

FOTENN

1919 MAPLE GROVE ROAD – INTEGRATED ENVIRONMENTAL REVIEW



July 16, 2019

Integrated
Environmental Review
Statement



Prepared for:

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Fotenn Planning + Design has been retained by Formasian Development Corporation (“Formasian”) to prepare an Integrated Environmental Review Statement in support of an application for Draft Plan of Subdivision for the lands municipally known as 1919 Maple Grove Road (the “subject site”) in the Stittsville community of the City of Ottawa.

Formasian proposes to develop the lands with residential land uses featuring a range of dwelling types and densities, including semi-detached dwellings, back-to-back townhouses, low-rise apartments, and potential retirement home uses. As the property is currently zoned Development Reserve (DR), a Zoning By-law Amendment application is required to permit the proposed land uses and has also been submitted to the City of Ottawa.

The requirements for an IERS are outlined in Section 4.7.1 of the City of Ottawa Official Plan which states:

Policy 4.7.1 (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.

Policy 4.7.1 (2)

The integrated environmental review statement will provide:

- / A brief overview of the results of individual technical studies and other relevant environmental background material;*
- / 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;*
- / 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;*
- / 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;*
- / An indication that the statement has been reviewed and concurred with by the individual sub consultants involved in the design team and technical studies; and,*
- / A description of how the proposed development maximizes the energy efficiency of development and to promote sustainable design that reduces consumption, energy use and carbon footprint of the built environment. A sustainable design checklist will be prepared to assist in this description.*

2.1 Subject Property and Existing Conditions

The subject property is located in the Kanata community on the north side of Maple Grove Road, west of Huntmar Drive. The property is T-shaped, with 6.6 hectares of area and 138 metres of frontage along Maple Grove Road. The property is legally described as CON 1 PT LOT 1 RP 5R2175; PART 2 S & E PT 1 ON RP; 5R6898 PART 1 ON RP 5R11374; HUNTLEY.



Figure 1: Aerial photograph of the subject site.

The property is a rural lot and is currently developed with a detached dwelling near the southwest corner of the property. The balance of the property features abundant landscaping, including a variety of tree species.

The right-of-way for Maple Grove Road is protected to the west, but the existing roadway ends at Alon Street west of the site. West of Alon Street, Stittsville Main Street currently terminates at the Maple Grove Road right-of-way corridor, but similarly has a protected corridor for future expansion to the north. However, in contrast to the road alignment shown in the Kanata West Concept Plan, Stittsville Main Street has been approved to run along the northern edge of the subject property, creating a future frontage along this street at the rear of the lot.

The subject property is located in a rural area that has gradually been urbanized in recent years. East and south of the property are residential subdivisions, with supporting uses such as schools and parks. Some low-density retail and institutional uses are located along Hazeldean Road approximately one (1) kilometre south of the subject property. North and northeast of the property are large rural properties, which historically have been used for agricultural purposes, but are currently reserved for future urban development. Urban development is also anticipated for the lands westward from the subject property to Carp Road to the west, beyond which is planned to remain under rural land use designations in the Official Plan.

