

195 HUNTMAR DRIVE DRAFT : INTEGRATED ENVIRONMENTAL REVIEW STATEMENT

**PLAN OF SUBDIVISION + OFFICIAL PLAN
AMENDMENT + ZONING BY-LAW AMENDMENT
APPLICATIONS**

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1.0 Introduction

FOTENN Consultants Inc. has been retained by Cavanagh / Shenkman to prepare an Integrated Environmental Review Statement (IERS) in support of Draft Plan of Subdivision, Official Plan Amendment, and Zoning By-law Amendment applications for the lands municipally known as 195 Huntmar Drive (“the subject lands”). The subject lands are located east of Huntmar Drive and south of Highway 417 in Ottawa’s western community of Kanata West. Cavanagh / Shenkman are proposing the development of employment, commercial, and low- to high-density residential uses, as well as a District Park, on the subject lands.

1.1 Integrated Environmental Review Statement

Section 4.7.1- *Integrated Environmental Review to Assess Development Applications* of the Official Plan acknowledges that a comprehensive understanding of the relationship between the natural environment and the built environment is the foundation for site design and subdivision planning. Section 4.7.1 contains the following two (2) policies:

“1. Subdivision, and site plan and rezoning applications requiring an Environmental Impact Statement, Tree Conservation Report or landform feature assessment, will be accompanied by an integrated environmental review statement demonstrating how all the studies in support of the application influence the design of the development with respect to effects on the environment and compliance with the appropriate policies of Section 4. The appropriate policies and studies will be identified through pre-consultation at the beginning of the design and review process. [Amendment #76, OMB File # PL100206, Ministerial Modification # 48, April 26, 2012.]”

“2. The integrated environmental review statement will provide:

- a. A brief overview of the results of individual technical studies and other relevant environmental background material;
- b. A graphic illustration, such as an air photo, summarizing the spatial features and functions (e.g. natural vegetation, watercourses, significant slopes or landform features, recharge/infiltration areas) as identified in the individual studies;
- c. A summary of the potential environmental concerns raised, the scope of environmental interactions between studies, and the total package of mitigation measures, including any required development conditions and monitoring, as recommended in individual studies;
- d. A statement with respect to how the recommendations of the support studies and the design with nature approach have influenced the design of the development;
- e. An indication that the statement has been reviewed and concurred with by the individual sub consultants involved in the design team and technical studies.
- f. A description of how the principles of Design Objective 7 (Section 2.5.1) to maximize the energy-efficiency of development and to promote sustainable design that reduces consumption, energy use and carbon footprint of the built environment have been considered. A sustainable design checklist will be prepared to assist in this description. [Amendment #76, OMB File # PL100206, Ministerial Modification # 49, April 26, 2012.]”

2.0 Description of Subject Lands and Project

2.1 Description of Subject Lands

The subject lands, legally known as Part of Lots 1 and 2, Concession 1, Geographic Township of Huntley, are located east of Huntmar Drive and south of Highway 417 in Ottawa's western community of Kanata West. The subject lands comprise one lot of record that has 153.6 metres (504 feet) of frontage along Huntmar Drive and a total area of 54.9 hectares (135.7 acres).

The subject lands are generally flat with a gentle slope to the east. The lands are characterized by a mix of cultivated fields in the east portion, with coniferous, deciduous and mixed wooded areas in the west. Lower lying areas are to the north of the site, on the Ministry of Transportation (MTO) lands located south of Highway 417. There are no buildings or other structures on the site.

2.2 Description of Project

The proposed Plan of Subdivision would create 260 blocks and 18 streets. The future North-South Arterial Road serves to divide the subject lands into two (2) areas. As discussed in more detail in the Community Transportation Study (CTS) prepared by Parsons (July 2016), a roundabout is proposed at the intersection of the North-South Arterial Road, which continues west from Huntmar Drive and then makes a 90 degree turn northwards towards Highway 417, and the Stittsville Mainstreet extension, a major collector road which would run along the southwestern edge of the subject lands. Three additional collector roads are also proposed. The following uses are proposed on the subject lands:

- 174 detached dwellings;
- 285 townhouse dwellings;
- Approximately 520 stacked townhouse dwellings;
- Approximately 120 to 190 units in low-rise apartment buildings (up to 4 storeys in height);
- A neighbourhood-oriented commercial block along Huntmar Drive (2.5 hectares (6.0 acres));
- Three (3) automobile dealership blocks (2 hectares (5 acres) each); and
- A District Park (11 hectares (27.5 acres))

3.0 Summary of Technical Studies

3.1 Planning Rationale/Demonstration Report (FOTENN, July 2016)

FOTENN prepared a Planning Rationale/Demonstration Report (2016) in support of the Draft Plan of Subdivision, Official Plan Amendment, and Zoning By-law Amendment applications required for the proposed mixed-use development. The purpose of the Planning Rationale/Demonstration Report was to evaluate the proposed development with respect to the applicable policy and regulatory framework and determine if the development is appropriate for the site and compatible with the existing and planned function of the broader area.

As outlined in the Planning Rationale/Demonstration Report, the eastern half of the subject lands is designated *Mixed Use Centre* in the Official Plan. The western half of the subject lands is currently designated *Enterprise Area* in the Official Plan, however, the City's Draft Employment Land Strategy report (2016) recommends re-designating the southern portion to General Urban Area.

