Stittsville South W4 Future Neighborhood Area: Tree Conservation Report

Final Report

2025-11-07

Submitted To:

CAIVAN

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List of Acronyms and Abbreviations

CRZ – Critical Root Zone
DBH – Diameter at Breast Height
ELC – Ecological Land Classification
ESA – Endangered Species Act
HDFA – Headwater Drainage Features Assessment
HDF – Headwater Drainage Feature
KAL - Kilgour & Associates Ltd.
TCR – Tree Conservation Report

1.0 INTRODUCTION

This Tree Conservation Report (TCR) was prepared by Kilgour & Associates Ltd. (KAL) on behalf of Caivan (Stittsville South) Inc. and Caivan (Stittsville West) Ltd. in support of future development on the north side of Flewelynn Road west of Shea Road in Stittsville, Ontario (with major parcels including 5993 and 6115 Flewellyn Road, and 6070 Fernbank Road constituting "the Site"; Figure 1). The Client requires the removal of site trees to allow for site grading and development work.

A TCR is required for all Plans of Subdivision, Site Plan Control Applications, Common Elements Condominium Applications, and Vacant Land Condominium Applications where there is a tree of 10 cm in diameter at breast height (DBH) or greater on a site and/or if there is a tree on an adjacent site that has a critical root zone (CRZ) extending into the proposed work area. A "tree" is defined as any species of woody perennial plant, including its root system, which has reached or can reach a minimum height of at least 450 cm at physiological maturity. The CRZ is calculated as DBH x 10 cm.

The removal of trees on the Site cannot occur until written approval of the TCR has been granted through a tree permit as per the City of Ottawa's Tree Protection By-law. The approval of the TCR will come in the form of a letter (the tree permit) from the General Manager[1] with conditions specific to the Site, tree retention, and associated tree protection and tree removal. The approved TCR is a requirement for the approval of the development applications listed above. A copy of the report must be available on the Site during tree removal, grading, construction, or any other site alteration activities, and for the duration of construction on the Site.

2.0 PROPERTY INFORMATION

The Site (Figure 1) currently includes four major parcels (5993 and 6115 Flewellyn Road, and 6070 Fernbank Road, plus a 14.2 ha field on the northwest corner of Shea and Flewellyn Roads, 1820 Shea Road, and is hereby referred to as the "Eder Parcel"). Several other associated parcels are also included in the Site. There is the Faulkner Stormwater Management (SWM) pond (addressed as 59 Aridus Cres.), and a hydro corridor that diagonally crosses the southern end of 6070 Fernbank Road. The hydro corridor is currently cultural thicket, however, is subject to occasional mowing (every ~3-5 years). The SWM area includes a sanitary pump station at its north end but is otherwise comprised almost entirely of the open pond, though the banks are sparsely vegetated. A recreational pathway extends around the east side of the SWM pond and through a portion of the hydro corridor.

Seven additional 0.8 ha properties (residential parcels at 5971, 6015, 6025, 6035, 6141, and 6159 Flewellyn Road, and 1770 Shea Road, which is farmed as part of the larger, adjacent agricultural field/Eder Parcel), are associated with the Site. These parcels are still held by private landowners not currently associated with proposed site development, but nevertheless are considered within the context of this study as areas likely to be eventually included. The Eder Parcel is not included within the W-4 urban expansion lands, but is considered in this TCR as part of the Site.