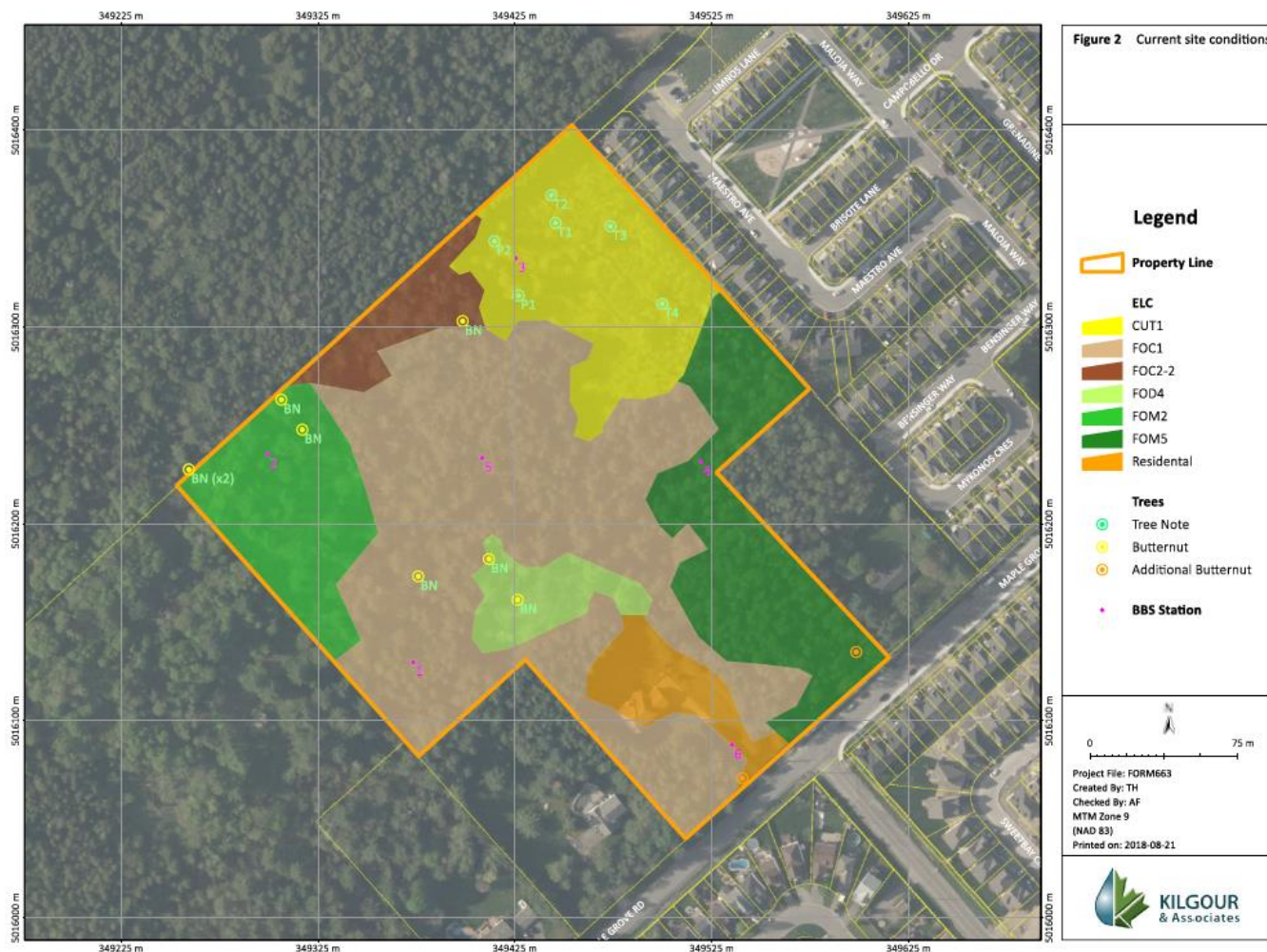


Figure 2: Existing Conditions as identified in the Environmental Impact Statement prepared by Kilgour & Associates.

The subject property is located within the Ottawa Valley Clay Plains on soils considered to be poorly drained and highly susceptible to surface puddling and sheet flow after heavy rain. The property was previously cleared and used for agriculture, but has been regenerating natural land cover more recently. The topography of the property is nearly level and no wetlands, streams or aquatic habitats were observed on the property. Further, there are only limited rocky outcrops on the property and no Earth Science Areas or Areas of Natural and Scientific Interest as designated by the Ministry of Natural Resources on Schedule K of the Official Plan.

The subject property contains four (4) main ELC communities: deciduous forest, coniferous forest, mixed forest, and shrubland. The most extensive ecosite on the subject property is FOC1 – Dry Pine Non-Calcareous Shallow Coniferous Forest. The subject property is currently treed with a young forested area, largely consisting of early successional regrowth on former agricultural fields. As the subject property is located within the urban boundary and is included within an approved CDP area, none of the wooded portions of the site constitute Significant Woodland.

The subject property is approximately 450 metres east of the Carp River and falls within the Carp River Watershed. No tributaries or drains were observed on or adjacent to the property, and no wetland habitats were observed on or adjacent to the property. The nearest significant wetland is located 550 metres to the southwest.

