



Drummond Subdivision

Planning Rationale

Draft Plan of Subdivision + Zoning By-law Amendment Applications

June 8, 2020



Prepared for Caivan Communities

Prepared by Fotenn Planning + Design
396 Cooper Street
Ottawa, ON K2P 2H7

June 2020

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1.0

Introduction

Fotenn Consultants Inc. (Fotenn) was retained by Caivan Communities (Caivan) to prepare this Planning Rationale in support of Draft Plan of Subdivision and Zoning By-law Amendment (ZBLA) applications for the eastern portion of 3713 Borrisokane Road ("subject lands"). The applicant intends to establish a residential subdivision which incorporates parkland and municipal rights-of-way on the subject lands.

1.1 Project Background

The subject lands are located on a depleted sand and gravel aggregate resource area. Extraction operations the property have now ceased and the pit is currently being cleared of equipment. A letter from the Ministry of Natural Resources & Forestry (MNRF) dated February 12, 2020 confirms that the extraction license has been surrendered and there are no further obligations under the Aggregate Resources Act for the subject lands.

Aerial photography indicates that the resource extraction has taken place on the subject lands for more than 40 years. At present, the policy and regulatory framework reflects the former aggregate extraction use and an update is required to facilitate continued meaningful use of the land. To establish the desired urban residential development, the following applications are required:

- / **Draft Plan of Subdivision:** To subdivide the subject lands with a residential lot layout, a municipal park, and municipal streets; and
- / **Zoning By-law Amendment (ZBLA):** To re-zone the property from a Mineral Extraction Zone (ME2) zoning to urban zones commensurate with the proposed uses, including:
 - o "Residential Third Density Zone, Subzone YY, with Exceptions (R3YY[XXXX])" for the residential component and
 - o "Parks and Open Space Zone (O1)" for the proposed municipal park.

Planning applications are also underway for the western portion of 3713 Borrisokane Road, which is located within the rural area. A light-industrial manufacturing facility and office space are proposed in the southwest corner of 3713 Borrisokane Road and a stormwater management facility is planned for the northwest corner of the property. Official Plan Amendment (OPA), ZBLA, and Site Plan Control applications were submitted in January 2020 (file numbers D01-01-20-0001, D02-02-20-0002, and D07-12-20-0002) and deemed "complete" effective February 10, 2020. The OPA and ZBLA went to the Agricultural and Rural Affairs Committee (ARAC) on June 4, 2020 and are scheduled to go to Council on June 10, 2020

Finally, Committee of Adjustment applications were recently approved to separate the rural land on which the light-industrial manufacturing facility and office space are proposed from the remainder of 3713 Borrisokane Road. The applications included reciprocal Consent applications (D08-01-20/B-00004, -00007) and a Minor Variance application (D08-02-20/A-00009) to address technical zoning issues which would arise from the severance. These applications were approved by the Committee of Adjustment on February 19, 2020 and the Committee confirmed on May 19, 2020 that no appeals were filed.

1.2 Overview of Subject Lands

The subject lands are legally described as Part of Lot 9, Concession 3 (Rideau Front) and are known municipally as 3713 Borrisokane Road. The subject lands have an area of 20.36 hectares and have frontage along future New Greenbank Road to the east.

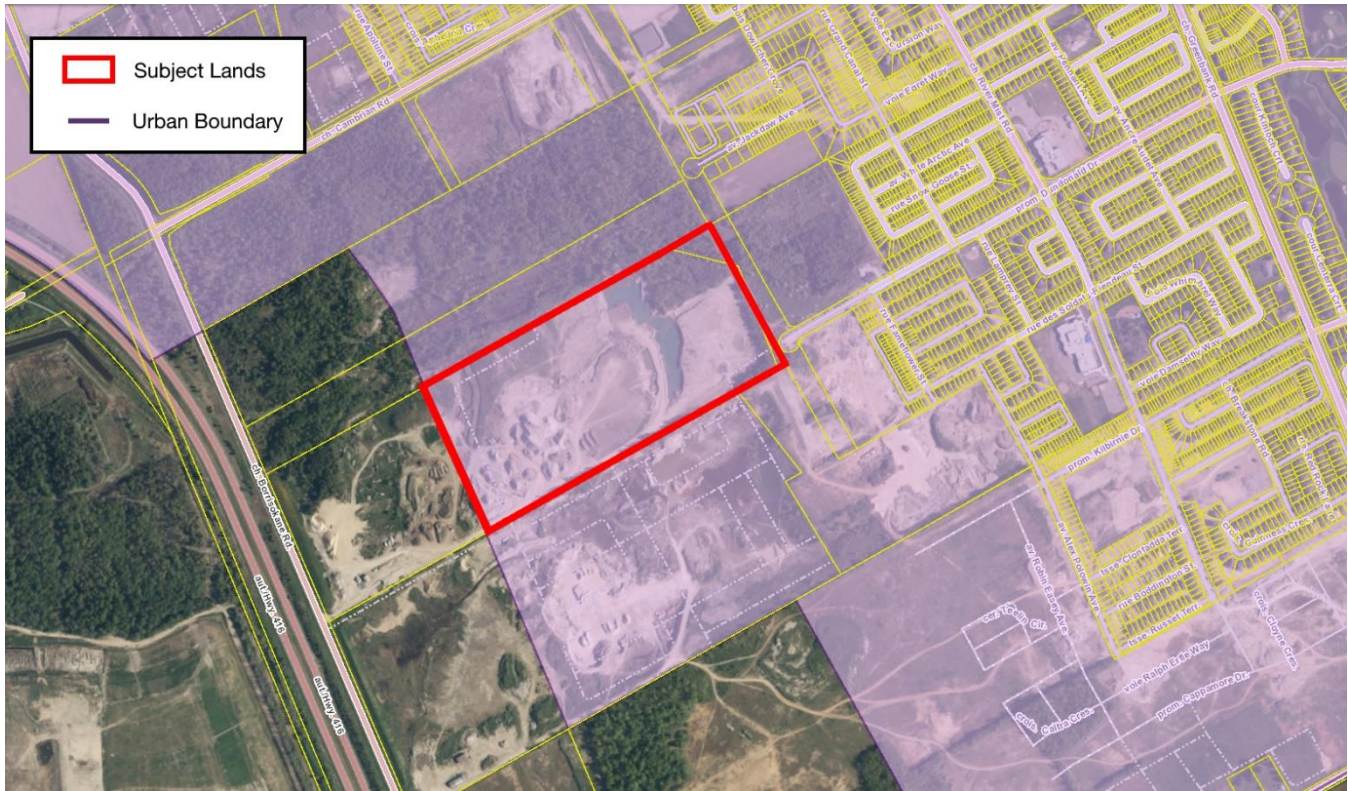


Figure 1: Location of Subject Lands

1.3 Area Context

North

Undeveloped rural and urban lands zoned Development Reserve (DR) and Mineral Aggregate Reserve (MR) Zone are located to the immediate north of the subject lands. Approximately 300 metres north of the subject lands is Cambrian Woods, a City-owned woodlot representing one of the largest blocks of contiguous remnant forest within the highly disturbed Jock River-Barrhaven sub-catchment area. Continuing north are new suburban residential communities that are currently under development, including Mattamy's Half Moon Bay West and Glenview's Flagstaff communities, both located within the Barrhaven South Community Design Plan (CDP) (2006) area. Further north is the Jock River, beyond which is the Barrhaven Town Centre.

West

Immediately west of the subject lands is the portion of 3713 Borrisokane Road located in the rural area. As noted above, this property is subject to multiple applications to establish a light-industrial office and manufacturing facility (Figure 2). Further west is Highway 416, which is accessible via interchanges located approximately 4.5 kilometres to the north (at Strandherd Drive/Fallowfield Road) and approximately 2.9 kilometres to the south (at Bankfield Road/Brophy Drive). Approximately 1 kilometre west of the subject lands is the Trail Road Landfill municipal landfill site. The urban boundary is located 500 metres west of the Trail Road Landfill, which reflects Official Plan policies that prohibit sensitive land uses within this setback area. Several rural uses such as agricultural operations, mineral and aggregate extraction, contractor and materials yards, and undisturbed natural areas are located further west.

South

South of the property is the rural area, consisting primarily of agricultural operations and rural detached residential uses. The Village of Manotick is located approximately 3.2 kilometres to the southeast of the subject lands, along the Rideau River.

East

To the east of the subject lands are additional lands within the Barrhaven South Urban Expansion Area (BSUEA) CDP (2018), which guides development in the area. The accompanying OPA brought the CDP lands into the urban area. Further east are a number of newer communities located within the Barrhaven South CDP (2006) area, including Mattamy's Half Moon Bay South and Minto's Quinn's Pointe - Phase 1 communities.

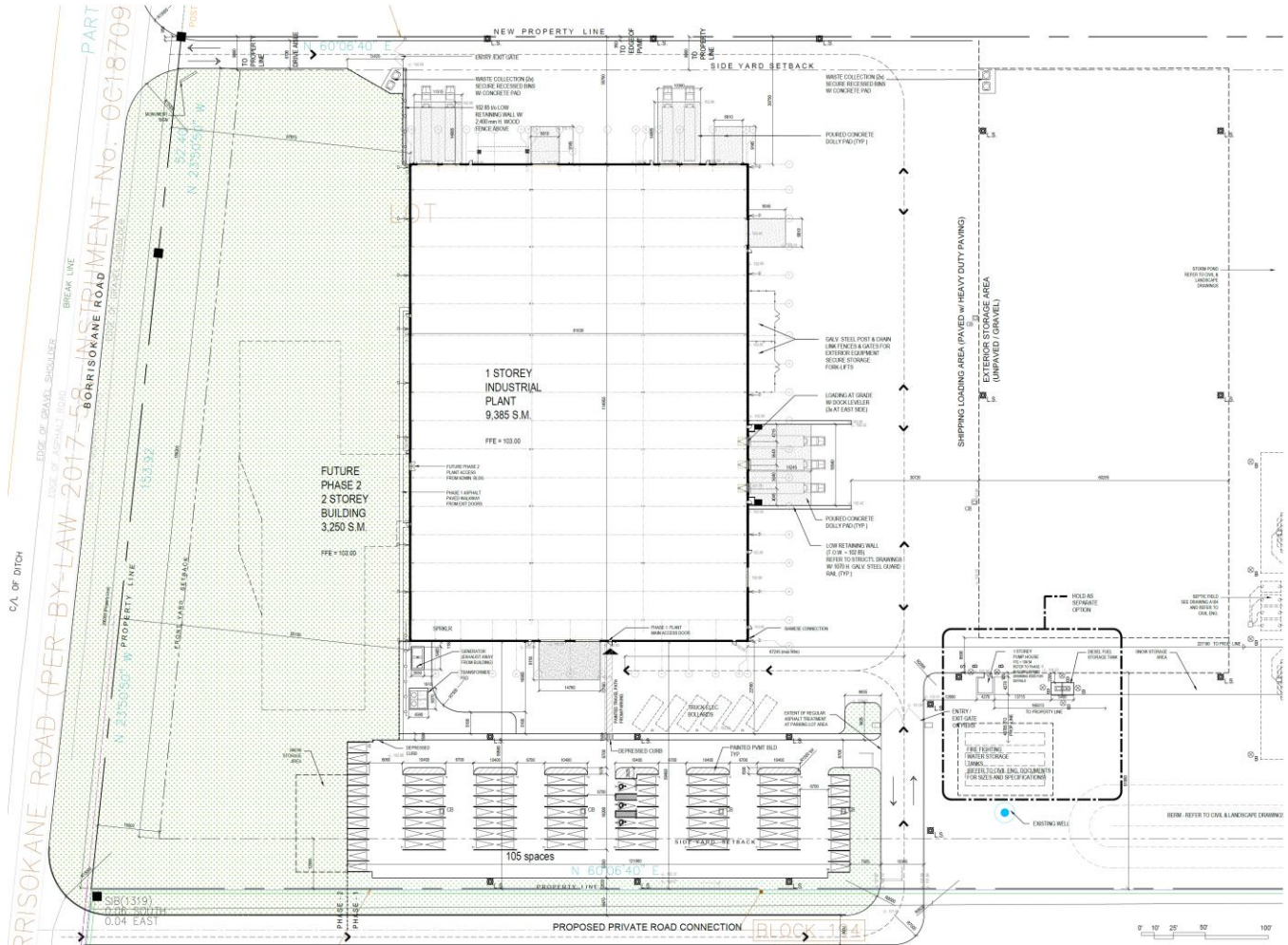


Figure 2: Site Plan for Development of Western End of 3713 Borrisokane Road

1.4 Road Network

The subject lands will be accessed from future New Greenbank Road, which is not yet constructed but is planned as an arterial on Schedule E- *Urban Road Network* of the City of Ottawa's Official Plan (Figure 3). Arterial roads are the major roads of the City that carry large volumes of traffic over the longest distances.

