File: 39T-17502 / OZ-8147
Planner: L. Mottram

Report to Planning and Environment Committee

To: **Chair and Members**
Planning & Environment Committee
From: **George Kotsifas, P. Eng.**
Managing Director, Development & Compliance Services and Chief Building Official
Subject: **Application By: Thames Village Joint Venture Corporation**
1738, 1742, 1752 and 1756 Hamilton Road
Public Participation Meeting on: June 18, 2018

Recommendation

That, on the recommendation of the Senior Planner, Development Services, the following actions be taken with respect to the application of Thames Village Joint Venture Corporation relating to the properties located at 1738, 1742, 1752 and 1756 Hamilton Road:

(a) the proposed by-law attached hereto as Appendix "A-1" BE INTRODUCED at the Municipal Council meeting on June 26, 2018 to amend the Official Plan to delete the “Secondary Collector” road classification on Schedule ‘C’ – Transportation Corridors map;

(b) the proposed by-law attached hereto as Appendix "A-2" BE INTRODUCED at the Municipal Council meeting on June 26, 2018 to amend Zoning By-law No. Z.-1, in conformity with the Official Plan, to change the zoning of the subject property FROM an Urban Reserve (UR4) Zone, a holding Urban Reserve (h-2•UR4) Zone, a Residential R1 (R1-14) Zone, an Environmental Review (ER) Zone, an Open Space (OS4) Zone, and a holding Open Space (h-2•OS4) Zone TO:

i) a holding Residential R1 Special Provision (h•h-100•R1-3(*)) Zone to permit single detached dwellings on lots with a minimum lot frontage of 10 metres and a minimum lot area of 300 square metres; together with a special provision for a maximum lot coverage of 45% for one (1) storey dwellings;

ii) a holding Residential R1 Special Provision (h•h-100•R1-3(**)) Zone with a special provision to permit the existing single detached dwelling with a minimum front yard depth of 1.5 metres;

iii) a holding Residential R4 Special Provision (h•h-100•R4-6( )) Zone to permit street townhouse dwellings with a minimum lot area per unit of 145 square metres, together with a special provision for a minimum lot frontage of 7.0 metres, a minimum front and exterior side yard depth of 3.0 metres to a main building and 6.0 metres to a garage, and a minimum rear yard depth of 6.0 metres where access from the front yard to the rear yard of each unit is provided through the garage;

iv) a holding Residential R6 Special Provision (h•h-100•R6-5( )) Zone to permit various forms of cluster housing including single detached, semi-detached, duplex, triplex, fourplex, townhouse, stacked townhouse, and apartment buildings up to a maximum density of 35 units per hectare and a maximum height of 12 metres; together with a special provision for a minimum interior side and rear yard depth of 5.0 metres, and to permit open or covered but unenclosed decks or porches not exceeding one storey in height to project into the required yard no closer than 2.0 metres to a lot line adjacent an Open Space (OS5) Zone; and,

v) an Open Space (OS5) Zone to permit such uses as conservation lands, conservation works, passive recreation uses which include hiking trails and multi-use pathways, and managed woodlots;

it being noted that the following holding provisions have also been applied:

- (h) - to ensure orderly development and adequate provision of municipal

services, the “h” symbol shall not be deleted until the required security is provided and that the conditions of draft plan approval will ensure the execution of a subdivision agreement prior to development;
- h-100 – to ensure there is adequate water service and appropriate access, a looped watermain system must be constructed and a second public access must be available;

(c) the Planning and Environment Committee REPORT TO the Approval Authority the issues, if any, raised at the public meeting with respect to the application for Draft Plan of Subdivision of Thames Village Joint Venture Corporation relating to a properties located at 1738, 1742, 1752 and 1756 Hamilton Road;

(d) Council SUPPORTS the Approval Authority issuing draft approval of the proposed plan of residential subdivision, submitted by Thames Village Joint Venture Corporation (File No. 39T-17502) (Project No. OVE DP), dated September 20, 2017, as red-line amended, which shows a draft plan of subdivision consisting of 69 single detached residential lots, 2 cluster housing blocks, 1 street townhouse block, 7 open space blocks, 1 road widening block, 2 reserve blocks, 2 temporary turning circles, and 3 local streets; SUBJECT TO the conditions contained in the attached Appendix "A-3"; and,

(e) the Applicant BE ADVISED that Development Finance has summarized claims and revenues information as attached in Appendix “A-4”.

Executive Summary

Summary of Request

The applicant has requested approval of Draft Plan of Subdivision, Official Plan and Zoning By-law Amendments to facilitate the development of a residential subdivision consisting of low density single detached dwellings, cluster dwellings, street townhouse dwellings, open space lands, and public road access via local street connections to Hamilton Road.

Purpose and the Effect of Recommended Action

The purpose and effect is the creation of a residential plan of subdivision which will consist of
- 69 single detached dwelling lots, including retention of one existing home on its own lot;
- a 29 unit vacant land condominium;
- a street townhouse block with potential to yield approximately 20 to 25 residential units;
- over 12 hectares of open space lands incorporating ravines, stream corridors, and buffers; and
- three local streets with two access road connections to Hamilton Road.

Rationale of Recommended Action

The proposed Thames Village Joint Venture Corp. Draft Plan of Subdivision, Official Plan and Zoning By-law amendments are consistent with The London Plan, the City’s Official Plan, the Old Victoria Area Plan, and the Provincial Policy Statement. The recommended red-lined draft plan and conditions of draft approval will create a residential subdivision compatible with adjacent lands, provide good connectivity and opportunities for a multi-use trail system, and appropriate protection and enhancement of natural heritage resources. The recommended Draft Plan of Subdivision, Official Plan and Zoning By-law Amendments represent good land use planning and an appropriate form of development.

Analysis

1.0 Site at a Glance

1.1 Property Description

The southwesterly half of the site is characterized by tableland consisting of open fields previously in agricultural use. The northeasterly half of the site is composed of steep, wooded ravines in which there are two watercourses tributary to the Thames River to the north. Residential uses existing on the property consist of a single detached dwelling fronting the east side of Hamilton Road (1738 Hamilton Road), and an existing dwelling at the back of the property located on tableland overlooking the Thames River and adjacent ravine (1742 Hamilton Road). Not far to the east is another home within the same area, but located on a separate parcel of land outside the proposed subdivision lands (municipal address 1746 Hamilton Road). Both residential properties share a private lane for access from Hamilton Road.

A strip of residential dwellings situated on approximately 30 metre (100 ft.) wide by 67 metre (220 ft.) deep lots has developed over time along the north side of Hamilton Road. This was partly the result of a subdivison plan (R.P. 747) registered many years ago when the area was within the Township of Westminster. Through that registered plan, Oriole Drive, Bobolink Lane, and Cardinal Lane were dedicated as public highways. Oriole Drive and Bobolink Lane will be utilized to provide the subdivision plan with public road access to Hamilton Road.

The proposed subdivision lands are traversed by an untravelled road allowance lying east of Hamilton Road between Concession 1 and Broken Front Concession 'B' (known as the "Base Line" road allowance). The process of legally closing the road allowance as a public highway has been approved by Municipal Council. The bulk of the road allowance will be retained by the City for open space purposes, except for a small portion which is to be sold to the adjacent property owner/developer in order to connect development lands lying on either side of the road allowance. These lands are also traversed by the Hydro One Networks transmission corridor easement. Adjustments to the draft plan have been made to ensure that future residential development does not encroach into the hydro corridor easement lands.

1.2 Current Planning Information (see more detail in Appendix D)

- Official Plan Designations – "Low Density Residential", "Multi-family, Medium Density Residential", and "Open Space"
- The London Plan Place Types – "Neighbourhoods" and "Green Space"
- Existing Zoning – Urban Reserve (UR4), holding Urban Reserve (h-2•UR4), Residential R1 (R1-14), Environmental Review (ER), Open Space (OS4), and holding Open Space (h-2•OS4)