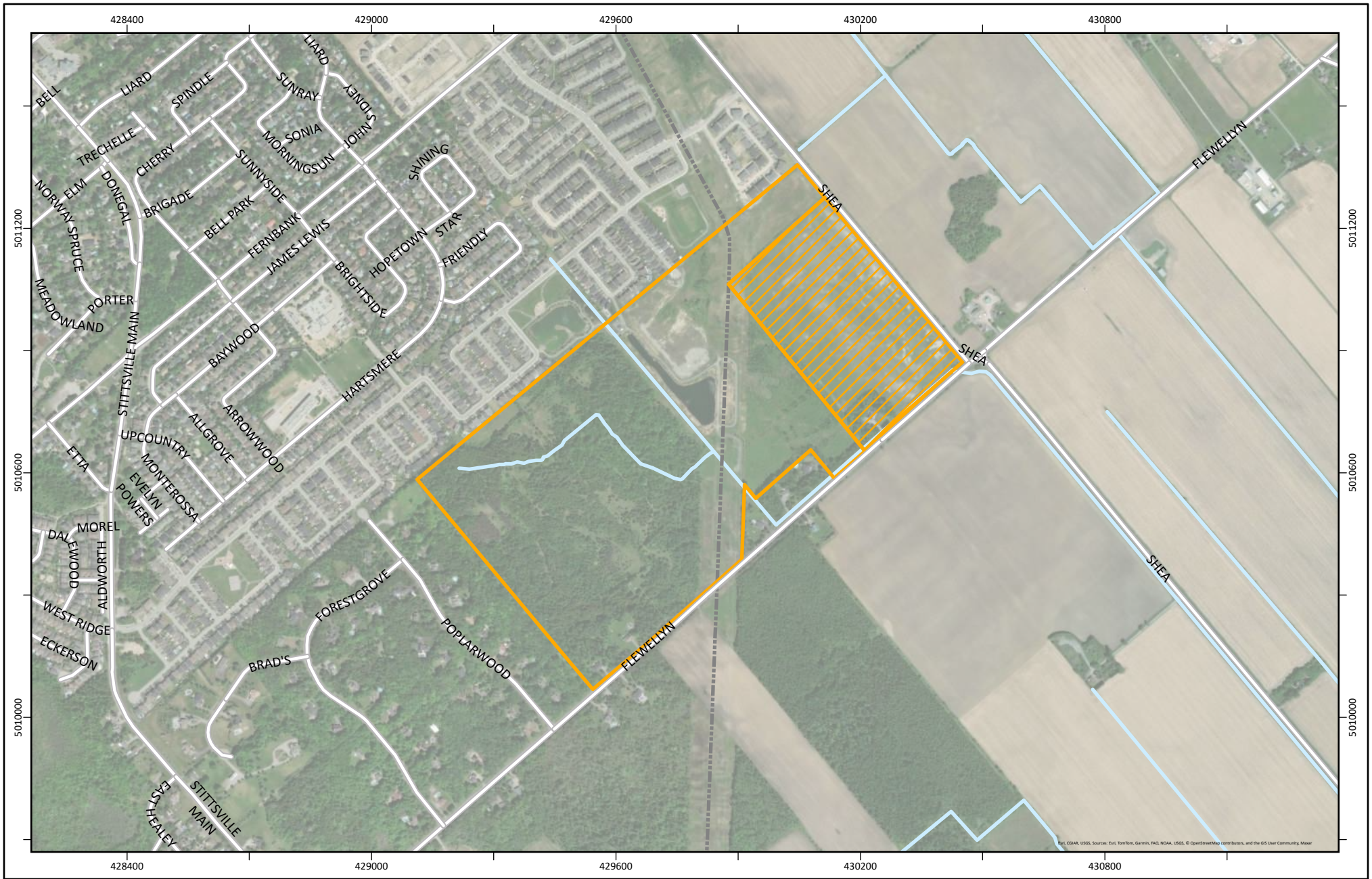
[1] General Manager of the Public Works & Environmental Services Department or the General Manager of the Planning, Infrastructure and Economic Development Department of the City of Ottawa, or their designate.

Combined, these parcels cover an area of approximately 75 ha south of Stittsville in the west end of Ottawa. Much of the Site was historically farmed though some currently forested areas on the western half area associated with broad forested bands that have existed on the Site for more than 60 years based on historical aerial photography[2]. Much of 5993 Flewellyn Road and the Eder Parcel was cleared of vegetation in ~2016 (per geoOttawa imagery) in association with the construction of the Faulkner SWM Pond. The remaining forested area in the southeast corner of the Site was cleared of tree cover throughout 2018. Other than the hydro corridor, which is zoned O1P – Open Lands, the Site is currently zoned RU – Rural, with a zoning by-law application submitted concurrently with the draft plan submission for this property.

The Site is bordered by:

- A community of R1 to R3 density residential (single homes; still partially under construction) to the north, together with parks, ponds, etc.;
- Country estate lots to the west;
- Shea Road and agricultural lands to the east; and
- Flewellyn Road and agricultural lands (with some forest blocks) to the south.

