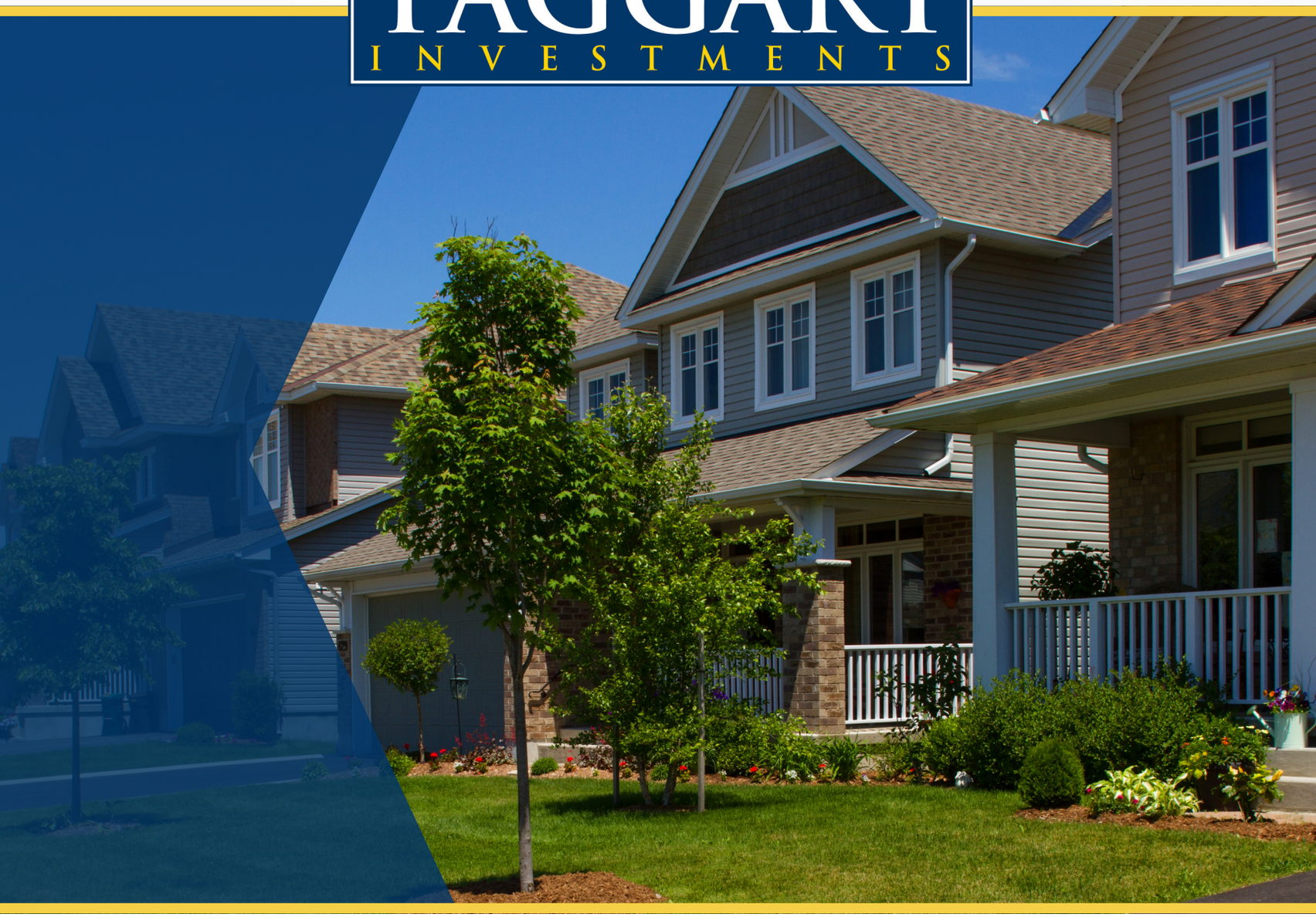
TAGGART
INVESTMENTS



Ottawa Street

Integrated Environmental Review Statement
Plan of Subdivision
Zoning Bylaw Amendment

November 2020

Prepared By:

Taggart Richmond Corporation
Peter.Hume@hpurban.ca

Introduction

This Integrated Environmental Review Statement will support the Draft Plan of Subdivision and Zoning Bylaw Amendment applications for the Taggart Richmond lands located at the intersection of Ottawa Street and Eagleson Road (the subject lands). Taggart Richmond is proposing the development of low-density residential uses, a local park, and a site for an elementary school along with reserving lands for employment uses.