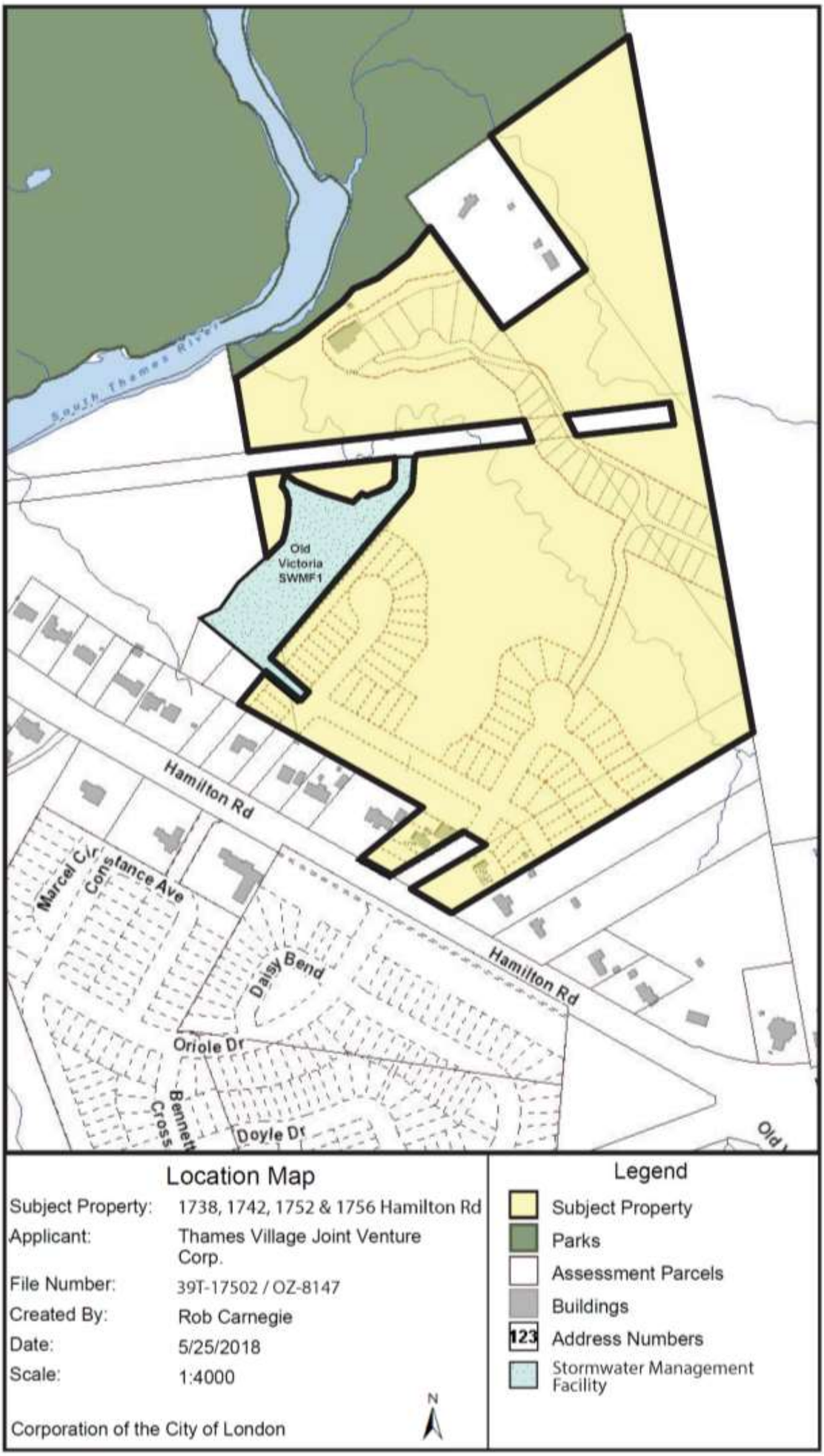
1.3 Site Characteristics

- Current Land Use – residential dwellings and vacant lands
- Frontage – 95 metres (312 ft.)
- Depth – varies from approx. 270 metres (886 ft.) to 600 metres (1,970 ft.)
- Area – approx. 19.4 hectares (48 acres)
- Shape – irregular

1.4 Surrounding Land Uses

- North – stormwater management facility, Thames River and open space
- East – agriculture
- South – low density residential
- West – low density residential

1.5 Location Map

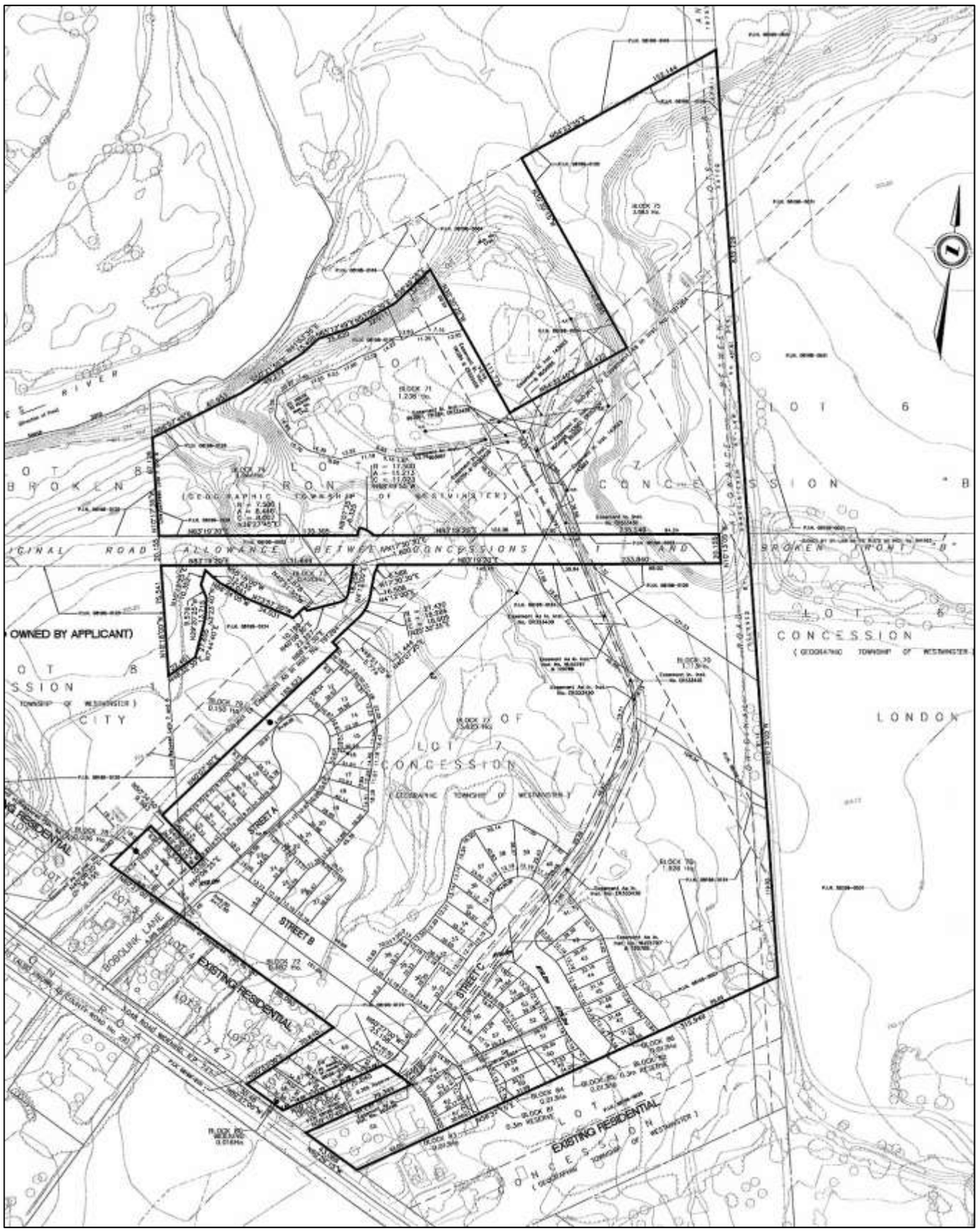


2.0 Description of Proposal

2.1 Development Proposal

The proposed draft plan of subdivision will consist of 69 single detached dwelling lots, including the retention of one existing home on its own lot; a 29 unit vacant land condominium; a street townhouse block with potential yield of approximately 20 to 25 units; over 12 hectares of open space lands including the ravines, stream corridors, buffers, and a narrow strip of land within the hydro corridor between the proposed subdivision and the Old Victoria SWMF1; and three local streets with two access road connections to Hamilton Road.

2.2 Development Proposal - Enlargement



3.0 Revelant Background

3.1 Planning History

The subject lands were included within the Urban Growth Boundary and designated Urban Reserve - Community Growth through the "Vision London" planning process, which was implemented through the adoption of Official Plan Amendment No. 88 in 1996. The Planning Area was originally identified as "Summerside East" but later changed to become known as "Old Victoria" based on the proximity of Old Victoria Road.

The Old Victoria Area Planning Study was initiated in December 2005. The Area Plan was subsequently brought forward for consideration and recommended for approval at a Public Participation Meeting of Planning Committee on September 24th, 2007. At its meeting on October 1, 2007, London City Council adopted the Old Victoria Area Plan pursuant to Section 19.2.1. of the Official Plan, as a guideline document for the review of planning applications, and the development of public facilities and services within the Old Victoria Community.

City Council also adopted Official Plan Amendment No. 427, which confirmed land use designations, road alignments and environmental features on Map Schedules "A", "B" and "C" of the Official Plan. In addition to mapping modifications, OPA 427 also included the adoption of area specific policies in Section 3.5.18 of the Official Plan (later carried over into *"The London Plan"* under Specific Policies for Neighbourhood Place Types Policies 1000 to 1011) to provide further guidance with respect to the form of development, public infrastructure facilities and environmental protection measures to be supported within the planning area.

A parallel Municipal Class Environmental Assessment for Stormwater Management was carried out for the Old Victoria Planning Area, concurrent with the preparation of the Area Plan, to determine the appropriate facilities required to address stormwater flows. The SWM strategy provided for the creation of two off-line wet ponds to service future development lands within the area. The first pond located north of the Victoria on the River subdivision is completed and operational. The pond serves the post development catchment area for much of the westerly portion of the Old Victoria Planning Area. The second SWM pond located on the east side of Hamilton Road, immediately adjacent the Thames Village Joint Venture proposed subdivision, serves the easterly portion of the planning area is now complete and operational.

3.2 Requested Amendment

Draft Plan of Subdivision – Request for approval of a draft plan of subdivision consisting of 69 single detached residential lots (Lots 1 - 69), two (2) cluster housing blocks (Blocks 70 & 71), one (1) street townhouse block (Block 72), seven (7) open space blocks (Blocks 73 - 79), one (1) road widening block (Block 80), two (2) reserve blocks (Blocks 81 & 82), temporary turning circles (Blocks 83 - 86), and three (3) local streets (Streets "A", "B" & "C").

Official Plan Amendment – Request for amendment to the Official Plan to Schedule 'C' – Transportation Corridors map to delete the "Secondary Collector" road classification on the east side of Hamilton Road. (Note: There was also a request to amend Schedule 'B2' - Natural Resources and Natural Hazards map to remove the "Aggregate Resource Area" delineation. Upon further review of the mapping, it was determined this delineation does not apply to the subject lands. It was broadly applied to include existing residential uses along the north side of Hamilton Road which would preclude future extraction activity).