Borrisokane Road, a collector road south of Cambrian Road on Schedules E and G- *Rural Road Network* is located approximately 355 metres west of the subject lands (Figure 3). Collector roads are roads that serve neighborhood travel to and from major collector or arterial roads and usually provide direct access to adjacent lands.

The draft plan proposes extensions of two existing/planned collectors on Schedule E, including a western extension of Dundonald Drive and a southern extension of Apolune Street (which is named Elevation Road to the south of the subject lands, in "The Ridge" subdivision).

Highway 416, a provincial highway, runs parallel and adjacent to Borrisokane Road, with Borrisokane Road located within the highway right-of-way.

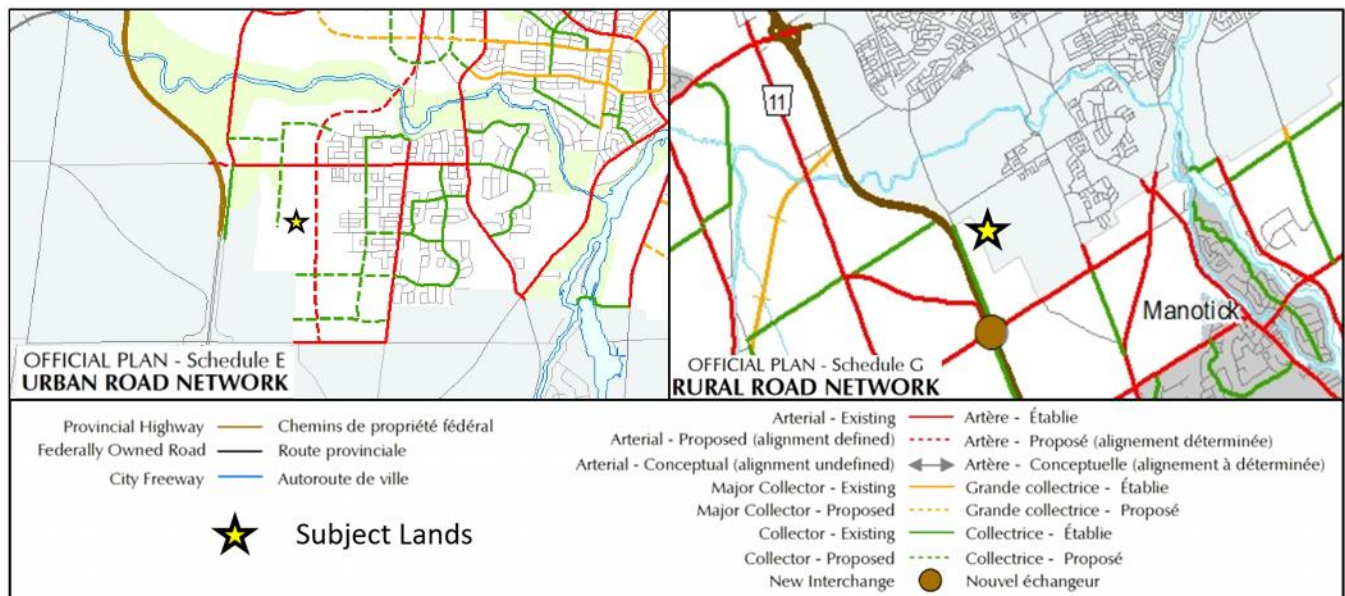


Figure 3: Schedules E - *Urban Road Network* and G - *Rural Road Network* of the Official Plan.

1.5 Transit Network

New Greenbank Road is identified as a Bus Rapid Transit (BRT) corridor with at-grade crossings on Schedule D- *Rapid Transit Network* of the Official Plan (Figure 4). A BRT Station is planned for the intersection of Cambrian Road and New Greenbank Road, which is located approximately 1.5 kilometres north of the subject lands.

Bus routes servicing the area include Rapid Route 75 and Connexion Route 275, which can be accessed from a bus stop at River Mist Road and Dundonald Drive, approximately 610 metres east of the subject lands.

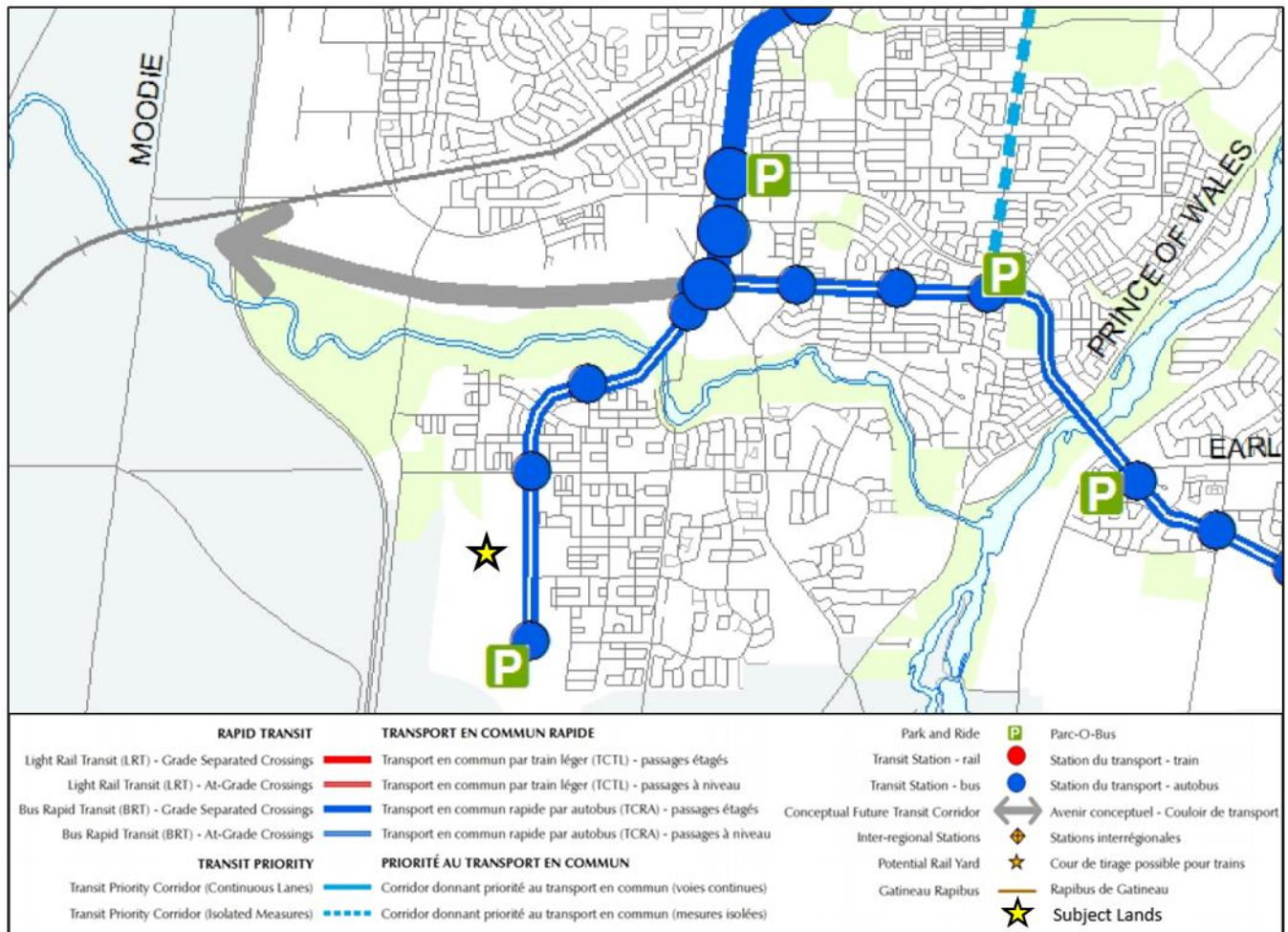


Figure 4: Schedule D - *Rapid Transit Network* of the Official Plan

1.6 Cycling Infrastructure

Cycling infrastructure in the area surrounding the subject lands has not been implemented to its full and planned extent, however, as more development is completed and the necessary infrastructure and roads are added, cycling and multi-use pathways (MUPs) will continue to expand. New Greenbank Road is identified as a Spine Route, with cycle tracks proposed on both sides of the future right-of-way (ROW). Schedules C and J of the Official Plan (Figure 5) demonstrate existing and planned cycling infrastructure and MUPs.

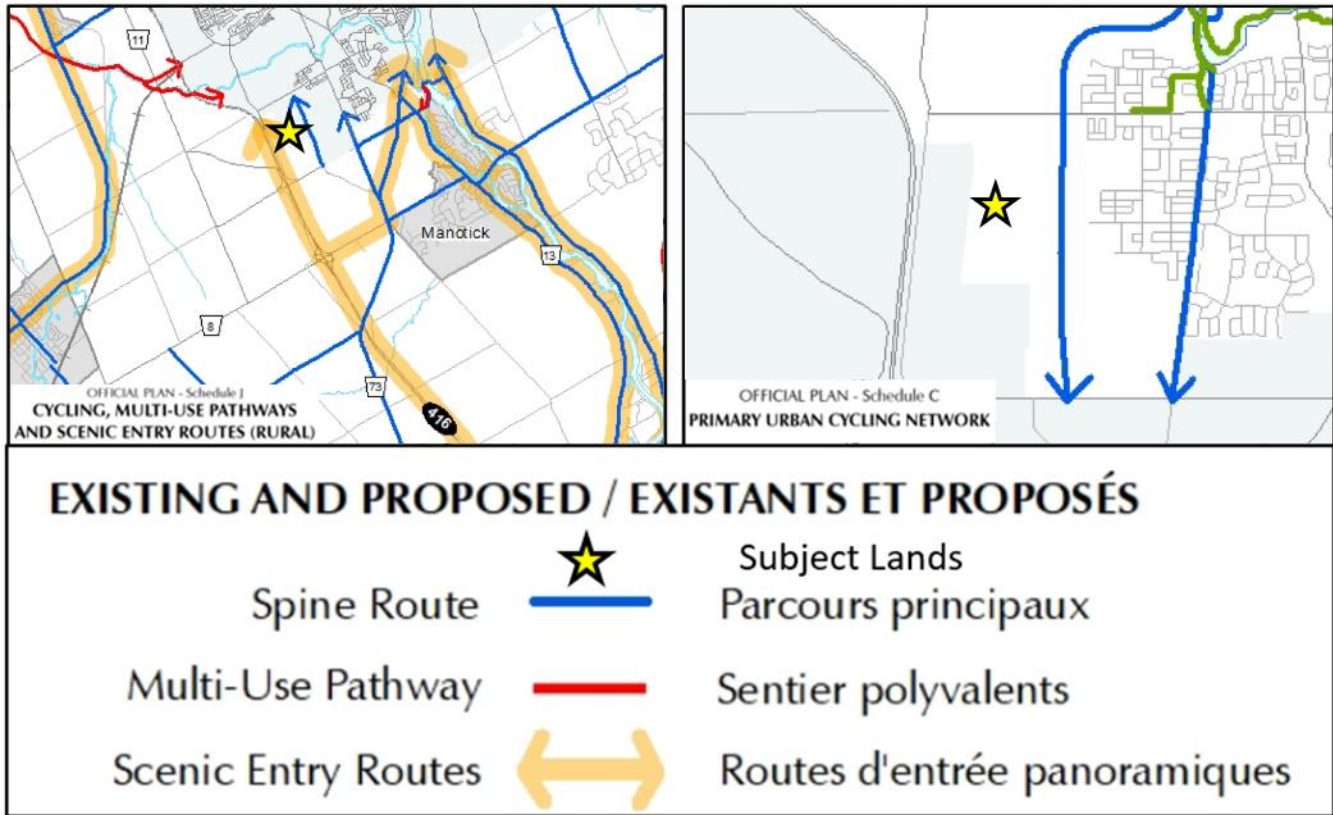


Figure 5: Schedules C - *Primary Urban Cycling Network* and J - *Cycling, Multi-Use Pathways and Scenic/Entry Routes (Rural)* and of the Official Plan

2.0

Proposed Development

Caivan is proposing a residential subdivision of approximately 580 units, roughly 25% of which are planned to be detached units and 75% are planned to be townhouse units, including both street and rear lane townhomes (Figures 6 and 7). The proposed low-rise housing typologies will support a diversity of housing needs in the area. All three proposed housing types have a lot depth of approximately 21 metres, with exceptions ranging from 20.56 metres to 22.77 metres.