[2] National Air Photo Library Roll A18057, Photo 0049, Dated 1963-05-24



Legend

- Development Site
- Eder Parcel
- Watercourse
- Utility Line

Figure 1. Site Context

0 115 230 460 m

N W E S

Spatial Reference:
PCS: WGS 1984 UTM Zone 18N
Map Units: Meter

Project: CAIV 1300
Map File Name: CAIV 1300 ArcGIS
Date Exported: 10/22/2025 7:18 AM

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2.1 Property Owner/ Applicant and Arborist Contact Information

Table 1 Contact information for property owner/ applicant and arborist

Organization	Role	Contact Person	Phone Number	Email Address
Caivan Communities 2934 Baseline Road, Suite 302 Ottawa, ON, K2H 1B2	Proponent	Hugo Lalonde, Director, Land Development	(613) 295-5082	hugo.lalonde@caivan.com
Kilgour & Associates Ltd. 2285-C St. Laurent Blvd., Unit 16, Ottawa, ON, K1G 4Z6	Arborist	Maren Nielsen, BES, EMA	(613) 367 5562	mnielsen@kilgourassociates.com
Kilgour & Associates Ltd. 2285-C St. Laurent Blvd., Unit 16, Ottawa, ON, K1G 4Z6	Arborist	Anthony Francis, PhD	(613) 367 5556	afrancis@kilgourassociates.com

2.1.1 Qualifications of Arborist

Maren Nielsen

Maren is a Biologist with a background in terrestrial ecology. She has over eight years of comprehensive field, laboratory and environmental and agricultural consulting experience through a combination of graduate and undergraduate studies and work experience. Maren completed a Bachelor of Environmental Studies with Honours at York University and a Graduate Certificate in Environmental Management and Assessment from Niagara College Canada. Maren assists clients to navigate the land development and site rehabilitation processes as well as obtaining permits and approvals from regulatory agencies. She has led numerous studies including Environmental Assessments (EA), Environmental Impact Studies (EIS), Opportunities & Constraints Analysis, Agricultural Impact Assessments (AIA), LEAR Studies and Minimum Distance Separation (MDS) I & II studies. Maren has carried out field programs for the collection of soils, water, sediment, fish and benthos as well as vegetation and tree surveys, wildlife surveys, wind turbine avian and bat mortality monitoring, and land use surveys. Since joining Kilgour & Associates Ltd. in 2023, Maren has worked on a variety of land development projects and completed numerous Environmental Impact Studies (EIS), Headwater Drainage Feature Assessments (HDFA), Existing Conditions Reports, Opportunities and Constraints Analysis, and Species at Risk (SAR) monitoring. Maren is a certified wetland evaluator under the Ontario Wetland Evaluation System (OWES).

Anthony Francis (Ph.D.) is a Senior Ecologist with 20 years of consulting experience to both government agencies and private industry. He has worked on a diversity of projects relating to species at risk (SAR), invasive species, terrestrial and aquatic habitat, environmental effects monitoring and mitigation, and fate/effects of contaminants. Within each of these subject areas, Dr. Francis has completed projects addressing specific site concerns and broader policy initiatives. Dr. Francis' academic background is in spatial ecology with a focus on tree species diversity. As a Senior Ecologist at KAL, he regularly completes TCRs, Environmental Impact Statements, and Integrated Environmental Reviews for land development projects throughout Ottawa and eastern Ontario. He is also a certified Butternut Health Assessor (BHA #104).

2.2 Additional Applications

Not applicable.

3.0 EXISTING CONDITIONS

3.1 Tree Inventory

An inventory of trees on the Site was performed on June 02, 2023, following guidelines set forth by the City of Ottawa (2020). All live trees with a DBH ≥ 10 cm having a potential to be removed under the proposed development were identified, enumerated, mapped, their DBH measured, and their general health and condition documented (Figure 2). General tree communities were grouped within the Ecological Land Classification (ELC; Lee et al., 1998) ecosites that the trees were documented within.

White Cedar Mineral Coniferous Swamp (SWCM1-1)

Within the SWCM1-1 ecosite, Eastern White Cedar (*Thuja occidentalis*) was the only tree documented. Trees ranged from 10-25 cm DBH and were observed to be in fair health.