Zoning By-law Amendment – Request for amendments to the Zoning By-law to change the zoning from an Urban Reserve (UR4) Zone, a holding Urban Reserve (h-2•UR4) Zone, a Residential R1 (R1-14) Zone, an Environmental Review (ER) Zone, an Open Space (OS4) Zone, and a holding Open Space (h-2•OS4) Zone to the following zones:

Residential R1 Special Provision (R1-3( )) to permit single detached dwellings on lots with a minimum lot frontage of 10 metres and a minimum lot area of 300 square metres; together with a special provision for a maximum lot coverage of 45% for one (1) storey dwellings ***(Lots 1 – 69)***;

Residential R4 Special Provision (R4-6( )) to permit street townhouse dwellings with a minimum lot area per unit of 145 square metres and minimum lot frontage per unit of 5.5

metres; together with a special provision for minimum front and exterior side yard depth of 3.0 metres to main building and 6.0 metres to garage, and minimum rear yard depth of 6.0 metres ***(Block 72)***;

Residential R6 Special Provision (R6-5( )) to permit various forms of cluster housing including single detached, semi-detached, duplex, triplex, fourplex, townhouse, stacked townhouse, and apartment buildings up to a maximum density of 35 units per hectare and maximum height of 12 metres; together with a special provision for minimum interior side and rear yard depth of 5.0 metres, and to permit open or covered but unenclosed decks or porches not exceeding one storey in height to project into the required yard no closer than 2.0 metres to a lot line adjacent an Open Space (OS5) Zone ***(Blocks 70 & 71)***;

Open Space (OS5) to permit such uses as conservation lands, conservation works, passive recreation uses which include hiking trails and multi-use pathways, and managed woodlots ***(Blocks 73 – 79)***.

3.3 Community Engagement (see more detail in Appendix B)

In response to the Public Notice of Application, concerns were expressed by a resident on Hamilton Road regarding impact of development of street townhouses backing onto existing single family homes.

In response to the Departmental/Agency circulation of the Notice of Application, the Environmental Impact Studies and associated background studies, concerns were expressed with respect to the environmental impacts on the natural heritage system, particularly the impact of development on the local groundwater regime, tributaries, wetlands and seeps, and groundwater dependent ecosystems; post-development groundwater infiltration / surface water run-off; buffers and encroachment; trail planning; and environmental management plan and monitoring.

3.4 Policy Context (see more detail in Appendix C)

Old Victoria Area Plan
This planning area includes the lands bounded by the Thames River on the north, Commissioners Road East on the south, the Old Victoria Road alignment on the east and the lands that include the Victoria on the River subdivision on the west. The same area was also the subject of Official Plan Amendment No. 427 which applied land use designations, environmental mapping delineations, transportation corridors and area specific policies in section 3.5.18 of the Plan.

The Area Plan provided the basis and supporting documentation for OPA 427, including detailed information that is intended to assist in interpreting and implementing the more generalized Official Plan policies that apply to the Old Victoria area. While the Area Plan should be considered as a guide in evaluating the subdivision application, it does not have Official Plan status and there is flexibility to interpret or modify provisions of the Area Plan within the context of overriding Official Plan policies.

Official Plan
Official Plan Amendment No. 427 confirmed the land use designations, road alignments and environmental features on Map Schedules “A”, “B” and “C” of the Official Plan. In addition to mapping modifications, OPA 427 also included the adoption of area specific policies in Section 3.5.18 of the Official Plan, which provide further guidance with respect to the form of development, public infrastructure facilities and environmental protection measures to be supported within the Old Victoria Community Planning Area.

The London Plan
The Old Victoria Community Planning Area policies in the Official Plan have been incorporated into the *“The London Plan”* under Specific Policies for Neighbourhood Place Types (Policies 1000 to 1011).

Provincial Policy Statement, 2014
The proposal must be consistent with the Provincial Policy Statement (PPS) and land use planning policies aimed at 1. Building Strong Healthy Communities, 2. Wise Use and Management of Resources, and 3. Protecting Public Health and Safety.

4.0 Key Issues and Considerations

4.1 Issue and Consideration # 1 - Impact of development of street townhouses backing onto existing single family homes.

Residents on Hamilton Road whose homes presently back onto an open field expressed concern with future development on Block 72, the loss of privacy and enjoyment of their rear yards. This block is intended for future development of street townhouses. Being a multiple-attached form of residential development, any future development will be subject to Site Plan Approval. Privacy fencing along the rear property line of the street townhouse block is typically not a requirement of the subdivison approval process; but, perimeter privacy fencing, landscaping and screening will be reviewed at the site plan stage, and appropriate measures to protect privacy of rear yard amentiy space can be incorporated into the approved site plan and development agreement prior to development.

Official Plan and *The London Plan*

The recommendation conforms with the Official Plan under Section 19.9.2 iv), and The London Plan under the Our Tools Policies 1681-6, with respect to matters to be considered as part of Site Plan Approval – "*Matters Addressed by Site Plan Control – Location and design of on-site exterior lighting, landscaping, buffering, fencing, outdoor storage, and garbage disposal facilities".*

4.2 Issue and Consideration # 2 - Impact of development on the groundwater regime, tributaries, wetlands, and groundwater dependent ecosystems.

Concerns with respect to groundwater impacts on natural heritage features and functions have been the focus of much back-and–forth between the applicant/consultant and the Conservation Authority during the review of the EIS and Hydrogeological Assessment. The recent response received from the UTRCA indicated that they have reviewed the Environmental Impact Study (EIS) submissions for the subject lands prepared by the applicant's consultant, Natural Resource Solutions Inc. (NRSI); and the Hydrogeological Assessment reports prepared by Golder Associates Ltd. The Conservation Authority reports that they are generally satisfied with the technical studies that have been submitted to support this development application. While there are still some outstanding concerns (as outlined in their correspondence attached to this report), they have advised that these concerns can be addressed at the Detailed Design stage of the subdivision approval process. Therefore, draft plan conditions are being recommended to ensure that:

- a Final Environmental Impact Study which consolidates all of the various ecological submissions and addresses the Conservation Authority's outstanding concerns be prepared to the satisfaction of the UTRCA, including the preparation of a Homeowners Information Package (D.P. Condition No. 120)
- a Final Hydrogeological Assessment and Water Balance Analysis which addresses the outstanding concerns be prepared to the satisfaction of the UTRCA (D.P. Condition No. 121); and,
- if it is determined through the review of the Final EIS, Hydrogeological & Water Balance and Stormwater Management studies that there is a need for a larger buffer to protect the natural hazard and natural heritage lands and their functions, that the draft plan be redlined to accommodate the required buffer (D.P Condition No. 122)

Provincial Policy Statement, 2014

The outstanding concerns are addressed by the recommended draft plan conditions which must be satisfied prior to Final Approval of the subdivision plan, and entering into a Subdivision Agreement. This approach is considered to be reasonable, and consistent with the Provincial Policy Statement - Section 2.1 Natural Heritage 2.1.1.: *"Natural features and areas shall be protected for the long term";* Section 2.1.8: *"Development and site alteration shall not be permitted on adjacent lands to the natural heritage features and areas identified in policies 2.1.4, 2.1.5, and 2.1.6 unless the ecological function of the adjacent lands has been evaluated and it has been demonstrated that there will be no negative impacts on the natural features or on their ecological functions";* and Section 2.2.1*:"Planning Authorities shall protect, improve or restore the quality and quantity of water by:…..c) identifying water resource systems consisting of ground water features, hydrologic functions, natural heritage features and areas, and surface water features*

including shoreline areas, which are necessary for the ecological and hydrological integrity of the watershed."

Official Plan

The recommendation conforms with the Official Plan under Section 15.1.1 Natural Heritage Objectives – 15.1.1iii) "*Protect, maintain and improve surface and groundwater quality and quantity by protecting wetlands, groundwater recharge areas and headwater streams."* and Section 15.4.9. Groundwater Recharge Areas, Headwaters and Aquifers*:"…The City will require the protection of the hydrological function of these sensitive areas through its planning approval processes."*

The London Plan

The recommendation is consistent with similar policy objectives reflected in the Natural Heritage and Water Resource policies of The London Plan: Policy 1308-3 "*Protect, maintain and improve surface and groundwater quality and quantity by protecting wetlands, groundwater recharge areas and headwater streams.";* Policy 1363_ *The City shall protect, improve or restore the quantity and quality of groundwater and surface water through its planning approval processes, consistent with the Provincial Policy Statement and in conformity with the Natural Resources policies of this Plan….."; and Policy 1393_ Development and site alteration shall not be permitted on adjacent lands to natural heritage features and areas until appropriate studies have been completed to satisfy provincial and municipal policy and the ecological function of the adjacent lands has been evaluated and it has been demonstrated that there will be no negative impacts on the natural heritage features or on their ecological functions."*

4.3 Issue and Consideration # 3 – Thames Valley Parkway (TVP) trail crossing the hydro corridor.

City staff held discussions and met on-site with Hydro One Networks Inc. (HONI) officials regarding the issue of a crossing for the future trail over the hydro transmission corridor at the City's Storm Water Management Facility (Old Victoria SWMF No. 1) outlet. HONI was initially opposed to any public path encroachment into the easement; however, they have now agreed in principle to the pathway crossing the easement, subject to their review and approval of the detailed design and the entering into an Encroachment Agreement. Detailed planning for the multi-use trail alignment will proceed in conjunction with the detailed design of the subdivision. Parks planning staff have been heavily involved in the conceptual routing for the trail and have recommended a draft plan condition that a conceptual plan be provided by the owner/subdivider delineating the alignment of the west-east Thames Valley Parkway (TVP multi-use pathway) from Whites Bridge (crossing the Thames River at Hamilton Road) to the eastern boundary of the proposed plan of subdivision with approval from all impacted agencies and utilities. If approval of the alignment cannot be secured, redline revisions to the plan of subdivision will be required to accommodate the 10 meter wide multi-use pathway corridor (D.P. Condition No. 116). A 15 meter wide corridor was originally requested; however, a narrower corridor width will be required in order to work around some "pinch" points, such as between the rear of Lots 14 and 15 and limit of the ESA boundary. The UTRCA also requests the proposed pathway/trail be located outside of erosion/slope hazard lands including the 6 metre erosion access allowance.