As planned on Schedule E- *Urban Road Network* of the Official Plan, the proposed subdivision incorporates a westward extension of Dundonald Road (an existing east-west collector street) and a southern extension of Apolune Street (a planned north-south collector street, which is named Elevation Road to the south), both of which will have 24 metre wide ROW. The local streets within the subdivision are proposed to have a ROW width of 16.5 metres, save for the window street proposed in the northeast corner, which will have a ROW width of 14 metres, and the rear lanes, which are proposed to have a ROW width of 8.5 metres.

The subdivision will be supported by a centrally located Neighbourhood Park which has an area of 1.45 hectares and frontage along two municipal streets, including Street 'C' (a local street) and Street 'E' (a collector street). An 8-metre wide MUP block is proposed along the western edge of the park, which will also accommodate a local watermain that is required to service the rear lane townhomes.

Rear lane townhomes, which do not have at-grade amenity space, are strategically located to the west of the Neighbourhood Park so that future residents are located in proximity to greenspace. The rear lane townhomes proposed towards the eastern end of the subdivision are located within 400 metres (5-minute walk) of Black Raven Park, a Community Park that was recently developed on the east side of future New Greenbank Road.

With windows and primary doors oriented towards the park, the western rear lane townhomes serve to frame and activate the western edge of the proposed park as well as provide "eyes" on the park. The rear lane townhomes proposed along future New Greenbank Road) will also fulfill several urban design objectives, including avoiding the need for noise walls and defining the edge of this future multi-modal transportation corridor. Similarly, the window street proposed in the northeast corner of the subject lands will also avoid the need for continuous noise walls and will provide a window into the community.

Given their respective net densities, street townhomes are proposed in the eastern portion of the subject lands, closest to the BRT corridor along future New Greenbank Road, and detached homes are proposed at the western end of the subject lands. As previously described, rear lane townhomes are proposed in both the western and eastern areas, which serves to provide a mix of unit types in both areas.

A 9-metre wide servicing block is proposed in the northwest corner of the residential component of the subdivision, leading to the stormwater management facility that was draft-approved through the Plan of Subdivision application for "The Ridge" subdivision. The stormwater management block is not yet registered, but detailed design of the facility is currently underway.

Table 1. Proposed Land Uses

Land Use	Block(s)	Area (square metres)
Detached home blocks	1 to 11 (inclusive) and 41	40,745.4
Street townhome blocks	12 to 27 (inclusive)	54,477.9
Rear lane townhome blocks	28 to 37 (inclusive)	21,494.8
Multi-Use Pathway	38	941.7
Park	39	14,526.3
Walkway	40	191.7
Reserves	42 to 45 (inclusive)	34.8
Streets	'A' to 'Q' (inclusive)	5,014.7
Lanes	'A' to 'E' (inclusive)	66,129.4
Total		203,556.7

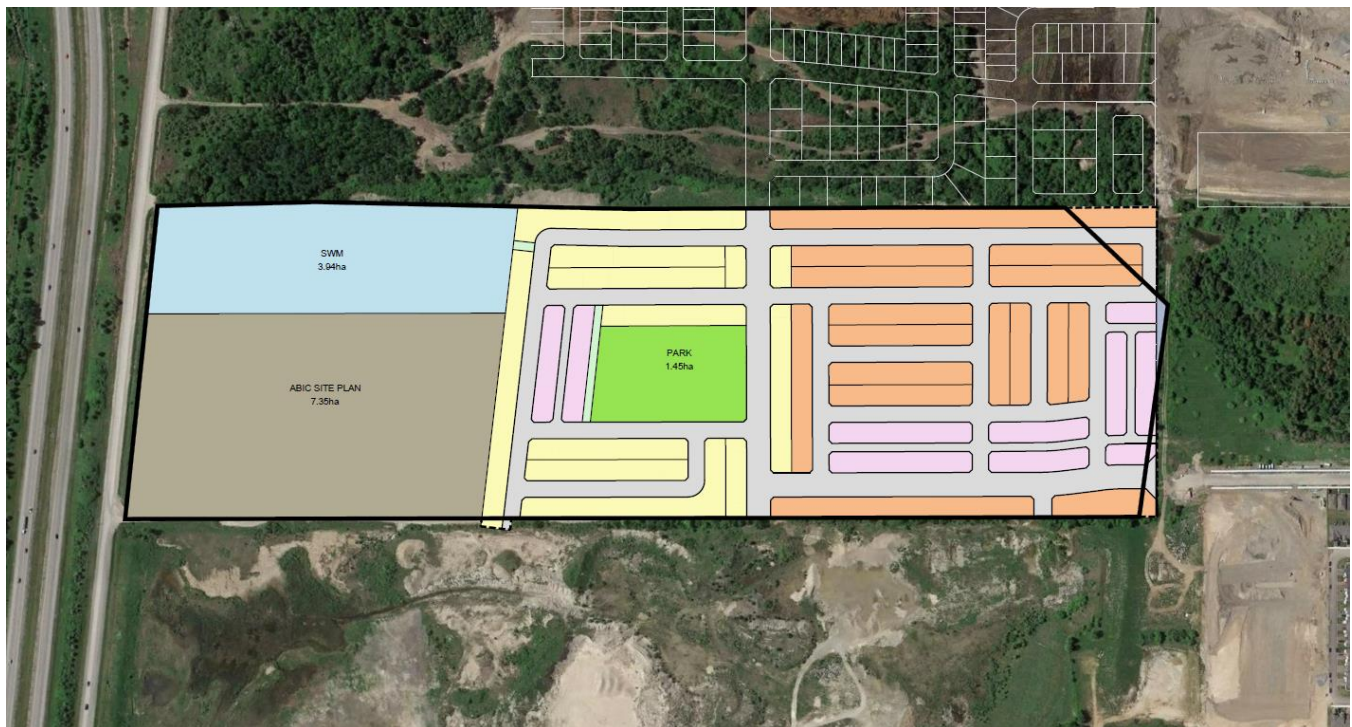


Figure 6: Concept Plan (Yellow = Detached homes, Orange = Street Townhomes, Purple = Rear Lane Townhomes)

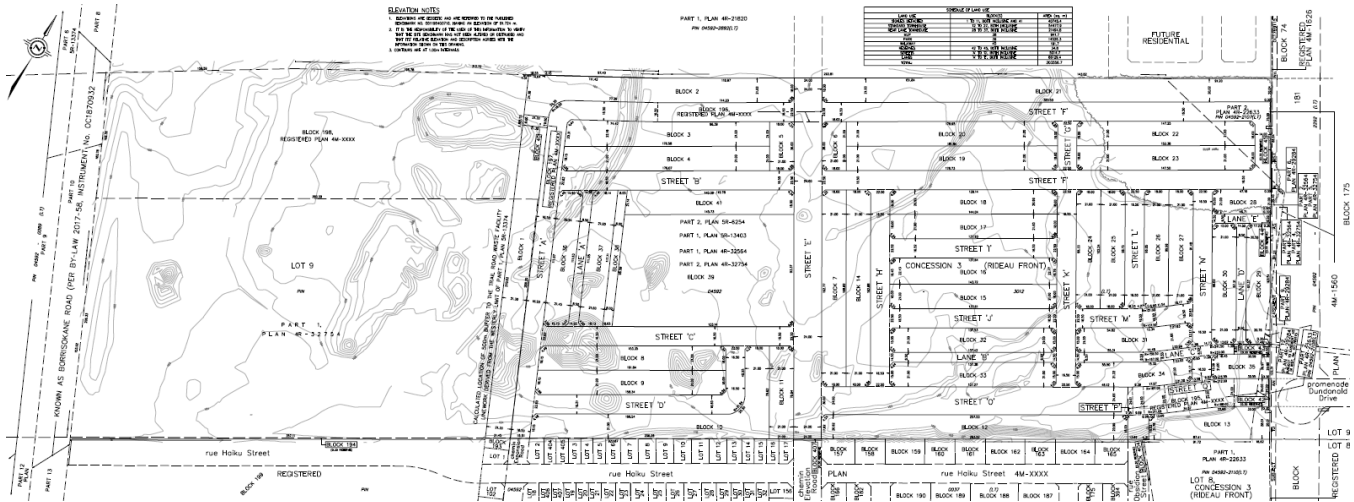


Figure 7: Draft Plan of Subdivision

2.1 Parkland Dedication By-law (2009-95)

As previously noted, a centrally located Neighbourhood Park is proposed as part of the plan of subdivision. The City's Parkland Dedication By-law (2009-95) requires 1 hectare of parkland per 300 units, either through land dedication and/or cash-in-lieu of parkland. The enclosed memorandum from NAK Design Strategies (May 2020) acknowledges that there are three potential Neighbourhood Parks and one Community Park located within 400 to 800 metres (5 to 10 minute walk) of the centre of the proposed subdivision. As such, a 1.45-hectare park is a reasonable park size for this location. The balance of land required through the Parkland Dedication By-law (0.48 hectares) would be provided as cash-in-lieu (Table 2).

A preliminary Facility Fit Plan has been prepared by NAK which demonstrates that a mini soccer field, half basketball court, pickleball court, splash pad, games tables, junior and senior play areas, pathways, and free play areas could be accommodated in the proposed park (Figure 8). As shown in the enclosed preliminary park budget, Caivan is proposing a development budget that exceeds the City's price per hectare, which is updated annually. A grading plan for the park block, prepared by David Schaeffer Engineering Ltd. (May 2020), is enclosed. There are no known existing or proposed encumbrances on the proposed park block.

Table 2. Parkland Dedication and Cash-in-Lieu

			Comments
Proposed Units	580 units		This number is approximate
Parkland Required	1.93 ha		The Parkland Dedication By-law requires 1 hectare of parkland for every 300 units
Parkland Provided	Dedication	1.45 ha	One 1.45-hectare Neighbourhood Park is proposed
	Cash-in-lieu	0.48 ha	