2.2 Project Summary

Formasian proposes to develop the subject property with a range of residential uses. The existing detached dwelling will be retained on a 6,380 m² lot, with the balance of the property being developed with denser housing forms. A park block is also included, to be dedicated to the City of Ottawa for public purposes.

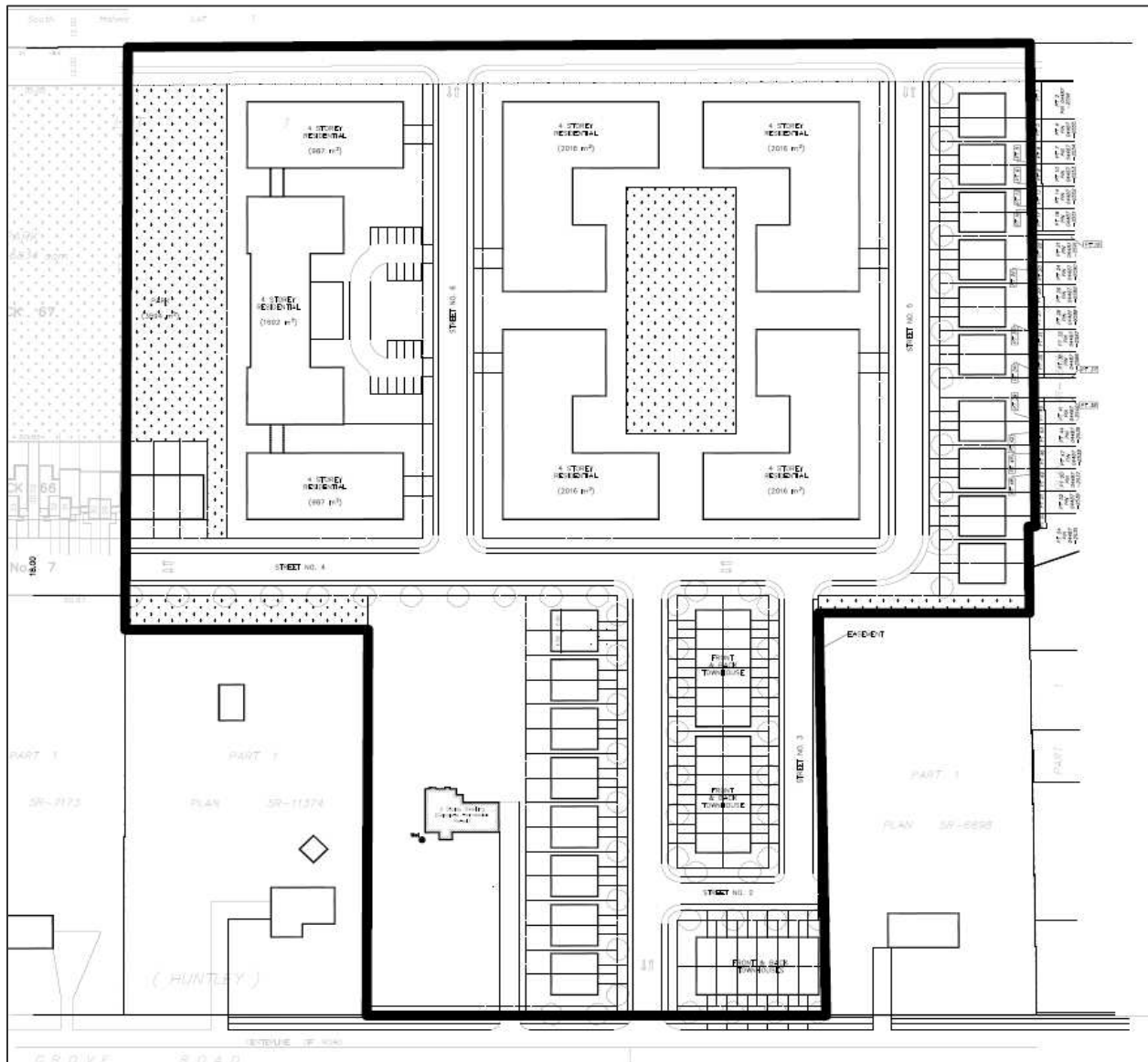


Figure 3: Proposed Site Plan.