It should also be noted that HONI objected to the original draft plan submission (May 2017) as it showed the rear yards of residential lots (Lots 1 to 12) encroaching into the hydro easement. A revised draft plan has since been re-submitted (November 2017) which has removed the lots and a portion of the bulb of Street 'A' road allowance outside of the easement. The remnant strips of land identified as Blocks 78 and 79 will remain as open space and be conveyed to the City. HONI comments with respect to their approval of grading and drainage plans, fencing, and warning clauses are addressed by the recommended draft plan conditions (D.P. Conditions No. 69, 107 and 113)

Old Victoria Area Plan

The vision of a having a multi-use trail is one of the key components of the area plan as expressed under Section 3.1 Vision Statement – *"To provide internal linkgages throughout Old Victoria Area based on multi-use trails, parks and roads for public transit, bicycles and walking";* Section 4.4.4 Multi-Use Trails – *"Neighbourhood multi-use trails should be frequently connected to the creek corridors via public parks, hydro corridors, and public and private streets."*; and Section 7.2.3 Open Space and Trail System – *"Many*

opportunities exist in this area to provide a well integrated and looped trail system that links the natural and protected areas with the community focal points."……"The future Old Victoria Area is anticipated to have an extensive network of multi-use trails throughout that will loop and connect to various points of the Thames Valley Parkway. It is intended that the majority of the trails will be within parkland, public squares and other open space areas such as the Hydro corridor."

4.4 Issue and Consideration # 4 – Buffers, Encroachment, Environmental Management Plan and Monitoring

Comments from EEPAC generally expressed disagreement with the Environmental Impact Study's calculations for determining the proposed buffer encroachment and compensation areas. These areas establish the limit of development for most of the lots backing onto the ESA lands (Lots 12 to 48). The results of the calculations indicate the total area of proposed encroachment into the development setback (or buffer) is 546.77 square metres. The total area of proposed development setback compensation is 2,101.43 square metres, exceeding the area of encroachment by 1,554.66 square metres. The results of the EIS calculations conclude the total area of compensation more than off-sets the amount of setback encroachment.

The EIS Addendum (July 2015) states that *"Recommendations are provided in the EIS to minimize impacts and ensure that mitigation measures are installed and functioning. These include recommendations to mitigate direct, indirect and induced impacts that may arise during the proposed development. Monitoring recommendations have also been provided to ensure that construction-stage mitigations are functioning appropriately, restoration plantings are establishing as expected, and established development setbacks and protective buffers are being respected. The proposed development, including areas of proposed localized encroachment into the development setbacks, is not anticipated to cause significant negative impacts to the ESA ….."*

Environmental and Parks Planning staff will be further refining these recommendations as this development proceeds to the Focused Design Study stage, and have also recommended as a condition of draft plan approval that the Owner prepare and submit a restoration and compensation plan as identified in the recommendations of the Environmental Impact Study and Addendum prepared by Natural Resource Solutions Inc. dated July 2015. The restoration plan shall also include a monitoring program for the restoration and compensation lands for a period of five (5) years. Prior to submitting the focused design study, the Owner and his consultants, shall meet with staff to scope out the requirements of the restoration and compensation plan. (D.P. Condition No. 117)

Other recommended draft plan conditions include the requirements for fencing without gates at the interface of lots and blocks in this plan adjacent any park or open space areas (D.P. Conditions No. 106), as well as requirements that the Owner develop and deliver to all purchasers and transferees of the lots in this plan, a homeowner guide/education package acceptable to the City and UTRCA. (D.P. Conditions No. 109 and 120)

Provincial Policy Statement, 2014

Based on the accepted EIS, the recommended draft plan and conditions of draft approval are consistent with the Provincial Policy Statement - Section 2.1 Natural Heritage 2.1.1.: *"Natural features and areas shall be protected for the long term";* Section 2.1.8: *"Development and site alteration shall not be permitted on adjacent lands to the natural heritage features and areas identified in policies 2.1.4, 2.1.5, and 2.1.6 unless the ecological function of the adjacent lands has been evaluated and it has been demonstrated that there will be no negative impacts on the natural features or on their ecological functions"*

Official Plan

The recommended draft plan and conditions of draft approval conforms with the Official Plan under Section 15.1.1 Natural Heritage Objectives – 15.1.1ii) - *"Provide for the identification, protection and rehabilitation of significant natural heritage areas."* and Section 15.3.6. Ecological Buffers - *"Ecological buffers serve to protect the ecological function and integrity of the Natural Heritage System. Ecological buffers will be required around, or adjacent to, and other components of the Natural Heritage System, based upon the recommendations of an approved Environmental Impact Study."*

The London Plan

The recommended draft plan and conditions of draft approval conforms with The London Plan (as adopted by Council and currently under appeal) under Policy 1308–2 - *"Provide for the identification, protection, rehabilitation, and management of natural heritage features and areas and their ecological functions."* and Policy 1412. - *"Ecological buffers are required to protect natural heritage features and areas, and their ecological functions and proceesses, to maintain the ecologcial integrity of the Natural Heritage System."*

More information and detail is available in Appendix B and C of this report. The consultant's response to the EEPAC comments is provided in Appendix C.

4.5 Issue and Consideration # 5 – Is the recommended Official Plan Amendment appropriate?

Schedule "C", Transportation Corridors map is recommended to be amended by deleting the "Secondary Collector" road classification on the east side of Hamilton Road. The alignment as shown on Schedule "C" appears as a short "loop" or "crescent" connecting future development with access to Hamilton Road via Oriole Drive and Bobolink Lane (see Appendix D map excerpt). The subdivision draft plan continues to incorporate the basic configuration, except it would be to the standards of a local street. The City's Transportation Planning and Design and Development Services staff have reviewed the proposed draft plan and have no concerns with the change in classification to a local street. This follows a recent amendment to the Official Plan to change the road classification on the west side of Hamilton Road (Oriole Drive) from a "Primary Collector" to a local road. It is also consistent with Map 3 - Street Classifications Map in The London Plan, which identifies the lands on the east side of Hamilton Road to be served by future Neighbourhood Streets.

4.6 Issue and Consideration # 6 – Is the recommended zoning appropriate?

The following provides a synopsis of the recommended zones, permitted uses, regulations, and holding provisions to be applied to lots and blocks within the draft plan. Reference should be made to the Zoning Amendment Map found in Appendix "A-2" of this report.

Single Detached Residential Lots 1 to 64, Lots 66 to 67, and Lot 69 – are recommended to be zoned holding Residential R1 Special Provision (h•h-100•R1-3(*)) Zone to permit single detached dwellings on lots with a minimum lot frontage of 10 metres and minimum lot area of 300 square metres; together with a special provision for a maximum lot coverage of 45% for one (1) storey. The special provision to increase lot coverage from 40% to 45% will allow for construction of one floor bungalows with flexibility to add slightly more livable floor area to meet the needs of home builders and purchasers. The recommended zoning is consistent with the R1-3(17) zoning approved for the applicant's Old Victoria East subdivision now being developed on the west side of Hamilton Road which has similar sized lots. It should be noted that Lot 65 is recommended to be "red-lined" out of the draft plan and will maintain the existing R1-14 Zoning. The lot contains an existing dwelling that now represents a remnant parcel as a result of a severance application to sever the vacant rear portion of the property to be joined with the proposed subdivision lands.

Single Detached Residential Lot 68 – is recommended to be zoned holding Residential R1 Special Provision (h•h-100•R1-3(**)) Zone with a special provision to permit the existing single detached dwelling with minimum front yard depth of 1.5 metres. This special provision zone will provide for the retention of the existing dwelling in its present location. The owner has expressed a strong desire to retain the dwelling consisting of a brick bungalow in good condition on its own lot within the draft plan of subdivision. Based on an accepted design option for the future Oriole Drive alignment, the edge of the road allowance will be approximately 2.0 metres from the southwest corner of the house, plus a 5.25 metre wide boulevard. Although there will be a relatively shallow front yard, the house will be retained on a much larger lot area providing sufficient clearance for a driveway and parking leading to the side and rear yard.

Street Townhouse Block 72 – is recommended to be zoned holding Residential R4 Special Provision (h•h-100•R4-6( )) Zone to permit street townhouse dwellings with a minimum lot area per unit of 145 square metres, together with a special provision for a minimum lot frontage of 7.0 metres, a minimum front and exterior side yard depth of 3.0

metres to the main building and 6.0 metres to the garage, and minimum rear yard depth of 6.0 metres where access from the front yard to the rear yard of each unit is provided through the garage. A 5.5 metre minimum lot frontage per unit is the standard regulation. However, recently staff have been recommending a minimum lot frontage of 7.0 metres per unit in order to ensure there is adequate spatial separation to install and maintain underground utility, water and private drain connections between the unit and the services within the road allowance that it fronts on.

A minimum front and exterior side yard depth of 3.0 metres to the main building in place of the zone standard of 4.5 metres has been determined to be appropriate, and achieves community design objectives in the Old Victoria Area Plan for a strong building orientation to the street. Recognizing that Block 72 backs onto a developed area with fairly deep lots and deep rear yards, staff are of the opinion that a regulation that requires a 6.0 metres minimum rear yard setback for the street townhouse block is appropriate. Given that the proposed block is long and its depth is shallow, the unit's rear yards are expected to be wider. Therefore, a 6.0 metre minimum rear yard depth should provide sufficient buffer adjacent to existing residential rear yards.

Cluster Housing Blocks 70 & 71 – are recommended to be zoned holding Residential R6 Special Provision (h•h-100•R6-5( )) Zone to permit various forms of cluster housing including single detached, semi-detached, duplex, triplex, fourplex, townhouse, stacked townhouse, and apartment buildings up to a maximum density of 35 units per hectare and maximum height of 12 metres; together with a special provision for minimum interior side and rear yard depth of 5.0 metres (in place of 6.0 metres when the wall of a unit contains windows to habitable rooms), and to permit open or covered but unenclosed decks or porches not exceeding one storey in height to project into the required yard no closer than 2.0 metres (in place of 3.0 metres) to a lot line adjacent an Open Space (OS5) Zone. These blocks are intended to be developed for a Vacant Land Condominium with access provided by a private driveway. The recommended special provisions for yard setbacks and yard encroachments have been determined to be appropriate, as the block is intended to be developed for single detached cluster housing within a confined area surrounded by open space.