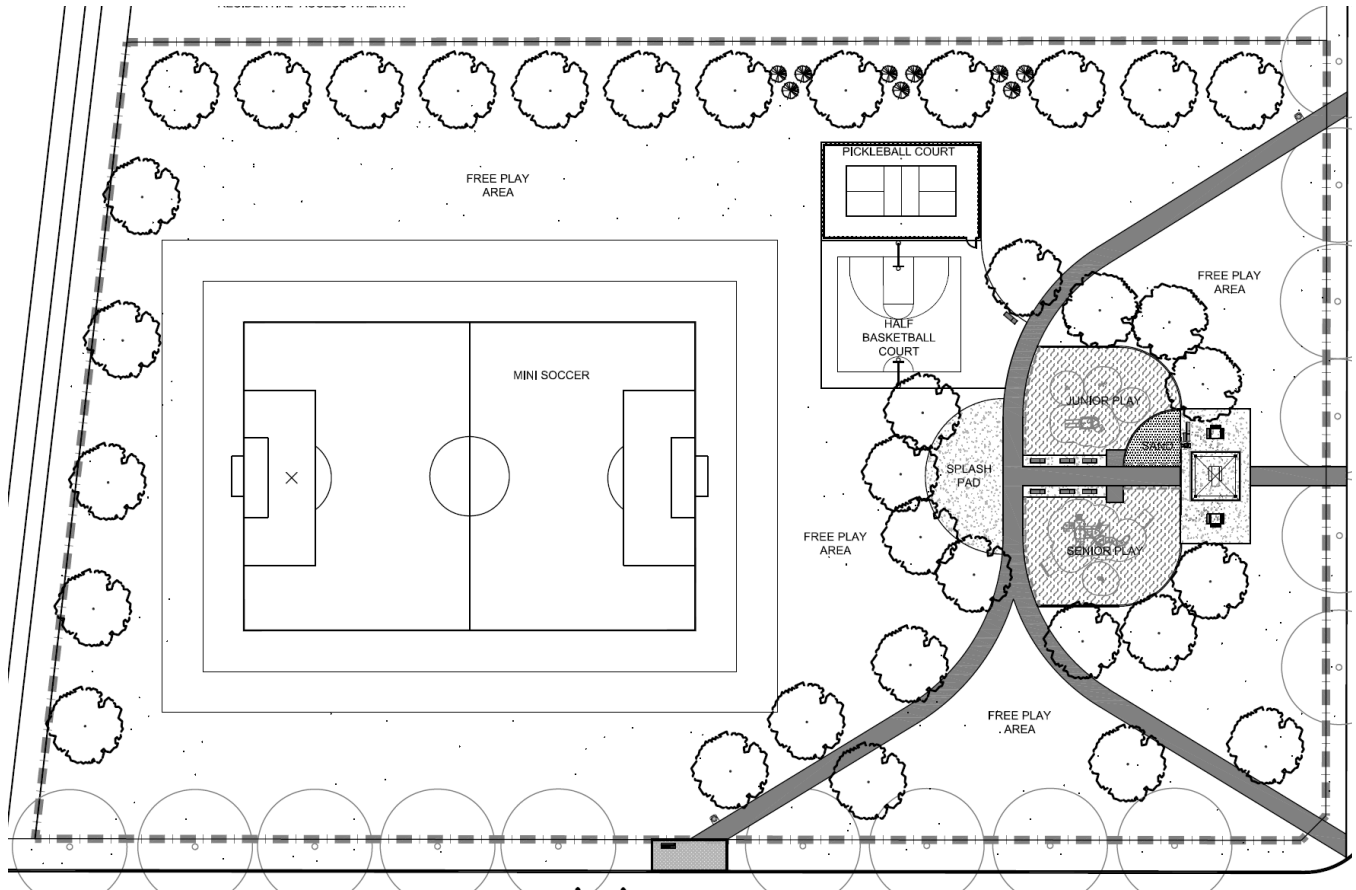


Figure 8. Preliminary Facility Fit Plan for the Proposed Neighbourhood Park

3.0 Policy and Regulatory Framework

3.1 Provincial Policy Statement (2020)

The Provincial Policy Statement (PPS) was issued under Section 3 of the *Planning Act* and came into effect May 1, 2020, replacing the PPS issued April 30, 2014. The PPS provides policy direction on matters of provincial interest related to land use planning and development. As a key part of Ontario's policy-led planning system, the Provincial Policy Statement sets the policy foundation for regulating the development and use of land.

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 PPS supports improved land use planning and management, which contributes to a more effective and efficient land use planning system. The policies of the PPS that are of relevance to the proposed development are analyzed below.

Efficient and resilient development and land use patterns

- / Promotes efficient development and land use patterns which sustain the financial well-being of the Province and municipalities over the long term;
- / Accommodates an appropriate range and mix of residential, recreational and open space uses to meet long-term needs;
- / Promotes cost-effective development standards to minimize land consumption and servicing costs; and
- / Ensures that necessary infrastructure and public service facilities are or will be available to meet current and projected needs.

Settlement Areas

- / Land use patterns within Settlement Areas shall be based on densities and a mix of land uses which:
 - a) Efficiently use land and resources; and
 - b) Are appropriate for, and efficiently use, infrastructure and public service facilities which are planned or available, and avoid the need for their unjustified and/or uneconomical expansion.
- / New development taking place in designated growth areas should occur adjacent to the existing built-up area and shall have a compact form, mix of uses and densities that allow for the efficient use of land, infrastructure and public service facilities.

Housing

- / Maintains ability to accommodate residential growth within a Settlement Area in accordance with the PPS;
- / Provides for an appropriate range of housing types and densities; and
- / Directs the development of new housing towards locations where appropriate levels of infrastructure and public service facilities will be available to support current needs.

Public Spaces, Recreation, Parks, Trails and Open Space

- / Plans public streets, spaces and facilities to be safe, meet the needs of pedestrians, foster social interaction, facilitate active transportation and community connectivity; and
- / Plans and provides for a full range and equitable distribution of publicly accessible built and natural settings for recreation, including facilities, parklands, public spaces, open space areas, trails and linkages, and, where practical, water-based resources.

The proposed development is consistent with the above noted policies of the PPS. More specifically, the proposal seeks to develop an area that is located within the City of Ottawa's urban area, immediately adjacent to an existing built-up area, which allows for the logical and efficient extension of

existing services and roads. The proposal provides for a range of housing options with a centrally located municipal park.

Policy 1.1.5.5 the PPS states that development shall be appropriate to the infrastructure which is planned or available, and avoid the need for the unjustified and/or uneconomical expansion of this infrastructure. **The proposal is appropriate for the infrastructure available.**

Section 2.5 discusses Mineral Aggregate Resources, and in particular, Section 2.5.3 addresses their rehabilitation. Policy 2.5.3.1 states that progressive and final rehabilitation shall be required to accommodate subsequent land uses, to promote land use compatibility, to recognize the interim nature of extraction, and to mitigate negative impacts to the extent possible. Final rehabilitation shall take surrounding land use and approved land use designations into consideration. **As previously noted, the subject lands have been rehabilitated and the extraction license has been surrendered.**

3.2 Barrhaven South Urban Expansion Area Community Design Plan (2018)

The subject lands are located within the Barrhaven South Urban Expansion Area (BSUEA) CDP (2018), which establishes development and design policies for the study area, including permitted land uses and design guidelines. The CDP features a Land Use Plan (Figure 9) which illustrates the location of planned land uses, community facilities (such as parks and schools), arterial and collector streets, and stormwater management infrastructure. The CDP also contains a Demonstration Plan (Figure 10) which illustrates the intent for development, including the preferred local street layout.

At the time the CDP was prepared, the time at which the licenses for the Drummond (north) and Brazeau (south) aggregate pits would be surrendered was unknown, therefore the CDP provides limited guidance on the redevelopment of these areas. More specifically, Section 3.4.1- *Aggregate Pits* of the CDP recognizes the former operations and notes that the extraction licences would be surrendered after operations have ended and rehabilitation has occurred as per the requirements of the MNR (which has now occurred for the former Drummond pit). Section 5.7- *Phasing Plan* of the CDP notes that the sand and gravel pits will be subject to the same density and housing mix requirements as the remainder of the CDP area.

Section 7.2- *Policies and Guidelines for Parks and Greenspace* of the CDP notes that the aggregate pits were not included in the calculations that were used to determine the quantity of parkland in the CDP area and therefore redevelopment of the pits is subject to a separate parkland dedication calculation through the Plan of Subdivision process.

As explained in Section 8.2- *Aggregate Pits* of the CDP, the urban portions of the two active aggregate pits were brought into the urban area through the Official Plan Amendment implementing the CDP. However, unlike the majority of the CDP area, which was redesignated to “General Urban Area”, the urban portion of the former aggregate pits remained designated “Sand and Gravel Resource Area” but with “Developing Community (Expansion Area)” also applied.

As previously noted, the draft Plan of Subdivision proposes detached and townhouse units, including both street townhomes and rear lane townhomes. Therefore, the proposed subdivision and rezoning align with the policies for the “Low-Medium Density Residential Area” CDP designation (Section 5.1.1- *Residential Areas* of the CDP). This designation permits low-rise, ground-oriented dwellings, including detached dwellings, semi-detached dwellings, linked-detached dwellings, and townhouses. The CDP directs that multiple-attached dwellings will be distributed throughout the Residential Area, as is proposed with the rear lane townhomes in the proposed plan of subdivision. A density of 36 units/net hectare was expected within the CDP study area. At approximately 49.6 units/net hectare, the proposed subdivision well exceeds the expected density within the CDP study area, serving to make more efficient use of land and planned infrastructure.

June 2020

3.2.1 Community Design Policies and Guidelines

The proposed Plan of Subdivision meets the following policies and guidelines from the BSUEA CDP:

Streetscape Policies:

- / Access from local roads to arterials is limited;
- / Residential dwellings face collector and local streets;
- / Design of collector streets is consistent with City guidelines;
- / Acoustic fencing (noise walls) will be discouraged on collector streets; and
- / Window streets will not be permitted along collector streets.

Streetscape Guidelines:

- / Streets will be designed to include bump-outs to better define crossing points;
- / The use of acoustic fencing (noise walls) along arterials should be avoided except where no other design options are available;
- / Collector streets accommodating transit routes are designed with a 24-metre right-of-way;
- / The local street pattern is designed as a fully-connected offset grid; and
- / Single loaded window streets may be designed with a minimum 14 metre ROW.

As previously noted, the rear lane townhomes and window street proposed along future New Greenbank Road and the proposed ROW widths for collector (24 metres) and window (14 metre) streets serve to fulfil the above noted policies and guidelines.

As illustrated in the Traffic Calming Plan from the Transportation Impact Assessment prepared by CGH Transportation (Figure 11), bulb-outs and intersection narrowing are proposed throughout the proposed subdivision.

Parks Policies:

- / Sidewalks and street trees will be provided within the ROW of all streets that abut parks;
- / Parks will have a minimum of 50% street frontage; and
- / Intersection narrowings shall be provided around all park edges to facilitate safer pedestrian crossings.

As illustrated in the Concept Pedestrian Network (Figure 12), sidewalks are proposed along both street frontages of the proposed park and a Multi-Use Pathway is proposed along the western edge of the park. The Traffic Calming Plan (Figure 11) proposes bulb-outs at the north and south ends of the eastern edge of the proposed park, with an intersection narrowing proposed to the south, where two collector streets intersect.

Park Guidelines:

- / Pedestrian connections should be provided through the park to the sidewalks in the abutting ROW and other pedestrian access points.

As illustrated on the Preliminary Facility Fit Plan (Figure 8), a pathway is proposed which would allow for pedestrians and cyclists to cut across the eastern end of the park. A MUP proposed along the western edge of the park connects the sidewalks proposed along the east-west local streets to the north and south of the park.

Policies for Linkages and Pathways:

- / Pathway connections are included mid-block along long residential streets to facilitate pedestrian and cyclist access to schools, parks, and transit facilities; and
- / Bicycle routes should be permitted within the street ROW.

The proposed blocks are within 150 to 250 metres in length, which is the length recommended by the Urban Design Guidelines for Greenfield Neighbourhoods (2007). As such, the residential blocks provide sufficient porosity and do not require mid-block pathway connections. As shown on Figure 12, cycle tracks are proposed along the southern extension of Apolune Street/northern extension of Elevation Road.

Guidelines for Linkages and Pathways:

- / Pedestrian pathways are provided from residential neighbourhoods to adjacent uses; and
- / Pedestrian connections are provided between residential neighbourhoods.

As illustrated in Figure 12, sidewalks are proposed along both sides of the two collector streets and along one side of select local streets. These sidewalks will connect residential units to the centrally located Neighbourhood Park, future New Greenbank Road (a multi-modal transportation corridor, east of which are additional parks and schools), and the future urban residential to the south (“The Ridge” subdivision) via northern extensions of draft-approved Elevation Road and Obsidian Street.

Policies for All Residential Site Design and Building:

- / A variety of housing densities and designs will be provided to enhance the streetscape;
- / Front entrances should face and be visible from the street; and
- / Projecting garages will be avoided.

A mix of detached, street townhome, and rear lane townhome units are proposed. As illustrated in the proposed elevations (Figure 13), the front entrances of the proposed units face the street and the garages are flush with the façade of the buildings, with the front porches projecting slightly.

Guidelines for Residential Site Design and Building:

- / Residential dwellings should be located close to the street to reinforce a strong street edge; and
- / Residential dwellings located on window streets should face the street and incorporate a high quality of architectural design and detail;

Front yard setbacks of 3 metres are proposed for all three unit types. The dwellings proposed along the window street will side onto future New Greenbank Road. However, rear lane townhomes are proposed to front onto the majority of future New Greenbank Road.