In terms of the Kanata West Concept Plan (KWCP), a Council-approved policy document, the eastern half of the subject lands is designated *Intensive Employment Area*, the western half is designated *Prestige Business Park*, and the proposed District Park is designated *Future Major Public Park* (and located further east than currently proposed).

The subject lands are currently zoned *Development Reserve (DR) Zone* in the City's Comprehensive Zoning By-law, which serves to protect lands for future urban development.

The planning applications submitted in support of the proposed development would achieve the following:

Draft Plan of Subdivision

- Create blocks and streets, including:
 - North-South Arterial Road
 - Stittsville Main Street extension
 - Additional collector and local roads
 - District Park block
 - Three (3) blocks for new automobile dealerships, in close proximity to the existing Palladium Autopark
 - One (1) block on the west side of Huntmar Drive for neighbourhood commercial uses
 - One (1) block adjacent to the commercial block for low-rise apartment buildings (up to 4 storeys)
 - Multiple blocks for stacked townhomes, townhomes, and detached dwellings

Official Plan Amendment

- Permit detached dwellings at the south end of the Enterprise Area designation (south of the District Park and west of the future North-South Arterial Road).
- Permit the District Park to be located in the southwest quadrant of the Enterprise Area designation.
- Maintain Schedule E-*Urban Road Network* of the existing Official Plan, which illustrates the Stittsville Main Street terminating at the North-South Arterial Road.
- Maintain existing Official Plan policies for the Mixed Use Centre designation, which do not require a minimum building height.
- Revise the Kanata West Concept Plan to reflect the proposed development.

Zoning By-law Amendment

- Rezone the subject lands as follows:
 - Mixed-Use Centre Zone (MU) for the neighbourhood commercial block along Huntmar Drive and the abutting low-rise apartment block;
 - Business Park Industrial Zone (IP) for the three (3) 2.0 ha blocks planned for the automobile dealerships or other employment uses.
 - Residential Fourth density (R4) for the stacked townhouses and townhouse dwelling blocks;
 - Residential Third density (R3) for the detached dwellings located west of the North-South Arterial Road; and
 - Parks and Open Space (O1) Zone for the 11 hectare (27.5 acre) District Park.

3.2 Functional Servicing Report (DSEL, 2016)

David Schaeffer Engineering Limited (DSEL) prepared a Functional Servicing Report (July 2016) for the subject lands. Given that the subject lands are located within the Kanata West Concept Plan (KWCP) area, the Kanata West Master Servicing Study (KWMSS) applies. The KWMSS was completed in order to provide a conceptual servicing strategy and cohesive development approach for an overall development area of 725 hectares located west of the Carp River and north of Hazeldean Road. The KWMSS identifies existing infrastructure and environmental constraints, describes the neighbourhood-level trunk services that will service all properties within the study area, establishes quantity and quality control targets for future site-specific stormwater management plans, and identifies required infrastructure upgrades to support the proposed development of the KWMSS area. Since completion of the KWMSS, many of the identified neighbourhood-level infrastructure projects have been completed or are underway. The proposed concept plan differs from the “prestige business park” and “extensive employment” land use designations in the KWCP and KWMSS.

The subject lands will be serviced by municipal water, wastewater, and stormwater services, as outlined below:

Water

The City’s 3W pressurized water supply network will be expanded to meet the water demands of the proposed development. Detailed modelling is required to confirm

phasing of the extensions of trunk watermain, as per the KWMSS. The trunk watermain network has shifted from the alignments proposed in the KWMSS in order to follow the proposed arterial and collector road network.

Wastewater

The subject lands will be serviced by off-site sanitary trunk gravity sewer(s) delivering collected wastewater to the Kanata West Pump Station, which is currently being constructed. The preferred offsite trunk sanitary sewer alignment is a deviation from the proposed alignment in the KWMSS. Sufficient residual capacity exists within the Maple Grove Road trunk sanitary sewer to accommodate the preferred alignment.

Stormwater

Stormwater runoff will be conveyed via storm trunk gravity sewers (minor system) and overland flow routes (major system) to two (2) designated off-site stormwater management facilities. One (1) new stormwater management pond, located on the Ministry of Transportation (MTO) lands to the north, will outlet to Feedmill Creek (Pond 7) and one (1) existing stormwater management pond will outlet to the Carp River (Pond 4). The proposed alignment of storm sewers differs from the KWMSS due to modifications to the street network and block layout through the subject planning applications, and due to a proposed change in catchment area for the proposed stormwater management facilities. To achieve the planned stormwater drainage program and meet City of Ottawa guidelines pertaining to road and lot grading, final on-site road grades are planned to be set at least to 106.5m – 107.5m, which requires about two (2) meters of fill above existing ground.

The proposed water, wastewater, and stormwater design is expected to conform to all relevant City and Ministry of the Environment Guidelines and Policies. Low Impact Development (LID) techniques will be implemented where possible, as part of detailed design.

As outlined in Section 4.0 of this Integrated Environment Review Statement, Section 7.0 of the Functional Servicing Report (DSEL, 2016) also contains detailed erosion and sediment control measures.

3.3 Environmental Impact Statement and Tree Conservation Report (Muncaster Environmental Planning, August 2016)

An Environmental Impact Statement (EIS) and Tree Conservation Report (TCR) were prepared as one (1) report by Muncaster Environmental Planning Inc. (August 2016).