Integrated Environmental Review

Section 4.7.1 of the City's Official Plan requires an Integrated Environmental Review Statement to help assess development applications and ensure that subdivision planning is undertaken at level sensitive to the natural environment.

Section 4.7.1 contains two (2) policies that provide guidance on creating the IERS:

"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 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.

- 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.]"

Summary of Technical Studies

Planning Rationale – Taggart Group – November 6, 2020

A Planning Rationale was prepared to support of the Draft Plan of Subdivision, and Zoning By-law Amendment applications required for the proposed development. The purpose of the Planning Rationale 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.

The rationale determined the proposed development conformed to the policies of the Provincial Policy Statement (2020), the City of Ottawa Official Plan, Village of Richmond Secondary Plan, and the Village of Richmond Community Design Plan.

The planning application submitted to support the proposed development are as follows:

Draft Plan of Subdivision

The draft plan would create:

- Development Blocks

- Parks and Open Space

- Right of Way blocks for local and collector roadways

- Employment block along the southern boundary of the site

Zoning By-law Amendment (ZBLA)

The ZBLA would rezone the site from Rural General Industrial Zone (RG3[385r]) to the following zones:

- Village Residential Third Density Zone (V3) for the detached, semi-detached and townhouse dwellings;

- Parks and Open Space (O1) Zone for the 7.3 hectares of land designated parks and open space

- Rural Institutional Zone for the land designated for the elementary school

Functional Servicing Report - David Schaeffer Engineering Ltd. (DSEL) - PROJECT NO: 19-1042

The applicant retained David Schaeffer Engineering Ltd. (DSEL) to prepare a Functional Servicing Report (FSR) in support of their application for draft plan approval and zoning by-law amendment for 6012 Ottawa Street.

DSEL has provided a comprehensive set of servicing requirements for the site. The are as follows:

- The subject lands were zoned as Industrial but are now comprised of Residential, Institutional and Village Commercial as per City of Ottawa Official Plan Amendment (OPA) 150.

- Approvals will be required from the City of Ottawa, MECP and RVCA. As Marlborough Creek is the only fish bearing feature with the Tamarack Richmond Lands and it is not subject to any alterations or disturbance within 30 m of its riparian corridor, no permits or consultation with DFO are required.

- The Marlborough Creek (Richmond By-Pass Drain) traverses the land and there is associated flood plain.

- Internal and external watermains will be designed per City of Ottawa Standards. Water servicing will require connections to the King's Park Communal Well and Caivan Communal Well (Richmond West Pumping Station) as well as the crossing of several watercourses. A complete hydraulic analysis will be prepared for the proposed water distribution network at the time of detailed design to confirm that water supply is available within the required pressure range under the anticipated demand during average day, peak hour and fire flow conditions.

- The proposed wastewater design follows all current City guidelines and policies including ISTB-2018-01 (March 21, 2018).

- The subject site will be serviced by a network of internal and external sanitary sewers discharging to the existing Richmond Pump Station via Ottawa Street, King Street and Royal York Street requiring existing sanitary sewers to be upgraded and a new crossing under existing Marlborough Creek (Richmond By-Pass Drain) at Ottawa Street.

- Upgrades to the existing RPS and forcemains will be required to secure capacity for the Tamarack Richmond Lands. However, the expansion process is currently underway with the City of Ottawa and MECP and it is anticipated that there will be sufficient capacity for the proposed development at the time of construction.

- Although the site was previously contemplated as an industrial development and has since been revised to include residential and institutional development and parkland, the proposed wastewater servicing is in general conformance with the MSS.

- The subject site will be serviced with sump pumps. Minor system flows for the Tamarack Richmond Lands and adjacent parcels of land currently draining through

Environmental Impact Statement and Tree Conservation Report - Kilgour and Associates Ltd.

Kilgour and Associates Ltd. (KAL) was retained by HP Urban Inc. on behalf of Tamarack Homes to provide an Environmental Impact Statement (EIS) in support of the proposed development of 6012 Ottawa Street and several adjacent parcels in the Village of Richmond.