Fresh-Moist White Cedar – Hardwood Mixed Forest Type (FOMM7-2)

The FOMM7-2 community is dominated by Eastern White Cedar (*Thuja occidentalis*; 5-15 cm DBH), White Birch (*Betula papyrifera*; 10-20 cm DBH), Trembling Aspen *(Populus tremuloides*; 10-35 cm DBH), White Ash (*Fraxinus americana*; 5-8 cm DBH), White Spruce (*Picea glauca*; ~10 cm DBH), and Balsam Fir (*Abies Balsamea*) tree species. Trees within this community were observed to be in good to fair health.

Fresh Scots Pine Naturalized Coniferous Plantation Type (FOCM6-3)

This plantation tree grouping is located in the northwest corner of the Site (**Error! Reference source not found.**). It is mainly dominated by Scots Pine (*Pinus sylvestris*; ~10-20 cm DBH), Jack Pine (*Pinus banksiana*; ~15 cm DBH), Eastern White Cedar (*Thuja occidentalis*), White Pine (*Pinus strobus*; ~20 cm DBH), White Birch (*Betula papyrifera*; 10-20 cm DBH), Butternut* (*Juglans cinerea*), American Beech (*Fagus grandifolia*), and Green Ash (*Fraxinus pennsylvanica*; 10-15 cm DBH). Trees within this community were observed to be in fair to poor health.

Dry - Fresh White Cedar – Hardwood Mixed Forest Type (FOMM4-3)

The FOMM4-3 ecosite dominates the majority of the forested area on the western portion of the Site. FOMM4-3 is dominated by Eastern White Cedar (*Thuja occidentalis*; 10-20 cm DBH), Trembling Aspen *(Populus tremuloides*; 10-20 cm DBH), Green Ash (*Fraxinus pennsylvanica*; 10-15 cm DBH), Large tooth Aspen (*Populus grandidentata*; ~15 cm DBH), White Spruce (*Picea glauca*; 30 cm DBH), White Pine (*Pinus strobus*; 25 cm DBH), Larch/Tamarack (*Larix laricina*; 15-20 cm DBH), American Beech (*Fagus grandifolia*; 10-15 cm DBH), and American Elm (*Ulmus americana*). Butternut* (*Juglans cinerea*; 20-50 cm DBH) were observed scattered throughout this community. Trees within this community were observed to be in fair health generally. Disturbance from Geotechnical cut lines have affected the health of some trees adjacent to the MEMM3 ecosite.

Fresh – Moist Poplar Deciduous Forest Type (FODM8-1)

The FODM8-1 ecosite is dominated by Trembling Aspen (*Populus tremuloides*; 10-20 cm DBH), White Birch (*Betula papyrifera;* 10-20 cm DBH), Balsam Poplar (*Populus balsamifera*; 10-25 cm DBH), Butternut* (*Juglans cinerea*; 10-20 cm DBH), Eastern White Cedar (*Thuja occidentalis*; 10-20 cm DBH), Basswood (*Tilia americana*; ~30 cm DBH), Red Maple (*Acer rubrum*; ~27 cm DBH), American Elm (*Ulmus americana*; 10-20 cm DBH), and Black Ash* (*Fraxinus nigra*). Trees within this community were observed to be in generally good health. Some fallen Green and Black Ash trees were observed.

Fresh – Moist Lowland Deciduous Forest Ecosite (FODM7)

The FODM7 ecosite is located within the southern portion of the Site adjacent to the hydro corridor. It is dominated by Trembling Aspen (*Populus tremuloides*), Eastern White Cedar (*Thuja occidentalis*), Butternut* (*Juglans cinerea*), Black Ash* (*Fraxinus nigra*), and Balsam Poplar (*Populus balsamifera*). Trees within this community were observed to range from good to fair health. Many fallen dead Black Ash trees were observed within this community.

Legend

ELC

- CUM1-1
- CUT1
- FOCM6-3
- FODM7
- FODM8-1
- FOMM4-3
- FOMM7-2
- MEMM3
- OAGM4
- SWCM1-1
- Butternuts
- Black Ash - Individual Tree (>8 cm DBH)
- Sapling Presence
- HDF
- Faulkner Drain
- Upper Faulkner
- Development Site