The major objective of the EIS was to determine whether significant natural heritage features are on or adjacent to the subject lands and if so, if the proposed change in land use will negatively affect these significant features and functions. Section 1.0 of the EIS/TCR characterizes the subject lands as follows:

- Much of the subject lands and MTO lands are part of the North of Maple Grove Urban Natural Area (Area 32). This 67 hectare Urban Natural Area was rated “moderate” overall.
- No portions of the City’s Natural Heritage System are identified on or adjacent to the site and no environmental or other constraints are on the site or adjacent lands.
- There are no Areas of Natural and Scientific Interest or Provincially Significant Wetlands in proximity to the site. The northwest portion of the subject lands and

lower lying areas to the north of the site are mapped as part of the Stittsville Wetland Complex, which is not considered Provincially Significant

- Areas of rare vegetation were identified in the southwest portion of the site and to the west of the site in the Carp River Watershed/Subwatershed Study. These areas are not Centres of Ecological Significance. The field studies did not find any rationale for these areas to be identified as rare vegetation.
- The on-site forests do not contain mature stands of trees 80 years of age or older and thus do not meet all of the City's Significant Woodlands criteria.
- The west and central portions of the site are identified as moderate recharge areas due to sand and Paleozoic bedrock while the clay soils in the east portion are considered to have a low recharge.
- In the Carp River Subwatershed Study (CRWSS), Feedmill Creek was considered to support a cold water fish community, with good water quality. However, more recent water temperatures preclude the cold water designation for the Creek.
- The only Species at Risk observed on or adjacent to the site was butternut. No additional site disturbances are to occur until the butternut health assessment is completed.

Potential Impacts

The potential impacts of the proposed development considered critical to the local natural system were scoped from features identified in the review of existing information, including the features identified in the North of Maple Grove Urban Natural Area, the Stittsville North Natural Area, the CRWSS and field visits to the site and adjacent lands. These impacts include:

Potential Impacts- Terrestrial and Wetland Habitats

No development is recommended within 30 metres of the normal high water mark of Feedmill Creek, thus remaining trees along the west edge of the site will be retained as shown on Map 3 of the EIS/TCR, with new trees planted to replace those recently removed. Protection of the Feedmill Creek corridor will achieve a major objective of the CRWSS, including the establishment of an environmental corridor along Feedmill Creek.

The lands located in the northwest corner of the subject lands appear as wetland habitat on some background mapping. The lands have been grubbed and are shown as disturbed lands on Map 1 of the EIS/TCR. As part of the park development in this area, plantings of native, local trees and shrubs are recommended to over time assist in replacing the features and functions of the woody vegetation removed.

The stormwater management facility to the north of the site has been sited to avoid the willow thicket swamp habitat in the west portion of the Ministry of Transportation (MTO) lands. The footprint of the stormwater management facility will maximize use of the existing disturbed staging area and adjacent cultural woodlands and younger deciduous forests.

Potential Impacts- Aquatic Habitat

The 30 metre no-touch setback along the Feedmill Creek corridor will protect and allow for restoration of the existing vegetation, aquatic habitat and water quality of the Feedmill Creek corridor.

Once the headwater field sampling and analysis are completed, compensation measures as required will be developed for the removal of the on-site tributaries, referred to as the northwest and east swales. Summer sampling is required to complete the headwater assessment. Once this work is completed, a separate Headwater Assessment report will be prepared by Muncaster.

Category 2 Blanding's turtle habitat is within and adjacent to Feedmill Creek. The Category 2 habitat will be retained as part of the 30 metre setback from Feedmill Creek. Category 3 Blanding's turtle habitat is also located on the subject lands. Category 3 habitat provides movement corridors between wetlands, a function which is essential for carrying out life processes associated with the Category 1 and 2 habitats. The subject lands do not play a role in facilitating potential Blanding's Turtle movement between a turtle sighting in the vicinity of Carp Road and the wetlands between the sighting area and Feedmill Creek. Furthermore, no wetland habitat is present to the east or south of the site, to which turtles may be transiting through the site and Highway 417 is to the north of the site. Thus the loss of the Category 3 habitat in this area is not anticipated to impact the productivity and life stages of the species.

Existing on-site grades are below the 100-year floodplain elevation. Written authorization from the Mississippi Valley Conservation Authority (MVCA) is required to fill site areas below the 100-year floodplain elevation and outside of the identified Feedmill Creek corridor. Based on preliminary consultation with the MVCA by DSEL, it is understood that the proposed fill outside of the Feedmill Creek corridor is not expected to have a negative impact on the function of Feedmill Creek.

Stormwater management measures outlined in DSEL's Functional Servicing Report (2016) will be designed to ensure that the development can proceed without adversely affecting the downstream Feedmill Creek and Carp River in terms of water quality, base flows or peak flow rates. Best management practices identified in the EIS/TCR will ensure that the aquatic habitat of Feedmill Creek will not be impacted. The servicing approach detailed in DSEL's report (2016) includes recommendations to promote infiltration of stormwater runoff within the site.

