphid densities necessary to support the species may not be present.	--
Rusty-patched Bumble Bee (*Bombus affinis*)	END	Species distribution and on-site habitats	• Occupies a range of open areas with nectaring sites. • Nests underground in abandoned rodent burrows or decomposing	**Negligible**. Most records in Ontario are historical (before 1970). The species was last observed from	--

Species	Status per O. Reg. 230/08 of the ESA	Rationale for Consideration in this Study	General Description of Habitats and Features which the Species is Known to Occupy within the Ecoregion in which this Study is Located	Likelihood that the Species Occupies the Study Area	Likelihood that Negative Effects to the Species or its Habitat (i.e., "Damage" or "Destruction" as defined in the ESA) will occur based on the Development and any related Site Alteration Activities
			logs.	Pinery Provincial Park in 2009 (Colla and Taylor-Pindar 2011).	
Mammals					
Eastern Small-footed Myotis (*Myotis leibii*)	END	Species distribution and on-site habitats	• Maternal roosting sites include exposed rock outcrops, crevices, and cliffs. • Overwinters in caves and mines that maintain temperatures above 0°C.	**Unlikely.** While species may forage above open habitats on the Study Area or adjacent lands, potential maternal roosting habitat (e.g., rock outcrops, cliffs, etc.) is absent.	--
Little Brown Myotis (*Myotis lucifugus*)	END	Species distribution and on-site habitats	• Maternity roosts sites most often include buildings and large diameter trees with cracks, crevices, and/or exfoliating bark. • Overwinters in caves and mines that maintain temperatures above 0°C.	**Possible.** Forest/woodland communities within the Study Area could provide roosting opportunities for maternity colonies of this species within larger-diameter snags, cavity trees, or trees with cracks/crevices/loose bark. Forest and savanna communities surrounding the geodomes likely offered smaller diameter, non-specific roosting habitat (i.e., "day roosts") for individual bats (males or non-reproductive females) at best. The forest/woodland edge and canopy openings provide suitable foraging habitat for this species.	**Negligible.** Tree removals to accommodate the northern geodome were limited to an immature and regenerating stand of Scots Pine (see **Appendix 6**). Tree removals to accommodate the southern geodome were generally limited to scattered trees within a relatively open, Coniferous Savannah (SVC). Trees within these areas are unlikely to have exhibited conditions which support maternity roosting by this species (e.g., cracks, crevices, and loose bark within larger-diameter trees) based on observations made during the site assessment, and may also have lacked roosting habitat for individual bats (males and non-reproductive females). The Study Area continues to provide widespread roosting opportunities for bats (particularly within the cedar-poplar mixed forest to the west) and generalized feeding habitat.
Northern Myotis (*Myotis septentrionalis*)	END	Species distribution and on-site habitats	• Maternity roosts most often include large diameter trees with cracks, crevices, and/or exfoliating bark (buildings rarely used). • Overwinters in caves and mines that maintain temperatures above 0°C.	**Possible.** Forest/woodland communities within the Study Area could provide roosting opportunities for maternity colonies of this species within larger-diameter snags, cavity trees, or trees with cracks/crevices/loose bark. Forest and savanna communities surrounding the geodomes likely offered smaller diameter, non-specific roosting habitat (i.e., "day roosts") for individual bats (males or non-reproductive females) at best. The forest/woodland edge and canopy openings provide suitable foraging habitat for this species.	**Negligible.** Tree removals to accommodate the northern geodome were limited to an immature and regenerating stand of Scots Pine (see **Appendix 6**). Tree removals to accommodate the southern geodome were generally limited to scattered trees within a relatively open, Coniferous Savannah (SVC). Trees within these areas are unlikely to have exhibited conditions which support maternity roosting by this species (e.g., cracks, crevices, and loose bark within larger-diameter trees) based on observations made during the site assessment, and may also have lacked roosting habitat for individual bats (males and non-reproductive females). The Study Area continues to provide widespread roosting opportunities for bats (particularly within the cedar-poplar mixed forest to the west) and generalized feeding habitat.
Tri-colored Bat (*Perimyotis subflavus*)	END	Species distribution and on-site habitats	• Maternal roosting sites include Maple (*Acer* spp.) and Oak (*Quercus* spp.) with dead/dying leaf clusters. • Overwinters in caves and mines that maintain temperatures above 0°C.	**Possible.** Oaks and Maples are present within the Study Area which may provide suitable roosting sites for this species.	**Negligible.** Oaks and Maples are largely absent from the Dry - Fresh Pine Coniferous Forest (FOC1) surrounding the northern geodome and Coniferous Savannah (SVC) surrounding the southern geodome.
Plants					