Open Space Blocks 73 to 79 – are recommended to be zoned Open Space (OS5) Zone to permit such uses as conservation lands, conservation works, passive recreation uses which include hiking trails and multi-use pathways, and managed woodlots. This zone is appropriate for the natural heritage features within the subdivision plan that are to be protected and maintained as Open Space, including the adjacent buffer blocks.

Holding Provisions
Since this subdivision will be developed in phases, it is recommended that the standard holding (h) provision be applied to all proposed residential lots and blocks. The "h" provision is applied in almost all subdivision approvals for the purpose of ensuring adequate provision of municipal services, that the required security has been provided, and that a Subdivision Agreement or Development Agreement is entered into. A holding (h-100) provision is recommended for all residential blocks in the subdivision in order to ensure there is adequate water service and appropriate access. A looped watermain system must be constructed and a second public access must be available.

The recommended zones for the various lots and blocks within the proposed draft plan of subdivision, and the holding provisions applied to the zones, are considered appropriate and conform with the land use designations and policies of the Official Plan, the Place Types and policies of The London Plan, and are in keeping with the guidelines of the Old Victoria Area Plan.

4.7 Issue and Consideration # 7 – Is the subdivision design in keeping the Old Victoria Area Plan and City's Placemaking Design Guidelines?

The main attraction of this site is the unique backdrop of natural areas and passive open space. Both components of the public and private realm incorporate these features into the subdivision design. Street 'B' ties the subdivision together and is the main focal point providing a "window" street to the open space on the east side, and a long street townhouse block on the west provides opportunities for a strong street-oriented built form. The proposed private driveway serving the vacant land condominium block will act as a window street to the open space as its key design feature. Street 'A' (Bobolink Lane) and

Street 'C' (Oriole Drive) will be the main entrances to the neighbourhood providing public road connections to Hamilton Road. The site's configuration is the major influence on the road and lot pattern which has been largely determined by the development limits and buffer setbacks from the ESA. Buffers generally range from 10 to 30 metres along the edge of the ESA and its features, including some identified encroachment and compensation areas. The subdivision plan provides good connectivity with two public access points to Hamilton Road, and planning for a future multi-use trail through the area and around the adjacent SWM facility to the north, will provide excellent opportunities for walking and cycling. Overall, the design incorporates elements of the City's Placemaking and Old Victoria Area Plan Community Design Guidelines and is considered to be appropriate.

5.0 Conclusion

Based on Staff's review, the proposed Thames Village Joint Venture Corp. Draft Plan of Subdivision, Official Plan and Zoning By-law amendments are consistent with the Provincial Policy Statement, The London Plan, the City's Official Plan, and the Old Victoria Area Plan. The recommended red-lined draft plan and conditions of draft approval will create a residential subdivision compatible with adjacent lands, provide good connectivity and opportunities for a multi-use trail system, and appropriate protection and enhancement of natural heritage resources. The proposed plan represents good land use planning and is an appropriate form of development.

Recommended by:	**Larry Mottram, MCIP, RPP** **Senior Planner, Development Services**
Reviewed by:	**Lou Pompilii, MCIP RPP** **Manager, Development Planning (Subdivision)**
Concurred in by:	**Paul Yeoman, RPP, PLE** **Director, Development Services**
Submitted by:	**George Kotsifas, P.ENG** **Managing Director, Development and Compliance Services and Chief Building Official**
Note: The opinions contained herein are offered by a person or persons qualified to provide expert opinion. Further detail with respect to qualifications can be obtained from Development Services.	

June 11, 2018
GK/PY/MF/LP/LM/lm

Y:\Shared\DEVELOPMENT SERVICES\4 - Subdivisions\2017\39T-17502 - 1738, 1752 and 1756 Hamilton Road (LM)\Draft Approval\PEC Report.docx

CC. Matt Feldberg, Manager, Development Services (Subdivisions) – electronic only

Appendix A

Appendix "A-1"

Bill No. (number to be inserted by Clerk's Office)
2018

By-law No. C.P.-1284-
A by-law to amend the Official Plan for the City of London, 1989 relating to properties located at 1738, 1742, 1752 and 1756 Hamilton Road.

The Municipal Council of The Corporation of the City of London enacts as follows:

1. Amendment No. (to be inserted by Clerk's Office) to the Official Plan for the City of London Planning Area – 1989, as contained in the text attached hereto and forming part of this by-law, is adopted.

2. This by-law shall come into effect in accordance with subsection 17(38) of the *Planning Act, R.S.O. 1990*, c.P.13.

PASSED in Open Council on June 26, 2018.

Matt Brown
Mayor

Catharine Saunders
City Clerk

First Reading – June 26, 2018
Second Reading – June 26, 2018
Third Reading – June 26, 2018

File: 39T-17502 / OZ-8147
Planner: L. Mottram

AMENDMENT NO.

to the

OFFICIAL PLAN FOR THE CITY OF LONDON

A. PURPOSE OF THIS AMENDMENT

The purpose of this Amendment is:

1. To amend Schedule "C" – Transportation Corridors of the Official Plan to delete the "Secondary Collector" road classification.

B. LOCATION OF THIS AMENDMENT

1. This Amendment applies to lands located at 1738, 1742, 1752 and 1756 Hamilton Road in the City of London.

C. BASIS OF THE AMENDMENT

The amendment is being considered in conjunction with a proposed draft plan of subdivision consisting of low density residential uses served by local streets, including two public road connections to Hamilton Road. The City's Transportation Planning and Design and Development Services staff have reviewed the proposed draft plan and have no concerns with the change in classification to a local street. This follows a recent decision by Municipal Council to amend the Official Plan to change the road classification on the west side of Hamilton Road (Oriole Drive) from a "Primary Collector" to a local road. It is also consistent with Map 3 - Street Classifications Map in The London Plan, as adopted by Municipal Council, which identifies the lands on the east side of Hamilton Road to be served by future Neighbourhood Streets.

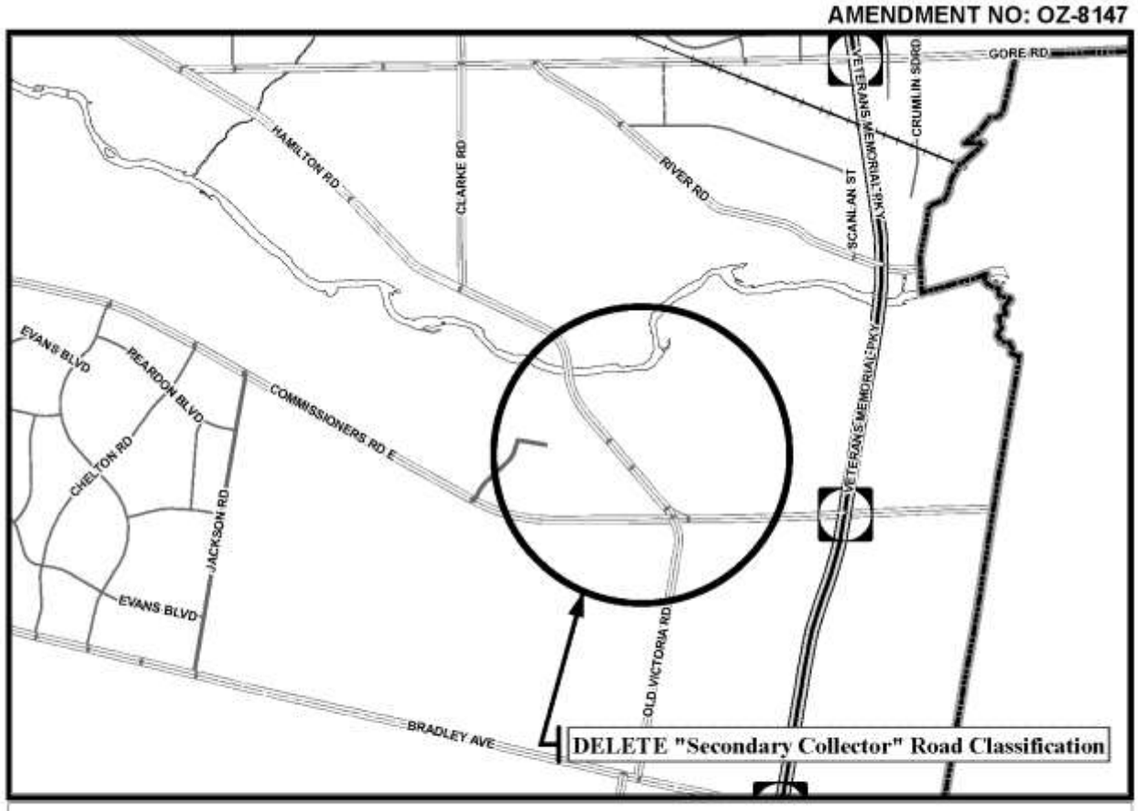
D. THE AMENDMENT

The Official Plan for the City of London is hereby amended as follows:

1. Schedule "C", Transportation Corridors to the Official Plan for the City of London is amended by deleting the "Secondary Collector" road classification, as indicated on the schedule attached hereto.

File: 39T-17502 / OZ-8147
Planner: L. Mottram

AMENDMENT NO: OZ-8147



Legend

ROAD CLASSIFICATION

- Secondary Collector
- Primary Collector
- Arterial
- Freeway
- Expressway

PROPOSED ROAD CORRIDOR

- Proposed Secondary Collector
- Proposed Primary Collector
- Proposed Arterial
- Proposed Freeway
- Proposed Expressway
- Proposed Interchange

THIS IS AN EXCERPT FROM THE PLANNING DIVISION'S WORKING CONSOLIDATION OF SCHEDULE C TO THE CITY OF LONDON OFFICIAL PLAN, WITH ADDED NOTATIONS

SCHEDULE C TO OFFICIAL PLAN

AMENDMENT NO. OZ-8147

PREPARED BY: Graphics and Information Services

Scale 1:30,000

Meters

FILE NUMBER:	OZ-8147
PLANNER:	LM
TECHNICIAN:	RC
DATE:	2018/01/25

PROJECT LOCATION: E:\Planning\Projects\p_officialplan\workconsol00\amendments\oz-8147-revised\OPA_OVE_Jan2018_scheduleC_b&w_8x11_with_SWAP.mxd

File: 39T-17502 / OZ-8147
Planner: L. Mottram

Appendix "A-2"

Bill No.(number to be inserted by Clerk's Office)
2018

By-law No. Z.-1-18_____

A by-law to amend By-law No. Z.-1 to rezone an area of land located at 1738, 1742, 1752 and 1756 Hamilton Road.