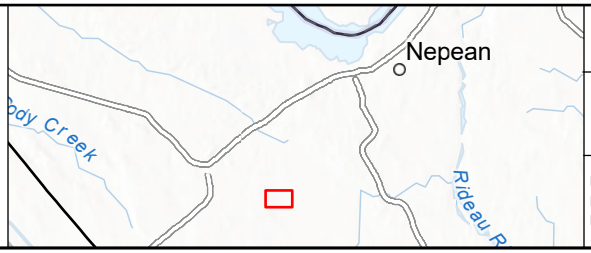

Figure 2. Existing Tree Conditions

0 80 160 320 m

N W E S

Spatial Reference:
PCS: WGS 1984 UTM Zone 18N
Map Units: Meter

Project: CAIV 1300
Map File Name: CAIV 1300 ArcGIS
Date Exported: 10/22/2025 8:10 AM

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3.2 Ecological Significance of Trees on Site

A total of 45 Butternuts were observed on the Site and determined to be Category 2 or 3. These trees were located predominantly within the central FODM8-1 forest ecosite, which is the most mature forested area on the property (Figure 2).

A total of 102 Black Ash >8 DBH were observed on the Site. Black Ash were located predominantly within the FODM7 and FODM8-1 forest ecosites (Figure 2). Of the 102 Black Ash observed, 73 were determined to be healthy, while 29 were determined to be unhealthy. Healthy trees have a canopy condition rating of 1, 2 or 3, and mortality is unlikely within five years based on severity of stressors. Unhealthy trees have a canopy condition rating on 3, 4 or 5, and mortality is expected within five years based on the severity of stressors. A total of 2,034 Black Ash that do not meet the size requirements for protection under the Endangered Species Act (ESA; Government of Ontario, 2007) were observed on the Site.

Given their urban context, the trees on the Site likely play a role in the regulation of relative humidity, sequestration of carbon and removal of pollutants, wind-shielding, shading and reduction of urban heat island effects, and filtration of dust, noise, and light pollution. They also provide some habitat structure in the surrounding urban landscape. However, the trees on the Site likely only provide habitat for common bird and small mammal species in the Ottawa area and not species of significance (i.e., species that are at risk, rare, or provincially or federally significant).

3.3 Other Natural Environmental Elements

3.3.1 Surface Water Features

The Site is located within the Rideau River watershed and the Jock River subwatershed (Ministry of Natural Resources and Forestry – Government of Ontario, 2023; Rideau Valley Conservation Authority, 2023). The Site contains a portion of the Faulkner Drain. The drain traverses the Site from north (near Hickstead Way) to south, turning east and becoming a roadside ditch along Flewellyn Road, towards Shea Road. The drain continues south down Shea Road, eventually joining the Flowing Creek Phase 1 Drain, just south of Brownlee Road (Figure 1).

The Headwater Drainage Features Assessment (HDFA) identified six (6) Headwater Drainage Features (HDF) located on and adjacent to the Site. One group of channels is primarily associated with the Faulkner Municipal Drain, and the second group primarily conveys water from within the forested areas on the Site towards the Faulkner drain.

3.3.2 Steep Slopes

No steep slopes occur on or near the Site.

3.3.3 Valued Woodlots

There are no valued woodlots on the Site.

3.3.4 Significant Woodlands

The City of Ottawa's (2022) Significant Woodland Policy, defines Significant Woodlands within the urban boundary as any area 0.8 hectares in size or larger, supporting woodland 60 years of age and older at the time of evaluation. Significant Woodland on the Site was thus demarcated by delineating the boundaries of wooded areas on and adjacent to the property based on aerial imagery from 1963[3] (Appendix H). Portions of the demarcated areas that were noted as subsequently deforested in historical aerial imagery between 1976 and 2023 within the geoOttawa system were removed. Remaining areas greater than 0.8 ha in size were deemed to constitute Significant Woodland. A total of 10.0 ha of the wooded areas on the Site thus constitute Significant Woodland (Figure 14). Significant Woodland features on the Site are characterized according to screening criteria per the City's Significant Woodlands policy (2022; Table 2).