Species	Status per O. Reg. 230/08 of the ESA	Rationale for Consideration in this Study	General Description of Habitats and Features which the Species is Known to Occupy within the Ecoregion in which this Study is Located	Likelihood that the Species Occupies the Study Area	Likelihood that Negative Effects to the Species or its Habitat (i.e., "Damage" or "Destruction" as defined in the ESA) will occur based on the Development and any related Site Alteration Activities
American Ginseng (*Panax quinquefolius*)	END	Critical Habitat for Species at Risk National Dataset - Canada	• Occupies rich, relatively undisturbed deciduous forests.	**Negligible.** Suitable habitat is absent form the Study Area.	--
Black Ash (*Fraxinus nigra*)	END	iNaturalist	• Occupies deciduous swamps (often peaty), floodplains, and wet woods.	**Confirmed.** A stand of Black Ash was found in the within the wetland in the western portion of the Study Area.	**Negligible.** Black Ash are situated a considerable distance from the northern geodome and are not currently afforded protection under the ESA.
Butternut (*Juglans cinerea*)	END	iNaturalist, NHIC	• Occupies a variety of treed habitats including mature forests, early-successional forests, and hedgerows.	**Negligible.** Species not documented during site visit.	--
Reptiles					
Blanding's Turtle (*Emydoidea blandingii*)	THR	Critical Habitat for Species at Risk National Dataset – Canada, Ont. Herp Atlas	• Occupies freshwater lakes, permanent or temporary pools, slow-flowing streams, marshes, and swamps. • Nests in exposed, usually coarse, friable substrate. • Known to make long-distance overland movements (i.e., several kilometers) between habitats.	**Negligible.** Suitable feeding and basking habitat (e.g., wetlands, large woodland ponds, etc.) is absent from the Study Area and adjacent lands. Study Area is not expected to act as a movement corridor.	--
Wood Turtle (*Clemmys insculpta*)	END	Critical Habitat for Species at Risk National Dataset - Canada	• Occupies clear rivers, streams or creeks with a slight current and sandy or gravelly bottom. • Often feeds in upland areas adjacent to streams. • Nests in exposed, usually coarse, friable substrate.	**Negligible.** Suitable habitat is absent from the Study Area.	--

[1] Likelihood categories are to be interpreted as follows:

Negligible: so limited that the assessed species can be assumed absent.

Unlikely: while theoretically conceivable, species presence very improbable or temporary based on available information (e.g., habitat conditions, range, abundance in local landscape, etc.).

Possible: species presence plausible based on available information; no convincing evidence suggesting species could not occur on-site.

Probable: while not confirmed, available information suggests species has a high likelihood of being present.

Confirmed: species observed and/or evidence of occupation (e.g., tracks, etc.) documented.

Appendix 4. Significant Wildlife Habitat Assessment

Table 1. Results of the Significant Wildlife Habitat Assessment.

Ecoregion 6E	Do any Features, Habitats, or Areas within the Study Area meet relevant criteria (Ecoregion 6E Criteria Schedule) as Candidate SWH?	Do any Features, Habitats, or Areas within the Study Area meet relevant criteria (Ecoregion 6E Criteria Schedule) as Confirmed SWH?	Likelihood that Negative Effects to SWH (i.e., "degradation that threatens the health and integrity" as defined in the 2020 PPS) will occur based on the Development and any related Site Alteration Activities.
Seasonal Concentration Areas of Animals			
Waterfowl Stopover and Staging Areas (Terrestrial)	**No.** Meadows, fields, and/or thickets that annually flood during spring and could support significant congregations of migrating waterfowl are absent.	--	--
Waterfowl Stopover and Staging Areas (Aquatic)	**No.** Large surface water features (e.g., ponds, lakes, bays, coastal inlets, large watercourses, etc.) and/or wetlands that annually flood during spring and could support significant congregations of migrating waterfowl are absent.	--	--
Shorebird Migratory Stopover Areas	**No.** Unvegetated open areas adjacent to surface water features (e.g., shorelines, beaches, mudflats, etc.) which could support significant congregations of migrating shorebirds are absent	--	--
Raptor Wintering Areas	**No.** A combination of forest and meadow habitats of suitable size to support a significant congregations of wintering raptors are absent from the Study Area.	--	--
Bat Hibernacula	**No.** Features that could support hibernating bats (e.g., caves, mine shafts, karsts, etc.) are absent.	--	--
Bat Maternity Colonies	**Yes.** Mature deciduous and mixed forests with a high-density (i.e., >10/ha) of large-diameter (i.e., ≥25 cm DBH) trees containing cracks/cavities may be present.	**Unknown.** Acoustic monitoring devices not deployed as part of this study.	**Negligible.** Tree removals to accommodate the northern geodome were limited to an immature and regenerating stand of Scots Pine (see **Appendix 6**). Tree removals to accommodate the southern geodome were generally limited to scattered trees within a relatively open, Coniferous Savannah (SVC). Trees within these areas are unlikely to have exhibited conditions which support bat maternity roosting (e.g., cracks, crevices, and loose bark within larger-diameter trees) based on observations made during the site assessment.
Turtle Wintering Areas	**No.** Surface water features and/or wetlands with soft, muddy substrate which do not freeze to the bottom during winter are absent.	--	--
Reptile Hibernaculum	**Yes.** Features (e.g., small mammal burrows, rock crevice's, etc.) and/or habitats (e.g., certain wetlands with a fluctuating water table, etc.) that could provide snakes with access below the frost line may be present throughout the Study Area.	**Unknown.** Spring emergence surveys to assess burrow/stump use by overwintering by snakes were not undertaken.	**Unlikely.** The geodomes were constructed in relatively homogeneous areas of treed vegetation. Based on review of recent aerial photographs, there appears to have been an absence of features with a higher potential to support snake overwintering within the constructed development envelopes. The geodomes were constructed in areas which were historically used for agricultural purposes, lessening the likelihood of significant overwintering use by snakes.
Colonially - Nesting Bird Breeding Habitat (Bank and Cliff)	**No.** Features that could support nesting by Cliff Swallow and Northern Rough-winged swallow (e.g., eroding banks, sandy hills, borrow pits, steep slopes, cliff faces, etc.) are absent.	--	--
Colonially - Nesting Bird Breeding Habitat Breeding Habitat (Tree/Shrubs)	**No.** Swamp and treed fen communities with stick nests are absent.	--	--