KAL's Impact Assessment on Surface Water Features, Trees and Vegetation, and Species at Risk (Page 45 and 46) are as follows:

Surface Water Features

The roadside ditches along Eagleson Rd. and Ottawa St. may be subject to some disturbance and/or reconstruction during the development of the Site but will otherwise be fully retained. As these features do not provide habitat for fish, frogs or turtles, such disturbances are not considered to be consequential so long as standard erosion and sediment controls are employed during construction to prevent the transport of any sediment to downstream receivers.

Headwater Reaches 1 through 4 will be removed from the Site. Reaches 1 through 3 were assigned management recommendations of "Mitigation" under Headwater Drainage Feature Assessment for the Site (Table 9). These features currently serve to convey runoff from the active agricultural areas of the Site, though likely provide some allochthonous input and filtration functionality. Both of these services can be provided through the use of stormwater management ponds and/or vegetated swales

through the community. As such, no negative impacts are anticipated to the broader watershed following their removal.

Reach 4 was assigned a management recommendation of “Conservation” under the Headwater Drainage Features Assessment for the Site (Table 9). This feature may also be removed but must be replaced by a new feature (not necessarily in the same location) that would recreate or augment the functionality of the current feature. The current feature is long (795 m), but is unnatural in form, being perfectly linear, and does not provide habitat for fish, frogs, or turtles. The ultimate design for an outlet channel for the site stormwater management facility has not yet been finalized. However, a suitably constructed outlet channel, situated within a naturalized corridor with 30 m setbacks, and planned following principals of natural design to provided fish habitat (with potential to support turtles and frogs), would ensure no negative impacts to the broader watershed even if the feature were significantly shorter.

Marlborough Creek will be fully preserved and protected within a retained corridor of natural habitat with a width of 30 m or more. As such, no negative impacts are anticipated to this feature.

Trees and Vegetation

All existing trees and vegetation on the Site, outside of the setback around Marlborough Creek, will be removed. The eastern side of the Site, however, an area of 29 ha, is currently completely devoid of natural vegetation, being under active agricultural usage. Much of the western side of the Site has limited tree cover, consisting of meadows and recently regenerating woodlands with only ~30% canopy cover.

The removal of trees from the property will be mitigated through the planting of trees on or adjacent to house lots throughout the new community and within common areas such as stormwater management areas and parks. With tree planting at a minimum level equivalent to one tree per lot and additional tree planting in common areas, over 1000 trees will be planted throughout the development. This level of tree planting represents a decrease in canopy cover from current tree density levels on the western half of the Site, but an increase in canopy cover over the eastern agricultural areas. No areas of significant woodland will be removed as no areas of significant woodland exist on Site.

Existing riparian trees along Marlborough Creek will be retained and protected within a reserved corridor of natural habitat with a width of 30 m or more.

Species at Risk

No SAR legally protected under the ESA were found to use habitat on the Site during the 2019 field campaign. It is possible, however, that Little Brown Myotis may transiently occur in wooded areas on Site. So long as no clearing of wooded areas occurs when bat species may be present, no negative impacts would be anticipated to these individuals.

Blanding's Turtles were not observed on Site, though an occurrence record for the species does occur on Ottawa Street near the western boundary of the Village of Richmond. This point occurs just within 2 km of the western most end of Marlborough Creek on the Site, thereby defining this small portion of the Site as legally protected Category 2 Blanding's Turtle habitat (MNRF, 2013). Blanding's Turtle Category 2 habitat is regulated to include a 30 m buffer around suitable wetland features (i.e., Marlborough Creek). However, as no development will occur within 30 m of the creek and this area is to be maintained in its natural state, no impacts are anticipated to either the species or its habitat. All other channelized features on Site are situated more than 2 km away from any recorded Blanding's Turtles occurrences and are thus not deemed to constitute Blanding's Turtle habitat based on definitions of their Category 1, 2, and 3 habitats (MNRF, 2013). As shallow, linear farm ditches with firm substrate, the other channelized features on Site would provide very limited habitat suitability regardless.