Table 2. Characterization of Significant Woodland Areas

Social Values	
Unusual recreational, educational or cultural opportunities	None. The Site consists of private property with no public use supported.
Qualifying Cultural, Heritage, or Historical Features	None. There are no existing designations within the OP.
Indigenous values established through consultation	No values are identified in the Jock River Subwatershed Study or in the nearby Stittsville Mainstreet or Fernbank CDPs. These studies did not however include indigenous consultation.
Hazard lands	
Constrained areas	None. Subject area has no hazards (e.g. floodplain, meander belts, steep or unstable slopes, restrictive soils or karst).
Habitat and Landscape Connectivity	
Adjacency and connectivity	None. Not part of Natural Heritage System Core Area or identified greenspace. Forested areas on the Site extend to abut areas of dense residential development to the north and west. As such, they cannot serve as connection corridors between other natural areas.
Specialized habitat	Limited. There are no uncommon community types or rare species within the wooded areas. Many of the largest trees on the Site (primarily poplar species) were blown down in the 2022 derecho event (including the largest historically present Butternuts). The current forest mix consists of trees neither especially large nor uncharacteristically old for the broader area. The Significant Woodlands do contain remaining Butternuts (i.e. those not blown down) and some small clusters of Black Ash, which are both listed as SAR.

3.3.5 Greenspace Linkages

The Site does not contain any greenspace linkages are identified in the Greenspace Master Plan (City of Ottawa, 2016) or as may occur in the larger landscape.

3.3.6 Distinctive Trees

Due to the large size of the Site, distinctive trees were not characterized.

3.3.7 Hazardous Trees

A formal risk assessment for hazardous trees (e.g., Tree Risk Assessment) was not completed for the Site.

[3] National Air Photo Library Roll A18057, Photo 0049, Dated 1963-05-24

3.3.8 Unique Ecological Features

The Site does not contain any riparian woodlots, rare communities, or other unique ecological features not already addressed in this document.

4.0 PROPOSED DEVELOPMENT

Tree removal is required to accommodate the proposed Draft Plan of Subdivision (Figure 3), which includes a mix of single detached, standard townhouse, and stacked condominium residential areas. A total of two parks are proposed, located west of the Upper Faulkner Watercourse, and in the southeast portion of the Site adjacent to Shea Road. The existing utility corridor will be maintained as an open space area. No development is proposed within the utility corridor other than the street 12/13 and street 21 crossings and proposed enhancements to the Upper Faulkner Watercourse. Street widening areas are proposed to accommodate the future widening of Shea Road (Block 102) and Flewellyn Road (Block 104).

For stormwater considerations, two SWM ponds are proposed to be located in the southeast corners of the east and west halves of the Site respectively, based on the existing site topography as well as technical and cost constraints per the Master Servicing Study (MSS) dated July 2024, prepared by DSEL. The SWM ponds are (and must be) located at relatively lower elevations than the remainder of the Site to effectively receive site runoff, but cannot be at lower elevations than the downstream receivers to which they drain. The required elevations for the pond relative to both the Site and the surrounding areas require that most of the Site be regraded (DSEL, 2024). The pond blocks have been sized and located such that outflow systems will be limited to pipe connections to the immediately adjacent Faulkner Drain. As such, the area within the SWM blocks is dedicated almost fully to SWM functionality, though the outer perimeter of the circumferential access road/berm can still include some limited tree planting.

The Upper Faulkner Watercourse is proposed to be enhanced to improve fish habitat and create additional wildlife habitat to support herpetofauna using principles of natural channel design, in-stream and riparian native vegetation planting, and wetland pocket creation. A general design concept is included in Figure 3. Final design details will be provided to the City when available. An existing naturalized corridor including at least 30 m from the top of its channel bank of natural riparian vegetation and Significant Woodland along the west side will be retained as natural heritage lands, thus providing a 30 m setback. A 5.5 m wide public pathway is proposed adjacent to the western edge of the 30 m forested setback, abutting rear yards. No grading will occur within the 30 m forested setback. The limit of grading is the eastern boundary of the 5.5 m pathway, which will match existing grade, and is shown on the Conceptual Grading Plan (DSEL, 2025a), included in Appendix J. Rear yards abutting the 5.5 m pathway will drain predominantly via a storm trunk tributary (DSEL, 2025b) and via overland flow directed southeast (based on existing topography) to the Upper Faulkner Watercourse. Sufficient grade exists within the 30 m forested setback lands to adequately dissipate flows. Thus, ponding at surface for an extended period of time is not anticipated given the slope to the drain and soil type(s) as identified by Paterson Group (DSEL, personal communication, April 17, 2025; Paterson Group, 2023).