Ecoregion 6E	Do any Features, Habitats, or Areas within the Study Area meet relevant criteria (Ecoregion 6E Criteria Schedule) as Candidate SWH?	Do any Features, Habitats, or Areas within the Study Area meet relevant criteria (Ecoregion 6E Criteria Schedule) as Confirmed SWH?	Likelihood that Negative Effects to SWH (i.e., "degradation that threatens the health and integrity" as defined in the 2020 PPS) will occur based on the Development and any related Site Alteration Activities.
Colonially - Nesting Bird Breeding Habitat (Ground)	**No.** Rocky islands or peninsulas along lakes or large rivers are absent.	--	--
Migratory Butterfly Stopover Areas	**No.** A mixture of fields and forests within 5 km from the shoreline of Lake Ontario are absent.	--	--
Landbird Migratory Stopover Areas	**No.** While migrating landbirds may temporarily stopover on the Study Area to feed and rest, it is unlikely that the Study Area supports significant congregations of migrating landbirds as it is greater than 5 km from the shoreline of Lake Ontario.	--	--
Deer Yarding Areas	**No.** MNRF has not identified any deer yarding areas and the Study Area lacks vegetation communities that could provide thermal cover and lower snow depths in winter (e.g., coniferous woodlands and plantations, etc.).	--	--
Deer Winter Congregation Areas	**No.** See above.	--	--
Rare Vegetation Communities or Specialized Habitats for Wildlife			
Cliffs and Talus Slopes	**No.** Cliffs and talus slope communities are absent.	--	--
Sand Barren	**No.** Sand barren communities are absent.	--	--
Alvar	**No.** Flora characteristic of alvars are absent.	--	--
Old Growth Forest	**Yes.** Based on a review of historical aerial photographs parts of the mixed forest in the western half of the Study Area have been treed since at least 1954 and are at least 80 to 90 years old. Based on observation made during the site, parts of the mixed forest in the western half of the Study Area exhibit old-growth characteristics (e.g., old trees, abundant snags and downed woody debris, canopy gaps caused by species turnover, limited disturbance, etc.).	**Yes.** See previous description.	**Negligible.** The constructed geodomes are situated outside of the areas of mature forest coinciding with the Dry – Fresh White Cedar Poplar Mixed Forest (FOMM4-2).
Savannah	**No.** Flora characteristic of savannahs are absent.	--	--
Tallgrass Prairie	**No.** Flora characteristic of tallgrass prairies are absent.	--	--
Other Rare Vegetation Community	**No.** Provincially rare vegetation communities are absent.	--	--
Waterfowl Nesting Area	**No.** Wetlands which may support nesting waterfowl are absent.	--	--
Bald Eagle and Osprey Nesting, Foraging and Perching Habitat	**No.** Forest communities adjacent to large surface water features are absent.	--	--
Woodland Raptor Nesting Habitat	**Yes.** On-site forest communities may support nesting raptors.	**Yes.** While no stick nests were documented on-site, tree cavities that may support Barred Owl are present. Barred Owl have been documented in the general area and could potentially nest within mature woodlands within the Study Area west of the geodomes .	**Unlikely.** The constructed geodomes are situated outside of the areas of mature forest coinciding with the Dry – Fresh White Cedar Poplar Mixed Forest (FOMM4-2), where potentially suitable nesting habitat for Barred Owl is present.

Ecoregion 6E	Do any Features, Habitats, or Areas within the Study Area meet relevant criteria (Ecoregion 6E Criteria Schedule) as Candidate SWH?	Do any Features, Habitats, or Areas within the Study Area meet relevant criteria (Ecoregion 6E Criteria Schedule) as Confirmed SWH?	Likelihood that Negative Effects to SWH (i.e., "degradation that threatens the health and integrity" as defined in the 2020 PPS) will occur based on the Development and any related Site Alteration Activities.
Turtle Nesting Areas	**No.** Exposed mineral soils adjacent to surface water features (e.g., lakes, ponds, etc.) and/or wetlands that may support turtles are absent.	--	--
Seeps and Springs	**No.** Areas where groundwater emerges at the surface and may support specialized habitat for plants and wildlife are absent.	--	--
Amphibian Breeding Habitat (Woodland)	**Yes.** Forests with wetlands, ponds, and/or pools that may support significant congregations of breeding amphibians are absent.	**Unknown.** Targeted surveys for breeding amphibians were not conducted as part this study.	**Negligible.** The northern geodome is approximately 67 m from the nearest wetland, whereas the driveway entrance for the southern geodome is over 30 m from the nearest wetland. These setback distances (in combination with the low-intensity uses associated with the geodome) are sufficient to protect any candidate significant amphibian breeding habitat therein.
Amphibian Breeding Habitat (Wetlands)	**No.** Wetlands and surface water features (e.g., ponds, lakes, etc.) that may support significant congregations of breeding amphibians are absent.	--	--
Woodland Area-Sensitive Bird Breeding Habitat	**Yes.** Interior forest interior conditions (i.e., >200 m from edge) are present.	**Unknown.** Targeted surveys for breeding birds were not conducted as part of this study.	**Unlikely.** The constructed geodomes are situated outside of the areas of mature forest coinciding with the Dry – Fresh White Cedar Poplar Mixed Forest (FOMM4-2), where potentially suitable nesting habitat for area-sensitive forest birds occurs.
Habitat for Species of Conservation Concern			
Marsh Bird Breeding Habitat	**No.** Wetland habitats of sufficient size with shallow water and emergent aquatic vegetation are absent.	--	--
Open Country Bird Breeding Habitat	**No.** Meadow habitats of sufficient size are absent.	--	--
Shrub/Early Successional Bird Breeding Habitat	**No.** Shrub/early-successional habitats of sufficient size are absent.	--	--
Terrestrial Crayfish	**No.** Marsh and swamp communities and/or wet fields are absent.	--	--
Special Concern and Rare Wildlife Species	**Yes.** See **Table 2** below.	**Yes.** See **Table 2** below.	**Possible.** See **Table 2** below.
Animal Movement Corridors			
Amphibian Movement Corridors	**Unlikely.** Significant amphibian breeding habitat is unknown.	**Unknown.** Targeted surveys for breeding amphibians were not conducted as part of this study.	**Unlikely.** Given the relatively uniform nature of the habitats within the Study Area, it is expected that amphibian movement through the area is evenly dispersed. The limited removals of small parts of the wooded habitats and meadows within the Study Area and low-intensity uses associated with the geodomes is unlikely to negatively affect significant amphibian movements (if present and occurring).
Deer Movement Corridors	**No.** As MNRF has not identified any Deer Yarding Areas, significant Deer Movement Corridors are by extension also absent.	--	--

