



PLANNING RATIONALE REPORT

SUBDIVISION AND ZONING BY-LAW AMENDMENT

January 2022

EMERALD SUBDIVISION

6544 Jack Pine Crescent

Part of Lots 3 and 4, Concession 3 - Geographic Township of
Osgoode

9287043 CANADA CORPORATION

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Table of Contents

1	Introduction	6
1.1	Background.....	6
1.2	Location	6
1.3	Consultation.....	7
1.4	Supporting Reports	8
2	Context.....	8
2.1	Surrounding Area.....	8
2.2	Site Conditions.....	9
2.3	Relationship to Landscape.....	10
2.4	Transportation Connections	12
2.5	Natural Heritage System and Parks	13
3	Proposed Plan of Subdivision	14
3.1	Details.....	14
3.1.1	Layout.....	14
3.1.2	Statistics: Height/Density/Unit Type/Mix.....	15
3.1.3	Landscaping and Streetscaping	15
3.1.4	Parks and Open Space.....	15
3.1.5	Transportation and Access	16
3.1.6	Outdoor Amenity Space	17
3.1.7	Noise and Air Quality	18
3.1.8	Sunlight and Microclimate	18
3.1.9	Supporting Neighbourhood Services.....	18
3.2	Design Proposal	18
3.2.1	Materials and Design	18
3.3	Approvals.....	19
4	Proposed Zoning By-law Amendment	20
4.1	Details of Proposed Amendment.....	20
4.1.1	Residential.....	20
4.1.1.1	Minimum Lot Size:	21
4.1.2	Open Space.....	21
5	Policy and Regulatory Framework.....	22
5.1	The Planning Act and 2020 Provincial Policy Statement	22

- 5.1.1 Building Strong Communities Section 1.0 22
- 5.1.2 Wise Use and Management of Resources Section 2.0 23
- 5.1.3 Protecting Public Health and Safety Section 3.0 24
- 5.1.4 Summary 24
- 5.2 City of Ottawa Official Plan (2003, as amended)..... 24
 - 5.2.1 Rural Lands 24
 - 5.2.2 Designations and Land Use 24
 - 5.2.2.1 Villages – Section 3.7.1 24
 - 5.2.2.2 Adjacent to Land-Use Designations – Section 4.2 25
 - 5.2.2.3 Private Water and Wastewater Servicing – Section 4.4.2.1..... 25
 - 5.2.3 Environmental Protection - Section 4.7 25
 - 5.2.3.1 Integrated Environmental Review 25
 - 5.2.3.2 Protection of Vegetation Cover – Section 4.7.2..... 26
 - 5.2.3.3 Erosion Prevention and Protection of Surface Water – Section 4.7.3..... 27
 - 5.2.3.4 Protection of Endangered and Threatened Species – Section 4.7.4 27
 - 5.2.3.5 Protection of Groundwater Resources – Section 4.7.5..... 27
 - 5.2.3.6 Stormwater Management - Section 4.7.6..... 27
 - 5.2.3.7 Environmental Impact Statement - Section 4.7.8 27
- 5.3 Compatibility Analysis 27
 - 5.3.1 Urban Design and Compatibility - Section 2.5.1 27
 - 5.3.2 Urban Design and Compatibility – Section 4.11 28
- 5.4 Village of Greely Community Design Plan..... 29
 - 5.4.1 Development Principals 29
 - 5.4.2 Land Use Plan 29
 - 5.4.2.1 Residential Areas – Section 4.2 29
 - 5.4.2.2 Open Space – Section 4.7 30
 - 5.4.2.3 Ecological Feature – Section 4.9 30
 - 5.4.2.4 Ecological Function – Section 4.10 30
 - 5.4.3 Community Design Policies and Guidelines for Road Pedestrian and Cycle Links
32

6 Relevant Policy Considerations 34

- 6.1 Shields Creek Subwatershed Study 34
- 6.2 Design Guidelines..... 34
 - 6.2.1 Based on pre-consultation Design Brief Terms of Reference 34
 - 6.2.2 City of Ottawa Design Guidelines for Rural Villages..... 35
- 6.3 Park Development Manual..... 36

7	Integrated Environmental Review	37
8	Supporting Studies Summary	39
8.1	Serviceability Brief (Revision 1) – January 2022, prepared by ARK Engineering and Development.....	39
8.2	Geotechnical Investigation (Revision 1) – December 20, 2021, prepared by GEMTEC	39
8.3	Transportation Impact Assessment Strategy Report – October 27, 2021, prepared by D.J. Halpenny & Associates Ltd.	39
8.4	Hydrogeological Investigation and Terrain Analysis (Revision 1) – January 18, 2022, prepared by GEMTEC.....	39
8.5	Stage 1 Archeological Assessment – May 2021, prepared by LHC.....	40
8.6	Phase 1 Environmental Site Assessment- January 28, 2021, prepared by Paterson Group	40
8.7	Environmental Impact Statement and Headwater Drainage Feature Assessment (Revision 1) – dated January 10, 2022, prepared by GEMTEC	40
9	Conclusion	41

Table of Figures

Figure 1: Location of Subject Site	7
Figure 3: Site Air Photo	10
Figure 4: Site Context	11
Figure 5: Immediate Site Context	11
Figure 6: Transportation Master Plan – Road Network Rural	12
Figure 7: Transportation Master Plan – Cycle Network – Primary Rural Routes	12
Figure 8: Natural Heritage Features - Schedule L2 & Environmental Constraints – Schedule K	13
Figure 9: Concept and Phasing Plan	14
Figure 10: Greely CDP Schedule C Village Road Network	16
Figure 11: Vehicle and Pedestrian Transportation Network	17
Figure 12: Outdoor Amenity Space Provided on Individual Lots	17
Figure 13: Examples of Detached Dwellings in Local Development	19
Figure 14: Neighbourhood Character in Local Subdivisions Developed by the Applicant.	19
Figure 15: Proposed Zoning	20
Figure 16: Rural Policy Plan - Schedule A	24
Figure 17: Sample Lot Tree Preservation and Planting Plan	26
Figure 18: Sample Lot Tree Preservation and Planting Plan with Stormwater Management Pond	26
Figure 19: Greely CDP Land Use	31
Figure 20: CDP Land Use Plan with Emerald Subdivision Land Uses inlaid [Schedule A]	32
Figure 21: Development Areas and Site Features	38

1 Introduction

1.1 Background

J.F. Sabourin and Associates has been retained by Sunset Lakes Developments to prepare this Planning Rationale in support of a subdivision and zoning by-law amendment application for the Emerald Subdivision located at 6544 Jack Pine Crescent (subject site). This report provides an analysis of relevant policies and a summary of supporting technical studies which support the proposed development.

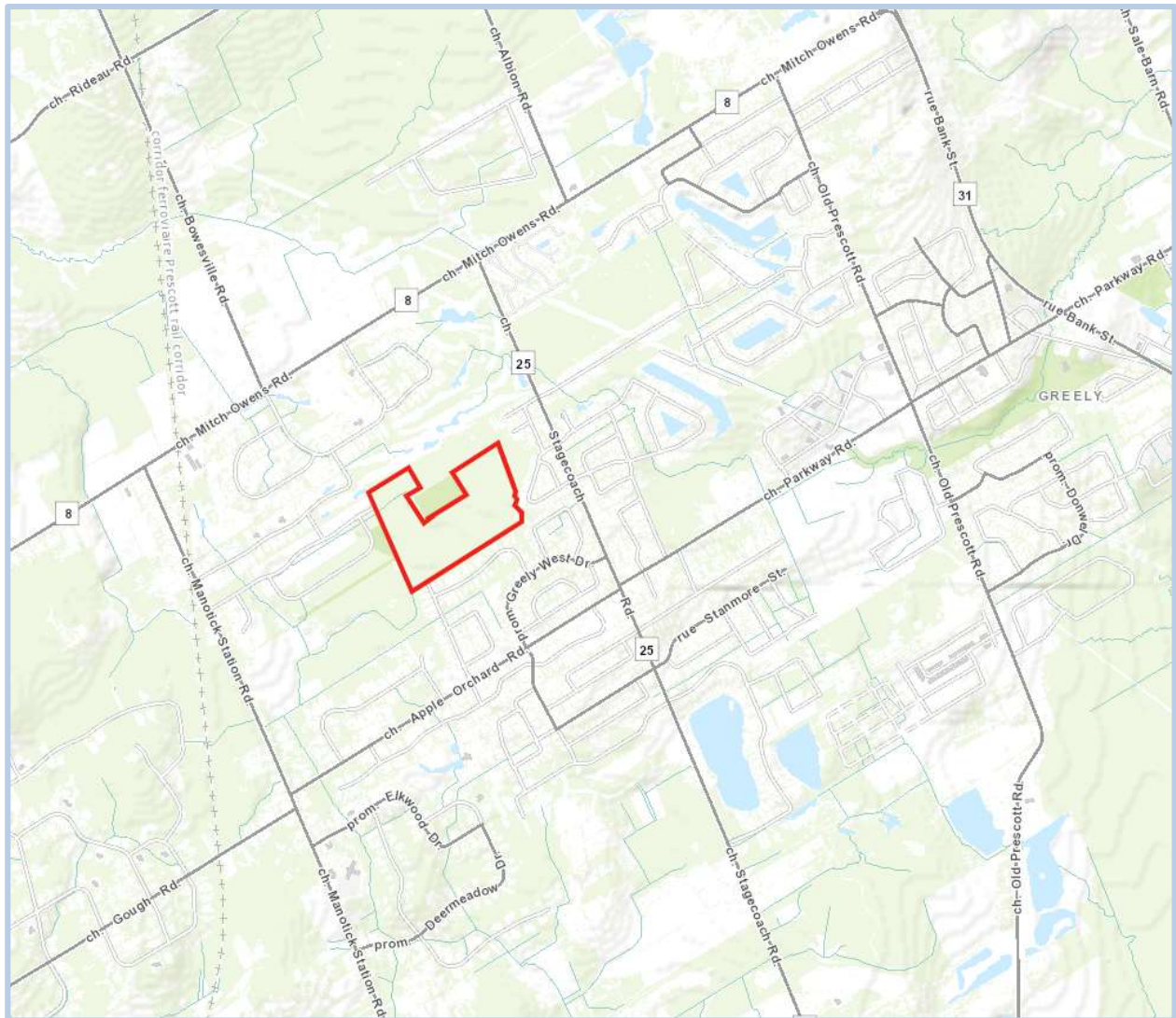
The draft plan for the Emerald Subdivision will establish 73 residential lots on private, individual water supply and sanitary sewage systems, two park blocks which support a natural wildlife corridor, a stormwater drainage block, three pathway link blocks, and four local streets. Additionally, two stormwater management ponds will be located on the site.