The Faulkner Drain, where it is not directly adjacent to the utility corridor or other properties not part of the proposed development, would be retained as natural heritage lands and include a 15 m setback from the northern top of slope on the Site. The setback is proposed to be planted with medium-sized trees to provide some shading and allochthonous inputs to the channel. A SWM pond is located immediately north

of the 15 m setback. The south bank of the Faulkner Drain would remain adjacent to Flewellyn Road to maintain its current functionality as a roadside ditch.

Existing forest cover on the western half of the Site will be fully removed to accommodate development, except for the 30 m forested setback from the Upper Faulkner Watercourse, and east of HDF D abutting rear yards along the western site boundary (Figure 3). HDFs associated with forest cover on the western half of the Site (HDF A, B and E) will be fully removed to accommodate development. The eastern half of the Site currently has an extremely limited number of trees. Thus, development will lead to increased urban canopy cover with streetscape tree planting, parks, and SWM ponds within the eastern half of the Site. Overall canopy cover on the Site would likely be reduced from 40% to 32% (NAK Design Strategies, 2025), not considering park blocks. Existing trees within forested areas on the western half of the Site will be retained to the highest extent possible. Parklands may be developed without the retention of any existing vegetation, if needed for the delivery of park programming. The future site landscape plan is recommended to be reviewed in coordination with KAL Biologists/Arborists to identify potential tree retention to the highest extent possible, acknowledging that retention may not be feasible. Development would result in a significantly more even distribution of canopy cover across both east and west portions of the Site. While tree cover is not generally feasible within the hydro corridor, the Site landscape plan is recommended to naturalize that area as further public greenspace for the community. Employing low-height canopy enhancements through the planting of thickets can be expected to further increase the Site canopy cover. Canopy coverage is based on average expected mature diameter of ~12.5m, area of 138m² (combination of medium and large sized trees). Calculation accounts for canopy overlap between trees and excludes canopy overlap to non-residential lands (NAK Design Strategies, 2025).

Tree removal on the Site will be delayed to the highest extent possible prior to development. Caivan Communities is seeking to clear the entire western portion of the Site within one phase (i.e., under one tree permit) to allow for extensive re-grading requirements across the entirety of the Site.

Legend

Draft Plan
- Natural Heritage Area
- Park
- SWM Pond
- Hydro Corridor
- Condo Block

Aquatic Setbacks
- 15 m from TOS
- 30 m from TOB
- Top of Bank (TOB)
- Top of Slope (TOS)
- Faulkner Drain

- Upper Faulkner
- Limit of Grading
- Significant Woodland Retained
- Development Site

Figure 3. Community Concept

0 75 150 300 m

N W E S

Spatial Reference:
PCS: WGS 1984 UTM Zone 18N
Map Units: Meter

Project: CAIV 1300
Map File Name: CAIV 1300 ArcGIS
Date Exported: 10/22/2025 8:48 AM

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5.0 MITIGATION MEASURES

5.1 Site Preparation and Construction

The following mitigation measures should be applied during Site preparation and construction:

- Trees adjacent to the Site will not be removed or damaged.
- To minimize impacts to trees adjacent to the Site:
    - Erect a fence beyond the CRZ of the retained trees. The fence should be highly visible (orange construction fence) and paired with erosion and sediment control fencing.
    - Pruning of branches is recommended in areas of potential conflict with construction equipment but must be completed by a certified arborist.
    - Do not place any material or equipment within the areas protected by the construction fencing.
    - Do not attach any signs, notices, or posters to any trees.
    - Do not raise or lower the existing grade within areas protected by the construction fencing without approval.
    - Tunnel or bore when digging within the CRZ of a tree.
    - Do not damage the root system, trunk, or branches of any remaining trees.
    - Ensure that exhaust fumes from all equipment are not directed towards any tree's canopy.

5.2 Tree Planting Recommendations

Per the City of Ottawa Tree Protection By-Law (No. 2020-340), compensatory tree planting should be determined through the development review process. Replacement tree planting should be on the same property in the vicinity of the work area.