Table 2. Results of the Special Concern and Provincially Rare Species Assessment.

Species	Status per O. Reg. 242/08 under the ESA and/or NHIC	Rationale for Consideration in this Study	General Description of Habitats and Features which the Species is Known to Occupy or Use within the Ecoregion in which this Study is Located	Likelihood that the Species Occupies the Study Area	Likelihood that Negative Effects to the Species or its Habitat (i.e., "degradation that threatens the health and integrity" as defined in the 2020 PPS) will occur based on the Development and any related Site Alteration Activities
Birds					
Bald Eagle (*Haliaeetus leucocephalus*)	SC	iNaturalist	• Generally found feeding along waterbodies and shorelines, and adjacent deciduous and mixed forests. • Super-canopy trees are used for nesting and roosting. • Feeds largely on fish and carrion.	**Negligible.** Suitable breeding habitat is absent from the Study Area and adjacent lands.	--
Barn Swallow (*Hirundo rustica*)	SC	OBBA	• Nests in barns, bridge/culvert undersides, awnings/overhangs on sides of buildings, and (historically) tree cavities. • Forages in a variety of open areas including agricultural lands, meadows, prairies, woodland clearings, marshes, and above waterbodies.	**Negligible.** While this species may forage over open areas on the Study Area for brief periods during migration or forays from adjacent breeding sites, suitable breeding sites within the Study Area are absent.	--
Black Tern (*Chlidonias niger*)	SC	iNaturalist	• Forages and nests in freshwater marshes with floating vegetation mats.	**Negligible.** Suitable breeding habitat is absent from the Study Area and adjacent lands.	--
Canada Warbler (*Cardellina canadensis*)	SC	Species distribution and on-site habitats	• Breeds and forages in a wet thickets, swamps, and mature deciduous forest.	**Unlikely.** Habitats within the Study Area do not represent ideal conditions for this species.	--
Common Nighthawk (*Chordeiles minor*)	SC	Species distribution and on-site habitats	• Breeds and forages in a variety of open habitats with sparse cover of woody vegetation. • Also occupies urban areas and nests on flat roof tops.	**Unlikely.** Habitats within the Study Area do not represent ideal conditions for this species.	--
Eastern Wood-pewee (*Contopus virens*)	SC	OBBA	• Breeds and forages in relatively open, deciduous and mixed forests of various sizes (including urban forest fragments) and along forest edges.	**Possible.** Suitable habitat is present within the Study Area.	**Unlikely.** Tree removals to accommodate the northern geodome were limited to a Dry - Fresh Pine Coniferous Forest (FOC1) that is relatively immature (see **Appendix 6**) and unlikely to support nesting by this species. Low intensity uses associated with the geodomes is unlikely to negatively affect suitable habitat for this species if present within the adjacent mature woodland areas to the west.
Golden-winged Warbler (*Vermivora chrysoptera*)	SC	Species distribution and on-site habitats	• Breeds and forages in thickets and early-successional forests/thickets adjacent to deciduous or mixed forest.	**Possible.** thicket and early successional forest adjacent to mixed forest is present within the Study Area.	**Unlikely.** This species is a rare breeder within the local landscape. Low intensity uses associated with the geodomes is unlikely to negatively affect suitable habitat for this species.
Grasshopper Sparrow (*Ammodramus savannarum*)	SC	Species distribution and on-site habitats	• Breeds and forages in hayfields, savannahs, pastures, meadows, grasslands, and prairies.	**Negligible.** Suitable breeding habitat is absent from the Study Area	--
Olive-sided Flycatcher *(Contopus cooperi)*	SC	OBBA	• Breeds and forages in open coniferous or mixed coniferous forests with tall trees, often located near water or wetlands	**Negligible.** Suitable breeding habitat is absent from the Study Area	--