WHEREAS Thames Village Joint Venture Corp. has applied to rezone an area of land located at 1738, 1742, 1752 and 1756 Hamilton Road, as shown on the map attached to this by-law, as set out below;

AND WHEREAS this rezoning conforms to the Official Plan;

THEREFORE the Municipal Council of The Corporation of the City of London enacts as follows:

1) Schedule "A" to By-law No. Z.-1 is amended by changing the zoning applicable to lands located at 1738, 1742, 1752 and 1756 Hamilton Road, as shown on the attached map, from an Urban Reserve (UR4) Zone, a holding Urban Reserve (h-2•UR4) Zone, a Residential R1 (R1-14) Zone, an Environmental Review (ER) Zone, an Open Space (OS4) Zone, and a holding Open Space (h-2•OS4) Zone to a holding Residential R1 Special Provision (h•h-100•R1-3(*)) Zone, a holding Residential R1 Special Provision (h•h-100•R1-3(**)) Zone, a holding Residential R4 Special Provision (h•h-100•R4-6( )) Zone, a holding Residential R6 Special Provision (h•h-100•R6-5( )) Zone, and an Open Space (OS5) Zone.

2) Section Number 5.4 of the Residential R1 Zone is amended by adding the following Special Provision:

) R1-3(*)

a) Regulations

i)	Lot Coverage One (1) Storey Single Detached Dwelling (Maximum)	45%

) R1-3(**)

a) Regulations

i)	Front Yard Depth For Existing Dwelling (Minimum)	1.5 metres

3) Section Number 8.4 of the Residential R4 Zone is amended by adding the following Special Provision:

) R4-6( )

a) Regulations

i)	Lot Frontage (Minimum)	7.0 metres
ii)	Front and Exterior Yard Depth for Main Dwelling (Minimum)	3.0 metres

iii)	Front and Exterior Yard Depth for Garage (Minimum)	6.0 metres
iv)	Rear Yard Depth Where Access From The Front Yard to the Rear Yard is through the Garage (Minimum)	6.0 metres

4) Section Number 10.4 of the Residential R6 Zone is amended by adding the following Special Provision:

) R6-5( )

a) Regulations

i)	Interior Side and Rear Yard Depth (Minimum)	5.0 metres
ii)	Open or covered but unenclosed decks or porches not exceeding one (1) storey in height may project into the required yard no closer than 2.0 metres to lot line adjacent an Open Space (OS5) Zone	

The inclusion in this By-law of imperial measure along with metric measure is for the purpose of convenience only and the metric measure governs in case of any discrepancy between the two measures.

This By-law shall come into force and be deemed to come into force in accordance with Section 34 of the *Planning Act*, *R.S.O. 1990, c. P13,* either upon the date of the passage of this by-law or as otherwise provided by the said section.

PASSED in Open Council on June 26, 2018.

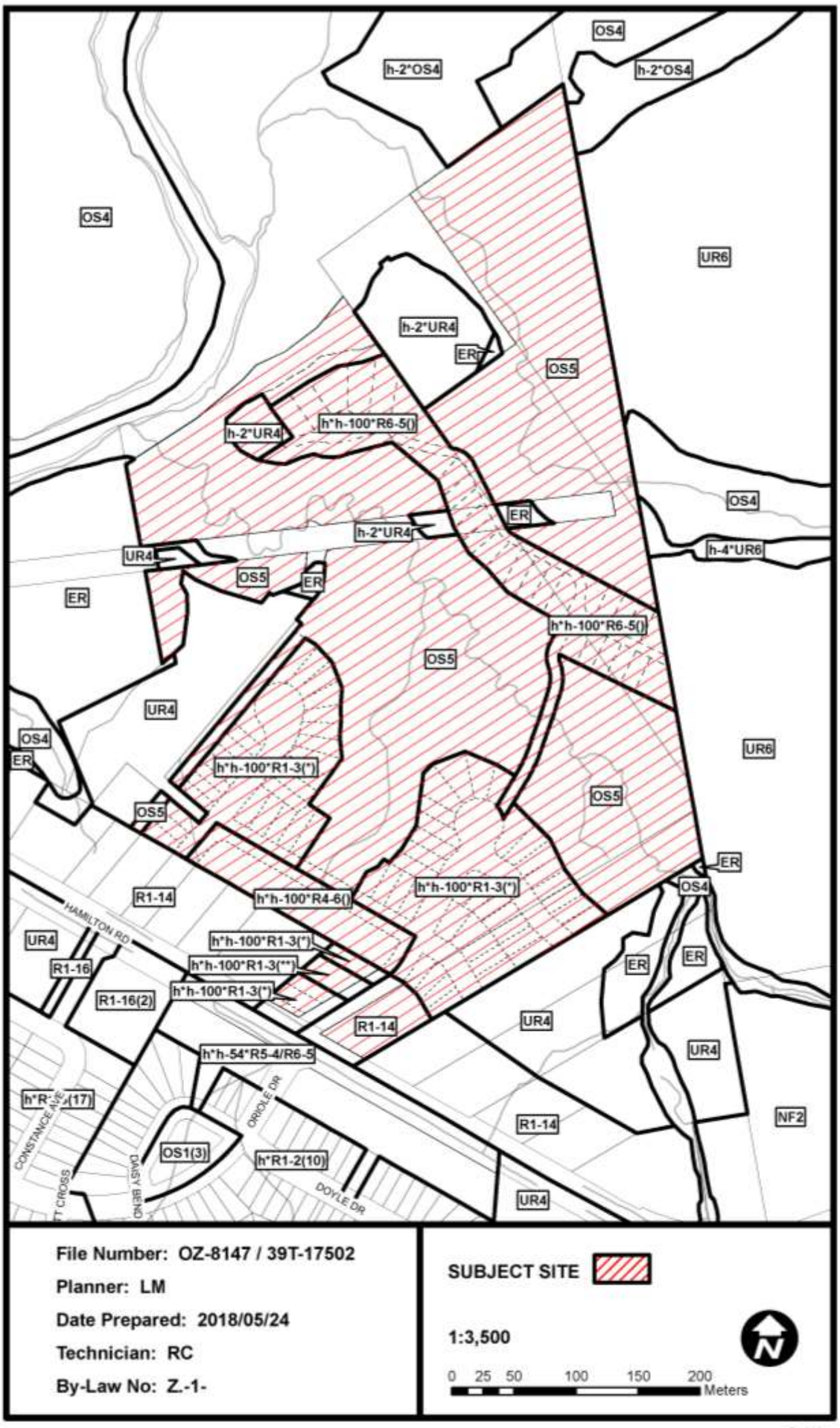
Matt Brown
Mayor

Catharine Saunders
City Clerk

First Reading – June 26, 2018
Second Reading – June 26, 2018
Third Reading – June 26, 2018

File: 39T-17502 / OZ-8147
Planner: L. Mottram

AMENDMENT TO SCHEDULE "A" (BY-LAW NO. Z.-1)



File: 39T-17502 / OZ-8147
Planner: L. Mottram

Appendix "A-3"
(Conditions to be included for draft plan approval)

THE CORPORATION OF THE CITY OF LONDON'S CONDITIONS AND AMENDMENTS TO FINAL APPROVAL FOR THE REGISTRATION OF THIS SUBDIVISION, FILE NUMBER 39T-17502 ARE AS FOLLOWS:

NO.	CONDITIONS

1. This draft approval applies to the draft plan as submitted by Thames Village Joint Venture Corporation (File No. 39T-17502), prepared by Archibald, Gray & McKay and certified by Juan D. Zapata, Ontario Land Surveyor dated , 2018 (Project No. OVE DP), as red-lined revised, which shows 69 single detached residential lots, 2 cluster housing blocks, 1 street townhouse block, 7 open space blocks, 1 road widening block, 2 reserve blocks, 2 temporary turning circles, and 3 local streets.

2. This approval applies for three years, and if final approval is not given by that date, the draft approval shall lapse, except in the case where an extension has been granted by the Approval Authority.

3. The road allowances included in this draft plan shall be shown on the face of the plan and dedicated as public highways.

4. The Owner shall request that street(s) be named to the satisfaction of the City.

5. The Owner shall request that the municipal addresses be assigned to the satisfaction of the City.

6. Prior to final approval, the Owner shall submit to the City a digital file of the plan to be registered in a format compiled to the satisfaction of the City of London and referenced to NAD83UTM horizon control network for the City of London mapping program.

7. The Owner shall enter into the City's standard subdivision agreement (including any added special provisions) which shall be registered against the lands to which it applies. Prior to final approval the Owner shall pay in full all municipal financial obligations/encumbrances on the said lands, including property taxes and local improvement charges.

8. In conjunction with registration of the Plan, the Owner shall provide to the appropriate authorities such easements and/or land dedications as may be required for all municipal works and services associated with the development of the subject lands, such as road, utility, drainage or stormwater management (SWM) purposes, to the satisfaction of the City, at no cost to the City.

9. Prior to final approval, for the purposes of satisfying any of the conditions of draft approval herein contained, the Owner shall file with the City a complete submission consisting of all required clearances, fees, and final plans, and to advise the City in writing how each of the conditions of draft approval has been, or will be, satisfied. The Owner acknowledges that, in the event that the final approval package does not include the complete information required by the City, such submission will be returned to the Owner without detailed review by the City.