A Zoning By-law Amendment is also required to change the current zoning in the development area from Development Reserve Zone to Village Residential First Density Zone (V1E (xxx)) to reflect proposed village residential development. The parks, owners association block, wildlife corridor and pathway links shall be zoned as open space.

1.2 Location

The site is a 35.03 hectare irregular-shaped parcel currently addressed as 6544 Jack Pine Crescent, Part of Lots 3 and 4, Concession 3, of the former Geographic Township of Osgoode (See Figure 1), within the Village of Greely. The land is bounded by the existing Emerald Links Golf & Country Club and a mature residential fabric to the north, mature residential fabric to the east and south, and a residential subdivision under construction to the west. The UPI lands consisting of recreational fields and a large natural area are located to the south-west of the subject site.

Figure 1:Location of Subject Site



1.3 Consultation

A pre-consultation meeting with the municipal planning file lead and review staff was held on December 15, 2020. Confirmation of materials required to support this subdivision and zoning by-law application were provided by email on January 29, 2021 by Sarah McCormick. Additional consultation was held with municipal review staff on March 4, 2021.

The Ward Councillor is aware of this application. Direct consultation with the councillor was undertaken by the proponent in Spring 2021.

1.4 Supporting Reports

This application is accompanied by the following reports and plans:

- ⊕ Serviceability Brief – ARK Engineering and Development
- ⊕ Grading Plans 1-5 – ARK Engineering and Development
- ⊕ Geotechnical Investigation – GEMTEC
- ⊕ Transportation Impact Assessment Stage 3 – D.J. Halpenny & Associates Ltd.
- ⊕ Storm Drainage Area Plan – ARK Engineering and Development
- ⊕ Hydrogeological & Terrain Analysis – GEMTEC
- ⊕ Draft Plan of Subdivision plotted July 16, 2021– George Zervos of J.D. Barnes Limited
- ⊕ Planning Rationale (includes Design Brief information and Integrated Environmental Review) – JFSA
- ⊕ Concept Plan – ARK Engineering and Development
- ⊕ Archeological Resource Assessment – LHC
- ⊕ Environmental Site Assessment Phase 1 – Paterson Group
- ⊕ Environmental Impact Statement – GEMTEC
- ⊕ Headwater Drainage Feature Assessment – GEMTEC
- ⊕ Tree Preservation Plan – Sunset Lakes Developments/GEMTEC
- ⊕ Lot Development Plan – ARK Engineering and Development
- ⊕ Watershed Divide Analysis - JFSA

Note that as confirmed by municipal planning staff, a noise/vibration study, ESC Plan, stand alone design brief, and stand alone EIRS is not required.

2 Context

The local context, a design with nature approach and consultation with municipal staff have influenced the layout of the subdivision and arrangement of amenities/services within. The arrangement of the roads and pathway blocks is intended to address the relationship with the adjacent developing subdivision to the west and the established neighbourhoods to the east and south. Local roads are designed as an interconnected network, with pathway blocks connecting into the existing trail system and open space. The park blocks provide a natural open space in keeping with wooded, natural environment of this development, and connects the municipally owned natural woodland property to the developing neighbourhood parkland at the western boundary. The development features single residential units with deep lots, maintaining the rural village lot and substantially woodland character of the area.

2.1 Surrounding Area

The development site is located within the village of Greely boundary. The lands to the north are designated General Rural Area. To the east and south, the lands are designated as Village. To the west, the lands are designated General Rural Area. As shown in the 2018 air photo, the surrounding lands are characterized by the following land uses (see Figure 2):

- ⊕ North

The lands north consist of the Emerald Links Golf & Country Club. Large lot residential development is interspersed with the golf club lands. The lands between the golf club and

Emerald Subdivision are vacant, owned by other private owners. A municipally-owned open space natural area, the Osgoode Nature Reserve. Emerald Subdivision surrounds this park on three sides.

⊕ East

To the east, there is a large vacant triangular lot, undeveloped but indicated as a future municipal park known as the Osgoode Gardens Woodlot in the Greely CDP. Across Jack Pine Crescent, is another already existing park, Tintern Park. Single-family residential developments are also present to the east on both sides of Stagecoach Road.

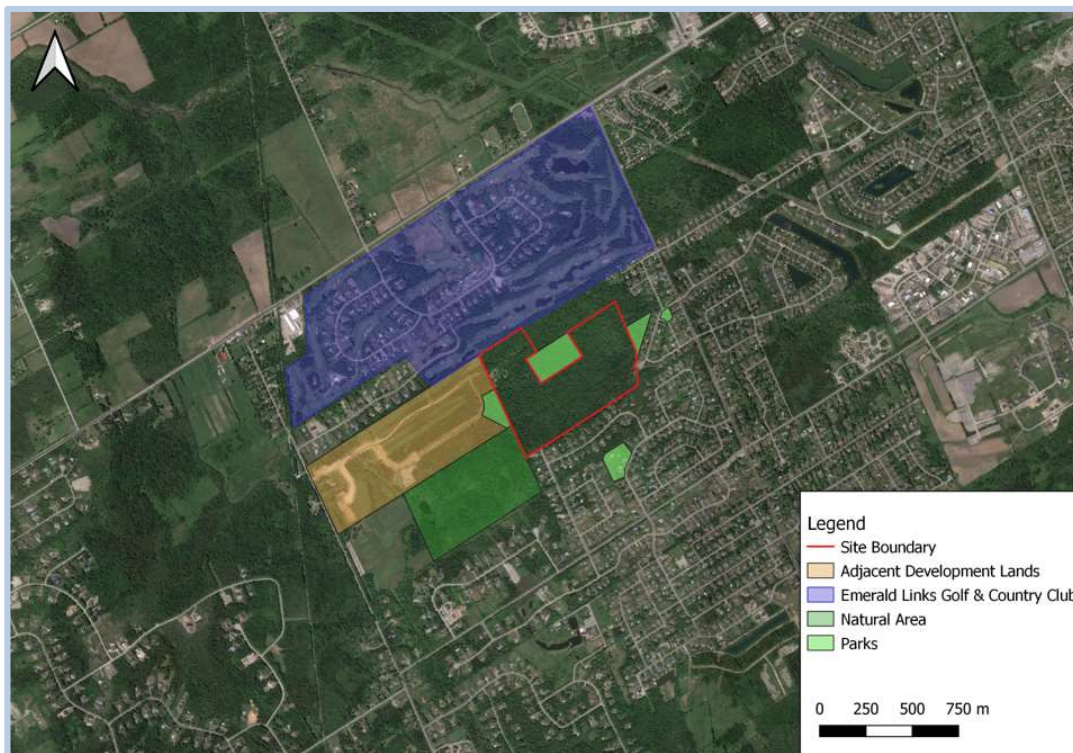
⊕ South

Directly south are single-family residential developments, and another park, Greely West Park.

⊕ West

To the west, another park is proposed within lands that are currently under development as single-family residential developments, Emerald Links Phase three. Additionally, a large parcel with a largely undeveloped area exists to the west. These lands are owned by an athletic facility, Ultimate Parks Incorporated (UPI) and are outside the settlement area.

Figure 2: Site Context



2.2 Site Conditions

As shown in Figure 3, the site is currently completely vegetated, except for a small area in the northwest corner of the site that has been cleared as a private garden and workshop area. Several paths and road accesses have been periodically cleared traversing the site. Air photo imagery

indicates no significant clearing or development has occurred on the site in the last 45 years. Prior to 1976 there may have been areas cleared, attempts at agriculture and topsoil stripping based on soil profiles and air photography. Several informal walking trails cross through the site, likely used for recreational purposes by local residents. Elevations on the site vary from 104.4 to 101.8 metres and the drainage is generally from east to west towards Grey's Creek Municipal Drain. No natural surface water features exist on the site.

Figure 3: Site Air Photo



2.3 Relationship to Landscape

The site is in the rural area of Ottawa and will be complementary to the surrounding residential fabric once build out is complete. The land is quite flat and does not provide views towards any notable features or landmarks. Currently, the vacant land is contiguous with the UPI undeveloped lands, central city owned open space block, and other landowner blocks of vacant land to the north. The north-west site boundary is shared with the Emerald Links Golf & Country Club, however there is no drainage link nor continuity of vegetation. The golf course creates a 'hard' anthropogenically manicured northern edge to the entire area.

The surface drainage is generally overland with several man-made channels and interruptions to former natural drainage patterns by work undertaken at the boundaries by adjacent property owners. The topography ultimately directs flows west to Grey's Creek, without a naturally defined outlet, however the residential development underway directly west established a formal drainage (outlet) corridor to the receiver.

The subject site is a vacant gap in the expected settlement area of the Village of Greely as apparent by the surrounding residential development and the underlying parcel fabric, as well as the location within the village boundaries since the early 1990's. Contextually, the site is most appropriately developed as village residential development lots.

Figure 4: Site Context

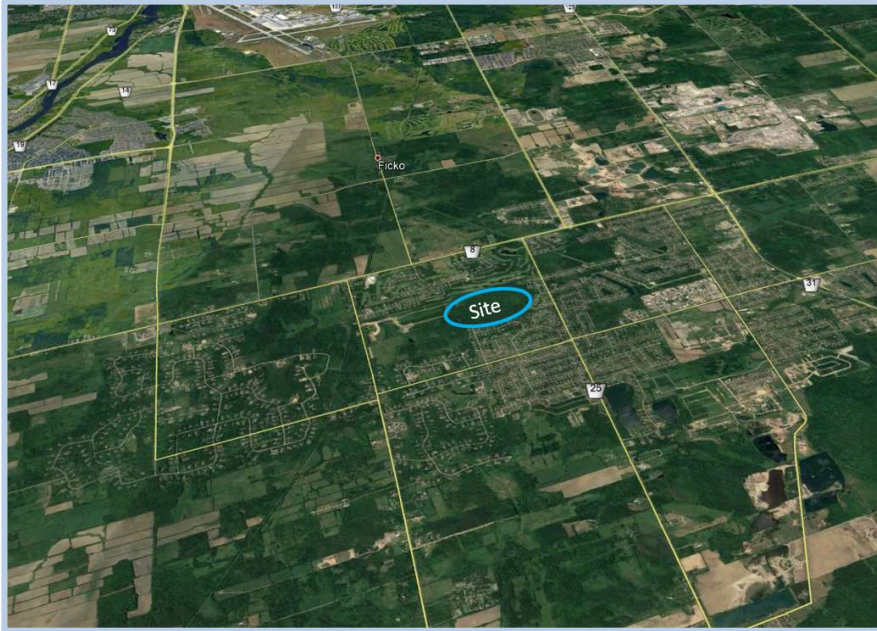


Figure 5: Immediate Site Context



2.4 Transportation Connections

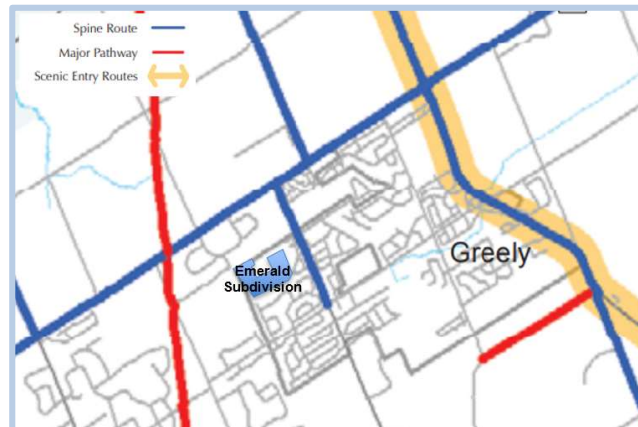
The property is currently accessible by the existing Jack Pine Crescent to the west and Fox Valley Road to the south. Fox Valley Road will be extended through the site to the north terminating at an east/west crossroad that connects the site to the adjacent development lands to the west. An additional east/west local road will connect Fox Valley Road to Jack Pine Crescent through the site once complete. These connections will allow the site access to the existing collectors, Apple Orchard Road to the south, and Manotick Station Road to the west, as well as existing arterial, Stagecoach Road to the east. Connection to the City’s cycling network is provided along a spine route, Stagecoach Road, to the east and a major route, Osgoode Trail, to the west.