The following land uses are proposed in the development:

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- / Semi-detached dwellings (16 units at the south portion of the property, and 20 along the eastern property line at the northern portion of the development);
 - / Back-to-back dwellings are proposed in the southern portion of the property (3 sets of 12 units each);
 - / Townhouses (one set of three townhouses south of the park block);
 - / Low-rise apartments, including a potential retirement home (7 buildings of 4 storeys each; total of 11,730 m² / 126,261 sq. ft.);
 - / Park block (3,594 m²).

A set of base zones is proposed through the Zoning By-law Amendment application to permit the proposed uses on the property. The proposed zones include:

- / Residential Third Density Subzone Z (R3Z) to permit the semi-detached dwellings and back-to-back dwellings;
- / Residential Fourth Density Subzone Z (R4Z) to permit the low-rise apartment and retirement home buildings; and,
- / Parks and Open Space Zone (O1) to permit the park block.

To permit the development as proposed, a Zoning By-law Amendment application and Plan of Subdivision application have been submitted concurrently.

3.0 SUMMARY OF TECHNICAL STUDIES

This section provides an overview of the technical studies that were completed in support of the Zoning By-law Amendment and Draft Plan of Subdivision applications for the development of the site. These studies fall into three groups: engineering studies, planning studies, and environmental studies.

A summary describing the existing environmental conditions and identified potential environmental effects related to the proposed development is presented for each study, as required in Section 4.7 of the Official Plan. Each summary uses the exact language and wording in the technical study, where possible.

3.1 Engineering Studies

Geotechnical Investigation, prepared by Paterson Group and dated July 20, 2018

From a geotechnical perspective, the subject site is suitable for the proposed residential development. It is expected that the proposed buildings will be constructed with conventional shallow foundations. It should be further noted that bedrock outcrops and shallow bedrock were observed at various locations across the subject site. The report concludes that the following material testing and observation program be performed by the geotechnical consultant:

- / Observation of all bearing surfaces prior to the placement of concrete.
- / Sampling and testing of the concrete and fill materials used.
- / 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 backfilling.
- / Field density tests to determine the level of compaction achieved.
- / Sampling and testing of the bituminous concrete including mix design reviews.

Functional Servicing and Stormwater Management Report, prepared by David Schaeffer Engineering Ltd. and dated September 2018

Based on boundary conditions provided by the City, the existing municipal water infrastructure is capable of providing the contemplated development with water within the City's required pressure range. Based on the sanitary analysis conducted, the existing municipal sewer infrastructure has sufficient capacity to support the development. Post-development stormwater runoff will be required to be restricted to the allowable target release rate for storm events up to an including the 100-year storm, in accordance with the provided Storm Drainage Plan. It is contemplated that stormwater objectives may be met through storm water retention via roof top, surface and subsurface storage. Finally, the Ministry of the Environment, Conservation and Parks (MOECP) requires an Environmental Compliance application for new storm and sanitary sewers within the future municipal right-of-ways.

3.2 Planning Study

Planning Rationale, prepared by Fotenn Planning + Design and dated October 24, 2018

The Planning Rationale Report provides a detailed analysis of the existing and proposed policy and regulatory framework for the subject property. As the site is currently zoned Development Reserve (DR), a Major Zoning By-law Amendment application is required and has been submitted to rezone the lands. The proposed R3 and R4 zones for the purposes of developing townhouses, low-rise apartment dwellings and retirements homes are in keeping with the scale and type of development in the surrounding area's existing subdivisions. The proposed zones are compatible with the existing community and are not anticipated to generate any undue adverse impacts on existing development as demonstrated through the technical studies.