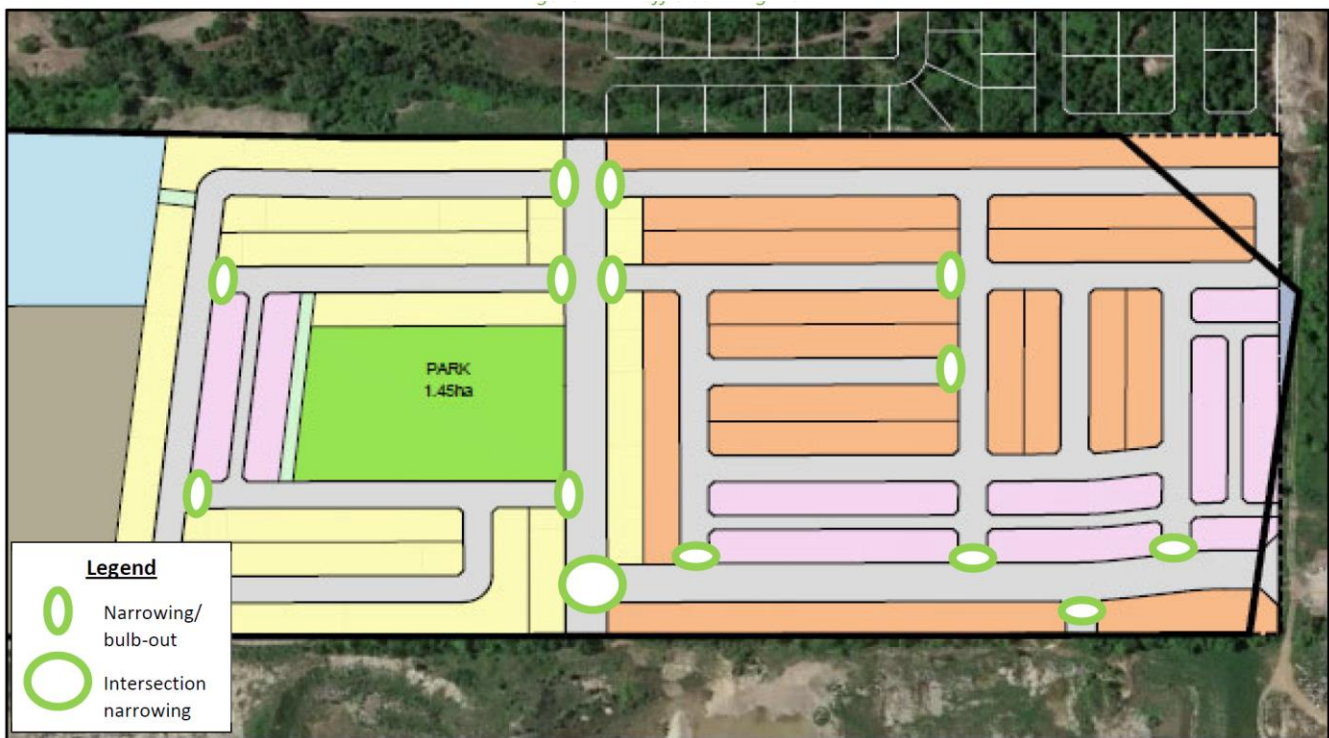


Figure 11: Traffic Calming Plan

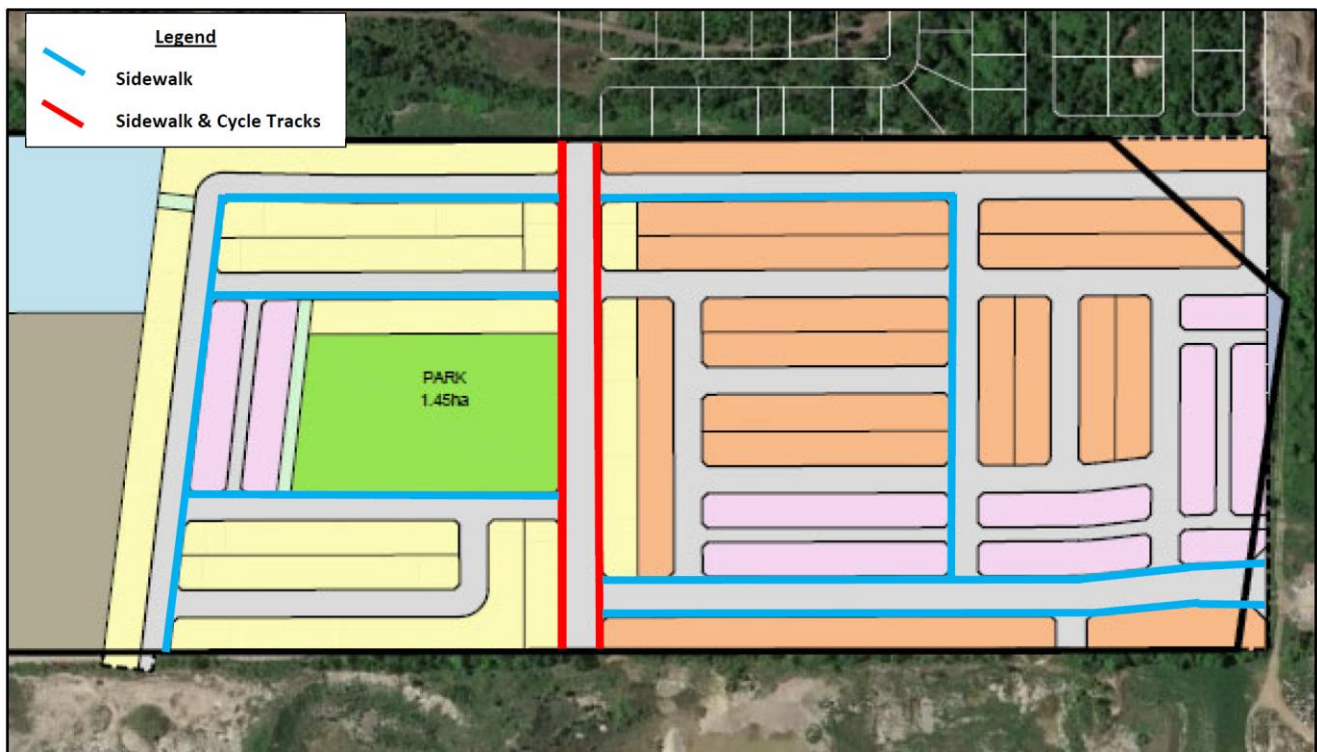


Figure 12: Concept Pedestrian Network

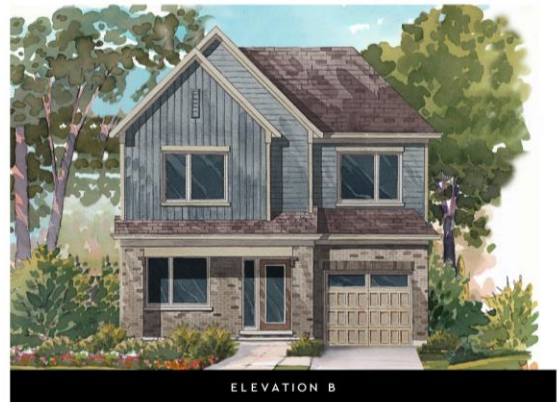
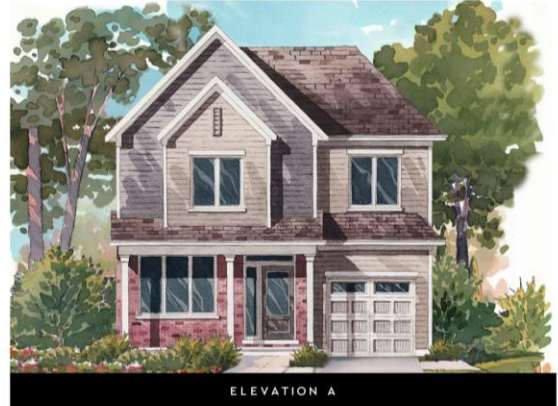
Street Townhome**Rear Lane Townhome****Detached Home A****Detached Home B**

Figure 13: Sample Caivan Product Elevations

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

The subject lands are designated “Sand and Gravel Resource Area” on Schedule B- *Urban Policy Plan* of the Official Plan, with the “Developing Community (Expansion Area)” designation also applying (Figure 14).

3.3.1 Sand and Gravel Resource Area

Section 3.7.4 of the Official Plan discusses mineral aggregate resources, which are identified as a non-renewable resource that the City will steward for future generations. Lands designated as Sand and Gravel Resource Area or Bedrock Resource Area have deposits of aggregates that may be available because they are:

- / Of a good quality and quantity;
- / Located sufficiently close to local markets;
- / Situated in relation to existing residential development such that they can be extracted with minimal impacts on most residential land uses.

The subject Sand and Gravel Resource Area has become depleted and therefore no longer meets the purpose of areas such designated. Section 3.7.4 contains policies that guide the future of development of depleted resource areas:

“Rehabilitation and New Use of Depleted Sites

15. Where the sand, gravel or bedrock mineral aggregate resources of a property have been fully extracted, the site fully rehabilitated and an aggregate license surrendered, the property may be used for other purposes. Under this circumstance the City will not require the proponent to amend the Official Plan; instead the Plan will be amended to accurately reflect the new use at the time of the next comprehensive Official Plan update or through a general Official Plan amendment.”

Similar to the above noted policy, Policy 5 in Section 3.12- *Developing Community (Expansion Area)* of the Official Plan states:

“An amendment to this Plan will not be required to remove the designation of Developing Community (Expansion Area) and replace it with General Urban Area, but an amendment may be required to implement infrastructure and open space provisions of plans approved for individual areas. Development may proceed once the City is satisfied that the requirements of this section have been met and the City has approved the plan of subdivision.”

The sand and gravel resources that were located on the subject lands have now been fully extracted and the aggregate license has been surrendered. In accordance with Policy 15 of Section 3.7.4, the property has been rehabilitated and the lands are now proposed to be used for residential.

As per Policy 5 of Section 3.12, the subject lands are expected to be re-designated to General Urban Area (or equivalent) through the current Official Plan Review, the designation that applies to the remainder of the residential portion of the BSUEA CDP (2018). Section 8.2 of the CDP states:

“A site-specific policy in the Official Plan will allow the sand and gravel pit lands to be integrated into the Barrhaven South CDP, Master Servicing Study (MSS), and Transportation Master Study (TMS) at a later date, after the licenses are retired. The sand and gravel pits will be subject to the same density and housing mix requirements as the remainder of the CDP area.”

The proposed rezoning from ME2 to R3YY[XXXX] for the residential portion of the subject lands is aligned with the anticipated General Urban Area designation.

3.3.2 Developing Community (Expansion Area)

The portion of the subject lands where urban residential is proposed is also subject to the Developing Community (Expansion Area) overlay (Figure 14). Section 3.12- *Developing Community (Expansion Area)* of the Official Plan notes that these areas contribute to the provision of sufficient urban land to support the residential demands of the projected population. The intent is that these lands will be developed primarily for urban residential uses once the policies of this section have been satisfied. The policies of Section 3.12 are to be achieved through the preparation of a plan of subdivision, such as the proposed plan of subdivision for the subject lands.

Policy 3 in Section 3.12 identifies the plans and studies that must be prepared, to the satisfaction of the City, for development proposed within a Developing Community (Expansion Area). This includes:

- a. Identify the location, timing and cost of roads and transit facilities, water and wastewater services, public utilities, stormwater management facilities, etc. required on-site and off-site to service the area; and
- b. Identify the natural heritage system on the site independent of the potential developable area. Typically an environmental management plan as described in Section 2.4.3 will be prepared where a subwatershed study does not exist or does not provide sufficient guidance to identify the environmental features on the site and their functions, which together constitute the natural heritage system. The components of this system are generally described in Section 2.4.2, with the exception that significant woodlands are to be further evaluated consistent with the Urban Natural Areas Environmental Evaluation Study. No development is permitted within this system, which is to be conveyed to the City for public use before development of the area is approved; and [Subject to amendment #179, December 14, 2016]
- c. Identify Recreational Pathways on the site;
- d. Establish the mix and location of residential dwelling which, as a minimum, will constitute the following:
 - i. At least 30% single detached but not more than 55% single detached, at least 10 per cent apartment dwellings and the remainder multiple dwellings, other than apartments. [Amendment #236, December 31, 2019]
 - ii. In Developing Community (Expansion Area) designations, overall residential development will meet a minimum average density target of 34 units per net hectare. Net residential density is based on the area of land in exclusively residential use, including lanes and parking areas internal to developments but excluding public streets, rights-of-way and all non-residential uses; and
- e. Show how the plan will achieve other policies of this Official Plan including, but not limited to, affordable housing and design; and
- f. Meet the requirements of Phase 1 and 2 of the Environmental Assessment Act where required.

Policy 7 in Section 3.12 specifically addresses the subject lands and the lands to the immediate south (former Brazeau pit, where “The Ridge” subdivision is draft approved). More specifically, Policy 7 states:

“Notwithstanding Policy 3a), b), and c) above, the lands designated Sand and Gravel Resource Area at 3713 and 3809 Borrisokane will fulfill the requirements for inclusion as described in the Barrhaven South Urban Expansion Study Area Community Design Plan, Master Servicing Study, Transportation Master Study, Area Parks Plan and Environmental Management Plan.”