Species	Status per O. Reg. 242/08 under the ESA and/or NHIC	Rationale for Consideration in this Study	General Description of Habitats and Features which the Species is Known to Occupy or Use within the Ecoregion in which this Study is Located	Likelihood that the Species Occupies the Study Area	Likelihood that Negative Effects to the Species or its Habitat (i.e., "degradation that threatens the health and integrity" as defined in the 2020 PPS) will occur based on the Development and any related Site Alteration Activities
Purple Martin (*Progne subis*)	S3B	OBBA	• Forages over towns, cities, parks, open fields, dunes, streams, wet meadows, beaver ponds, and other open areas. • Historically breed along forest edges and rivers, where dead snags offered woodpecker holes to nest in. Now exclusively nests in human made structures (nest boxes).	**Negligible.** While this species may forage over open areas on the Study Area for brief periods during migration or forays from adjacent breeding sites, suitable breeding sites within the Study Area are absent.	--
Upland Sandpiper (*Bartramia longicauda*)	S2B	OBBA	• Typically found in pastures and grasslands with available perches.	**Negligible.** Suitable breeding habitat is absent from the Study Area.	--
Wood Thrush (*Hylocichla mustelina*)	SC	OBBA	• Breeds and forages in second-growth and mature deciduous and mixed forests with a well-developed understory.	**Possible.** Suitable habitat is present within the Study Area.	**Unlikely.** Tree removals to accommodate the northern geodome were limited to a Dry - Fresh Pine Coniferous Forest (FOC1) that is relatively immature (see **Appendix 6**) and unlikely to support nesting by this species. Low intensity uses associated with the geodomes is unlikely to negatively affect suitable habitat for this species if present within the adjacent mature woodland areas to the west.
Insects					
American Bumble Bee (*Bombus pensylvanicus*)	SC	iNaturalist	• Occupies a range of open areas with nectaring sites. • Nests above ground in dense mats of long grasses but has also been known to nest in abandoned rodent burrows and bird nests high above the ground.	**Possible.** Species is a habitat generalist and occupies a wide range of areas. There is one record from the general area.	**Negligible.** Limited removals of trees to accommodate the geodomes and low-intensity uses associated with the geodomes is unlikely to negatively affect candidate habitat for this species.
Monarch (*Danaus plexippus*)	SC	Ont. Butterfly Atlas, iNaturalist	• Oviposits on Milkweeds (*Asclepias* spp.). • Generalist foraging that nectars in most areas with wildflowers.	**Possible.** Ovipositing sites (i.e., species in the genus *Asclepias*) are present, and species may forage on the Study Area.	**Negligible.** Limited removals of trees to accommodate the geodomes and low-intensity uses associated with the geodomes is unlikely to negatively affect candidate habitat for this species.
Yellow Banded Bumble Bee (*Bombus terricola*)	SC	Species distribution and on-site habitats	• Occupies a range of open areas with nectaring sites. • Nests underground in abandoned rodent burrows or decomposing logs.	**Possible.** Species is a habitat generalist and occupies a wide range of areas.	**Negligible.** Limited removals of trees to accommodate the geodomes and low-intensity uses associated with the geodomes is unlikely to negatively affect candidate habitat for this species.
Plants					
Pringle's Coralroot (*Corallorhiza odontorhiza pringlei*)	SC	S2	• Occupies moist to dry sandy woods, including old pine plantations.	**Possible.** Sandy mixed forest is present within the Study Area.	**Negligible.** If present, species would likely be associated with the cedar-poplar mixed forest to the west.
Reptiles					
Snapping Turtle (*Chelydra serpentina*)	SC	iNaturalist, NHIC	• Occupies a variety of aquatic habitats with slow moving water. • Nests in exposed, usually coarse, friable substrate. • Known to make long-distance overland movements (i.e., several kilometers) between habitats.	**Negligible.** Suitable habitat is absent from the Study Area.	--

[1] Likelihood categories should be interpreted as follows:

Negligible: so limited that the assessed species can be assumed absent.

Unlikely: while theoretically conceivable, species presence very improbable or temporary based on available information (e.g., habitat conditions, range, abundance in local landscape, etc.).

Possible: species presence plausible based on available information; no convincing evidence suggesting species could not occur on-site.
Probable: while not confirmed, available information suggests species has a high likelihood of being present.
Confirmed: species observed and/or evidence of occupation (e.g., tracks, etc.) documented.

Appendix 5. Proposed Development Plan.