Tree Conservation Report

The purpose of the Tree Conservation Report is to establish which vegetation should be retained and protected on the subject lands. Retention of healthy trees and regenerating tree stems will be done along the Feedmill Creek corridor, although most of these trees in the portion of the Feedmill Creek corridor extending onto the site have already been removed. Native plantings of local origin will be required to replace them and help to restore the integrity of the corridor.

Due to the filling required to accommodate the servicing of the urban development, no tree retention is possible within the core of the site. Many of the older trees are along the west and central portions of the south site boundary. However, this is the location of the future Stittsville Main Street extension and thus trees cannot be retained in this area over the long term. The removal of on-site forests will impact forest interior habitat and area sensitive breeding birds. Some local wildlife and aesthetic functions of the removed vegetation can be mitigated with a generous planting plan of native trees and shrubs.

Mitigation

As outlined in Section 4.0 of this Integrated Environmental Review Statement, Muncaster's report includes a comprehensive discussion of recommended mitigation measures to protect Feedmill Creek, existing trees and shrubs, and habitat.

3.4 Geotechnical Investigation (Paterson, 2015)

Paterson Group prepared a Geotechnical Investigation for the subject lands, dated July 24, 2015. The objectives of the investigation were to:

- Determine the subsoil and groundwater conditions at this site by means of test holes; and
- Provide geotechnical recommendations pertaining to the design of the proposed development, including construction considerations which may affect the design.

The subsurface profile encountered at the boreholes within the east and north portions of the subject lands consists of a topsoil layer/ agriculturally disturbed zone overlying a silty clay layer and glacial till deposit. The soil profile encountered at the remainder of the test hole locations consists of topsoil underlain by a silty sand and/or a glacial till deposit.

Practical refusal to augering on inferred bedrock was encountered between 0.3 and 3.7 m depth. Based on available geological mapping (NR Can), the subject site is located in an area where the bedrock consists of interbedded limestone and shale of the Verulam formation and interbedded limestone and dolomite of the Gull River formation in the east and west, respectively. The overburden drift thickness is estimated to be between 0 to 10 m below the west portion of the site, and 10 to 25 m below the east portion of the site.

Based on Paterson's observations, the long-term groundwater table is estimated to be between 2 to 3 m below existing ground surface.

Paterson concluded that from a geotechnical perspective, the subject site is satisfactory for the proposed development. A permissible grade raise restriction of up to 2.0 metres is required within the east and north portions of the site where a silty clay layer is present below the proposed buildings (see Drawing PG3520-2 of Paterson's report).

3.5 Slope Stability Assessment (Paterson, 2016)

Given that Feedmill Creek borders the north section of the northwest boundary of the subject lands, Paterson was retained to prepare a Slope Stability Analysis (July 21, 2016) to determine the limit of hazard lands designation line.

Three (3) slope sections were studied based on information obtained by Paterson field personnel and topographical mapping from the City of Ottawa.

The results of the slope stability analysis indicate that all sections are considered stable from a geotechnical perspective under static conditions. Further, the slopes are considered to be stable under seismic loading.

As depicted in Drawing PG3520-2 of Paterson's report, both the Top of Slope and Limit of Hazard Lands are located adjacent to, but not directly on, the subject lands.

3.6 Phase 1 Environmental Site Assessment (Paterson, 2016)

Paterson Group prepared a Phase 1 Environmental Site Assessment (ESA) for the subject lands (June 17, 2015). The purpose of the Phase 1 ESA 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.

Historically, the site has never been developed. It was used for agricultural purposes until sometime between 1977 and 1988, at which time the western portion of the property became tree covered, while the eastern part continued to be used for agricultural

purposes. The neighbouring historical land use was similar to the subject site, with occasional farmsteads. No potentially contaminating activities were identified with the historical use of the subject site or neighbouring properties.

Following the historical research, a site visit was conducted to assess the subject site and Phase I-ESA study area. The site visit did not identify any PCAs on site. Several PCAs were identified on properties in the Phase I study area, however, they were not considered to represent areas of potential environmental concern on the subject property.

Based on the results of the Phase I - ESA, it is Paterson's opinion that a Phase II - Environmental Site Assessment is not required for the subject lands at this time.

3.7 Community Transportation Study (Parsons, 2016)

Parsons prepared a Community Transportation Study (CTS) (July 2016) in support of the proposed development. A Kanata West Transportation Master Plan (KWTMP) was developed in 2006 in support of the Kanata West Concept Plan (KWCP) and updated in 2010 (by Parsons, formally Delcan). A significant amount of transportation planning within this area was undertaken and the results are included in the KWTMP and the City of Ottawa's 2013 Transportation Master Plan (TMP).

Within the KWTMP, the subject lands were planned as 'business park', 'intensive employment area', and a 'major public park'. Given these assumed land uses within Kanata West, the road network was developed to support these future developments. The proposed North-South Arterial is planned as a four-lane arterial providing access to/from HWY 417, and acting, in part, as a Stittsville East By-Pass. The Stittsville Main Street Extension is planned as a two-lane collector roadway and will form the southwestern boundary of the subject lands.

Given the extensive transportation planning already completed for Kanata West, the CTS evaluates the difference in traffic impact between the proposed site's land uses and the land uses originally planned. In addition, the CTS evaluates the roundabout that is proposed on the subject lands at the T-intersection of the Main Street Extension and the North-South Arterial.