Road and cycling routes delineated in the City’s Transportation Master Plan and Cycling Plans provide robust connections to adjacent communities, employment, and services for future residents. The City’s proposed transit network can be accessed via cycling on Osgoode Trail, which terminates at Leitrim Road in Findlay Creek, next to the planned Park-and-Ride facility; a future LRT station is planned at the location. As per the Greely Community Design Plan, the road fabric will ultimately connect through to Stagecoach Road in the east, Apple Orchard Road in the south, and Manotick Station Road in the west. The site has good connections to Highway 31 (Bank Street) by way of Apple Orchard Road.

Figure 6: Transportation Master Plan – Road Network Rural



Figure 7: Transportation Master Plan – Cycle Network – Primary Rural Routes

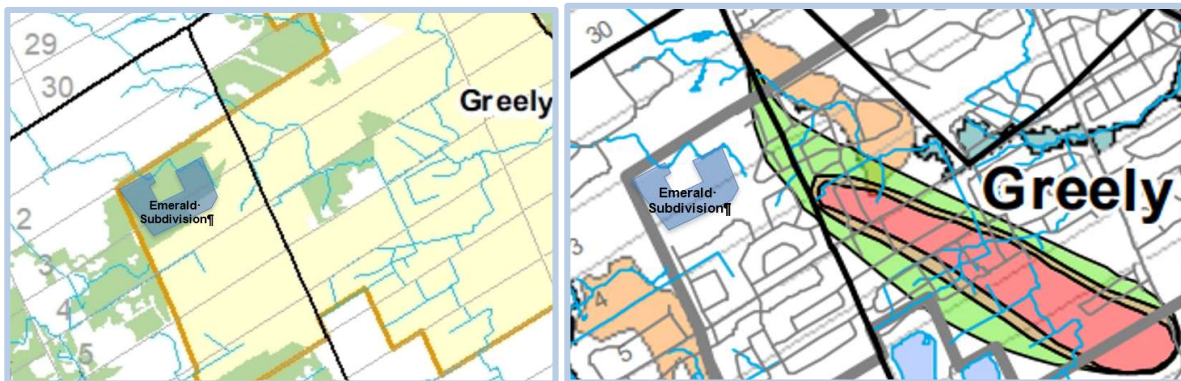


2.5 Natural Heritage System and Parks

The site is located within an area identified by the Natural Heritage System Feature Overlay on Schedule L2 (See Figure 8). The site is not within or adjacent to any Environmental Constraints on Schedule K (See Figure 8). The Shield's Creek Subwatershed Study and Greely Community Design Plan (CDP) both recognize the presence of natural and/or ecological features on the site, centered around the municipally-owned parcel. The CDP also identifies the location of existing woodlands and future parks. A conceptual park is suggested within the subject site in the south western quadrant.

Several established parks and open space areas are scattered nearby or abut the site. The municipally-owned parcel called the Osgoode Nature Reserve is located in the northern centre of the proposed development and is expected to remain a natural area. An additional municipal parcel between the subject site and the Osgoode Gardens community is the Osgoode Gardens Woodlot and remains in a vacant natural state. Active parkland can be found directly west of the site in the new Green Links Community, yet to be fully improved. Greely West is an active amenity park one block south on Waddion Drive. The UPI field facility and Green Links golf course abut the site providing additional recreational amenities. Finally, the site is located at the north end of the community 'Greely Loop' which provides an additional connection opportunity at the south - east end. The site is already accessed informally by locals for walking.

Figure 8: Natural Heritage Features - Schedule L2 & Environmental Constraints – Schedule K



3 Proposed Plan of Subdivision

The following section describes the key components of the proposed plan of subdivision.

3.1 Details

3.1.1 Layout

The proposed subdivision development is comprised of 73 residential lots over the 35.04 ha site. The layout has been designed to respect a ‘Design with Nature’ approach and integrate into the adjacent residential lands within the Village of Greely, in accordance with the CDP.

The structural components of the plan include the following, as shown in Figure 9:

- ⊕ 73 single detached homes (0.4 ha minimum)
- ⊕ 2 park blocks (0.65 ha)
- ⊕ 1 stormwater management and drainage corridor block (0.35 ha)
- ⊕ 3 pedestrian linkage and service blocks (1.16)
- ⊕ 4 local roads

The site is proposed to be developed in two phases with 40 lots in the first phase and 33 lots in the second phase. The subdivision is expected to be totally completed and substantially occupied by 2027.

Figure 9: Concept and Phasing Plan



3.1.2 Statistics: Height/Density/Unit Type/Mix

As illustrated above, the proposal provides lots for single detached homes only. The lots vary in depth, with a minimum frontage width of 30 metres, located along 20-metre wide local right of ways. The minimum lot size of 0.4 hectares is in keeping with the Official Plan policies. The total number of units (73) divided by the total land area devoted to residential use provides an approximate post development density of 2.45 units per gross hectare at full build out. This is less dense than most other village subdivisions in Greely which are typically .2 ha lots.

3.1.3 Landscaping and Streetscaping

The preservation of the forested environment both for ecological reasons and as a community identity is important to establish. This has been accomplished through the location of ROW's, configuration of lot length and width, and a proposed tree preservation approach which focuses not on individual trees but on forest contiguity and canopy cover.

The concept plan indicates where tree retention and protection is to be maintained over the larger site, and additional instruments are proposed to re-establish significant tree cover in the lot development envelopes once residential construction is completed.

The lots in this development shall be conveyed individually on a lot by lot basis to individual purchasers/and custom homebuilders. The designs of the homes and associated landscaping will vary within the defined development envelopes. A lot layout plan will be provided which establishes the development envelope that builders/designers may work within. The concept plan is not a document that is expected to be tied to the approval, it will be superseded by the lot layout plan.

Streets are expected to be typical village residential ROW with no sidewalks, roadside ditches and culvert access to each lot. Streets will benefit from a rural residential character including varied setbacks, space around individual residences and substantial tree planting around the residential envelopes.

3.1.4 Parks and Open Space

Two blocks are proposed as locally valued passive park land on this site. The blocks address a series of criteria identified as important through discussion with the ward councillor, community input, the Village Greenspace Network identified on Schedule D in the CDP, and findings in the EIS:

- ⊕ Establish an Open Space connection between the natural municipally-owned 'Osgoode Nature Reserve' parcel and the future park on Green Jacket Crescent, and the UPI lands.
- ⊕ Provide a wildlife corridor to protect the connection between the vacant lands to the north, the 'Osgood Nature Reserve' and the undeveloped UPI lands to the west.
- ⊕ Contribute to the pedestrian pathway network (linkage to the Greely Loop) from the east.

The local councillor has indicated support for this approach due to the existing and proposed active parks surrounding the site, and the local desire for pathway connections. Similarly, the community association and Greely Loop coordinator are in support of the priority placed on providing pathways. This proposal, as opposed to active amenity feature parks, is much more in keeping with the CDP Development Principles:

#1 'Develop a greenspace system that protects significant natural areas, promotes the rural character and provides a range of recreational opportunities.'

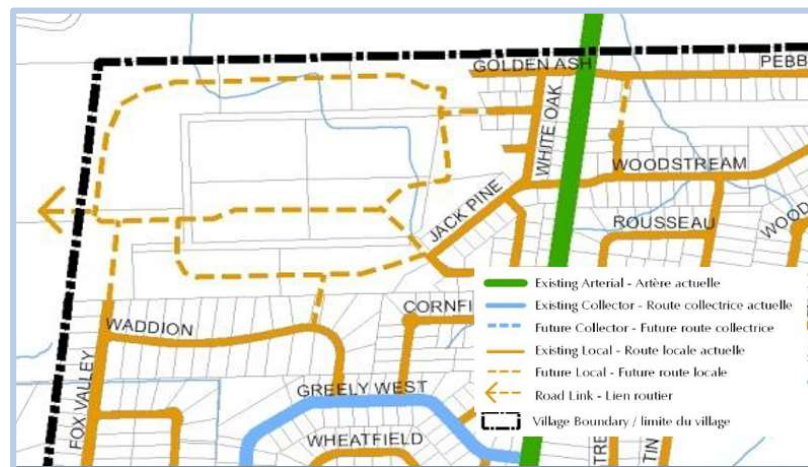
#2 'Provide an interconnected system of public walkways, trails and sidewalks that connect neighbourhoods, natural areas, parks and the outlying rural areas.

Cash in lieu will be provided for the remainder of the outstanding parkland dedication to support improvements and development of the existing parkland blocks in the area.

3.1.5 Transportation and Access

Access to the subdivision shall be from Jack Pine Crescent from the east, Fox Valley Road from the South, and Green Links Way from the west. This road pattern is substantially in keeping with the proposed local roads in the CDP. (See Figure 10). The road design is proposed to follow a standard 20-metre rural cross-section. Traffic calming measures within the internal subdivision streets have been considered by the consultant and will be provided in detail in the Phase 4 TIA. No changes to the street pattern will be required. No roadway modifications are proposed by the transportation consultant.

Figure 10: Greely CDP Schedule C Village Road Network



The proposed street network is designed to integrate with existing development to the east and south, as well as developing lands to the west. A 20 metre wide block has been provided to connect to an unconstructed right of way that would extend to the north-east access, if desired by the city as part of future development applications. Four local roads are proposed; there are no collector nor arterial roads within the development.