Two bird species listed as Special Concern, Wood Thrush and Eastern Wood-pewee, were observed during daytime breeding bird surveys. These species are not afforded any specific legal protection of individuals or habitat areas as SAR under the ESA, though individuals and active nests are protected under the federal SARA and the MBCA. Regardless, Wood Thrush were observed along the southern border of the Site, and additional suitable habitat that will not be altered under the proposed development exists south of the Site. A single Eastern Wood-pewee was observed along the wooded riparian area immediately adjacent to the Marlborough Creek, which will be preserved. As such, no significant impacts are anticipated to the habitat of either species. Limiting the clearing of trees to outside of the breeding season will prevent any potential impact to individuals.

Barn Swallow and Snapping Turtle were not observed during the 2019 field campaign but have a moderate potential to interact with the proposed development. Open areas in the eastern half of the Site could provide suitable foraging habitat for Barn Swallow, but there is no available nesting habitat directly on Site and no individuals were present. Suitable basking and overwintering habitats for Snapping Turtles exist in Marlborough Creek along the northwestern edge of the Site as well as in the nearby Jock River. These suitable habitat areas will be retained under the proposed development.

KAL's report also provided a Mitigation Strategy (Pages 46, 47, 48) which will be adhered to by the proponent:

Mitigation: Surface Water Features

Any works near water will, at minimum, require standard erosion and sediment control mitigation measures to protect receiving waters from sediment laden runoff, including:

- a multi-barrier approach to provide erosion and sediment control;
- retention of existing vegetation and stabilize exposed soils with vegetation where possible;
- limiting the duration of soil exposure and phase construction;
- limiting the size of disturbed areas by minimizing nonessential clearing and grading;
- minimizing slope length and gradient of disturbed areas;
- maintaining overland sheet flow and avoid concentrated flows; and
- storing/stockpiling all soil away (e.g., greater than 15 m) from watercourses, drainage features and top of steep slopes.

All changes to Site drainage must be done in consultation with and under a permit from the RVCA. As Marlborough Creek is the only fish bearing feature on the Site, and it is not subject to any alteration or disturbance within >30 m of its riparian corridor, no permits or consultation with Fisheries and Oceans Canada (DFO) are required.

The outlet channel for the Site stormwater management facility must be planned and constructed following principles of natural channel design. The feature should be situated within a naturalized corridor with 30 m setbacks and should provide fish habitat suitable for forage fish common in the area.

Marlborough Creek must be fully preserved and protected within a retained corridor of natural habitat with a width of 30 m or more.

Mitigation: Trees and Vegetation

Please note that this report does not constitute permission to remove any trees from the Site. Removal of trees can only be undertaken following appropriate consultation with City planning staff. To minimize impacts to trees adjacent to or to be retained on the Site, the

following general protection measures are recommended as necessary during construction:

- Tree removal on Site should be limited to that which is necessary to accommodate construction.

- To minimize impact to remaining trees during Site development:

    - Erect a fence beyond the critical root zone (CRZ; i.e., 10x the trunk diameter) of trees. The fence should be highly visible (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 trees;

    - Do not attach any signs, notices, or posters to any trees;

    - Do not raise or lower the existing grade within the CRZ of trees 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; and

    - Ensure that exhaust fumes from all equipment are NOT directed towards any tree's canopy.

Mitigation: Species at Risk

Trees on the Site have potential to support various bat species, albeit in small numbers, including the possibility of transient Little Brown Myotis. As such, trees on Site must not be cut down during the roosting season (May to September inclusive; MNRF, 2015c). Therefore, to protect bats in general, no trees should be cleared between May and September. Clearing trees outside of the bird breeding/nesting window, which mostly overlaps with the bat window (generally early April to late August; Government of Canada, 2018) would ensure no impacts to Wood Thrush and Eastern Wood-pewee as well as other bird species in general.

Mitigation: General Wildlife

During several field visits to the Site, common wildlife species were observed, all of which are represented throughout the adjacent landscape. The following mitigation measures shall be implemented on Site during construction of the project to generally protect wildlife:

- Areas shall not be cleared during sensitive times of the year for wildlife (breeding season) unless mitigation measures are implemented and/or the habitat has been inspected by a qualified Biologist.

- Do not harm, feed, or unnecessarily harass wildlife.

- Manage waste to prevent attracting wildlife to the Site. Effective mitigation measures include litter prevention and keeping all trash secured in wildlife-proof containers and promptly removing it from the Site, especially during warm weather.

- Drive slowly and avoid hitting wildlife.