The CTS demonstrates that the proposed land uses are expected to generate less traffic than what would have been assumed for the originally planned lands (office park). As such, the CTS concludes that the proposed North-South Arterial, Stittsville Main Street Extension and local area roads are sufficient to support the developments projected traffic. This will be further evaluated during the Site Plan Approval stage for each development phase, which will require the preparation of Transportation Impact Studies or Briefs to assess the specific access requirements and intersection controls within the study area.

Further, the CTS concludes that the proposed Stittsville Mainstreet/North-South Arterial Road intersection is projected to operate acceptably with signal control or roundabout control. From a traffic operations perspective, a signalized intersection will operate more effectively than a roundabout. However, a roundabout intersection allows for a more "squared off" alignment that allows for more efficient land use and lotting patterns. Further, a roundabout can be designed as a "gateway" feature to help calm traffic as it enters a more residential area.

All proposed site access will be to/from future roads (i.e. North-South Arterial, Stittsville Main Street Extension). Given that these roads do not exist today, parts of these future roadways will have to be constructed by the proponent as part of Site Plan Control Approval.

3.8 Noise Assessment (Gradient Wind Engineering Inc., 2016)

Gradient Wind Engineering Inc. (GWE) prepared a Roadway Traffic Noise Feasibility Assessment (2016) for the subject lands. GWE's scope of work involved assessing exterior noise levels throughout the site, generated by local roadway traffic. The report also quantitatively addresses any potential noise and vibration impacts from a nearby quarry.

The results of the study indicate that the dominant source of noise impacting the subject lands is due to roadway traffic. Noise levels from roadway traffic will range between approximately 55 and 69 dBA during the daytime period (07:00-23:00). The highest roadway traffic noise levels will occur nearest to the intersection of the existing Huntmar Drive and the proposed North-South Arterial Road.

Minimum building construction in all areas is required to satisfy the Ontario Building Code (OBC) 2012. Blocks along Huntmar Drive and the North-South Arterial Road will require upgraded building components to mitigate noise transfer into the dwellings. In general, the requirements include upgraded building components, ventilation systems and Warning Clauses to be placed on all Lease, Purchase and Sale Agreements. As per City of Ottawa requirements, detailed drawings will be required to determine the appropriate sound transmission class (STC) ratings for walls and windows.

Results of the roadway traffic noise calculations also indicate that outdoor living areas having direct exposure to the noise sources that are within 100 meters of Palladium Drive and the proposed Main Street may require noise control measures, such as barriers, to reduce the Leq to as close to 55 dBA as technically, economically and administratively feasible.

Given that no structures are planned within 500 m of the Spratt Quarry, minimal noise and vibration impact on the site is expected.

At the time of Site Plan Control Approval, future detailed noise studies would be performed to determine appropriate Sound Transmission Class (STC) ratings for exterior windows and walls, as well as noise barrier heights and locations.

4.0 Potential Concerns, Mitigation Measures, and Implementation

The following table outlines the mitigation measures contained within the technical studies summarized in Section 3.0 of this Integrated Environmental Review Statement.

Number	Potential Environmental Concern	Proposed Mitigation Measures
1	Servicing (Erosion and Sediment Control)	<p>-The following is to be in place during construction, prior to topsoil stripping, earthworks or underground construction:</p> <ol style="list-style-type: none"> 1. Silt fence installed around perimeter of the active part of the site (cleaned and maintained throughout construction) 2. No material stockpiles within the Feedmill Creek corridor 3. Catchbasins will have catchbasin inserts 4. A mud mat will be installed at the construction access <p>-A list of recommendations will be included in the construction contract documents (DSEL, 2016)</p>
2	Environmental/ Slope Stability (Protection of Feedmill Creek)	<p>-Feedmill Creek will be directly protected with a no-touch setback of 30 metres from the normal high water mark. Approximately 14 metres of this setback will be within the unopened road allowance, with the balance of approximately 16 metres extending onto the site.</p> <p>-The existing vegetation on the slope face should not be removed as it contributes to the stability of the slope and reduces erosion. If the existing vegetation needs to be removed, it is recommended that a 100 to 150 mm of topsoil mixed with a hardy seed or an erosional control blanket be placed across the exposed slope face (Paterson, 2016).</p> <p>-A stormwater management pond will protect the water quality and quantity entering Feedmill Creek and the Carp River during operation of the proposed mixed-use development.</p> <p>-The Environmental Impact Statement (Muncaster, 2016) contains a number of mitigation measures to be applied as the tributary channels are abandoned, including completing required works outside of the more sensitive aquatic habitat periods.</p>
3	Environmental (Tree Protection)	<p>-The Tree Conservation Report (TCR) contains a number of recommendations to mitigate the impact of tree removal, including pre-stressing trees and protecting critical root zones of trees that are to be retained. Woody vegetation to be retained should be protected with sturdy fencing.</p> <p>-Any butternuts assessed as healthy are to be protected</p>