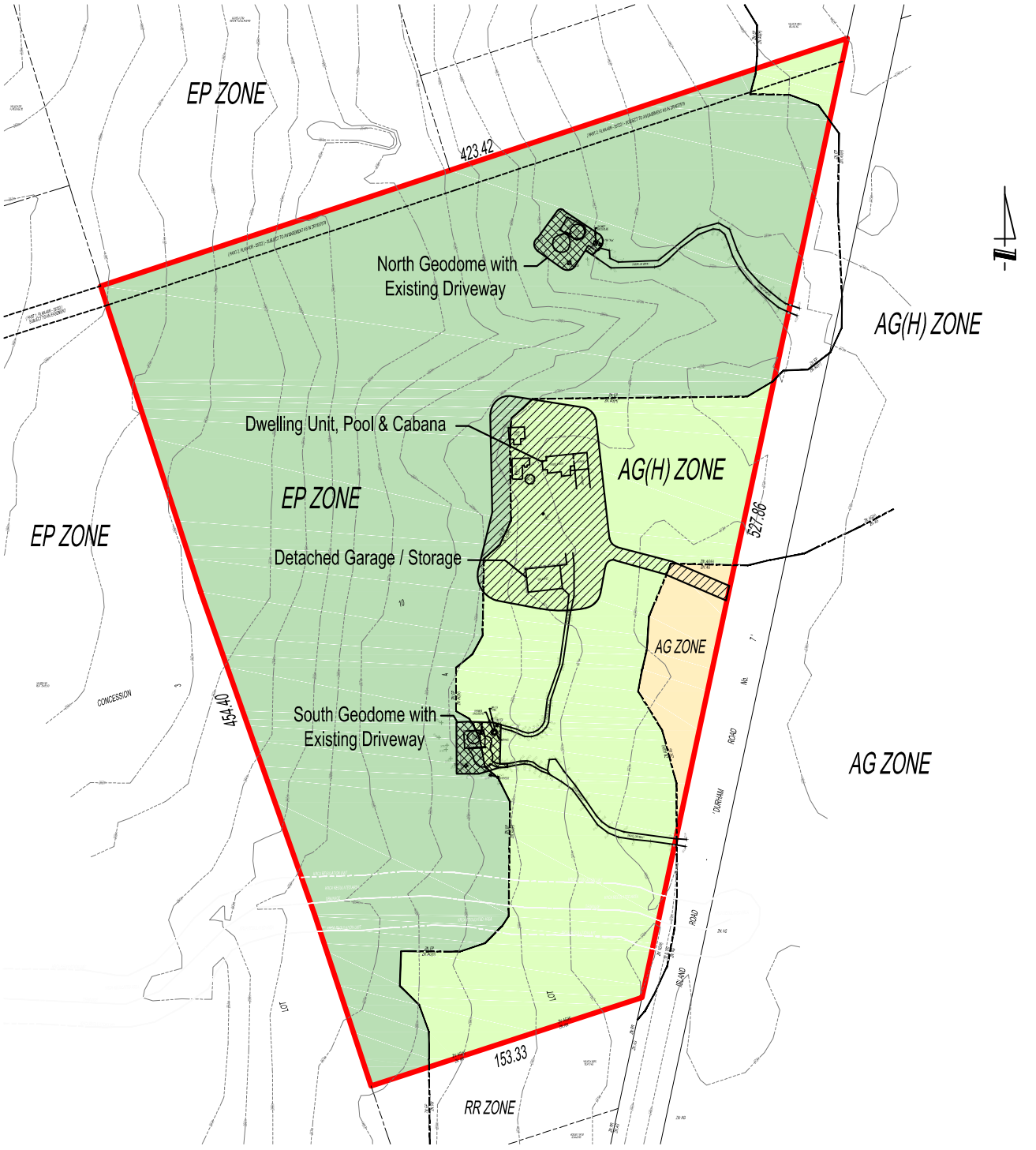


FIGURE 6

CONCEPTUAL SITE PLAN

19350 Island Road
Town of Scugog
Regional Municipality of Durham

Subject Lands - 13.14 ha

Zone Boundaries

Approximate area of site disturbance and clearing

Principal Residential Use - 7300 m2

Accessory Areas - 1340 m2

Thorstone Consulting Services
Land Use Planning and Development
P.O. Box 116, Sutton, Ontario

PREPARED FOR: BIRCHWOOD

DATE: NOV 27, 2023

REVISION

SCALE: (m)

0 20 40 60 80

Appendix 6. Historical Airphoto Analysis.