- Manage stockpiles and equipment on Site to prevent wildlife from being attracted to artificial habitat. Cover and contain any piles of soil, fill, brush, rocks and other loose materials and cap ends of pipes where necessary to keep wildlife out. Ensure that trailers, bins, boxes, and vacant buildings are secured at the end of each workday to prevent access by wildlife.

- Check the entire work site for wildlife prior to beginning work each day.

- Inspect protective fencing and/or other installed wildlife exclusion measures daily and after each rain event to ensure their integrity and continued function.

- Monitor construction activities to ensure compliance with the project-specific protocol (where applicable) or any other requirements.

- The MBCA 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 (City of Ottawa, 2015).

- Follow the best practices for the construction and maintenance of bird-safe buildings, such as applying visual markers on windows to prevent birds from colliding with glass and reducing the intensity and direction of night lighting (turn off lights at night if possible). See https://flap.org/workplaces-safe-for-birds/ for more resources and tips on designing and maintaining bird-friendly buildings.

The KAL report concluded **no negative impacts** to the proposed development:

It is our professional opinion that no negative impacts are anticipated to significant natural heritage features or SAR or their habitat under the proposed development if the recommended mitigations are followed.

Phase 1 Environmental Report – Paterson Group Report: PE4079-1

Paterson Group was retained to conduct a Phase I Environmental Site Assessment (Phase I-ESA) of a large parcel of vacant land, in the Village of Richmond. Their findings (Page 16) were as follows:

> Based on historical searches, the land has been undeveloped since at least 1950 and has been vacant or used for agriculture. No environmental concerns were identified with respect to the historical use of the subject site.
>
> Surrounding properties historically consisted of commercial and residential properties, agricultural fields, and undeveloped treed lands. Potentially contaminating activities were identified for properties within the Phase I-ESA study area. None of these potentially contaminating activities were considered to represent an area of potential environmental concern for the subject site.
>
> Following the historical review, a site visit was conducted. The site is currently vacant and partially used for agricultural purposes. Marlborough Creek was observed to flow southwest-northeast through the northern potion of the subject site. Neighbouring properties to the north and west were identified as commercial and residential properties. Neighbouring properties to the east were identified as residential dwellings and farm steads. Neighbouring properties to the south were identified as vacant lots or agricultural lands. Several PCAs were identified in the vicinity of the subject site, however, based on the separation distance and cross- or down-gradient locations to the subject site, these activities are not considered to have had the potential to have impacted the subject site.

Paterson concluded that a **Phase 2 report was not warranted:**

> Based on the results of the Phase I - Environmental Site Assessment, it is our opinion that a Phase II - Environmental Site Assessment is not required for the subject site.

Geotechnical Investigation – Paterson Report: PG4216-1

The Paterson Report found the soils completely suitable for development:

> From a geotechnical perspective, the subject site is adequate for the proposed development. It is expected that the proposed buildings will be founded on conventional shallow footings placed on an undisturbed, very stiff to firm silty clay, compact silty sand, glacial till or clean, surface sounded bedrock bearing surface.

> Due to the presence of the sensitive silty clay layer deposit, limited areas of the proposed development will be subjected to grade raise restrictions. The recommended permissible grade raise areas are presented in Drawing PG4216-3 - Permissible Grade Raise Areas in Appendix 2. If higher than permissible grade raises are required, preloading with or without a surcharge, lightweight fill and/or other measures should be investigated to reduce the risks of unacceptable long-term post construction total and differential settlements. Furthermore, to delineate a more precise area where the clay deposit is situated, additional boreholes may be required.

Paterson has already been commissioned to undertake a detailed soil mapping to determine the precise location of the clay deposit.

Noise Assessment – Gradient Wind

Gradient Wind Engineering Inc. (Gradient Wind) was retained by Taggart Richmond to undertake a transportation noise & vibration feasibility assessment in support of a draft plan of subdivision application for a proposed residential subdivision located at 5907-6038 Ottawa Street in the village of Richmond.