Policy 4 in Section 3.12 states:

“Proponents of development will prepare a Financial Implementation Plan and commit to providing:

- a. The on-site and off-site servicing systems described above through development charges or at the expense of the developer; and
- b. The natural heritage system as non-developable lands to be transferred to the City for \$1; and
- c. The Recreational Pathways as identified in this Plan through development charges or at the expense of the developer”

As previously noted, the proposed subdivision is located within the BSUEA CDP (2018), however the CDP provides limited guidance for the two former aggregate pits given that the timing of their redevelopment was unknown at the time the CDP was approved. As a result, the proposed plan of subdivision, this Planning Rationale and the other supporting plans and reports (summarized in Section 4.0 of this Planning Rationale) serve to integrate the subject lands into the policy framework of the BSUEA CDP by way of:

- / Applying the Low-Medium Density Residential Area policies from the BSUEA CDP to the proposed subdivision, including proposing three of the permitted uses and exceeding the minimum required net density in order to efficient use land and planned infrastructure;
- / Applying the BSUEA CDP general policies and guidelines for streetscapes, parks, stormwater management, linkages and pathways, and site design and built form to the proposed plan of subdivision (see Section 3.2.1 of this Planning Rationale for a full description);
- / Proposing the extension of collector streets that are planned in the BSEUA CDP into the proposed subdivision (as well as streets planned through the older Barrhaven South CDP (2006));
- / Building on the Master Servicing Study (MSS) that was approved along with the BSUEA CDP (see Section 4.0 of this Planning Rationale) to provide adequate servicing to the subject lands. Ongoing discussions with City Staff related to the servicing strategy for “The Ridge” subdivision will provide direction on the servicing strategy for the proposed subdivision. As the development approvals process progresses, it will be demonstrated how the proposed subdivision satisfies the required integration with the existing MSS; and
- / Sizing the Neighbourhood Park in the proposed subdivision based on the parks (and associated facilities) that have been constructed or planned in both the 2006 and 2018 CDP areas.

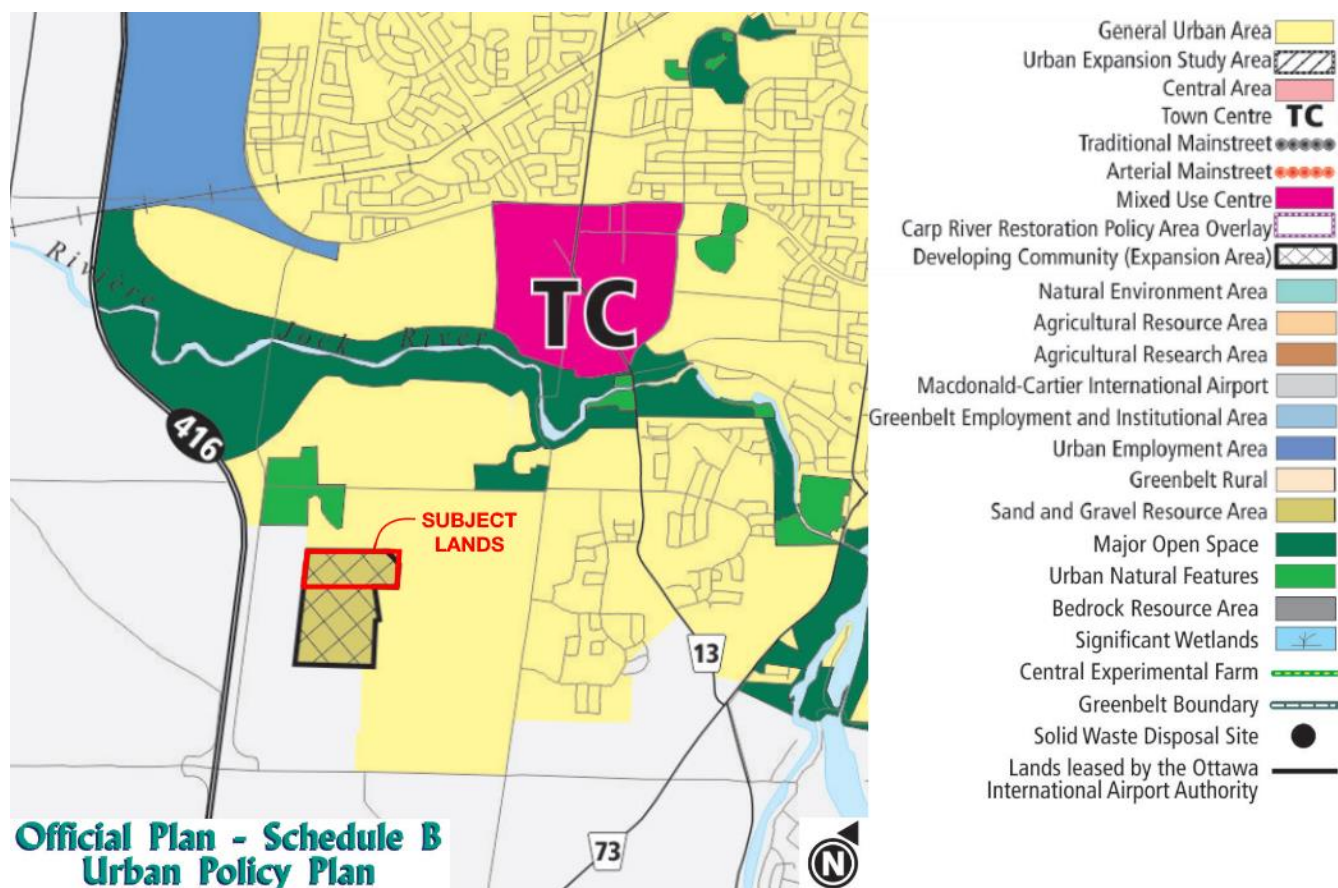


Figure 14: Schedule B – Urban Policy Plan of the Official Plan

3.3.3 Official Plan Review

The City of Ottawa is currently in the process of developing a new Official Plan (OP) that will replace the existing Official Plan from 2003 (as amended). The new OP will have a 25-year time horizon (from 2021 to 2046) to allow the City to make sounder long-term decisions related to the planning of major infrastructure and to better manage the required supply of developable land until the next OP review.

In December 2019, the City released Preliminary Policy Directions for the OP review. The following directions are of relevance to the proposed subdivision:

- / Increase the minimum required density for urban expansion areas from 34 to 36 units per net hectare
- / Remove the minimum percentage of detached units in urban expansion areas (currently 30%), but keep the requirement for a minimum of 10% apartments
- / Gradually increase the intensification target over the 25-year planning horizon, servicing capacity will be addressed
- / Enable evolution to denser, walkable, 15-minute neighbourhoods
- / Require a minimum percentage of residential units with 3+ bedrooms for certain types of development
- / Encourage the “missing middle” (mid-density, ground-oriented, low-rise) near high-level transit service such as rapid transit stations and high-frequency street buses and near commercial mainstreets

The draft Official Plan is expected to be released by the end of 2020 and the final Official Plan is expected to be approved by Council mid-2021.

While no longer an expansion area (since the subject lands are already in the urban area), the proposed subdivision has a density of approximately 49.6 units/net hectare, well exceeding the existing and proposed minimum densities for new communities outside of the Greenbelt. The flexibility in unit type breakdown allows for a greater number of attached units, such as the proposed street and rear lane townhomes, which generate higher densities. All of the proposed townhomes have three bedrooms, making them suitable for families.

3.3.4 Urban Design Guidelines for Greenfield Neighbourhoods (2007)

The Urban Design Guidelines for Greenfield Neighbourhoods were approved by Council in September 2007. The purpose of these design guidelines is to assist developers in understanding the City's expectations during the development review process. They are focused on providing guidance for neighbourhood design during the subdivision review and zoning processes. The Urban Design Guidelines for Greenfield Neighbourhoods are meant to be used as a tool to implement the design objectives and principles of the Official Plan.

The guidelines define a Greenfield Neighbourhood as a large area of land within the urban area that has not been developed previously or that has the potential to be extensively redeveloped. The subject property is a Greenfield Neighbourhood as defined by the guidelines.

The proposal meets several of the guidelines, including:

- / Concentrates higher-density residential uses in strategic locations;
- / Selects the most suitable zoning setbacks and road right-of-way widths for the land use context and the road function;
- / Incorporates sidewalks that provide connectivity to parkland;
- / Connects new streets to existing streets in adjacent developments and plans for future connections to land that has yet to be developed;
- / Limits the length of many development blocks to be between 150 and 250 metres;
- / Locates a park of sufficient size with substantial frontage onto local streets;
- / Avoids rear yards backing onto an Arterial Road.

The proposed Plan of Subdivision and Zoning By-law Amendment applications advance several of the Urban Design Guidelines for Greenfield Neighbourhoods, including:

- / **Locating higher density development (street and rear lane townhomes) closest to New Greenbank Road, a future arterial road that is planned to have higher order transit (BRT);**
- / **Proposing a park with two street frontages (which will both have sidewalks) and a MUP along the western edge;**
- / **Extending existing and planned roads from the north (Apolune Street), east (Dundonald Drive), and south (Elevation Road and Obsidian Street) into the proposed subdivision;**
- / **Limiting block lengths to 150 to 250 metres; and**
- / **Locating rear lane townhomes and a window street adjacent to future New Greenbank Road to avoid rear lotting onto this arterial road.**

3.3.5 Building Better and Smarter Suburbs

The City launched the Building Better and Smarter Suburbs (BBSS) initiative in the fall of 2013. The intent of the study is to identify challenges associated with new, dense suburban communities and to develop solutions to resolve these issues and conflicts. Completed BBSS Initiatives include the following:

- / Arterial Road Cross-Sections and Collector Road Cross-Section guidelines.
- / Traffic Calming and Pedestrian Priority Measures: The proposed plan of subdivision facilitates active transportation through neighbourhood connections.
- / Updated Park Development Manual (2017): The manual has been applied to the Preliminary Facility Fit Plan for the proposed Neighbourhood Park.
- / Mini-Roundabout Guidelines: There are no mini-roundabouts proposed in the subdivision.
- / Pedestrian Crossovers information for new subdivisions: Bulb-outs and intersection narrowings are address in the Traffic Calming Plan for the subdivision.
- / Tree Planting in Sensitive Marine Clay Soils: The guidelines are currently being reviewed by the City of Ottawa, a draft version of the 2020 guidelines are not available. As such, the 2017 guidelines are currently in use. While clay is present on the subject lands, it is not sensitive marine clay.

On March 10, 2015, Planning Committee approved the report titled “Building Better and Smarter Suburbs (BBSS): Strategic Directions and Action Plan” (dated February 20, 2015), which aims to support land efficiency and functionality in new suburban subdivisions. The Vision for the BBSS initiative is “the principles of good urbanism should apply to the suburbs as they do to other parts of the City.” This Vision is supported by four principles which speak to Ottawa’s suburbs being: land efficient and integrated; easy to walk, bike, bus, or drive; well designed; and financially sustainable.

The following nine core topic areas are identified in the BBSS document, each of which has its own objectives, strategic directions, and action plan:

- / Street Network and Land Use
- / Parks and Open Space
- / Stormwater Management
- / School Sites
- / Parking
- / Road Rights-of-Way
- / Rear Lanes
- / Trees
- / Utility Placement

Table 3 identifies the BBSS Strategic Directions that are met in the proposed subdivision.