Number	Potential Environmental Concern	Proposed Mitigation Measures
		<p>with a setback until their removal has been compensated for through the on-line registry process or a MNRF permit has been issued.</p> <p>-A Tree Cut Permit will be required from the City of Ottawa prior to any removal of trees greater than 10cm dbh.</p> <p>-Building envelopes on the blocks should be sited carefully to further increase tree and shrub retention.</p> <p>-The TCR recommends planting a mix of native tree and shrub species, which will assist in replacing trees removed and restoring the integrity of the Feedmill Creek corridor. It will also add to the features and functions along the corridor.</p>
4	Environmental (Habitat Protection)	<p>-To protect breeding birds, no tree or shrub removal should occur between April 15th and August 15th, unless a nesting survey conducted within five days of the woody vegetation removal identifies no breeding activity. More specifically, it is proposed to remove the on-site woody vegetation later in 2016 or early in 2017 outside of the breeding bird season.</p> <p>-The 30 metre setback from Feedmill Creek will ensure any potentially functional Category 2 Blanding's turtle habitat is retained on the site.</p> <p>-Any turtles and snakes are to be relocated to the rural areas to the west of the north portion of the site. Animals should be moved only far enough to ensure their immediate safety.</p> <p>-Once the headwater field sampling and analysis are completed, compensation measures as required will be developed for the removal of the on-site tributaries, referred to as the northwest and east swales.</p>
5	Geotechnical (Grade Raise Restriction)	-A permissible grade raise restriction of up to 2.0 metres is required within the east and north portions of the site where a silty clay layer is present below the proposed buildings.
6	Geotechnical (Material Testing and Observation Program)	-A material testing and observation program, as outlined in Section 7.0 of Paterson's Geotechnical Investigation, should be performed by the geotechnical consultant, including a review of detailed grading plans.
7	Noise	Future detailed noise studies would be performed to determine appropriate Sound Transmission Class (STC) ratings for exterior windows and walls, as well as noise barrier heights and locations.

5.0 Design with Nature Principles and Subdivision Design

Section 8- *Glossary* of the Official Plan (2003) defines “Design with Nature” as:

“An approach that utilizes natural methods during site design to work with the terrestrial, aquatic, and biological characteristics of the site and the relationship between them. These measures may serve to reduce the reliance on technological solutions, which may be expensive, energy- or management-intensive, and less environmentally sensitive. This may include:

- Retention of natural vegetation on slopes to reduce erosion;
- Conservation of as many existing trees as feasible;
- Use of appropriate natural infiltration techniques on site to reduce the need for stormwater management ponds;
- Orientation of streets to maximise opportunities for passive solar heating and reflection of natural contours;
- Protection of natural stream corridors and incorporation of natural features into open spaces.”

The mixed-use development proposed on the subject lands meets the above noted measures as follows:

- **EROSION:** The Slope Stability Assessment (Paterson, 2016) recommends that the existing vegetation on the Feedmill Creek slope face not be removed as it contributes to the stability of the slope and reduces erosion. If the existing vegetation needs to be removed, it is recommended that a 100 to 150 mm of topsoil mixed with a hardy seed or an erosional control blanket be placed across the exposed slope face.

Further, the Environmental Impact Statement (Muncaster, 2016) recommends that Feedmill Creek be directly protected with a no-touch setback of 30 metres from the normal high water mark.

- **TREE CONSERVATION:** As discussed in the Tree Conservation Report (TCR) (Muncaster, 2016), the retention of healthy trees and regenerating tree stems is proposed along the Feedmill Creek corridor.

Due to the filling required to accommodate the servicing of the urban development, no tree retention is possible within the core of the site. Further, the construction of the Stittsville Main Street Extension prohibits the retention of trees along the southwestern edge of the subject lands.

The TCR contains a number of recommendations to mitigate the impact of tree removal on the trees that are to be retained, including pre-stressing trees and protecting critical root zones.

- **NATURAL INFILTRATION:** Section 5.5 of the Functional Servicing Report (DSEL, 2016) outlines Low Impact Development techniques that should be considered for implementation as part of detailed design. Section 5.5 also outlines techniques that can be examined as part of detailed landscaping design of the District Park block.

The Kanata West Master Servicing Study calls for an increase of 25% in infiltration rates from pre-development levels. Soil and groundwater conditions will require further site-specific evaluation through the detailed design process to determine the feasibility of achieving this target.

Due to the fact that the subject lands are not identified as a Significant Groundwater Recharge area, an infiltration deficit in the post-development scenario for the subject lands is not considered to have a significant negative impact on the natural heritage system (Muncaster, 2016).

- **STREET ORIENTATION:** Both Section 4.9- *Energy Conservation Through Design* of the Official Plan and Guideline 14 of the City of Ottawa's *Urban Design Guidelines for Greenfield Neighbourhoods* (2007) encourage a road layout that allows for south-facing buildings and windows to reduce summer thermal gain and maximize opportunities for passive energy conservation. The proposed modified grid street pattern, which includes a number of roads oriented in an east-west direction, allows for south-facing buildings and windows.
- **ENVIRONMENTAL PROTECTION:** As discussed in the Environmental Impact Statement (Muncaster, 2016), a portion of the Stittsville Wetland Complex (not a Provincially Significant Wetland) is located in the northwest corner of the subject lands. The proposed District Park has been strategically located so that it incorporates this wetland, which fulfills the Design with Nature principle that encourages the incorporation of natural features into open spaces. Further, it corresponds with the City's parkland guidelines, which require 20% passive area within District Parks.

6.0 Energy Efficiency and Sustainable Design

Section 2.5.1- *Urban Design and Compatibility* of the Official Plan sets out design objectives and principles for new development within the City of Ottawa. The design objectives are qualitative statements of how the City wants to influence the built environment as the city matures and evolves. They are broadly stated, and are applied throughout all land use designations. The Design Principles are more specific, further describing how the City hopes to achieve each of the objectives.