Gradient Wind Engineering has made the following recommendations:

> The results of the current study indicate that noise levels due to roadway traffic over the site will range between approximately 45 and 70 dBA during the daytime period (07:00-23:00). The highest transportation noise levels will occur nearest to Eagleson Road. Results of the roadway traffic noise calculations indicate that dwellings exposed Eagleson Road, Ottawa Street and McBean Street will possibly require internal ventilation such as forced air heating or central air conditioning.
>
> Results of the roadway traffic noise calculations also indicate that outdoor living areas on blocks adjacent to and having direct exposure to Eagleson Road, Ottawa Street and McBean Street will likely require noise control measures in the form of noise barriers. Mitigation measures are described in Section 5.2, with the aim to reduce the Leq to as close to 55 dBA as technically, economically and administratively feasible. A detailed roadway traffic noise study will be required at the time of subdivision registration to determine specific noise control measures for the development.
>
> There are a number of light industrial facilities located adjacent to the study site, along Ottawa Street and McBean Street. These facilities include a garden centre, a landscaping stone company, a storage facility and two automotive garages. Based on Gradient Wind's past experience with similar industries, the 50- 100 m setback buffer created by the nearby creek/by-pass drain, and the background noise generated by the surrounding arterial and collector roadways, noise levels at the study site due to the light industrial facilities are expected to fall below the ENCG and NPC-300 noise criteria.

Furthermore, several existing dwellings along Ottawa Street currently constrain operations of these industrial sites with equal or less offset distance.

Based on an offset distance of 65 metres between the VIA Rail line and the property line the estimated vibration level at the nearest possible point of reception is expected to be 0.12 mm/s RMS (73.5 dBV) based on the FTA protocol. Details of the calculation are provided in Appendix B. Since predicted vibration levels are below the criterion of 0.14 mm/s RMS, no mitigation will be required. Ground borne noise levels are also expected to be below the ground borne noise criteria of 35 dB.

Potential Concerns and Mitigation Measures

All of the areas of environmental concern rest within the report provided by Kilgour and Associates Ltd. Those concerns and mitigation outlined in the attached table.

Potential Environmental Concern	Proposed Mitigation
Trees and Vegetation • Tree Preservation and Protection	• Tree removal on site should be limited to that which is necessary to accommodate construction. • To minimize impact to remaining trees during Site development: ▫ Erect a fence beyond the critical root zone (CRZ; i.e., 10x the trunk diameter) of trees. ▫ Pruning of branches is recommended in areas of potential conflict with construction equipment; ▫ Do not place any material or equipment within the CRZ of trees; ▫ Do not attach any signs, notices, or posters to any trees; ▫ Do not raise or lower the existing grade within the CRZ of trees 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; and ▫ Ensure that exhaust fumes from all equipment are NOT directed towards any tree's canopy.
Surface Water Features • Erosion • Fish bear Features • SWM	• a multi-barrier approach to provide erosion and sediment control; • retention of existing vegetation and stabilize exposed soils with vegetation where possible; • limiting the duration of soil exposure and phase construction; • limiting the size of disturbed areas by minimizing nonessential clearing and grading; • minimizing slope length and gradient of disturbed areas; • maintaining overland sheet flow and avoid concentrated flows; and • storing/stockpiling all soil away (e.g., greater than 15 m) from watercourses, drainage features and top of steep slopes. • Require RVCA permit for changes to site drainage. • Marlborough Creek is the only fish bearing feature on the Site – No alteration or disturbance within >30 m of its riparian corridor. • Marlborough Creek must be fully preserved and protected within a retained corridor of natural habitat with a width of 30 m or more. • The outlet channel for the Site stormwater management facility must be planned and constructed following principles of natural channel design. The feature should be situated within a naturalized corridor with 30 m setbacks and should provide fish habitat suitable for forage fish common in the area.
General Wildlife	• Areas shall not be cleared during sensitive times of the year unless mitigation measures are implemented and/or the habitat has been inspected by a qualified Biologist. • Do not harm, feed, or unnecessarily harass wildlife. • Manage waste to prevent attracting wildlife to the Site. • Drive slowly and avoid hitting wildlife. • Manage stockpiles and equipment on Site to prevent wildlife from being attracted to artificial habitat. • Check the entire work site for wildlife prior to beginning work each day. • Inspect protective fencing and/or other installed wildlife exclusion measures daily and after each rain event to ensure their integrity and continued function. • Monitor construction activities to ensure compliance with the project-specific protocol (where applicable) or any other requirements. • The MBCA 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. • Follow the best practices for the construction and maintenance of bird-safe buildings.
Species at Risk • Bats - Little Brown Myotis • Wood Thrush • Eastern Wood-pewee	• No trees should be cleared between May and September during Bat breeding/nesting. • No trees should be cleared between Early April and Late August to ensure no impacts to Wood Thrush and Eastern Wood-pewee as well as other bird species in general.