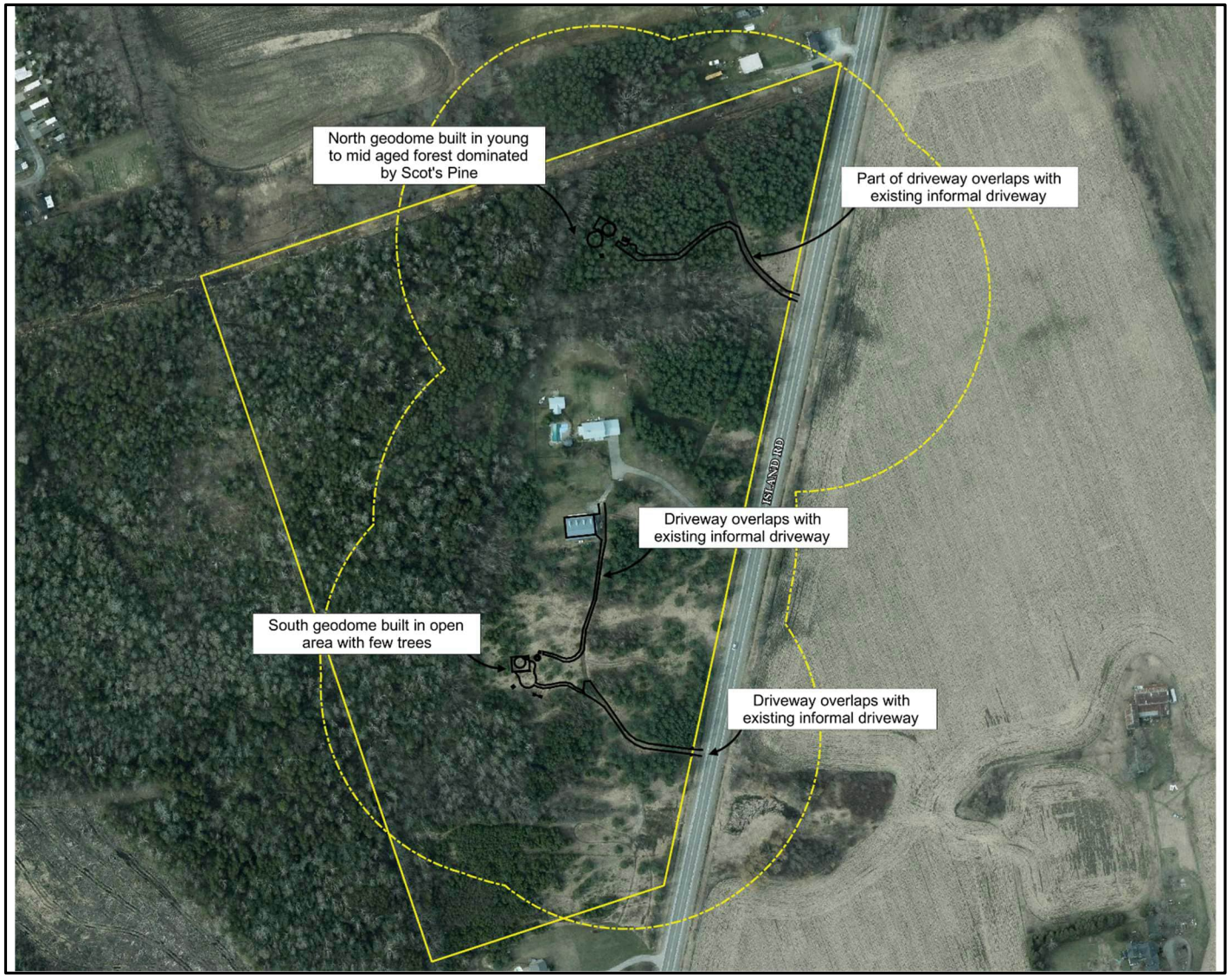


Photo 1. Geodomes overlayed on 2018 aerial imagery (City of Kawartha Lakes 2018).



Photo 2. Geodomes overlayed on 2005 imagery (Google Map 2005).



Photo 3. Geodomes overlayed on 1954 imagery (University of Toronto Library 1954).

Appendix 7. Summary of Technical Recommendations

Natural Feature	Technical Recommendations (per Section 5 of report)
Habitat of Endangered and Threatened Species	● Any lighting incorporated into the geodomes and related amenity space must be "dark sky friendly" and directed downward (i.e., towards the ground) to the extent practicable.
Significant Woodlands	● The area of woodland removed during construction of the northern geodome will be replaced with an equivalent area through cessation of mowing and native tree planting in the areas shown on **Figure 3**. ● Additional native tree plantings will be installed within the manicured grass areas surrounding the geodomes as noted on **Figure 3**. ● A Woodland Enhancement Plan will be prepared as part of a future Site Plan Application and is to include the following components (minimum): ● Confirmation that mowing will cease and native trees will be planted in the areas indicated on **Figure 3**. ● A detailed planting plan consisting of native trees with specifications and notes related to species composition, sizing, densities, etc. ● A Verification and Monitoring Plan for the compensatory trees to demonstrate that the plantings were installed consistent with the Plan requirements and are in good condition for the duration of the monitoring period. ● Installation of (2) replacement bat roosting structures ("Bat Rocket Boxes") within the Subject Property. ● The Class 2 greywater system will be located within the existing development envelope and amenity space surrounding the geodomes. ● In the event that a tree (or small number of trees) require removal to install the Class 2 greywater system, necessary tree removals will be completed outside the primary bird nesting and bat activity periods (i.e., to be completed between October 1 and March 31). If limited tree removal is required during this period, a survey will be conducted by a qualified Ecologist within two (2) days of the commencement of tree removal activities to determine habitat suitability and/or confirm the presence/absence of nesting birds and roosting bats.
Significant Wildlife Habitat	● Potential for impacts will be addressed through full implementation of other overlapping mitigation measures.
Other Natural Environment Considerations	● No additional removal of trees or naturalized vegetation will occur surrounding the geodomes except where such removals address hazardous trees that pose an unacceptable risk to human life or property. ● No expansion of existing manicured grass surrounding the geodomes will occur, while native tree species will be installed within the manicured grass to establish an overarching tree canopy. ● Incorporation of Bird-Friendly Guidelines into the existing geodomes design such as those published in City of Toronto's "Best Practices for Bird-Friendly Glass" (e.g. installation of window film) and "Best Practices for Effective Lighting" (e.g. dark sky compliant fixtures) should be implemented where possible. ● Any additional trees or landscaping surrounding the geodomes should consist exclusive of species native to the local landscape.

APPENDIX E

The Corporation of the Township of Scugog

By-law Number __-23

Being a by-law passed pursuant to the Provision of Section 34 of the Planning Act, R.S.O. 1990, to amend Zoning By-law 14-14 with respect to Part of Lot 4, Concession 10, Township of Scugog (19350 Island Road), (Roll # 030-001-29000-0000), Ward 3

Whereas the owners of lands located on Part of Lot 4, Concession 10, Township of Scugog (19350 Island Road), Ward 3, made an application to the Township of Scugog (Zoning By-law Application Z/__/2023) to amend Zoning By-law 14-14 to remove the Holding (H) symbol from the Agricultural Zone and to rezone the property to a Rural Residential and site-specific Environmental Protection Exception Zone to permit the existing accessory small-scale camping operation as a Home Industry.

And Whereas Council deems that adequate public notice has been given and no further public meeting is required;

And Whereas the matters herein set forth are in conformity with the policies and designations contained in the Official Plans of the Region of Durham and the Township of Scugog as are currently in force and effect.

Now therefore, the Council of The Corporation of The Township of Scugog hereby enacts as follows:

1. That Schedule A, Map 1 to Zoning By-law 14-14 is hereby amended by removing the Holding (H) symbol from the Agricultural (AG) Zone and rezoning the subject property to a site-specific Environmental Protection (EP) – Exception Section XX Zone and the Rural Residential (RR) zone with respect to Part of Lot 4, Concession 10, Township of Scugog (19350 Island Road), Ward 3, as shown on Schedule “A” attached to and forming part of this By-law.