10. Prior to final approval, for the purpose of satisfying any of the conditions of draft approval herein contained, the Owner shall file with the City complete submissions consisting of all required studies, reports, data, information or detailed engineering drawings, all to the satisfaction of the City. The Owner acknowledges that, in the event that a submission does not include the complete information required, such submission will be returned to the Owner without detailed review by the City.

SEWERS & WATERMAINS

Sanitary:

11. In conjunction with the Focused Design Studies submission, the Owner shall have his consulting engineer prepare and submit the following sanitary servicing design information:
    i) A preliminary sanitary drainage area plan, including the sanitary sewer routing and the external areas to be serviced, to the satisfaction of the City. Due to the depth of the outlet sewer on Hamilton Road, the sanitary plan shall include design details related to the connection of the internal sewers to the existing sewer on Hamilton Road and the proposed inverts of the internal subdivision sewers;
    ii) A servicing report for the lands which have been identified as requiring pumped sanitary servicing. The report shall confirm that there is no viable option to provide gravity servicing, identify that a pumped system would be constructed at the Owner's cost and be privately owned and operated, identify the type of private servicing system(s) which may be implemented and describe how the ownership and operation of the private system will be managed for the development of the lands within Blocks 70 and 71.
    iii) A servicing report that demonstrates an outlet to serve the subject lands and how it will ultimately outlet to the municipal sanitary sewer on Hamilton Road.
    iv) A suitable routing for the sanitary sewer to be constructed through this plan. Further to this, the consulting engineer shall be required to provide an opinion for the need for an Environmental Assessment under the Class EA requirements for this sanitary trunk sewer;
    v) An analysis to establish the water table level of lands within the subdivision with respect to the depth of the sanitary sewers and recommend additional measures, if any, which need to be undertaken to meet allowable inflow and infiltration levels as identified by OPSS 410 and OPSS 407;
    vi) Confirmation that the Upper Thames River Conservation Authority has agreed in principle to the construction of any proposed sanitary sewer through any Blocks in this Plan within the UTRCA regulatory area.

12. In accordance with City standards or as otherwise required by the City Engineer, the Owner shall complete the following for the provision of sanitary services for this draft plan of subdivision:
    i) Construct sanitary sewers to serve this Plan and connect them to the existing municipal sewer system, namely, the 750 mm (30") diameter sanitary sewer located on Hamilton Road.
    ii) Construct a maintenance access road and provide a standard municipal easement for any section of the sewer not located within the road allowance, to the satisfaction of the City;
    iii) Make provisions for oversizing of the internal sanitary sewers in this draft plan to accommodate flows from the upstream lands external to this plan, all to the satisfaction of the City. This sewer must be extended to the limits of this plan and/or property line to service the upstream external lands; and
    iv) Where trunk sewers are greater than 8 metres in depth and are located within the municipal roadway, the Owner shall construct a local sanitary sewer to provide servicing outlets for private drain connections, to the satisfaction of the City. The local sanitary sewer will be at the sole cost of the Owner. Any exception will require the approval of the City Engineer.

13. In order to prevent any inflow and infiltration from being introduced to the sanitary sewer system, the Owner shall, throughout the duration of construction within this plan, undertake measures within this draft plan to control and prevent any inflow and infiltration and silt from being introduced to the sanitary sewer system during and after construction, satisfactory to the City, at no cost to the City, including but not limited to the following:

i) Not allowing any weeping tile connections into the sanitary sewers within this Plan;
ii) Permitting the City to undertake smoke testing or other testing of connections to the sanitary sewer to ensure that there are no connections which would permit inflow and infiltration into the sanitary sewer.
iii) Having his consulting engineer confirm that the sanitary sewers meet allowable inflow and infiltration levels as per OPSS 410 and OPSS 407; and
iv) Implementing any additional measures recommended through the engineering drawing submission.
v) Installing Parson Manhole Inserts (or approved alternative satisfactory to the City Engineer) in all sanitary sewer maintenance holes at the time the maintenance hole(s) are installed within the proposed draft plan of subdivision. The Owner shall not remove the inserts until sodding of the boulevard and the top lift of asphalt is complete, all to the satisfaction of the City Engineer.

14. Prior to registration of this Plan, the Owner shall obtain consent from the City Engineer to reserve capacity at the Pottersburg Pollution Control Plant for this subdivision. This treatment capacity shall be reserved by the City Engineer subject to capacity being available, on the condition that registration of the subdivision agreement and the plan of subdivision occur within one (1) year of the date specified in the subdivision agreement.

Failure to register the Plan within the specified time may result in the Owner forfeiting the allotted treatment capacity and, also, the loss of his right to connect into the outlet sanitary sewer, as determined by the City Engineer. In the event of the capacity being forfeited, the Owner must reapply to the City to have reserved sewage treatment capacity reassigned to the subdivision.

Storm and Stormwater Management (SWM)

15. In conjunction with the Focused Design Studies submission, the Owner shall have his consulting engineer prepare and submit a Storm/Drainage and SWM Servicing Functional Report or a SWM Servicing Letter/Report of Confirmation to address the following:
i) Identifying the storm/drainage and SWM servicing works for the subject and external lands and how the interim drainage from external lands will be handled, all to the satisfaction of the City;
ii) Identifying major and minor storm flow routes for the subject and external lands, to the satisfaction of the City. This plan is to indicate any interim and ultimate conditions and any associated infrastructure and easements;
iii) Providing a preliminary plan demonstrating how the proposed grading and road design will match the grading of the proposed Stormwater Management Facility to be built by the City;
iv) Addressing the rerouting, enclosure and/or removal of any existing open watercourses in this plan and identify the needs for any setbacks from the open watercourses;
v) Providing details of the crossing of the watercourse to Block 70;
vi) Developing an erosion/sediment control plan that will identify all erosion and sediment control measures for the subject lands in accordance with City of London and Ministry of the Environment standards and requirements, all to the satisfaction of the City. This plan is to include measures to be used during all phases on construction; and
vi) Implementing SWM soft measure Best Management Practices (BMP's) within the Plan, where possible, to the satisfaction of the City. The acceptance of these measures by the City will be subject to the presence of adequate geotechnical conditions within this Plan and the approval of the City Engineer.

16. The above-noted Storm/Drainage and SWM Servicing Functional Report or a SWM Servicing Letter/Report of Confirmation, prepared by the Owner's consulting professional engineer, shall be in accordance with the recommendations and requirements of the following:
    i) The SWM criteria and environmental targets for the South Thames Subwatershed Study and any addendums/amendments;
    ii) The Municipal Class Environmental Assessment Environmental Study Report for Old Victoria Plan – Storm Drainage and Stormwater Management Servicing Works (January 15, 2009);
    iii) The approved Functional Stormwater Management Plan/Report for Old Victoria SWMF # 1 (AECOM 2015) and any other applicable Storm/Drainage and SWM Servicing Functional Report(s) for the subject lands or outlet systems;
    iv) The City's Design Requirements for Permanent Private Stormwater Systems were approved by City Council and is effective as of January 1, 2012. The stormwater requirements for PPS for all medium/high density residential, institutional, commercial and residential development sites are contained in this document, which may include but not be limited to quantity/quality control, erosion, stream morphology, etc.
    v) The approved Storm/Drainage and SWM Servicing Functional Report for the subject lands;
    vi) The Stormwater Letter/Report of Confirmation for the subject development prepared and accepted in accordance with the file manager process;
    vii) The City of London Environmental and Engineering Services Department Design Specifications and Requirements, as revised;
    viii) The City's Waste Discharge and Drainage By-laws, lot grading standards, Policies, requirements and practices;
    ix) The Ministry of the Environment SWM Practices Planning and Design Manual, as revised; and
    x) Applicable Acts, Policies, Guidelines, Standards and Requirements of all required approval agencies.

17. In accordance with City standards or as otherwise required by the City Engineer, the Owner shall complete the following for the provision of stormwater management (SWM) and stormwater services for this draft plan of subdivision:
    i) Construct storm sewers to serve this plan, located within the South Thames Subwatershed, and outlet them to the Thames River via the proposed regional Stormwater Management (SWM) Facility (Old Victoria SWM # 1) and the identified Tributary 2 in the Functional Stormwater Management Plan/Report for Old Victoria SWMF # 1 Report and all related stormwater/drainage servicing infrastructure in and related to, this plan of subdivision;
    ii) Make provisions to oversize and deepen the internal storm sewers, if necessary, in this plan to accommodate flows from upstream lands external to this plan;
    iii) Grade and drain all boundaries of the Lots/Blocks, open space and renaturalization areas in this plan to blend in with the abutting SWM Facility in this plan, at no cost to the City;
    iv) Construct and implement erosion and sediment control measures as accepted in the Storm/Drainage and SWM Servicing Functional Report or a SWM Servicing Letter/Report of Confirmation for these lands, the Owner shall confirm the required erosion and sediment control measures were maintained and operating as intended during all phases of construction, and the Owner shall correct any deficiencies of the erosion and sediment control measures forthwith; and
    vi) Address forthwith any deficiencies of the stormwater works and/or monitoring program.

18. Prior to the issuance of any Certificates of Conditional Approval for any lot/block in this plan, or as otherwise approved by the City, the Owner shall complete the following:
    i) All storm/drainage and SWM related works to serve this plan must be constructed and operational in accordance with the approved design criteria and accepted drawings, all to the satisfaction of the City;
    ii) Construct and have operational the major and minor storm flow routes for the subject lands, to the satisfaction of the City;
    iii) Implement the re-routing, enclosure and/or removal of any existing open watercourses in this plan and identify the needs for any setbacks from the open watercourses, to the satisfaction of the UTRCA and City; and,
    iv) Implement all geotechnical/slope stability recommendations made by the geotechnical report accepted by the City.

19. Prior to the issuance of any Certificates of Conditional Approval for any Lots/Blocks in this plan, the Old Victoria SWMF # 1, to be built by the City, to serve this plan, must be constructed and operational.

20. The Owner shall cross reference the submitted draft plan with the reference plan 33R-19767 for the adjacent Old Victoria SWM Facility # 1 block to ensure they are consistent as there are some discrepancies. Any additional land shall be included as part of the adjacent Open Space Block.