Design with Nature

Section 8 of the City of Ottawa 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 proposed draft plan of subdivision addresses the issues in Design with Nature as follows:

> **Erosion and Environmental Protection:** The Environmental Impact Statement and Tree Conservation Report by Kilgour and Associates Ltd. proposes a multi-barrier approach to provide erosion and sediment control. It also recommends that Marlborough Creek be fully preserved and protected within a retained corridor of natural habitat with a width of 30 m or more.
>
> TREE CONSERVATION: The Kilgour TCR recommends that tree removal on site should be limited to that which is necessary to accommodate construction. The TCR contains a number of recommendations to mitigate construction impact on the trees that are to be retained, including protecting critical root zones.
>
> NATURAL INFILTRATION: Section 5.0 of the Functional Servicing Report (DSEL) outlines the stormwater servicing solution consists of a minor system, a major system, and homes with basement, which will be equipped with sump pumps to provide foundation drainage which is consistent with a typical house in the Village of Richmond..

STREET ORIENTATION: Design with nature encourages a road layout that allows for south-facing buildings and windows to reduce summer thermal gain and provide opportunities for passive energy conservation. The proposed pattern includes several roads oriented in an east-west direction including the new collector roadway which will allow for south-facing buildings and windows.

Energy Efficiency

Section 4.7.1 of the Official Plan requires that the Integrated Environmental Review Statement Address Objective 7 of Section 2.5.1 of the Official Plan. Objective 7 states the following:

> To maximize energy-efficiency and promote sustainable design to reduce the resource consumption, energy use, and carbon footprint of the built environment. 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 draft plan includes the following efficient design principles:

- The applicant is a leading ENERGY STAR® homebuilder. Every home be 20-30% more energy efficient than a standard home built to the Ontario Building Code and is certified by a third-party inspection agency.
- This will be demonstrated when new residents receive an ENERGY STAR Homeowner's

Information Package when the home is registered with the ENERGY STAR program.

- The applicant uses green buildings practises (sustainable products, waste reduction and water conservation) throughout the development process to minimize the impact of residential construction.

- As noted in the design with nature section the proposed pattern, includes several roads oriented in an east-west direction including the new collector roadway which will allow for south-facing buildings and windows.

- Active transportation opportunities exist to connect the proposed subdivision to broader village and those walking and cycling links to places such as the local high school will be further developed during the finalization of the Community Traffic Study being conducted by CGH Transportation.

Concurrence of the Study Team

The study team members have reviewed this Integrated Environmental Review Statement and have provided written concurrence with its contents (Appendix B).

Conclusion

This Integrated Environmental Review Statement (IERS) outlines how the requirements in Section 4.7.1- Integrated Environmental Review of the Official Plan is addressed.

Sincerely,

Peter Hume

Peter Hume

Taggart Corporation

I have reviewed the sections of this Integrated Environmental Review Statement that are associated with the Planning Rationale and concur with the related contents.

Name: Peter Hume

Signature: PE Hume

Date: November 18, 2020

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 and concur with the related contents.

Name: Jennifer Ailey, P.Eng.

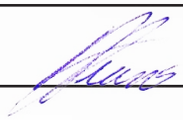
Signature: 

Date: 2020/11/13

Kilgour and Associates Ltd.

I have reviewed the sections of this Integrated Environmental Review Statement that are associated with Kilgour and Associates Ltd.'s Environmental Impact Statement and Tree Conservation Report and concur with the related contents.

Name: Anthony Francis

Signature: 

Date: November 17, 2020

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 and concur with the related contents.

Name: Joshua Foster, P. Eng.

Signature:

Date: Nov 18, 2020

Paterson Group

I have reviewed the sections of this Integrated Environmental Review Statement that are associated with Paterson's Geotechnical Investigation and Phase 1 Environmental Site Assessment and concur with the related contents.

Name: David Gilbert, P.Eng. - Principle

Signature:

Date: Nov. 18-2020