As per Section 4.7.1 - *Integrated Environmental Review to Assess Development Applications* of the Official Plan, an Integrated Environmental Review Statement is required to consider Objective 7 of Section 2.5.1 and the associated principles. Objective 7 and its associated principles state:

Objective 7

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

Principles

"Design should:

- Orient development to maximize opportunities for passive solar gain, natural ventilation, and use energy efficient development forms and building measures.
- Consider use of renewable energy and alternative energy systems.
- Maximize opportunities for sustainable transportation modes (walking, cycling, transit facilities and connections).

- Reduce hard surfaces and maximize landscaping and site permeability on site.
- Consider use of innovative green spaces such as green roofs, and measures that will reduce the urban heat island effect.
- Maximize re-use and recycling of resources and materials.
- Utilize green building technologies and rating systems such as Leadership in Energy and Environmental Design (LEED).
- Utilize advanced water conservation and efficiency measures.”

The proposed development includes efficient and sustainable design principles as follows:

- As noted in Section 5.0 of this Integrated Environmental Review Statement (IERS), the east-west orientation of multiple roads in the proposed Plan of Subdivision allows for south-facing buildings and windows.
- The Concept Plan prepared by FOTENN in support of the proposed development identifies the proposed sidewalk locations and mid-block pedestrian connections. These connections allow for future residents and employees to walk between the range of uses proposed on the subject lands, including residential, employment, commercial, and parkland uses.

As discussed in the Community Transportation Study (Parsons, 2016), modern design standards should be implemented at the proposed roundabout and signalized intersections in order to accommodate pedestrians and cyclists effectively (i.e. cycle tracks and full protected intersections).

As encouraged in the City's *Urban Design Guidelines for Greenfield Neighbourhoods* (2007), the proposed local street pattern contains short street block lengths (particularly along the Stittsville Main Street Extension, an anticipated transit route). This enhances pedestrian access to transit stops and to other neighbourhood amenities and facilities, such as schools, parks, and commercial areas.

- Also noted in Section 5.0 of this IERS, the Functional Servicing Report (DSEL, 2016) outlines Low Impact Development techniques that should be considered for implementation as part of detailed design. The Functional Servicing Report discusses the Kanata West Master Servicing Study's target for an increase of 25% in infiltration rates from pre-development levels and the site-specific evaluation that is required in order to determine if this target can be met.
- The remainder of the Objective 7 principles will be addressed at the Site Plan Control stage, when the details of site design and built form are known.

7.0 Concurrence of Study Team

The study team members, comprised of Cavanagh/Shenkman and the individual sub-consultants responsible for preparing the reports discussed herein, will review this draft Integrated Environmental Review Statement and will provide written concurrence with its contents (Appendix B).

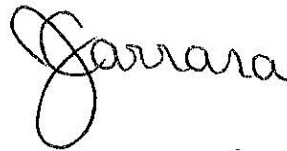
8.0 Conclusion

This draft Integrated Environmental Review Statement (IERS) outlines how the requirements in Section 4.7.1- *Integrated Environmental Review* of the Official Plan will be addressed. **It is expected that this IERS will be finalized at the conclusion of the planning application process, once any comments/concerns from City Staff and other review agencies have been satisfactorily addressed, including any revisions to the application submission material.**

Sincerely,



Miguel Tremblay, MCIP, RPP
Director of Planning + Development
FOTENN Consultants Inc.