Figure 11: Vehicle and Pedestrian Transportation Network

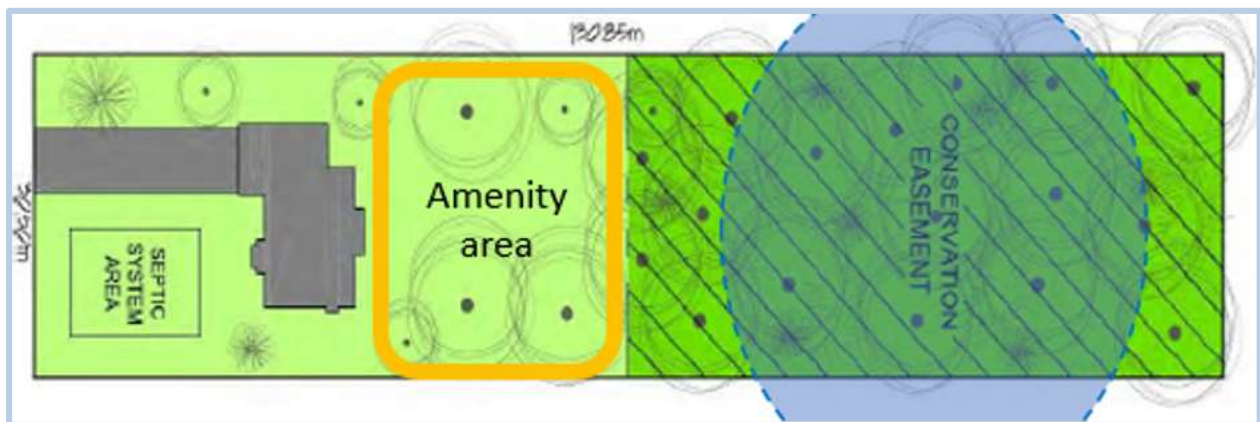


In keeping with the rural character of Greely, sidewalks are not provided, however pedestrian pathways are proposed to run through the development and link external and internal open space features for public access. These pathways will enhance the existing Greely Loop path network and are considered to be a key feature of the development (See Figure 11). Pathway design will be consistent with the standards outlined in the City of Ottawa Park Development Manual.

3.1.6 Outdoor Amenity Space

Private outdoor amenity space is available on each lot due to their size and spacing. Each lot is 0.4 ha minimum; all development will occur in the front half of the lot. The rear half is to be zoned Open Space and will contain either a water feature or protected tree area. Whether there is a water feature or a protected tree area occupying half of a lot, significant amenity space is available.

Figure 12: Outdoor Amenity Space Provided on Individual Lots



Public land within and surrounding the subdivision provides additional open space areas (active and passive) for the residents. Access to open space is enhanced by the expansion of the Greely Loop trail network through the site.

3.1.7 Noise and Air Quality

In consultation with the City of Ottawa, the proponent was informed that a noise study would not be required as it is only triggered by the site existing within 100 metres of an existing/proposed arterial or collector road. The closest arterial road, Stagecoach Road, is over 300 metres to the east. The closest collector road, Greely West Drive, is over 200 metres to the south.

The proposed plan of subdivision has taken into consideration the need to examine a minimum distance separation from livestock operations. No livestock operations were found to be operating within 750 metres of the proposed subdivision. Therefore, no further action was undertaken to examine minimum distance separation.

3.1.8 Sunlight and Microclimate

The nature of the proposed residential development, which is characterized by large lots, existing forest and limited open landscaped space is not likely to contribute to microclimatic change locally. The effects of the development on adjacent natural areas has been mitigated by using design with nature principles to buffer protected features. Impacts related to sunlight or shading on individual lots are not expected.

3.1.9 Supporting Neighbourhood Services

This additional residential density is in keeping with the larger community structures and amenities planned in the CDP. The residential population will have access to, and support the use of parkland, schools and transportation systems that are existing and planned for the adjacent established and developing communities.

3.2 Design Proposal

The applicant has significant experience in subdivision design in the Village of Greely with seven previous communities successfully developed. Through this experience, they have developed a review process for home design and landscape improvements, supervised and enforced through local homeowners' associations.

3.2.1 Materials and Design

The proposed development is to be exclusively single-family homes designed and built by a variety of custom builders. All homes are to be constructed with exterior cladding of wood, brick, stone or stucco. Additional design review is undertaken by the developer. The Neighbourhood character is maintained through several restrictive covenants registered on title, supervised and enforced through the local homeowners' association.

Figure 13: Examples of Detached Dwellings in Local Development



Figure 14: Neighbourhood Character in Local Subdivisions Developed by the Applicant.



3.3 Approvals

No approvals have been applied for in advance of this submission. Future required approvals will include:

- ⊕ Ministry of the Environment and Climate Change: Environmental Compliance Approval for stormwater management.
- ⊕ Ministry of the Environment and Climate Change: Permit to Take Water for construction if required.
- ⊕ South Nation Conservation Authority: Permit under O.reg 174/06 if required.
- ⊕ Individual private servicing permits on a lot-by-lot basis.

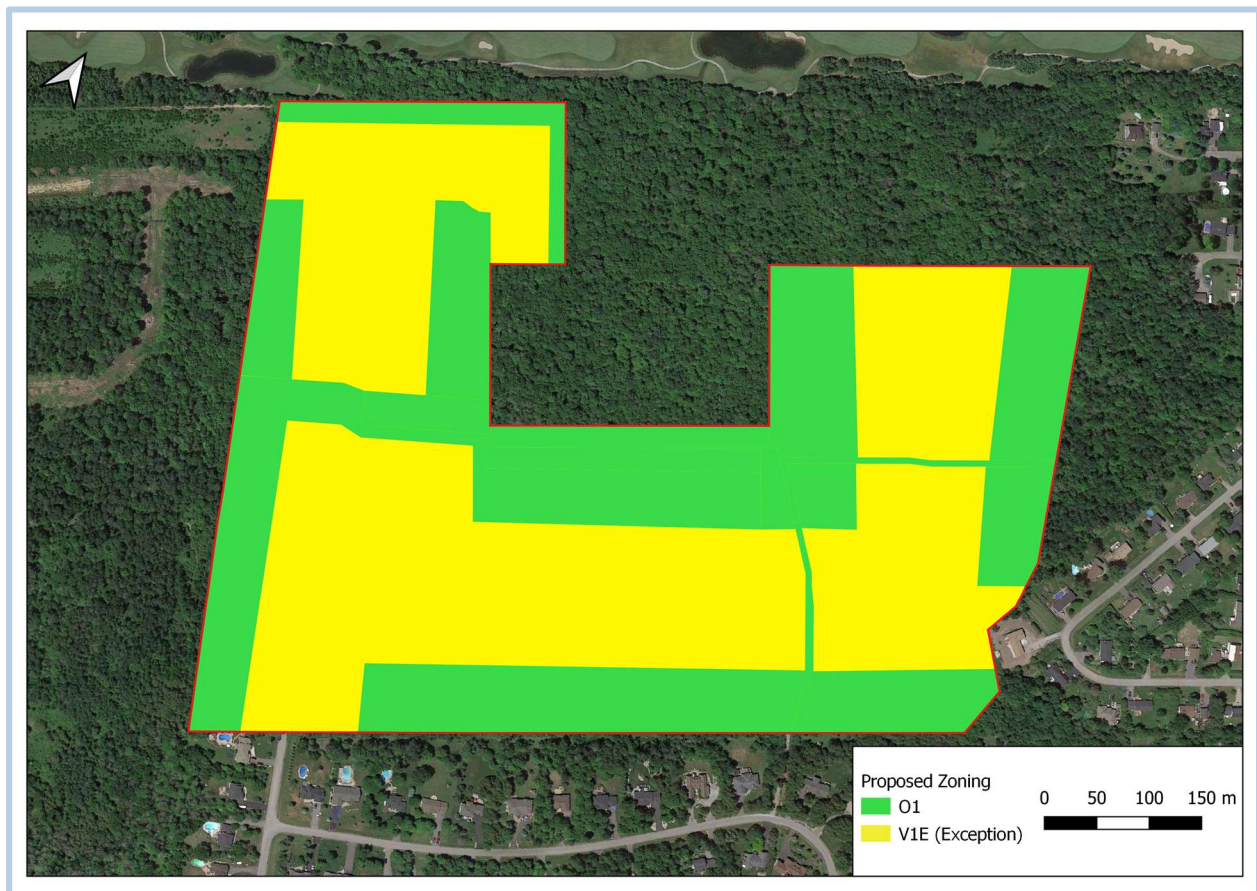
4 Proposed Zoning By-law Amendment

The entire site is currently a Development reserve Zone (DR1) zone intended for future village development in the Official Plan. The proposed rezoning shall reflect the land use and housing types expected by the draft approved plan of subdivision.

4.1 Details of Proposed Amendment

The lands are composed of single-family residential housing at low densities in keeping with the rural character of the area. Open space in the development includes pedestrian linkages and two open space blocks. The proposed zoning shall support these residential uses and open space.

Figure 15: Proposed Zoning



4.1.1 Residential

The proposed zoning will implement residential dwellings as proposed within the draft plan of subdivision. Such zoning is compatible with the existing and proposed developments adjacent to the site. The proposed zoning provisions are based on a similar zone used in other Village of Greely communities – V1E (617r) (By-law 2008-250), with the following additional accommodations:

4.1.1.1 Minimum Lot Size:

To support environmental conservation and the placement of easements for tree conservation the following accommodation is proposed for all lots:

- ⊕ lot size increase from 0.2 ha to 0.4 ha.

Zone requirements for dwellings (V1E (xxx)):

Zone requirements:	Detached Dwelling - interior lots	Detached Dwelling - corner lots
minimum lot area	4000 m ²	4000 m ²
minimum lot width	30 m	30 m
minimum front yard setback	7.0 m	7.0 m
minimum side yard setback	1.5m on one side and 3.5m on the other side	1.5 m on interior side and 7.5 m on the street side
minimum rear yard setback	10.5 m	10.5 m
maximum building height	11.0 m	11.0 m
maximum lot coverage	25%	25%
minimum setback of septic fields from the top of bank of a watercourse	15.0 m	15.0 m

This proposed zoning has considered the need for sufficient side yard setbacks to allow for maintenance of wells in rear yards. The 3.5 metre side yard setback on one side is sufficient for drill rig access as established on other development sites. No trees are indicated alongside the development envelopes.

4.1.2 Open Space

Consistent with other pathway corridors, local parks, owners association blocks in Greely, and natural areas, the Open Space [O1] zoning is proposed. Additionally, the stormwater ponds and tree conservation areas located to the rear of each lot will also be zoned Open Space [O1] to ensure no future development occurs in these areas.