3.3 Environmental Studies

Environmental Impact Statement and Tree Conservation Report, prepared by Kilgour & Associates and dated August 10, 2018

There are no Provincially or Locally Significant Wetlands, Life Science Areas of Natural and Scientific Interest, Significant Valleylands or Significant Woodlands on or adjacent to the site and so no impacts are anticipated to any such features. The proposed development would see wooded areas removed from the site, but with an

extensive forest area retained beyond the site (to the north) which could accommodate species (i.e. wood-peewee) in the area. All trees on site will be removed and details of trees to be planted on site will be provided within the landscape plan for the development. No trees will be removed from the retained parcel. No species-at-risk in the Ontario Endangered Species Act (ESA) are present on or adjacent to the site. While healthy butternut trees are protected under the ESA, all individuals of that species on the subject site were found to be non-retainable. As such, they are not subject to that Act. Overall, no negative impacts are anticipated to listed species-at-risk or other natural heritage features under the proposed property development so long as the mitigation recommendations (discussed later in this report) are followed.

Phase I - Environmental Site Assessment, prepared by Paterson Group and dated May 11, 2018

The purpose of this Phase I – Environmental Site Assessment 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 properties.

Based on historical searches, the property was first developed in 2004 with a two-storey residential dwelling. Prior to development, the subject site was used for agriculture. No environmental concerns were identified with the historical use of the subject site.

Surrounding properties historically consisted agricultural lands and residential properties. No potentially contaminating activities were identified within the Phase I-ESA study area, as such, no areas of potential environmental concern are known to exist on the subject site.

Following the historical review, a site visit was conducted. The site is currently occupied by a two-storey residential dwelling with a gravel driveway. The building is heated with propane and utilizes a private well and septic system. Neighbouring properties to the south, east and west were identified as residential properties. Undeveloped lands are located north and west of the subject site. No potentially contaminating activities were identified during the site visit. Based on the findings of the Phase I-ESA, in our opinion, a Phase II – Environmental Site Assessment is not required.

POTENTIAL CONCERNS, MITIGATION MEASURES AND IMPLEMENTATION

The various studies prepared in support of the development applications, as summarized in Section 3 above, have each described existing environmental conditions and identified potential environmental effects related to the proposed development.

The environmental interaction between the studies prepared for this project are consistent in their conclusions and approach to mitigation measures. There are no apparent issues which necessitate revision or clarification to the final studies. The identified potential concerns and recommended mitigation measures are discussed in the tables below:

Wildlife		
Report	Identified Potential Concern	Recommended Mitigation / Comment
EIS / TCR	A single Wood-pewee was noted adjacent to the site but never on the site. While no impacts are anticipated, the species does generally use forest-edge areas.	An extensive forest area is to be retained to the north of the site. Potential habitat areas for the species would thus shift away from Maple Grove but would not otherwise be reduced. No significant impacts are thus anticipated to the habitat potential for this species.
EIS / TCR	Property does not meet criteria for maternity roost habitat for some species, but there is a low probability of transient presence in the summer. Species noted: / Northern Long-eared Myotis / Little Brown Myotis / Tri-colored bat	Tree removal should be completed outside of the potential bat season (i.e. between November and March)
EIS / TCR	Common wildlife species were observed on site during the field visit, all of which are represented throughout the adjacent landscape.	The following mitigation measures shall be implemented on site during construction of the project: / Areas shall not be cleared during sensitive times of the year for wildlife, unless mitigation measures are implemented and/or the habitat has been inspected by a qualified biologist. / Site clearing should begin from the developed area in the south and proceed northward to drive any wildlife towards the remaining forest areas. / Do not harm, feed, or unnecessarily harass wildlife. / Food wastes and other garbage – effective mitigation measures include waste control (prevent littering); keeping all trash secured in wildlife-proof containers, and prompt removal