Table 3: BBSS Strategic Directions

BBSS Core Topic Area	Strategic Direction	Proposed Drummond Subdivision
Street Network and Land Use	Design the street network as an integral part and extension of the municipal grid, taking into consideration its future adjustments and evolution. and Ensure that a range of appropriate sized roadways complements the character and functional needs of each community area.	The subdivision accommodates the extension of existing and planned roads, such as the southward extension of Apolune Street (a collector), the westward extension of Dundonald Drive (a collector), and the northward extensions of Elevation Road (a collector) and Obsidian Street (a local street).
	Design the street network based on a modified or offset grid to maximize choices of travel routes and opportunities for utility connections. and Design the street network in conjunction with the land use and open space system to ensure direct pedestrian and cyclist connectivity to key destinations in the community (schools, shops, bus stops and stations, etc.).	The streets in the proposed subdivision are generally laid out in a grid pattern, which offers pedestrians and cyclists direct connections to community features such as the parks and schools in the area. The proposed ROW cross-sections for the collectors includes sidewalks on both sides of the street, cycle tracks along Apolune Street and on-street (mixed flow) bicycle use on Dundonald Drive. Sidewalks will be provided on one side of select local roads, as identified on the Concept Pedestrian Network. Sidewalks are strategically located along the two street frontages of the proposed park.
	Avoid reverse frontage lots (rear yards abutting public streets) within the community	No rear lotting is proposed in the subdivision. This has been achieved through the use of a window street and rear lane townhomes fronting onto future New Greenbank Road. This reduces the need for noise walls and achieves urban design objectives by orienting units towards the arterial road.
Parks and Open Space	Create street and lot patterns and building orientations that frame and enhance the presence of all parks, regardless of size. and Identify opportunities to connect separate features of the open space network (e.g. a park to a nearby woodlot) with streets that support canopy trees.	Rear lane townhomes facing the park define the western edge of the park. The southern and eastern edges of the park are street frontages (providing views into the greenspace), with detached homes facing the park from the opposite side of the streets. The three sides with home facing the park provides “eyes” on the park. The sidewalks along both sides of the Dundonald Drive extension provide a

BBSS Core Topic Area	Strategic Direction	Proposed Drummond Subdivision
		pedestrian connection to the existing parks on the east side of future New Greenbank Road.
Stormwater Management	Provide street frontage for sites that contain stormwater management ponds and and Ensure that land attributed to large SWM facilities can serve additional functions, such as recreation trails or multi-use paths as part of the open space system, and support the connection of trails in SWM facilities to parks and open spaces, and to pedestrian and cycling facilities.	Unfortunately this strategic direction cannot be achieved due to the rural industrial use proposed to the immediate west of the subject lands, which makes rear lotting onto the western lot line more appropriate.
Road Right-of-Way	ROW cross-sections, roadway widths, and design speeds should respond to built form and land use context.	The collector roads have a ROW width of 24 metres while local roads have been designed with an 16.5 metre right-of-way (14 metres for window streets).
	Ensure components of a `complete street` are provided in the ROW, such as: -Pedestrian facilities -Cycling facilities -On-street parking; -Traffic calming features; -Trees on both sides of the street, including canopy trees; -Utility placement and operational considerations that do not interfere with the attributes of complete streets.	The ROW cross-section for both collector streets includes sidewalks on both sides, with cycle tracks also accommodated on the southern extension of Apolune Street. Sidewalks will be provided on one side of select local roads, as identified on the Concept Pedestrian Network. Sidewalks are strategically located along both street frontages of the proposed park. Street trees and utility placements will be addressed at detailed design (subdivision registration).

3.4 Zoning Framework

3.4.1 Existing Zoning

The subject lands are currently zoned “Mineral Extraction Zone, Subzone 2 (ME2)” (Figure 15). The purpose of this zone is as follows:

1. Permit licensed mineral extraction operations in areas mainly designated as Sand and Gravel Resource Area or Limestone Resource Area in the Official Plan;
2. Allow a limited range of permitted uses which are related to or compatible with mineral extraction operations, as well as interim uses that would not sterilize the potential of future mineral extraction operation on the lands within the ME zones;
3. Impose regulations to minimize the impact of mineral extraction operations on the surrounding area.

The ME2 zoning is not suitable for the subject lands following the depletion of the mineral aggregate resources and therefore a rezoning is required.

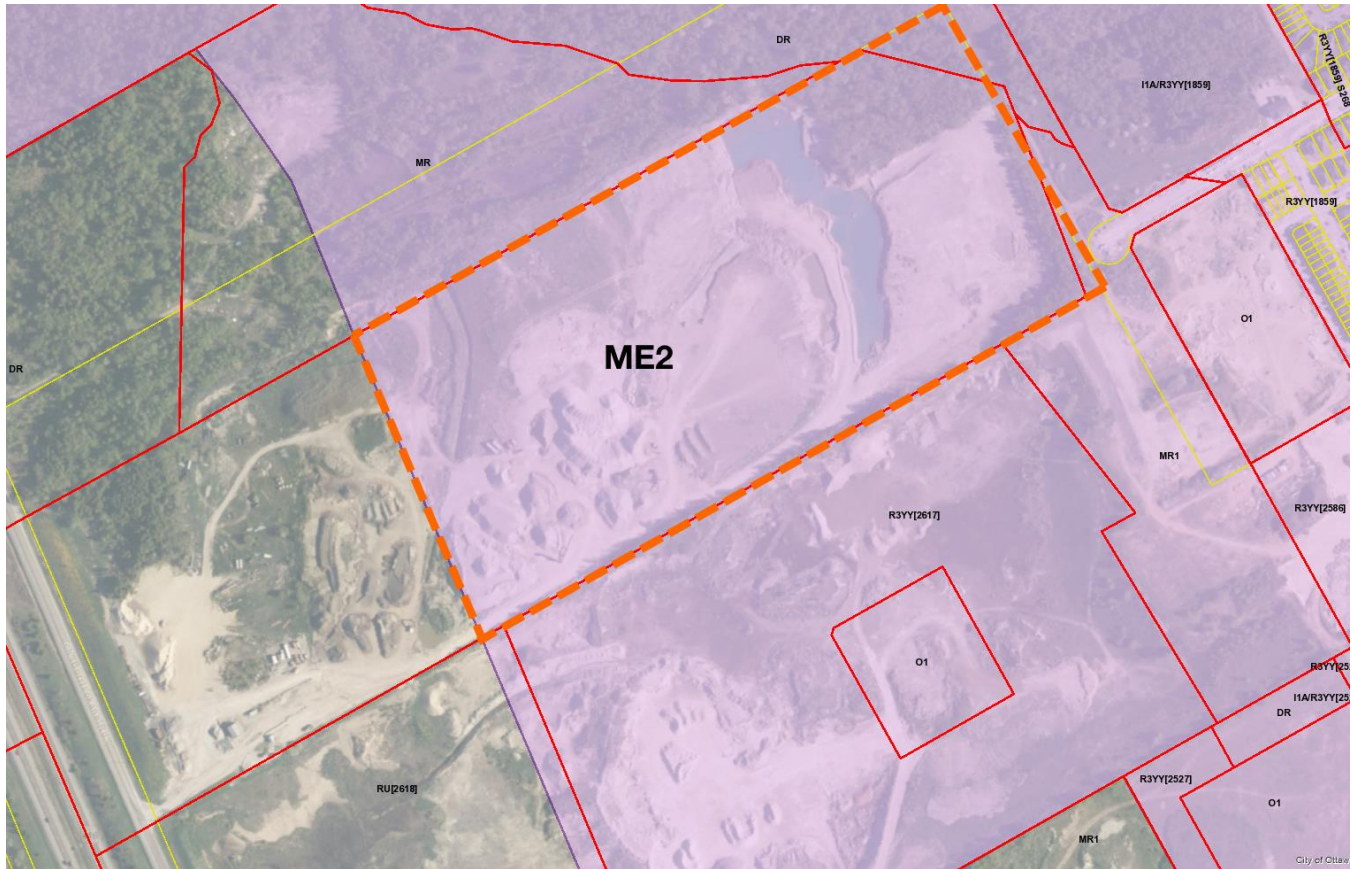


Figure 15: Existing Zoning Map; Subject Lands Outlined in Orange

3.4.2 Proposed Zoning By-law Amendment

A “Residential Third Density Zone, Subzone YY, with Exceptions (R3YY[XXXX])” zoning is proposed for the residential component of the proposed plan of subdivision (Table 4). The Exception proposes similar provisions to the zoning of Caivan’s “The Ridge” and “The Conservancy” subdivisions, resulting in a similar built form and density as is already proposed for the area.

The purpose of the Residential, Third Density – R3 zone is as follows:

1. Allow a mix of residential building forms ranging from detached to townhouse dwellings in areas designated as General Urban Area in the Official Plan;
2. Allow a number of other residential uses to provide additional housing choices within the third density residential areas;
3. Allow ancillary uses to the principal residential use to allow residents to work at home;
4. Regulate development in a manner that is compatible with existing land use patterns so that the mixed dwelling, residential character of a neighbourhood is maintained or enhanced; and
5. Permit different development standards, identified in the Z subzone, primarily for areas designated as Developing Communities, which promote efficient land use and compact form while showcasing newer design approaches.

The proposed subdivision can meet the above purposes. The requested zoning provisions align with the purpose of the parent R3 zone.

Table 4: Proposed Zoning

R3YY[XXXX] Proposed Zoning Provisions								
Unit	Min. lot width (m)	Min. lot area (m ²)	Max. building height (m)	Min. Front Yard Setback (m)	Min. Corner Yard Setback (m)	Min. Rear Yard Setback (m)	Min. Interior Yard Setback (m)	Maximum Lot Coverage
Detached	9	220	12	3 ¹	2.5 ^{2, 3}	6 ^{4,5}	Total 1.8, with one minimum no less than 0.6 ⁶	55%
Townhouse	5.5	137	14	3	2.5	6	1.5	65% ⁷
Back-to-back townhouse	5.5	81	14	3	2.5	0	1.5	No maximum
Townhouse with rear lane access	5.5	110	14	3	2.5	0	1.5	No maximum
Endnotes								
1	Front yard setback for an attached garage: 3.5m.							
2	Despite the foregoing, no more than two portions of the building, not exceeding a total floor area of 3m ² , may be located no closer than 2 m from the side lot line abutting a street.							
3	Detached dwellings on corner lots must keep street facing side yards consistent in the quality and detail of the front elevation.							
4	With minimum 4.5 m for a maximum of 50% of the lot width, the total area of the rear yard must not be less than 54 m ² .							
5	Minimum rear yard setback may be reduced to 2.5 m for part of the building that is no higher than 4.5 m and any part of the building, excluding projections, located less than 6 m from the rear lot line must be located at least 4 m from any interior side lot line.							
6	Where there is a corner lot on which is located only one interior side yard, the minimum required interior side yard setback equals the minimum required for at least one yard.							
7	Except where the side lot line abuts New Greenbank Road, the maximum lot coverage is 60%.							
General Provisions for Exception								
A	A maximum of 60% of the area of the front yard, or the required minimum width of one parking space, whichever is the greater, may be used for a driveway, and the remainder of the yard, except for areas occupied by projections permitted under Section 65 and a walkway with a maximum width of 1.8 metres, must be landscaped with soft landscaping, except where the side lot line abuts New Greenbank Road.							

B	Where an attached garage accesses a public street by means of a driveway that crosses a sidewalk, the attached garage must be setback at least 5.2 m from the nearest edge of the sidewalk
C	Despite Table 65, Rows 1, 2 and 3, a chimney, chimney box, fireplace box, eaves, eave-troughs, gutters and ornamental elements such as sills, belts, cornices, parapets and pilasters may project 1 m into a required interior side yard but no closer than 0.2 m to the lot line.
D	Despite Table 65, Row 6(b), balconies and porches may project to within 0 m of a corner lot line.
E	Despite Table 65 Row 6(b), the steps of a porch may project 2.5 m into a required yard, but may be no closer than 0.5 m from a lot line other than a corner lot line, from which they can be as close as 0 m.
F	Despite Table 65, Row 6(a), any portion of a deck with a walking surface higher than 0.3 m but no higher than 0.6 m above adjacent grade may project to within 0.6 m of a lot line, and any portion of a deck with a walking surface equal to or less than 0.3 m may project to within 0.3 m of a lot line.
G	Despite Table 65, Row 8, an air conditioning condenser unit may project 1 m, but no closer than 0.2 m to a lot line. An air conditioning condenser unit may not be located in a corner side yard except in the case of a townhouse dwelling and may not be located in a front yard except in the case of a back-to-back multiple dwelling.
H	Despite Section 57(2), for townhouse dwellings, the corner sight triangle will be calculated using 57(1) and in the instance of any dwelling listed in 57(1) including townhouse dwellings, the distance used to determine a corner sight triangle is a minimum of 2.75 m.
I	In the case of a home based business operating within a townhouse or semi-detached dwelling, a parking space is only required if a non-resident employee works on-site.
J	Section 136 does not apply.

The new municipal park within the subdivision is proposed to be rezoned to “Parks and Open Space Zone (O1)”. The stormwater management facility proposed in the northwest corner of 3713 Borrisokane Road will be rezoned through to O1 through the ZBLA application for the western (rural) end of 3713 Borrisokane Road (file number D02-02-20-0002), which is scheduled to go to ARAC on June 4, 2020.

The purpose of the O1 zone is to:

1. Permit parks, open space and related and compatible uses to locate in areas designated as General Urban Area, General Rural Area, Major Open Space, Mixed Use Centre, Village, Greenbelt Rural and Central Area as well as in Major Recreational Pathway areas and along River Corridors as identified in the Official Plan, and
2. Ensure that the range of permitted uses and applicable regulations is in keeping with the low scale, low intensity open space nature of these lands.