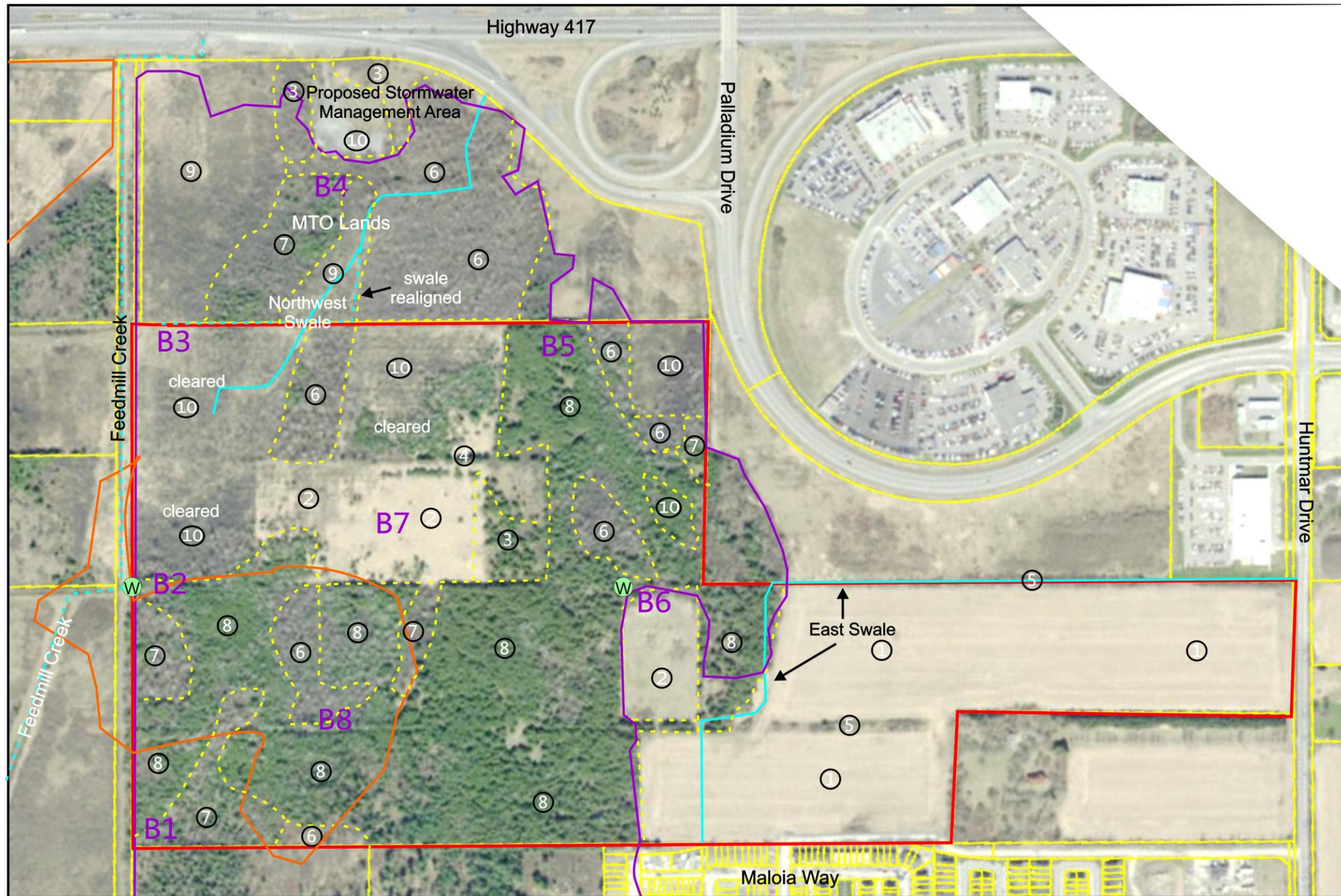


Julie Carrara, MCIP, RPP
Planner
FOTENN Consultants Inc.

APPENDIX A:

ENVIRONMENTAL FEATURES

DRAFT



2014 air photo from City of Ottawa web site

Legend

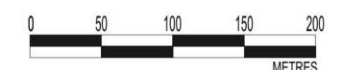
- Site
- Vegetation Communities
- North of Maple Grove Urban Natural Area
- B2 Breeding Bird Point Counts
- W Whip-poor-will Survey Points
- Other Channels
- Rare Vegetation per CRWSS (2004)

Vegetation Communities


- ① Cultivated field
- ② Cultural meadow
- ③ Cultural woodland
- ④ Coniferous hedgerow
- ⑤ Deciduous hedgerow
- ⑥ Upland poplar deciduous forest
- ⑦ Upland white cedar-poplar mixed forest
- ⑧ Upland white cedar coniferous forest
- ⑨ Willow thicket swamp
- ⑩ Cleared/disturbed lands



Approx. Scale 1:5,200 (on a 11 x 17 plot)



Prepared for: 2325483 Ontario Ltd.

Prepared by:  Muncaster Environmental Planning Inc.

FILE: 15-19

June 27, 2016

Map 1

NATURAL ENVIRONMENT FEATURES

Kanata West Lands, City of Ottawa
Concession 1, Lots 1 and 2, Huntley

APPENDIX B:

CONCURRENCE OF STUDY TEAM

DRAFT

1. FOTENN Consultants Inc.

I have reviewed the sections of this Integrated Environmental Review Statement that are associated with FOTENN's **Planning Rationale/Demonstration Report (July 2016)** and concur with the related content and recommendations.

Name: _____

Signature: _____

Date: _____

DRAFT

2. David Schaeffer Engineering Limited (DSEL)

I have reviewed the sections of this Integrated Environmental Review Statement that are associated with DSEL's **Functional Servicing Report (July 2016)** and concur with the related content and recommendations.

Name: _____

Signature: _____

Date: _____

DRAFT

3. Muncaster Environmental Planning Inc.

I have reviewed the sections of this Integrated Environmental Review Statement that are associated with Muncaster's **Environmental Impact Statement and Tree Conservation Report (August 2016)** and concur with the related content and recommendations.

Name: _____

Signature: _____

Date: _____

DRAFT

4. Paterson Group

I have reviewed the sections of this Integrated Environmental Review Statement that are associated with Paterson's **Geotechnical Investigation (2015)**, **Slope Stability Assessment (2016)**, and **Phase 1 Environmental Site Assessment (2015)** and concur with the related content and recommendations.

Name: _____

Signature: _____

Date: _____

DRAFT

5. Parsons

I have reviewed the sections of this Integrated Environmental Review Statement that are associated with Parson's **Community Transportation Study (CTS) (July 2016)** and concur with the related content and recommendations.

Name: _____

Signature: _____

Date: _____

DRAFT

6. Gradient Wind Engineering Inc.

I have reviewed the sections of this Integrated Environmental Review Statement that are associated with **Gradient Wind's Roadway Traffic Noise Feasibility Assessment (2016)** and concur with the related content and recommendations.

Name: _____

Signature: _____

Date: _____

DRAFT