		<p>from the site (especially in warm weather).</p> <ul style="list-style-type: none"> / Drive slowly and avoid hitting wildlife where possible. / Shelter – effective mitigation measures include covering or containing piles of soil, fill, brush, rocks and other loose materials; capping ends of pipes where necessary to keep wildlife out; ensuring that trailers, bins, boxes, and vacant buildings are secured at the end of each work day to prevent access by wildlife. / Checking the work site (including previously cleared areas) for wildlife, prior to beginning work each day. / Inspecting protective fencing or other installed measures daily and after each rain event to ensure their integrity and continued function. / Monitoring construction activities to ensure compliance with the project-specific protocol (where applicable) or any other requirements.
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Trees		
Report	Identified Potential Concern	Recommended Mitigation / Comment
EIS / TCR	All trees are to be removed on site, with no species noted under the ESA. However, mitigations for trees are recommended for trees on the retained parcel, where no trees are proposed to be removed.	<p>To minimize impacts to trees located on the retained parcel, and to trees adjacent to the site, the following protection measures are indicated as necessary during construction:</p> <ul style="list-style-type: none"> / Erect a fence beyond the critical root zone (CRZ, i.e. 10 x the trunk diameter at breast height) of trees. The fence should be highly visible (e.g. orange construction fence) and paired with erosion control fencing. Pruning of branches is recommended in areas of potential conflict with construction equipment; / Do not place any material or equipment within the CRZ of the tree; / Do not attach any signs, notices or posters to any tree; / Do not raise or lower the existing grade within the CRZ without approval;

		<ul style="list-style-type: none"> / Tunnel or bore when digging within the CRZ of a tree; / Do not damage the root system, trunk or branches of any tree; and / Ensure that exhaust fumes from all equipment are NOT directed towards any tree's canopy. / The <i>Migratory Bird Convention Act</i> (Canada, 1994) protects the nests and young of migratory breeding birds in Canada. The City of Ottawa guidelines stipulate no clearing of trees or vegetation between April 1 and August 15, unless a qualified biologist has determined that no nesting is occurring within 5 days prior to the clearing. <p>Specific trees to be planted on site will be identified in the landscape plan for the development. Trees species to be planted must be non-invasive and should be native to the Ottawa area. Recommended tree species to consider in the landscaping plan include Red Maple, White Pine, White Spruce, White Birch, Black Cherry, and White Cedar. Burr Oak may be considered where spacing allows for future showcase trees. Common Juniper, Maple-leaf Viburnum, Nannyberry, Serviceberry and Northern Bush-honeysuckle may be considered as appropriate shrub species. Trees must be planted within housing areas to a density equivalent to at least one per unit, though the distribution of specific planting locations may be varied from necessarily planting on every lot, as may be dictated by individual lot considerations. The landscape plan must include additional tree planting within park space as may be accommodated by the final configuration of that area.</p>
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5.0 DESIGN WITH NATURE PRINCIPLES AND SUBDIVISION DESIGN

As outlined in Section 4.7.1(2) of the Official Plan, subdivision design is required to include a statement with respect to how the design with nature approach has influenced the design of the development and how it supports the following environmental objectives:

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

Section 8 of the City of Ottawa Official Plan 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 proposed development's response to these principles and objectives is as follows:

- / All trees on site will be removed to accommodate grading and site prep, and the proposed roadway and residential development. Details of trees to be planted on site will be provided within the landscape plan for the development. No trees will be removed from the retained parcel with the existing house on site;
- / Infiltration levels are anticipated to be low through the excavation face, depending on the local groundwater table. Groundwater infiltration levels are subject to seasonal fluctuations, and are anticipated to be controllable with open sumps and pumps during construction;
- / Proposed streets and buildings are designed to maximize opportunities for passive solar heating; and,
- / No natural water features are present on site.

ENERGY EFFICIENCY AND SUSTAINABLE DESIGN

Section 2.5.1 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 of the Official Plan, an Integrated Environmental Review Statement is required to consider Objective 7 and the associated principles. Objective 7 and its associated principles are:

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 has implemented efficient and sustainable design principles as follows:

- / The proposed development will provide medium-density housing options in Stittsville in proximity to transit;
- / The proposed development will develop vacant lands within the City's urban boundary, making use of existing infrastructure and public service facilities.

Concurrence of Study Team

This statement has been coordinated with the sub-consultants involved in the design and studies prepared for this project and reflects the conclusions provided in the reports described above.

Conclusion

It is our professional opinion that this Integrated Environment Review Statement follows the policies set out in the Official Plan. We trust that this report is to your satisfaction. Should you have any questions, please do not hesitate to contact the undersigned.



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