Trees within Significant Woodlands (and other forested portions of the Site) generally furnish areas with near-100% canopy cover. Large portions of the Site, however, (e.g. the eastern half of the Site with its agricultural fields) provide near-0% canopy. Future site development will almost certainly result in the replacement of forested areas (>95% canopy) with other land uses having lower canopy coverage (e.g. streetscapes). Losses in canopy, however, should be equivalently offset with targeted tree planting where development will occur in currently open/agricultural areas. Residential areas should target a minimum of 25% canopy cover at maturity. Open lands associated with SWM facilities and park spaces that are not otherwise specifically programmed as sports fields should target at least 60% canopy cover at maturity to generate (semi-) wooded features that would be distributed across the future community. Proposed

development plans will be evaluated to ensure no loss of canopy-related services under a future redistribution of trees. Tree planting to be completed across the entire Site (i.e., the current proposed development, and the broader Site including the future development of the Eder Parcel) is anticipated to provide 32% canopy cover at maturity (NAK Design Strategies, 2025).

Trees planted in compensation on the site must be non-invasive species and must be a minimum of 50 mm in diameter measured no less than 15 cm above ground level for deciduous trees, and no less than 200 cm in height as measured from ground level to midway between the tip of the leader and the uppermost whorl, or as otherwise approved by the General Manager. As space is limited, we recommend planting mostly smaller trees such as:

- Alternate-leaved Dogwood – *Cornus alternifolia*
- Blue-beech – *Carpinus caroliniana*
- Hawthorn – *Crataegus chrysocarpa, C. flabellata* or *C. submollis*
- Pin Cherry – *Prunus pensylvanica*
- Serviceberry – *Amelanchier arborea*
- White Cedar – *Thuja occidentalis*

Larger trees should still incorporate where feasible including species such as:

- Freeman's Maple – *Acer freemanii*
- White Birch – *Betula papyrifera*
- Black Cherry – *Prunus serotina*
- White Spruce – *Picea glauca*

6.0 CLOSURE

This report was prepared for exclusive use by Caivan Communities and may be distributed only by Caivan Communities. Questions relating to the data and interpretation can be addressed to the undersigned.

Respectfully submitted,

KILGOUR & ASSOCIATES LTD.

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7.0 LITERATURE CITED

City of Ottawa. (2020). *Tree Protection (By-law No. 2020-340)*. https://ottawa.ca/en/living-ottawa/laws-licences-and-permits/laws/laws-z/tree-protection-law-no-2020-340

City of Ottawa. (2022). *Significant Woodlands: Guidelines for Identification, Evaluation, and Impact Assessment*. https://documents.ottawa.ca/sites/documents/files/significant_woodlands_en.pdf

DSEL. (2024). *Caivan—Stittsville West Cut / Fill Analysis*.

DSEL. (2025a). *Conceptual Grading Plan* (Nos. 21-1247–1) [Dataset].

DSEL. (2025b). *Storm Servicing Plan—Storm Tributary Area* (Nos. 21-1247–3) [Dataset].

DSEL. (2025, April 17). *Stittsville Storm Servicing Plan, Conceptual Grading Plan* [Personal communication].

Government of Ontario. (2007). Endangered Species Act*. 2007. S.O. 2007, c.6*. https://www.ontario.ca/laws/statute/07e06

Lee, H. R., Bakowsky, W., Riley, J., Bowles, J., Puddister, M., Uhlig, P., & Mcmurray, S. (1998). *Ecological Land Classification for Southern Ontario: First Approximation and its Application*. Ontario Ministry of Natural Resources. https://www.researchgate.net/profile/Wasyl-Bakowsky/publication/248626765_Ecological_Land_Classification_for_Southern_Ontario_First_Approximation_and_Its_Application/links/560e7abd08ae48337515fd59/Ecological-Land-Classification-for-Southern-Ontario-First-Approximation-and-Its-Application.pdf

Ministry of Natural Resources and Forestry – Government of Ontario. (2023). *Ontario Watershed Information Tool* [Land Information Ontario]. https://www.lioapplications.lrc.gov.on.ca/OWIT/index.html?viewer=OWIT.OWIT&locale=en-CA

NAK Design Strategies. (2025). *Stittsville West Preliminary Streetscape Plan*.

Paterson Group. (2023). *Hydrogeological Existing Conditions Report: Proposed Residential Development 5993 & 6115 Flewellyn Road & 6030 & 6070 Fernbank Road Ottawa, Ontario* (No. Report PH4625-1).

Rideau Valley Conservation Authority. (2023). *RVCA Subwatersheds and Catchments*. Subwatershed Reports. https://watersheds.rvca.ca/