5 Policy and Regulatory Framework

5.1 The Planning Act and 2020 Provincial Policy Statement

Under Section 3 of the Planning Act, the Provincial Policy Statement 2020 (2020 PPS) provides for appropriate development and land management while protecting public resources. Specifically, it promotes growth in designated settlement areas for the efficient use of land, resources, infrastructure, and public service facilities. The policies also seek to protect and conserve the natural resources that support the long-term health and social well-being of communities, and the sustainability of natural features and systems in the environment. Relevant policies of the 2020 Provincial Policy Statement are discussed below.

5.1.1 Building Strong Communities Section 1.0

The proposed development supports efficient and appropriate development and land use land patterns in accordance with policies under Section 1.1.1.

- ⊕ Promotes long term and sustainable economically efficient development and land use patterns;
- ⊕ Avoids environmental or public health and safety concerns;
- ⊕ Avoids limiting the appropriate location of future settlement area expansion, minimizing land consumption and servicing costs;
- ⊕ Improves ease of access and mobility, supporting participation in society for all;
- ⊕ Ensures that necessary infrastructure and public service facilities are available to meet current and projected needs; and
- ⊕ Sited and designed to conserve biodiversity and consider climate change impacts.

The subject area is located in a designated settlement area, in accordance with the municipal direction provided in the approved master planning documents, as directed under Section 1.1.3.

- ⊕ Focuses growth and development in the settlement area;
- ⊕ Efficiently and appropriately establishes a land use pattern that supports land, resources, infrastructure and public service facilities which are planned or available, including active transit;
- ⊕ Minimizes negative impacts to air quality and climate change, and promotes energy efficiency;
- ⊕ Prepares for the impacts of a changing climate; and
- ⊕ Occurs directly adjacent to the existing built-up area, meshing with and contributing to the mix of uses and densities that allow for the efficient use of land, infrastructure and public service facilities.

The proposed development is located within a designated rural settlement area and supports provincial policies addressing land use considerations and compatibility in rural areas, as directed under Section 1.1.4

- ⊕ Builds upon and maintains rural character, providing an appropriate range and mix of housing in rural settlement areas while leveraging rural amenities;
- ⊕ Efficiently utilizes rural infrastructure and public service facilities; and
- ⊕ Conserves biodiversity and considers the ecological benefits provided by nature.

The residential use of land adheres to the Section 1.4 housing provisions.

- ⊕ Supports residential growth in the settlement area as designated to meet projected land requirements;
- ⊕ Supports a range of appropriate housing types and densities;
- ⊕ Directs the new housing to areas where existing infrastructure and services are currently or are planned to be available.

The subdivision layout promotes public health and activity through the inclusion of open space and connectivity as per Section 1.5.

- ⊕ Streets and walkways are designed to support community interaction and active transportation, provide connectivity and allow for passive and active recreational activities.
- ⊕ Park space is located to be publicly accessible and adjacent to a natural area for active and passive recreation, trails and linkages.
- ⊕ Recognizes protected areas, and minimizes negative impacts on these areas

Infrastructure and services are available and provided to the development in accordance with Section 1.6.

- ⊕ Site conditions are suitable for the long-term provision of individual on-site sewage services and individual on-site water services with no negative impacts
- ⊕ Efficient use is made of existing and planned transportation and transit systems;
- ⊕ The systems protect human health and the natural environment;
- ⊕ The stormwater management system shall protect surface and groundwater quality and quantity through design to support the local water balance and in accordance with the standards of the receivers.

Long-term economic prosperity is reinforced as per Section 1.7 by efficiently using land, resources, infrastructure and facilities.

Further, energy conservation, air quality and climate change as per Section 1.8 are supported by compatibility with the land use and development pattern as set out in the Community Design Plan which seeks to maximize vegetation where feasible.

5.1.2 Wise Use and Management of Resources Section 2.0

The development has been designed to protect the natural heritage features and functions for the long term as per Sections 2.1 and 2.2.

- ⊕ The diversity, connectivity and long-term function of natural features in the area are maintained, restored and, where possible, improved by the subdivision layout and coordination with adjacent land uses.
- ⊕ Connections between natural heritage features and areas, surface water features and groundwater features are supported by locating open space amenities and land uses appropriately and designing infrastructure accordingly.
- ⊕ The proposed development design protects water by maintaining catchment area boundaries, the groundwater budget and providing appropriate quality and quality controls, all of which support related functions among natural heritage and surface water features.

Consistent with the requirements of Section 2.6 to protect cultural heritage and archaeology, the archaeological potential of this site has been investigated and was found to exhibit no archaeological potential.

5.1.3 Protecting Public Health and Safety Section 3.0

No natural or human made hazards have been identified on the subject site.

5.1.4 Summary

The proposed development is consistent with the applicable PPS 2020 policies as described above. The residential development site is located within the rural boundary and respects the direction provided in the master planning documents for the area as approved by the municipality. The design comprehensively and efficiently services the community, extending and connecting the development fabric in a logical manner. The proposal addresses and supports the natural heritage and water resources of the site and adjacent lands.

5.2 City of Ottawa Official Plan (2003, as amended)

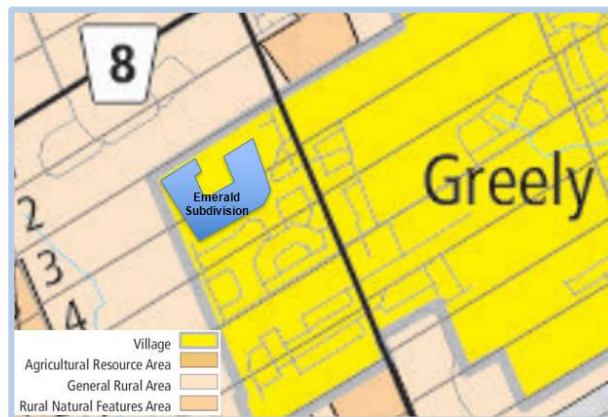
The property is wholly located within rural lands.

5.2.1 Rural Lands

The proposed residential development portion of the property is shown as ‘Village’ on Schedule A in the Official Plan, as shown in Figure 16. The Village designation is intended to encourage:

- ⊕ The delivery of municipal and community programmes and facilities;
- ⊕ The development of residential uses in a variety of forms; and
- ⊕ Modest employment opportunities, in the form of commercial, tourism and small-scale industrial development.

Figure 16: Rural Policy Plan - Schedule A



5.2.2 Designations and Land Use

5.2.2.1 Villages – Section 3.7.1

The designation of Village on Schedule A is intended to permit a variety of land uses to provide for the daily needs of the rural community and to ensure that they remain distinctly rural in character and scale. Villages vary in size and function and have different needs with respect to land-use plans. A CDP has been prepared for and applies in the Village of Greely.

Policy 7 establishes residential and open space as permitted uses within the Village designation:

“Permitted uses will include: residential ... and public open space.”

The proposed development of 73 large residential lots is permitted under the current land use designation and will maintain the rural character of the Village of Greely.

Policy 10 discusses the relation of housing forms to servicing requirements:

“A wide range of housing forms to meet the needs of the Village’s population will be permitted in Villages. The form and scale of development will be limited by the available servicing methods and subject to the policies of Section 4.4 on water and wastewater servicing. Where new lots are proposed for residential purposes that rely upon private services, the minimum lot size shall be 0.4ha.”

The proposed development consists of 73 lots that will all be on private, individual water supply and sanitary sewage systems. The proposed minimum lot size is 0.4 ha, conforming with this policy.

5.2.2.2 Adjacent to Land-Use Designations – Section 4.2

The site is adjacent to the General Rural Area and is within 120 metres of a Natural Heritage System feature within the General Rural Area. As such, an Environmental Impact Statement was prepared and has been submitted with this planning rationale.

5.2.2.3 Private Water and Wastewater Servicing – Section 4.4.2.1

The policies regarding subdivisions on private services require:

- 1. a servicing study of sufficient detail to establish evidence of site suitability will be required. The study must conform to the City’s guidelines. An integrated hydro geological and terrain analysis report is required to confirm sustainability of the water supply and suitability of the terrain. This report will include an impact assessment of nitrates on the groundwater, to confirm sustainability of sewage disposal. The study will also be of sufficient magnitude to consider the impact of the proposal on the operation of existing wells and septic systems in the vicinity. [Amendment #150, April 19, 2018]*
- 2. Applications for subdivisions on private individual services that exceed 40 lots will not be approved for registration unless it is broken into discreet phases of no more than 40 lots...*

An integrated hydrogeological and terrain analysis report has been prepared as per City Guidelines. The site has been found to provide an adequate quantity of groundwater for the proposed development. Water quality from drilled wells on the site has been confirmed as safe for consumption based on the absence of health-related exceedances.

Septic systems on site are predicted to have acceptable minimal impact based on the weighted average nitrate concentration at the site boundaries of 8.72 mg/L; assuming a full build-out of 73 lots.

The proposed development will be split in 2 registration phases of 40 lots or less.

5.2.3 Environmental Protection - Section 4.7

Policies relating to the natural environment seek to support natural features and functions while allowing land development in designated areas to proceed by using design with nature principles. The objectives include:

- ⊕ Increasing forest cover across the city;
- ⊕ Maintaining and improving water quality;
- ⊕ Maintaining base flows and reducing peak flows in surface water;
- ⊕ Protecting and improving the habitat for fish and wildlife in stream corridors;
- ⊕ Protecting springs, recharge areas, headwater wetlands and other hydrological areas;
- ⊕ Managing resources by using low-maintenance, natural solutions.

5.2.3.1 Integrated Environmental Review

An Integrated Environmental Review is provided as part of this Planning Rationale in Section 6.

5.2.3.2 Protection of Vegetation Cover – Section 4.7.2

The policies in this section are met and exceeded throughout the development of tree preservation lot level controls and additional replanting requirements post construction.

The tree preservation plan demonstrates the preservation and ultimate establishment of greater than 50% of tree canopy on each lot across the subdivision, exceeding Ottawa’s goal of 30% tree preservation. Approximately 50% tree canopy coverage will be retained in the back half of most of the 73 residential lots (Figure 17), although approximately 16 lots will retain 25% of the mature tree cover, forfeiting the other 25% to the development of the naturalized stormwater management ponds (Figure 18). In addition, though post construction landscaping, a further 0.2 ha of every lot will, through replanting and landscaping activities, re-establish an 20% tree canopy coverage over the disturbed area of each lot. The location of the development envelope on each lot and the tree retention areas are designed to buffer and protect the adjacent natural areas and support wildlife habitat.

This plan will be achieved through a series of conservation easements registered on title of the 73 private lots. Individual owners will be notified prior to purchase that they have only the front 0.2 ha to develop their home, septic system, driveway, rear, and front yards. In the front 0.2 ha 20% tree cover will be required to be retained or re-planted. In the rear 0.2 ha of each lot a conservation easement will specify 100% tree retention, save for the land required to build stormwater management ponds. The Tree Preservation and Planting Program: Conservation Easement and Agreement Information package is provided in Appendix D of the EIS.