2. That for the subject lands shown in Schedule A of this By-law as shown as Exception Section XX, all provisions of the Environmental Protection (EP) zone shall continue to apply as it relates to permitted uses in addition to the following:

DRAFT

a) A small-scale short term overnight camping operation consisting of a maximum of two (2) all-season geodesic dome structures shall be permitted as a Home Industry accessory to the principal rural residential use.
b) Each geodesic dome structure is permitted a maximum floor area of $39m^2$ and $50m^2$ respectively. Each geodome area is to be equipped with a kitchenette facility, pit privy, outdoor showers, and a private deck. Individual ancillary amenities such as a hot-tub or barbeque are also provided alongside each unit.
c) Parking for the short term overnight camping operation shall be calculated at 1 required parking space per geodesic dome.
d) Ancillary tent-camping or the use of a recreational trailer, travel trailer, truck camper or tent-trailer in conjunction with the Tourist Establishment are prohibited.

3, That for the subject lands shown in Schedule A of this By-law as shown as Rural Residential (RR) zone, all provisions of the Rural Residential (RR) zone shall apply as it relates to permitted uses, accessory uses and minimum standards under Section 8.

This By-law shall come into force in accordance with Section 34 of the Planning Act.

This By-law Read and Passed on the ___ day of ___, 2023

_____

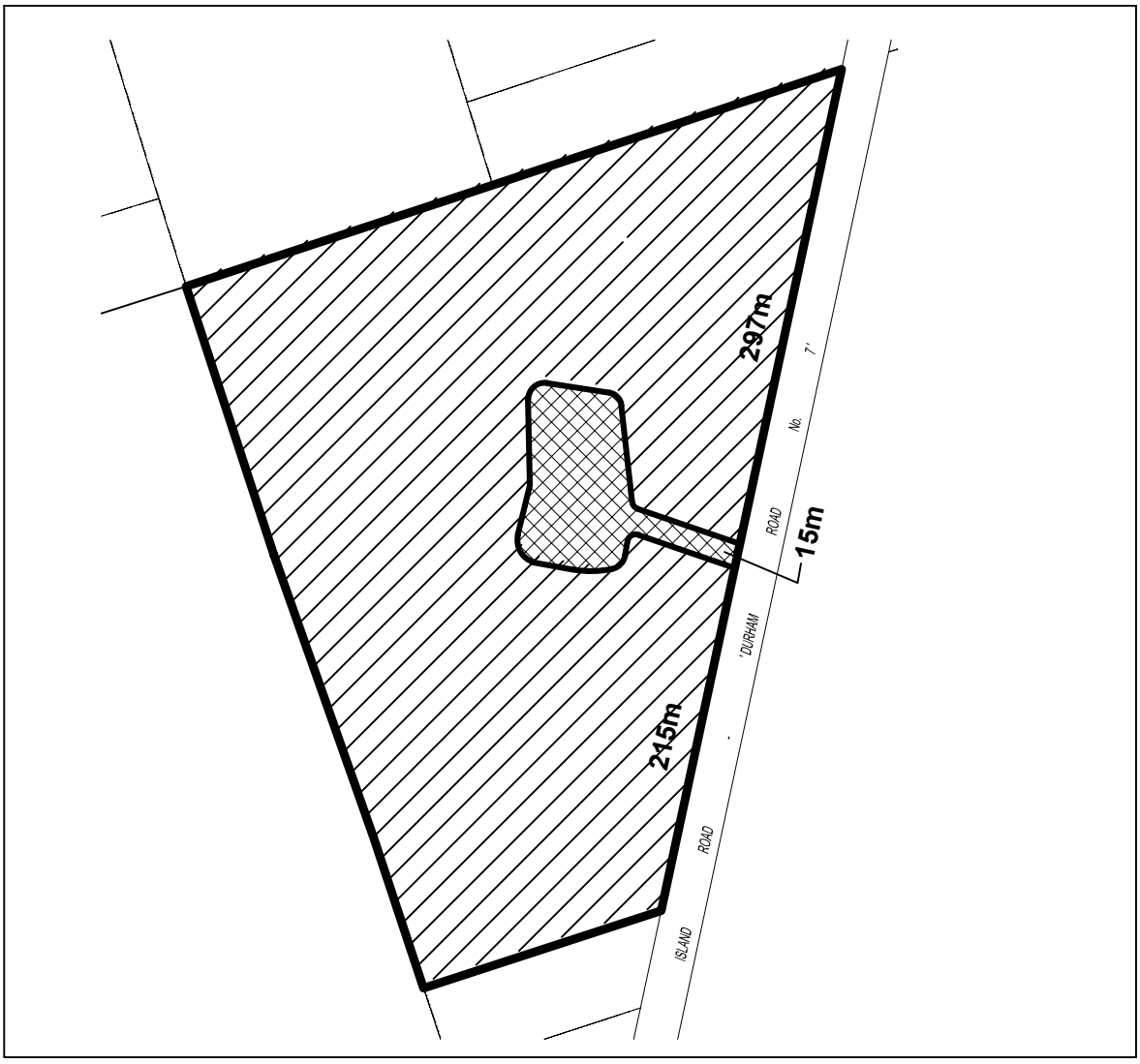
MAYOR, Wilma Wotten

_____

CLERK, Becky Jamieson

DRAFT

Schedule 'A'
To By-law No. XX-23
Township of Scugog
Amendment to Schedule A, Map 5
To Zoning By-law 14-14



AG, AG(H), EP to RR
AG, AG(H), EP to EP-XX

0 25 50 100 150
Meters

This is Schedule A to By-law 49-23

Passed this __ day of _____, 2023

Township of Scugog
Key Map