Permitted uses in the O1 zone include park, environmental preserve and education area, and urban agriculture.

The proposed R3YY[XXXX] and O1 zoning will allow for the subdivision to be developed in a manner that meets the intentions of the R3 parent zone and the policies of the BSUEA CDP, the Official Plan, and the Provincial Policy Statement.

4.0 Summary of Plans and Reports

Fotenn has reviewed the plans and reports prepared in support of this application. A summary of the documents is provided below for convenience, however is not intended to represent the original documents themselves.

4.1 Functional Servicing Report

David Schaeffer Engineering Limited (DSEL) prepared a Functional Servicing Report (FSR) dated May 13, 2020 in support of this application. The objective of the report is to provide sufficient detail to demonstrate that the proposed development area can be supported by municipal services. The Master Servicing Study (MSS) prepared in support of the Barrhaven South Urban Expansion Area (BSUEA) CDP provided an overview of the existing and planned infrastructure in the area. The report concludes that water supply, sanitary service, and stormwater service can be provided to the site, therefore demonstrating that adequate municipal infrastructure capacity is available. The following services are proposed:

/ **Water Supply:** the anticipated watermain servicing connections points include:

- Extend the existing 300mm diameter watermain from the east, which currently terminates at Dundonald Drive and future New Greenbank Road (proposed to be extended as part of “The Ridge” subdivision to the south);
- Proposed 300mm diameter watermain on Delphinus Avenue within the Tamarack Meadows development area to the north, which was previously proposed to extend up the western side of the Drummond property to service the Brazeau Lands to the south. This watermain is fed from the existing 400mm diameter Cambrian Road watermain; and
- Proposed 300mm diameter watermain from “The Ridge” development area to the south at “Elevation Road”.

/ **Wastewater Servicing:** it is proposed that the subdivision will outlet northward to the proposed sanitary sewer trunk along the future New Greenbank Road alignment, which is also proposed to service “The Ridge” subdivision. The sewers convey flows to the existing sewers along Cambrian Road. The proposed alignment allows for the optimization of sanitary sewer depths (i.e. minimizing depths) such that it mitigates any required groundwater pumping during construction and the potential for altered groundwater patterns that may occur with deeper permanent installations.

/ **Stormwater Management:**

- The future flows from the land area are planned to meet the following criteria per the BSUEA MSS:
 - Meet the existing flow in the downstream system;
 - Meet the quality control target of 80% TSS removal as per the Jock River Reach One Subwatershed Study (Stantec, 2007); and
 - Preserve pre-infiltration condition levels
- In order to provide drainage conveyance to a Borrisokane Road storm outlet, the site grading will be adjusted to convey flows westward as much as practicable. The

northeast portion of the Drummond property will drain to Future Greenbank Road given the site topography and the required grading elevation tie-in to the Future Greenbank Road ROW (i.e. to avoid a retaining wall along Greenbank Road).

- The stormwater management design will consist of:
 - A storm sewer system designed to capture at least the minimum design capture events required under PIETB-2016-01;
 - For westerly flows, one dry Stormwater Management (SWM) Pond for quantity control along with Oil Grit Separator (OGS) units designed to provide Enhanced Level of Protection (80% total suspended solids (TSS) removal) per Ministry of Environment, Conservation and Parks (MECP) guidelines. The SWM pond will provide controls to levels which respect any downstream pre-development levels. This single pond location was draft approved as part of the advancement of “The Ridge” subdivision application;
 - For flows from the northeast portion of the site, storm sewers which will convey flows to the previously constructed Clarke Pond within Half Moon Bay;
 - An on-site road network designed to maximize the available storage in the onsite road network for the 100-year design event, where possible, with controlled release of stormwater to the minor storm system; and
 - An overland flow route designed to safely convey stormwater runoff flows in excess of the on-site road storage.

4.2 Geotechnical Investigation

Paterson Group conducted a geotechnical investigation dated November 2019. The purpose of the investigation was to determine the sub soil and groundwater conditions and to provide geotechnical recommendations for the design of the proposed development based off these findings.

Generally, the subsurface profile consists of a fill layer overlying a deep deposit of brown silty sand and/or brown sand with varying amounts of gravel, cobbles and boulders. Stiff to very stiff brown to grey silty clay was encountered below the silty sand layer and/or fill layer in certain locations. Dolomite of the Oxford formation is present in the area with an overburden drift thickness ranging between 15 to 25 metres. A perched water table was noted within the west portion of the subject lands at a higher elevation at the borehole locations where a clay deposit is present below a sand deposit.

The Geotechnical Report anticipates that the majority of the proposed development area will undergo a ground improvement program consisting of a dynamic compaction program. There are areas within the subject lands where native silty sand will be encountered at footing level and also areas where the existing fill is to be removed to a native soil and reinstated with an engineered fill. Alternatively, an engineered granular fill pad can be placed over a proof-rolled fill layer.

Due to the groundwater level within the sand layer and high infiltration rate through the sand layer, it is expected that a significantly high groundwater in-flux will be observed for the installation of the deep sanitary sewer, where located below the groundwater table. Excavations below the water level in non-cohesive soils, such as the native silty sand, have the potential for basal heave if groundwater is not controlled during excavation work. A series of well points may be required to control groundwater in-flow for service trenches that extend below the water table.

The study recommends the following are completed once the master plan and site development are determined:

- / Review detailed grading plan(s) from a geotechnical perspective.
- / Observation of all bearing surfaces prior to the placement of concrete.
- / Periodic observation of the condition of unsupported excavation side slopes in excess of 3 m in height, if applicable.
- / Observation of all subgrades prior to placing backfilling materials.
- / Field density tests to ensure that the specified level of compaction has been achieved.
- / Sampling and testing of the bituminous concrete including mix design reviews.

4.3 Traffic Noise Feasibility Assessment

Gradient Wind prepared a Traffic Noise Feasibility Assessment dated May 2020. The results of the current study indicate that noise levels due to roadway traffic over the site will range between approximately 51 and 73 dBA during the daytime period (07:00-23:00). The highest roadway traffic noise levels will occur nearest to the realigned Greenbank Road. Results of the roadway traffic noise calculations indicate that dwellings exposed to the collector(s) will possibly require internal ventilation such as forced air heating with provisions for central air conditioning.

Similarly, dwellings exposed to or near the realigned Greenbank Road will likely require internal ventilation such as central air conditioning. Additionally, outdoor living areas siding onto the proposed minor collector(s) as well as the realigned Greenbank Road will likely require noise control measures in the form of a noise barrier.

4.4 Phase I Environmental Site Assessment

Paterson Group prepared a Phase I Environmental Site Assessment (ESA) dated November 25, 2019. The purpose of this study was to research the past and current use of the site and study area and to identify any environmental concerns with the potential to have impacted the subject property. A site inspection conducted in November 2019 confirmed that the property is no longer used for aggregate extraction purposes. The former extraction pit was backfilled with imported fill material, and due to the unknown quality of the fill, it is an area of potential environmental concern. No environmental concerns were identified with respect to neighbouring properties.

4.5 Phase II Environmental Site Assessment

Due to the unknown quality of the fill material used in the historical infilling of the subject lands, a Phase II Environmental Site Assessment was required. This study was completed in February 2020 and concluded that the fill used to infill the former aggregate pit has not been significantly impacted. However, soil impacted with arsenic should be remediated by means of removal from the site and disposal at an approved waste disposal facility. Further investigation of the near surface soil conditions in this area of the site should also be considered.

Based on the findings of the Phase II ESA, the groundwater beneath the Phase II Property is in compliance with the MECP Table 3 standards. It is recommended that efforts be made to maintain the integrity of the monitoring wells for possible future groundwater monitoring. It is expected that the monitoring wells will be abandoned in accordance with Ontario Regulation 903 at the time of construction excavation.

4.6 Transportation Impact Assessment

CGH Transportation prepared a Transportation Impact Assessment (TIA) in May 2020, which fulfills Steps 1 through 4 of the City of Ottawa's 2017 TIA Guidelines. The report speaks to the development road design, including:

- / One collector road is provided in the north-south direction (northward extension of Elevation Road and southward extension of Apolune Street) and one collector is proposed in the east-west direction (westward extension of Dundonald Drive), which will have 24 metre rights-of-way; and

- / The remaining streets are local streets which are generally 16.5 metre ROW, with a 14.5 metre window street abutting future New Greenbank Road, and 8.5 metre lanes in between the rear lane townhomes.

Sidewalks are proposed on both sides of the two collector roads and sidewalk connections are proposed in the vicinity of the park and other primary connections. Cycle tracks are proposed on the north-south collector road. Traffic calming measures are recommended to reduce pedestrian crossing distances where sidewalks are provided and reduce turning speeds from the collector roads to local roads.

Following the circulation and review of this Strategy Report, any outstanding comments will be addressed within the context of the zoning and plan of subdivision application. Following the completion of the remaining TIA Steps and sign-off has been received from City Transportation Project Manager, a signed and stamped final report will be provided to City staff.

4.7 Environmental Impact Statement and Tree Conservation Report

Kilgour & Associates prepared a Scoped Environmental Impact Statement (EIS) for the property dated May 22, 2020. The EIS was scoped to confirm that habitats for species at risk (SAR) on and adjacent to the site have been removed and are now absent. The EIS also addresses trees remaining on the Site, thereby serving as the Tree Conservation Report (TCR) for the proposed development. The report addresses the following:

- / **Vegetation Cover and Site Trees:**

- The entire parcel at 3713 Borrisokane Road, including the western remnant woodlot, has now been fully cleared of vegetation as part of the re-grading program for the lands of the Drummond Pit following its closure. The eastern remnant woodlot has been almost entirely removed. The clearing and regrading of the site were confirmed by the MNRF to have proceeded in compliance with the closure plan.

- / **Surface Water, Groundwater and Fish Habitat:**

- There were no surface water features on the site at the time of its closure in 2019 and none are currently present with the ongoing site regrading.

- / **Wildlife:**

- Faunae on the site were not studied directly as part of a site review for the proposed project. With the total site rehabilitation/regrading associated with the pit closure occurring presently, no habitat suitable for species is currently present on site.

- / **Habitat for SAR**

- The subject lands had previously been identified as providing habitat for two SAR – Barn Swallow and Bank Swallow. At the onset of this current project, it was understood that all habitat on the subject lands, including habitat for SAR, would be fully and completely removed as part of the closure process for the two pits. The City of Ottawa determined that Section 4.6 of Kilgour's report is not required to address SAR present on the site, given that no habitat remains, but rather, should outline the process by which that habitat was removed in accordance with regulations of the MNRF and MECP. It is very unlikely SAR or habitat suitable for SAR is present on the Site. Development of the site is unlikely to negatively impact SAR or SAR habitat.

5.0 Conclusion

It is Fotenn's professional opinion that the proposed subdivision represents good planning and is in the public interest for the following reasons:

- / The proposed development is consistent with the Provincial Policy Statement (2020) in developing an area that is located within the City of Ottawa's Urban Area, immediately adjacent to an existing built-up area, which allows for the logical and efficient extension of existing services and roads. The proposal provides for a range of housing options interspersed with parkland.
- / The proposal conforms to the Official Plan (2003, as amended). The subject lands are designated Mineral Aggregate Resource Area with a Developing Community (Expansion Area) overlay on the urban (residential) portion, which permits a range of uses including the proposed detached home and townhome uses. Per the direction of the Official Plan, the development of the site builds on the direction of and requirements for the Barrhaven South Urban Expansion Area CDP (2018).
- / The proposed subdivision meets a number of the Urban Design Guidelines for Greenfield Neighbourhoods (2007) and Building Better and Smarter Suburbs Strategic Directions (2015);
- / The proposed development meets some of the Preliminary Policy Directions of the City's New Official Plan (December 2019);
- / The proposed Zoning By-law Amendment would apply a Residential Third Density, Subzone YY with Exceptions (R3YY[XXXX]) zoning to the proposed residential units, which ensures efficient development patterns of a suitable scale and density which are in keeping with the nearby zoning and neighbourhood context. The proposed Zoning By-law Amendment would also apply a Parks and Open Space (O1) zoning to the proposed municipal park; and
- / The proposed development is supported by a range of technical studies, including geotechnical, civil engineering, transportation, environmental, and noise-related reports.



Julie Carrara, MCIP RPP
Senior Planner



Scott Alain, MCIP RPP
Planner