Figure 17: Sample Lot Tree Preservation and Planting Plan

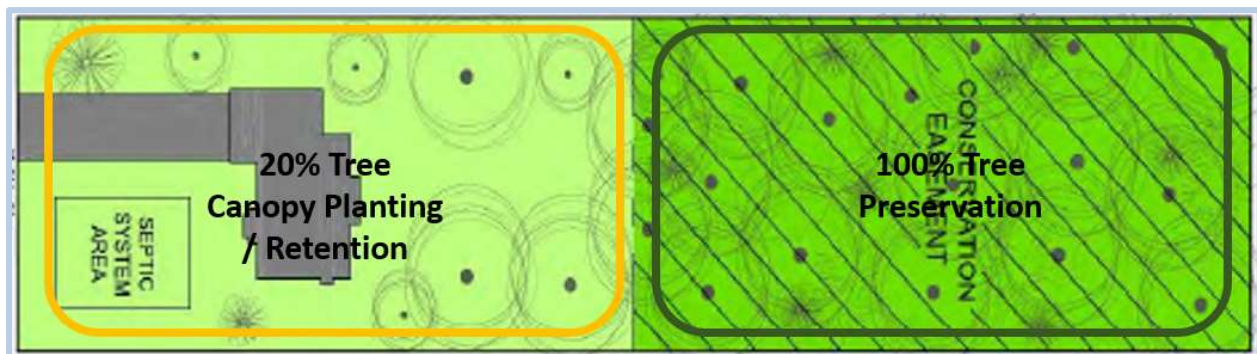
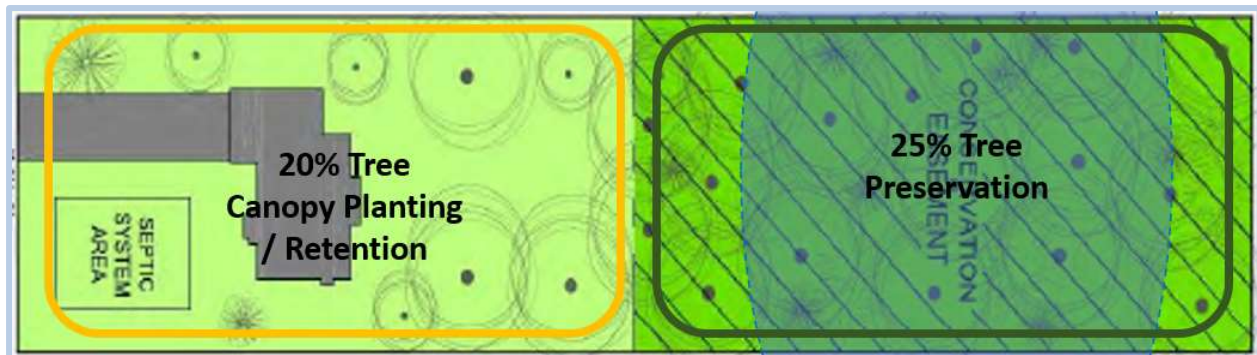


Figure 18: Sample Lot Tree Preservation and Planting Plan with Stormwater Management Pond



5.2.3.3 Erosion Prevention and Protection of Surface Water – Section 4.7.3

There are no permanent watercourses on this site, nor any defined outlets. Activities on adjacent lands to the north and west have interrupted and removed what may have once been a natural drainage pattern. Most surface water travels by way of overland flow. A small number of interconnected ephemeral drainage channels have been established through the development of informal road/path accesses. A Headwater Drainage Features Assessment was undertaken and no channels have been identified for retention.

The entire site is within the catchment area of Grey's Creek Municipal Drain. The existing hydrologic function of the catchment area has been maintained and supported through the stormwater management design. Stormwater leaving the site will be treated, cooled and controlled to meet the receiver quality and quantity requirements.

5.2.3.4 Protection of Endangered and Threatened Species – Section 4.7.4

No species at risk were observed onsite, however mitigation measures are provided in the EIS to ensure no significant impact on potential habitat.

5.2.3.5 Protection of Groundwater Resources – Section 4.7.5

A hydrogeological and terrain study has been completed in support of the subdivision. Groundwater integrity will be protected.

5.2.3.6 Stormwater Management - Section 4.7.6

A Stormwater Management Plan will be prepared in accordance with the recommendations of the Shields Creek Subwatershed Study.

5.2.3.7 Environmental Impact Statement - Section 4.7.8

A full site impact statement has been prepared in consideration of this development proposal as the subject site is within 120 metres of the natural heritage system.

5.3 Compatibility Analysis

As per Policy 12 of the Rural "Villages" designation, new development applications should reflect Urban Design compatibility objectives in Section 2.5.1 and the Urban Design and Compatibility policies in Section 4.1.1. and more specifically in the Design Guidelines for Rural Villages.

5.3.1 Urban Design and Compatibility - Section 2.5.1

To enhance the sense of community by creating and maintaining places with their own distinct identity.

- ⊕ The proposal complements the fabric of the existing Village of Greely but is laid out to establish a local neighbourhood intimacy and identity.

To define quality public and private spaces through development.

- ⊕ The development layout connects the public open spaces with the private residential dwellings through a network of streets and pedestrian pathways. Custom residential design of individual homes adds variety and interest, that are designed to a standard enforced by the developer and homeowners association. Public ROW frontage is available for the open space parkland.

To create places that are safe, accessible and are easy to get to, and move through.

- ⊕ The development is well connected through a street network that links easily through the neighbourhood and to adjoining communities.

- ⊕ A network of pedestrian pathways allows for pedestrian movement.
- ⊕ Safety in small communities is supported by a homeowners association and mutual commitment to a community identity.

To ensure that new development respects the character of existing areas.

- ⊕ The development design integrates well with the existing adjacent communities.
- ⊕ The building pattern of single-family residential dwellings is consistent with previously existing communities to the east and south, as well as the developing community to the west.
- ⊕ The fabric of streets and open space is linked to the adjacent developed and future development areas.

To consider adaptability and diversity by creating places that can adapt and evolve easily over time and that are characterized by variety and choice.

- ⊕ Large lots support private custom residential structures that may be designed to support multi generational living or other alternative household make up. Combined with public spaces, additional housing types and amenities available in the Village, this development contributes to potential for a diverse larger community and housing choices for residents.

To understand and respect natural processes and features in development design

- ⊕ Servicing supports natural function through maintaining natural catchment areas and established drainage patterns.
- ⊕ The central forested area is connected to adjacent open space and natural areas through a wildlife corridor.
- ⊕ A design with nature approach has determined the location of the ROW's, the configuration of the lots and the tree preservation/lot layout plans.

To maximize energy-efficiency and promote sustainable design to reduce the resource consumption, energy use, and carbon footprint of the built environment.

- ⊕ The provision of residential density with accessible pathways to local amenities
- ⊕ Long-term protection for a significant portion of the natural vegetation in this development area enhances natural carbon sequestration, wildlife habitat and reduces the use of summer air conditioning.

5.3.2 Urban Design and Compatibility – Section 4.11

Section 4.11 of the Official Plan provides policy to be used in the evaluation of the compatibility of the development application. The policies do acknowledge that determination of compatibility will vary depending on the use proposed and the immediate planning context and that not all criteria are applicable. The policies of the applicable Community Design Plan have been applied and respected, further, in the context of this application, the following criteria have been considered.

- ⊕ **Neighbourhood Character:** The proposed development maintains a consistent neighbourhood character and identity through a local design review process undertaken through the owners association.
- ⊕ **Vehicular Access:** The road network has sufficient capacity to accommodate the proposed development.
- ⊕ **Walking, and cycling** are promoted through proximity to pathway linkages and roadway design.

- ⊕ Outdoor amenity space on residential lots is designed to provide privacy to residents through building configuration, structure placement and large lots and vegetation protection.
- ⊕ Lighting, sunlight, microclimate, noise and air quality matters are addressed through the development layout and shall be mitigated, where required, by landscaping and building design.
- ⊕ The development will be serviced by existing and proposed services and facilities available in the Village of Greely. Additional population will support the long-term sustainability of these local services.

5.4 Village of Greely Community Design Plan

5.4.1 Development Principals

The Village of Greely Community Design Plan (CDP) was developed with four main principles in mind. The proposed development conforms with and enhances these principles.

- ⊕ **Principal #1 – Open Space and Recreation:** The proposed development enhances the greenspace system and adds to the protection of significant natural areas. Care has been taken to preserve the maximum possible tree cover surrounding the ecological feature designated in the CDP. This promotes the rural character and provides recreational opportunities for access to this natural area.
- ⊕ **Principal #2 – Linkages:** The proposed development provides critical interconnections with the system of public walkways and trails that connect neighbourhoods, natural areas, parks, and outlying rural areas.
- ⊕ **Principal #3 – Sustainability:** The proposed development maintains a natural wooded buffer around the municipally-owned high value ecological feature known as the Greely West Natural Area. The drainage and stormwater management design maintains the natural hydrological regime of the downstream receiver and protects the watercourse and associated downstream aquatic habitat. Groundwater resources are respected and protected with the maintenance of large undisturbed areas for infiltration and appropriate sewage system and well design and construction.
- ⊕ **Principal #4 – Diversity and Community Character:** The proposed development establishes the continuity of the residential nature of the surrounding land uses, and the large lot fabric will allow for substantial vegetation and varied residential designs while maintaining the rural village character

5.4.2 Land Use Plan

The CDP provides guidance on the desired organizing principles and objectives for this area. The land use on this site is expected to mesh with and complement the adjoining development areas and provide continuity with the existing community. The entirety of Emerald Subdivision has been contained within the boundaries of the Village of Greely since 1991.

5.4.2.1 Residential Areas – Section 4.2

The residential uses described in section 4.2 of the CDP state that single-detached, low density residences are to be the principal use permitted. The subject site proposes single-detached housing on lots with a minimum size of 0.4 hectares (1 acre). A hydrogeological and terrain analysis study has been prepared as part of this subdivision application

5.4.2.2 Open Space – Section 4.7

The layout of the subdivision provides new routes and formalizes connections to the existing pathways network the 'Greely Loop'. Two natural open space blocks are provided to support a wildlife corridor and facilitate connections between municipally owned recreational parkland and the Osgoode Nature Reserve.

5.4.2.3 Ecological Feature – Section 4.9

The CDP seeks to protect the interior woodland identified in the *Shields Creek Subwatershed Study*. This Ecological Feature and the contiguous Ecological Function area has also been identified in the City's natural heritage system. The Ecological Feature covers the municipally owned parcel and also extends out to the east and west onto the subject lands.

In accordance with policies 1 and 2, an Environmental Impact Statement has been completed. As per policy 2b) the developer is proposing to protect much of the land surrounding the city owned portion of the feature by preserving a substantial natural buffer between the development areas on the residential lots and municipally owned parcel. The EIS has concluded that the residential development will not have any adverse effects on the ecological function and maintenance of the feature. In consideration of Policy 4, discussion with city staff have agreed that this buffering approach is preferable to constructing single loaded roads adjacent the feature. Road frontage may be provided to the municipal parcel by way of the unopened ROW along the north. Access to the feature will be provided through the proposed development by a natural wildlife corridor from the west and a pathway linkage from the south-east.

5.4.2.4 Ecological Function – Section 4.10

On the Ecological Function overlay, the underlying land use category governs the permitted uses, subject to the findings of the EIS. The underlying land use on Schedule A (land use) is primarily residential. The EIS builds upon the technical analysis of the Shield's Creek Subwatershed Study as per policy 1.

Of particular relevance to the EIS are the sections of the Shields Creek Sub-watershed Study pertaining to impact analysis and management requirements for the Osgoode Nature Reserve. The City of Ottawa parcel within the study area, including the adjacent periphery of lands owned by the applicant have been identified as Level 2A indicating areas of significant ecological features and functions while the remainder of the subject site has been identified as Level 2B indicating areas of significant ecological functions.

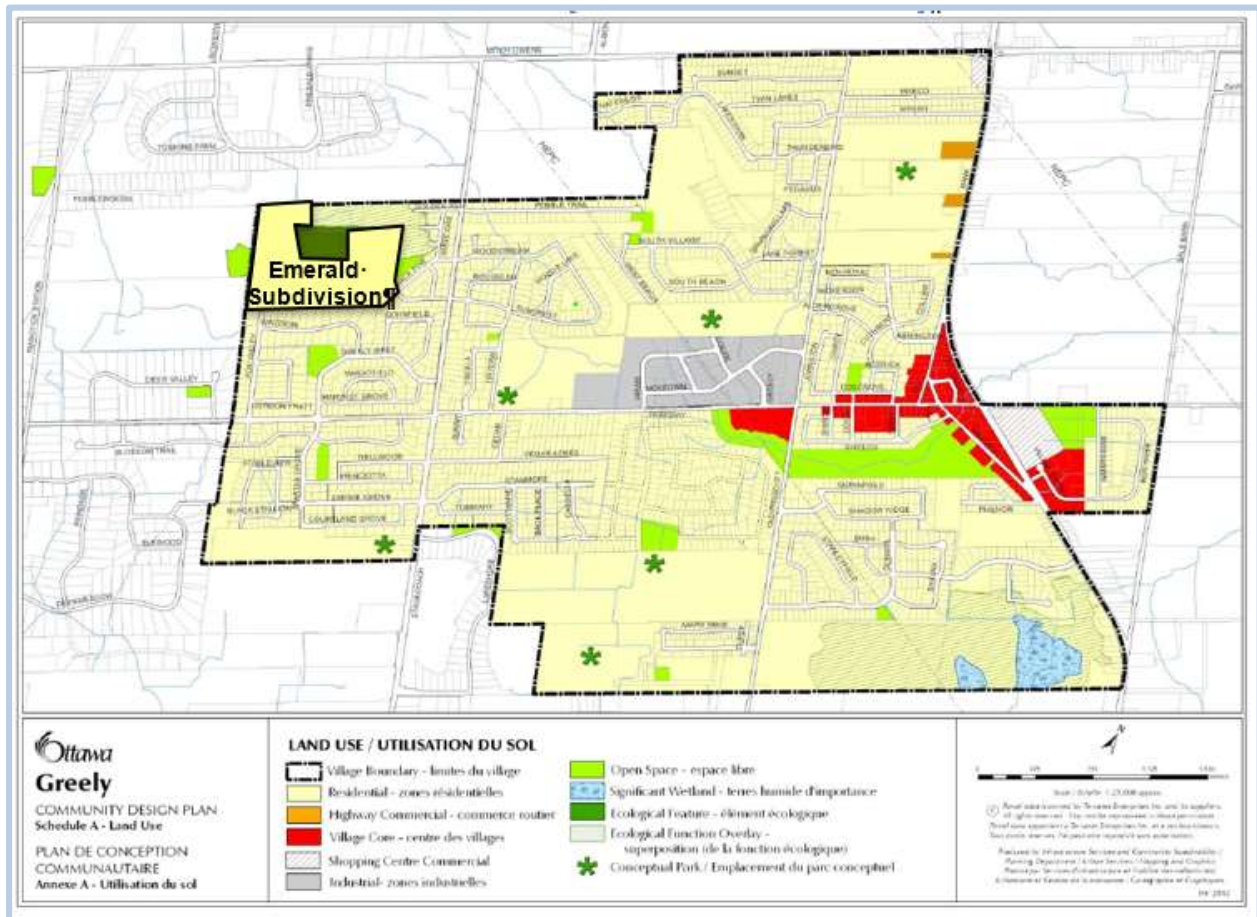
According to table 6.2.3 of the Shields Creek Sub-watershed Study, the rationale for protection Level 2A and Level 2B is the presence of rural natural features (i.e., significant woodlands), interior forest habitat, headwater region for Shields Creek and Mosquito Creek and partial corridor linkages between Shields Creek and Mosquito Creek. The key features and/or functions to be protected and/or enhanced, according to Table 6.2.3 include hydrogeological functions, canopy cover for watercourses, wildlife habitat including corridor linkages and interior forest habitat.

The EIS states that although there is a loss of significant woodlands, including interior forest habitat, from the site, the contiguous significant woodlands within the remnant portions of the site and the contiguous woodland coverage within the study area, identified significant woodlands will retain all defining elements for which their significance is based: contiguous woodland coverage greater than 27 ha; interior forest habitat greater than 2 ha, proximity and linkage to other natural features, and source water protection.

Figure 19: Greely CDP Land Use



Figure 20: CDP Land Use Plan with Emerald Subdivision Land Uses inlaid [Schedule A]



5.4.3 Community Design Policies and Guidelines for Road Pedestrian and Cycle Links

The proposed development layout has been designed to be consistent with the policies and guidelines established by the CDP in relation to road, pedestrian and cycling links.

Road Network

- ⊕ Roads have been designed according to current City of Ottawa Standards;
- ⊕ The conceptual road pattern has been respected.
- ⊕ Local streets are designed with a 20.m metre right of way; and
- ⊕ Roads follow an interconnected pattern and the local road layout considers connections outside of the village boundary.

Pedestrian and Cycling Links

- ⊕ A number of pedestrian linkage blocks have been set aside to enhance connectivity throughout the site and provide access to the Osgoode Nature Reserve; and
- ⊕ Pedestrian linkages integrate with the existing Greely Loop pathway network.

Greenspace Network and Open Space

- ⊕ Public linkages to parkland permit safe and efficient pedestrian connection to the greenspace network; and

- ⊕ Subdivision design supports preservation of the area in a natural wooded state as much as possible.
- ⊕ Passive recreational uses such as public trails will be provided in pedestrian linkage blocks.
- ⊕ Open Space: Natural corridors are being established to connect to adjacent woodland and undeveloped areas. Public trails are woven into the development fabric to access the ecological feature on the municipality owned central parcel.

6 Relevant Policy Considerations

6.1 Shields Creek Subwatershed Study

The purpose of the Shields Creek Subwatershed Study was to develop a framework to protect, maintain and restore a healthy natural system within the Subwatershed. The study indicated that the lands upon which Emerald Subdivision are to be developed contained a significant environmental feature and should be managed to maintain ecological function.

The Shields Creek Subwatershed Study divides the natural area into two parts (Level 2A and level 2B). The study identifies this area as having the following features: Organic Soils, Interior Forest habitat, headwater region for Shields Creek and Mosquito Creek and a linkage between the 2 creeks. The features/functions to be protected are Hydrogeological functions, riparian functions including canopy cover and water quality control, wildlife habitat including corridor linkage and interior forest and native vegetation.

According to table 6.2.3, the rationale for protection Level 2A and Level 2B is the presence of rural natural features (i.e., significant woodlands), interior forest habitat, headwater region for Shields Creek and Mosquito Creek and partial corridor linkages between Shields Creek and Mosquito Creek. The key features and/or functions to be protected and/or enhanced, according to Table 6.2.3 include hydrogeological functions, canopy cover for watercourses, wildlife habitat including corridor linkages and interior forest habitat

The EIS has completed a site specific evaluation and additional engineering work has refined the catchment area and drainage pattern. No part of the subject site is part of the Mosquito Creek watershed, with the entire development area draining to Grey's Creek.

The EIS concludes that in consideration of the potential impacts of the proposed development, the contiguous significant woodlands within the remnant portions of the site and the contiguous woodland coverage within the study area, identified significant woodlands will retain all defining elements for which their significance is based: contiguous woodland coverage greater than 27 ha; interior forest habitat greater than 2 ha, proximity and linkage to other natural features, and source water protection

6.2 Design Guidelines

6.2.1 Based on pre-consultation Design Brief Terms of Reference

Community Layout: Entrances at existing roadway access points are respected and the road network connects cleanly through the property while supporting a design with nature layout. Pathway connections enhance the existing network and support connectivity between communities and amenity spaces. Lot sizes are commensurate with requirements for the servicing and minimum lot sizes required by the Official Plan.

Built Form: Lot layout is planned to buffer environmental feature and stormwater is treated and controlled to support the receiver. Significant tree retention provides additional air, temperature and water management benefits.

Open Space: The pedestrian network connections are being maintained and enhanced. Natural areas are buffered with protective zoning and legal covenants requiring tree protection. New aquatic and terrestrial habitat is being established where existing habitat features cannot be preserved. There is significant preservation of on-site vegetation and natural corridors are being established to connect to adjacent woodland and undeveloped areas.

Streetscape: The proposed ROW's will be as per the City of Ottawa cross section for rural village streets. This cross section provides for a 20 metre ROW including 7 metre paved surface, with 1.5 gravel shoulder and drainage ditches on each side. Setbacks will be established on a site by site basis, as choices are made regarding sewage system type and sizing. Street illumination will be provided with street marker lighting supplemented with individual front yard and driveway lighting required on each lot. House facades, articulation, finishes and massing are expected to vary substantially as each lot will be developed as a custom home built by designers/builders. However, a design review process will be established through the developer/owner and new homeowners association which will review proposed residential builds and landscaping for quality and adherence to covenants on title. All way stops are planned at intersections, and the 2 pedestrian pathway crossings will have appropriate signage.

Sustainability: At a lot level, there are no specific sustainable design features required on the single-family residential structures, outside of those set by the City of Ottawa and the Ontario Building Code. A homeowners awareness package shall be prepared and distributed with purchase and sale agreements. The package shall provide direction regarding sustainable development opportunities. A covenant on title prohibits the use of chemical fertilizers and controls the removal/replacement of trees. The majority of the large lots have a substantial area protected from development that will be maintained in their natural condition. Maintaining the tree canopy will be enforced through legal instruments including covenants on title and zoning.

The proposed subdivision development maintains a natural wooded buffer around the municipally-owned high value ecological feature known as the Osgoode Nature Reserve. The drainage and stormwater management design maintains the natural hydrological regime of the downstream receiver to protect the watercourse and associated downstream aquatic habitat. Groundwater resources are respected and protected with the maintenance of large undisturbed areas for infiltration and appropriate sewage system and well design and construction.

Landscape Concept Plan: A landscape concept plan is not expected to be prepared for this rural subdivision; however specific standards for landscaping requirements in the front portion of the lots shall be included in the covenants on title. This includes a 20% tree cover requirement to be retained or re-planted in the development envelope are at the front of the lot. In the rear 0.2 ha of each lot a conservation easement will specify 100% tree retention, save for the land required to build stormwater management ponds.

6.2.2 City of Ottawa Design Guidelines for Rural Villages

In addition to the context-specific guidelines in the Village of Greely CDP, the City of Ottawa Design Guidelines for Rural Villages apply to the proposed development. The purpose of the guidelines is to provide design guidance to assess, promote and achieve appropriate development in Villages. The proposed development meets many of the applicable guidelines:

Built Form

- ⊕ Ensure new buildings are compatible with adjacent development by using a common scale, massing and height to complement the existing context.
- ⊕ Avoid developing buildings with blank facades along public rights-of-way. New buildings should follow the existing architectural pattern and rhythm established by adjacent development.

Community Design

- ⊕ Avoids the development of looping, circuitous, suburban-style roadway patterns. New roadway patterns should be direct and reflect the traditional development pattern that

exists in the village core. Patterns should also provide multiple pedestrian, bicycle and vehicular connections to adjacent and future development.

- ⊕ If a direct connection is not possible, develop roadways that terminate onto adjacent open space and/or agricultural land to create attractive, natural view corridors. Ensure turnarounds provide sufficient space for maintenance vehicles.
- ⊕ Develop a mix of housing designs along neighbourhood blocks to avoid a mass-produced or “cookie-cutter” appearance. Varied housing styles, colours and materials create a visually interesting streetscape and village atmosphere.
- ⊕ Provide direct pedestrian connections between adjacent uses within villages to ensure safe and convenient pedestrian movement.

Open Space

- ⊕ Ensure the pedestrian and cycling network is continuous and connects to the village core and village destinations. Protect connections that can be filled in over time as development and redevelopment permits, and ensure existing connections are not closed or disconnected.
- ⊕ Connect and integrate natural areas such as lakes, rivers and wetlands, and stormwater management ponds into the pedestrian and cycling network. Where possible, include opportunities for passive recreation such as hiking trails and seating areas.
- ⊕ Design trails and pathways to match the aesthetic and function of their surrounding space.
- ⊕ Retain healthy mature trees, hedgerows and historic forests and incorporate them into development, park space and community designs.

6.3 Park Development Manual

The two park blocks proposed for this subdivision provide a natural forested corridor in keeping with wooded, natural environment of this development, and connects the municipally owned natural woodland property to the developing neighbourhood parkland at the western boundary. This land will provide a seasonal wildlife corridor function and allow pedestrian access from the adjacent western park blocks through to the municipally-owned centrally located Osgoode Nature Reserve by way of a nature trail connection.

The local councillor has indicated support for this approach due to the existing and proposed active parks surrounding the site, and the local desire for pathway connections. This proposal, as opposed to active amenity feature parks, is much more in keeping with the CDP Development

The design of the pedestrian pathway through our site will follow the standard set out in the park development manual in consultation with city staff.

Cash in lieu will be provided for the remainder of the outstanding parkland dedication to support improvements and development of the existing parkland blocks in the area.

7 Integrated Environmental Review

A design with nature approach was fundamental in the draft plan layout of ROW's, lot fabric, open space and stormwater management design for this subdivision. The CDP and Shields Creek Subwatershed Study, as well as on-site investigations, identified the critical components to consider in the process of site design were:

- ⊕ the ecological values of the municipally owned woodland in the centre of the site;
- ⊕ the supporting ecological functions of the development lands;
- ⊕ the hydrologic and aquatic habitat requirements of the receiver;
- ⊕ the management of drainage across the site; and
- ⊕ the desire for pathway connectivity in the community to maintain access around the site and to the municipally owned central parcel.

A summary of the supporting studies is found in Section 8 of this Planning Rationale.

The following design decisions have been made in consideration of site conditions and the aforementioned considerations.

Development Layout

The road network is designed to accommodate potential land development by other owners along the north and existing ROW connections through the adjacent communities. Further, it optimizes the lot configuration to allow deep lots backing onto the protected municipally owned central block and adjacent lands. Deep lots allow for development envelopes in the front half and tree retention in the back half to protect the woodland/natural areas from edge effects.

Surface Water Management

The surface existing drainage pattern has been respected, outletting towards the west by way of an established (legal outlet) drainage corridor. Drainage areas have been refined to maintain surface water in areas requiring additional hydration to support function, such as in the north-east corner. Rear yards in this area are not serviced for drainage and maintain natural grades and vegetation. The stormwater will be treated to an enhanced level of quality control, provided thermal protection by using very deep ponds and a submerged draw into an underground pipe to convey offsite. The stormwater management facilities maintain pre-development offsite flows and retain 50 percent of the two year storm post development. The ponds are expected to become habitat for fish, birds, amphibians and marine and littoral vegetation.

Private Servicing

Private services are sited in the overall lot development plan and on individual lots through a local review process. This will limit intrusions into the existing treed areas and protect ground water resources.

The Integrated Environmental Review Statement will be updated and signed off as a condition of draft approval.

Figure 21: Development Areas and Site Features



8 Supporting Studies Summary

The following summarizes the analysis and conclusions/recommendations of various studies undertaken in support of the application.

8.1 Serviceability Brief (Revision 1) – January 2022, prepared by ARK Engineering and Development

Site grading: Preliminary findings indicate that grade raises up to 1.5m would probably be required in some areas in order to service the lands in question.

Potable water and sanitary services will be provided by private individual water wells and individual on-site septic systems.

Stormwater management will be designed to provide enhanced quality and pre to post quantity control. Two stormwater management ponds are to be developed on site, out letting to a City of Ottawa drainage easement ultimately discharging into Grey's Creek. A Stormwater Management Report will be prepared in conjunction with the approved Stantec Consulting Ltd: "Greely/Shields Creek Stormwater and Drainage Study", 2002 and Shields Creek Subwatershed Study 2004 which fall within the Middle Castor River Subwatershed.

8.2 Geotechnical Investigation (Revision 1) – December 20, 2021, prepared by GEMTEC

The report is based on site investigations and documents geological and ground water subsurface conditions. Grade raise limits of 3.0 metres are recommended across much of the site. Portions of the site are underlain by silty clay, however it is not expected that these soils will be within a zone triggering setback restrictions.

The report provides recommendations for home and roadway construction.

8.3 Transportation Impact Assessment Strategy Report – October 27, 2021, prepared by D.J. Halpenny & Associates Ltd.

Three local roads are the primary access points to the subdivision: Jack Pine Crescent, Fox Valley Road, and Green Links Way. Trips generated by the site are expected to be low resulting in a minor impact on the surrounding road network. No requirement to reduce travel demand from the development due to insufficient infrastructure capacity is recommended.

Recommendations are included to construct all three internal subdivision intersections as all-way stops. Thus, reducing speeds within the subdivision and providing traffic calming measures.

8.4 Hydrogeological Investigation and Terrain Analysis (Revision 1) – January 18, 2022, prepared by GEMTEC

The results of this study indicate that the quantity of groundwater from the proposed bedrock water supply aquifer is more than sufficient for the proposed development. Interference between drinking water wells is expected to be acceptable under typical usage for residential developments. No negative impacts to the bedrock aquifer are anticipated.

The water quality from drilled wells on the site is safe for consumption based on the absence of health-related exceedances; however, groundwater treatment for aesthetic parameters will likely be required.

Septic systems on site are predicted to have minimal impact based on the weighted average nitrate concentration at the site boundaries. Recommendations on well construction and septic design are provided in the report.

8.5 Stage 1 Archeological Assessment – May 2021, prepared by LHC

The report concludes that no portions of the study area exhibit archaeological potential, due to the physiology and location of the site. A review of historical land records indicate agricultural clearing and abandonment between mid 19th and 20th century. Potential historical settlements determined to be east of the study area. Pre-development topsoil removal on the site was noted. No further archaeological assessment is recommended.

8.6 Phase 1 Environmental Site Assessment- January 28, 2021, prepared by Paterson Group

A site inspection and historical research regarding the past and current use of the subject site and study area has not identified any environmental concerns with the potential to have impacted the subject site. Nor were any environmental concerns identified with respect to the surrounding land use. It is the opinion of the authors that a Phase II ESA is not required for this site.

8.7 Environmental Impact Statement and Headwater Drainage Feature Assessment (Revision 1) – dated January 10, 2022, prepared by GEMTEC

Numerous on-site field visits were made to inventory features and functions on and adjacent the site. Based on the results of the analysis, impacts to the natural environment are anticipated however; within the local and regional context, impacts to the natural environment, primarily the loss of woodlands and local wetlands are anticipated to be minimal. Provided that recommended mitigation measures are implemented, no significant residual impacts are anticipated from the proposed development.

Specific to the natural heritage features of the site, the following general conclusions were provided:

- ⊕ No significant impacts to natural heritage features identified on-site, including significant woodlands, significant wildlife habitat or habitats of species at risk are anticipated as a result of future residential subdivision development.
- ⊕ The proposed project complies with the natural heritage policies of the Provincial Policy Statement and meets the intent of the City of Ottawa Official Plan to support natural systems and encourage responsible development within designated settlement areas.

9 Conclusion

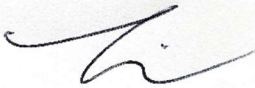
Based on the applicable policies and guidelines presented in this report, the draft plan of subdivision represents good land planning and is in the public interest. It is consistent with Provincial Policy Statement intent and objectives and in conformity with Ottawa Official Plan and Community Design Plan for the Area. The introduction of development at this time on the subject site is appropriate.

The proposed zoning by-law implements the regulations required to support development that meets design guideline objectives and sensitivity to the natural environment and adjacent land uses.

Should you have any questions, please do not hesitate to contact me at your convenience.



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