21. In conjunction with the engineering drawing submission, the Owner's professional engineer shall certify the subdivision has been designed such that increased and accelerated stormwater runoff from this subdivision will not cause damage to downstream lands, properties or structures beyond the limits of this subdivision. Notwithstanding any requirements of, or any approval given by the City, the Owner shall indemnify the City against any damage or claim for damages arising out of or alleged to have arisen out of such increased or accelerated stormwater runoff from this subdivision.

22. In conjunction with the Focused Design Studies submission, the Owner shall have a report prepared by a qualified consultant, and if necessary, a detailed hydro geological investigation carried out by a qualified consultant, to determine, including but not limited to, the following:
    i) the effects of the construction associated with this subdivision on the existing ground water elevations and domestic or farm wells in the area
    ii) identify any abandoned wells in this plan
    iii) assess the impact on water balance in the plan
    iv) any fill required in the plan
    v) provide recommendations for foundation design should high groundwater be encountered
    vi) identify all required mitigation measures including the design and implementation of Low Impact Development (LIDs) solutions
    vii) address any contamination impacts that may be anticipated or experienced as a result of the said construction
    ix) provide recommendations regarding soil conditions and fill needs in the location of any existing watercourses or bodies of water on the site.
    x) To meet allowable inflow and infiltration levels as identified by OPSS 410 and OPSS 407, include an analysis to establish the water table level of lands within the subdivision with respect to the depth of the sanitary sewers and recommend additional measures, if any, which need to be undertaken

    all to the satisfaction of the City.

23. Prior to the issuance of any Certificate of Conditional Approval, the Owner's professional engineer shall certify that any remedial or other works as recommended in the accepted hydro geological report are implemented by the Owner, to the satisfaction of the City, at no cost to the City.

24. The Owner shall ensure that any storm drainage areas within this draft plan of subdivision which cannot be serviced by the proposed SWM Facility shall be identified and SWM on-site controls for these specified areas shall be provided in accordance with the accepted Design Requirement for Permanent Private Stormwater Systems, all to the satisfaction of the City Engineer. Also, any parts of this draft plan that are not serviced by the proposed Old Victoria SWMF # 1 shall be required to provide quality controls for all storm flows, all to the satisfaction of the City Engineer.

25. The Owner's professional engineer shall ensure that all existing upstream external flows traversing this plan of subdivision are accommodated within the overall minor and major storm conveyance servicing system(s) design, all to the specification and satisfaction of the City Engineer.

26. The Owner shall develop the proposed plan of subdivision in accordance with the Design and Construction of Stormwater Management Facilities, Policies and processes identified in Appendix 'B-1' and 'B-2" Stormwater Management Facility "Just in Time" Design and Construction Process adopted by Council on July 30, 2013 as part of the Development Charges Policy Review: Major Policies Covering Report.

27. The Owner shall ensure the post-development discharge flow from the subject site must not exceed capacity of the stormwater conveyance system. In an event where the condition cannot be met, the Owner shall provide SWM on-site controls that comply to the accepted Design Requirements for permanent Private Stormwater Systems.

Watermains

28. In conjunction with the engineering drawings submission, the Owner shall have their consulting engineer prepare and submit a water servicing report including the following design information, all to the satisfaction of the City Engineer:

    i) Water distribution system analysis & modeling and hydraulic calculations for the Plan of Subdivision confirming system design requirements are being met;
    ii) Identify domestic and fire flows for the potential ICI/medium/high density Blocks from the low-level water distribution system;
    iii) Address water quality and identify measures to maintain water quality from zero build-out through full build-out of the subdivision;
    iv) Include modeling for two fire flow scenarios as follows:
        - Max Day + Fire confirming velocities and pressures within the system at the design fire flows; and
        - Max Day + Fire confirming the available fire flows at fire hydrants at 20 PSI residual. Identify fire flows available from each proposed hydrant to be constructed and determine the appropriate colour hydrant markers (identifying hydrant rated capacity);
    v) Include a phasing report as applicable which addresses the requirement to maintain interim water quality;
    vi) Develop a looping strategy when development is proposed to proceed beyond 80 units;
    vii) Provide a servicing concept for the proposed street townhouse (or narrow frontage) lots which demonstrates separation requirements for all services in being achieved;
    viii) Identify any water servicing requirements necessary to provide water servicing to external lands, incorporating existing area plans as applicable;
    ix) Identify any need for the construction of or improvement to external works necessary to provide water servicing to this Plan of Subdivision;

x) Identify any required watermain oversizing, if necessary, and any cost sharing agreements;
xi) Identify the effect of development on existing water infrastructure – identify potential conflicts;
xii) Include full-sized water distribution and area plan(s);
xiii) Identify on the water distribution plan the location of valves, hydrants, and the type and location of water quality measures to be implemented (including automatic flushing devices), the fire hydrant rated capacity and marker colour and the design fire flow applied to development blocks.

29. Prior to the issuance of any Certificates of Conditional Approval the Owner shall install and commission the accepted water quality measures required to maintain water quality within the water distribution system during build-out, all to the satisfaction of the City Engineer, at no cost to the City. The measures which are necessary to meet water quality requirements, including their respective flow settings, etc. shall be shown clearly on the engineering drawings.

30. The Owner shall ensure implemented water quality measures shall remain in place until there is sufficient occupancy demand to maintain water quality within the Plan of Subdivision without their use. The Owner is responsible for the following:
i) to meter and pay the billed costs associated with any automatic flushing devices including water discharged from any device at the time of their installation until removal/assumption
ii) any incidental and/or ongoing maintenance of the automatic flushing devices
iiii) payment for maintenance costs for these devices incurred by the City on an ongoing basis until removal/assumption
iv) all works and the costs of removing the devices when no longer required

31. The Owner shall ensure the limits of any request for Conditional Approval shall conform to the staging plan as set out in the accepted water servicing report and shall include the implementation of the interim water quality measures. In the event the requested Conditional Approval limits differ from the phasing as set out in the accepted water servicing report, the Owner would be required to submit revised plans and hydraulic modeling, as necessary to address water quality.

32. Prior to the issuance of any Certificates of Conditional Approval, and in accordance with City standards, or as otherwise required by the City Engineer, the Owner shall complete the following for the provision of water service to this draft Plan of Subdivision:

i) Construct watermains to serve this Plan and connect them to the existing low-level municipal system, namely the existing 250 mm diameter watermain on Hamilton Road;
ii) Deliver confirmation that the watermain system has been looped to the satisfaction of the City Engineer when development is proposed to proceed beyond 80 units; and
iii) The available fire flow and appropriate hydrant colour code marker (in accordance with the City of London Design Criteria) are to be shown on the engineering drawings; the coloured fire hydrant markers will be installed by the City of London at the time of Conditional Approval;

33. The Owner shall obtain all necessary approvals from the City Engineer for the servicing of all Blocks in this Plan of Subdivision prior to the installation of any water services to or within these Blocks.

34. With respect to Blocks 70 and 71, the Owner shall include in all agreements of purchase and sale and/or lease, a warning clause advising the purchaser/transferee that if it is determined by the Ministry of Environment and Climate Change (MOECC) that the water servicing for the Block is a regulated

drinking water system, then the Owner or Condominium Corporation may be required to meet the regulations under the Safe Drinking Water Act and the associated regulation O.Reg. 170/03.

If deemed a regulated system, the City of London may be ordered by the Ministry of the Environment and Climate Change (MOECC) to operate this system in the future. The system may be required to be designed and constructed to City standards.

STREETS, TRANSPORATION & SURVEYS

Roadworks

35. The Owner shall construct a cul-de-sac(s) on Street 'A' and Street 'C' in accordance with City of London Standard DWG. SR-5.0, to the specifications and satisfaction of the City Engineer. The Owner shall provide a raised circular centre island within the cul-de-sac(s) or as otherwise directed by the City Engineer.

36. All through intersections and connections with existing streets and internal to this subdivision shall align with the opposing streets based on the centrelines of the street aligning through their intersections thereby having these streets centred with each other, unless otherwise approved by the City Engineer.

37. At 'tee' intersections, the projected road centreline of the intersecting street shall intersect the through street at 90 degrees with a minimum 6 metres (20') tangent being required along the street lines of the intersecting road, all to the satisfaction of the City Engineer.

38. In conjunction with the first submission of engineering drawings submission, the Owner shall have its consulting engineer provide the following, all to the specifications and satisfaction of the City Engineer:
    i) provide a proposed layout plan of the internal road network including taper details for streets in this plan that change right-of-way widths with minimum 30 metre tapers for review and acceptance with respect to road geometries, including but not limited to, right-of-way widths, centreline radii, tapers, bends, intersection layout, daylighting triangles, etc., and include any associated adjustments to the abutting lots. The roads shall be equally tapered and aligned based on the road centrelines and it should be noted tapers are not to be within intersections.

39. The Owner shall provide a minimum of 5.5 metres (18') along the curb line between the projected property lines of irregular shaped lots around the bends and/or around the cul-de-sacs on Street 'A' and Street 'C'.

40. The Owner shall ensure all streets with bends of approximately 90 degrees shall have a minimum inside street line radius with the following standard:

Road Allowance	S/L Radius
20.0 m	9.0 m
19.0 m	9.5 m
18.0 m	10.0 m

41. The Owner shall have its professional engineer design the roadworks in accordance with the following road widths:

    i) Bobolink Drive and Oriole Drive, Street 'A' (from Hamilton Road to Street 'B') and Street 'C' have a minimum road pavement width (excluding gutters) of 8.0 metres (26.2') with a minimum road allowance of 20 metres (66').

ii) Street ‘A’ (from Street ‘B’ to cul-de-sac) and Street ‘B’ have a minimum road pavement width (excluding gutters) of 6.0 metres (19.7’) with a minimum road allowance of 18 metres (60’).

42. The Owner shall align Street ‘A’ opposite Bobolink Lane, to the satisfaction of the City Engineer.

43. The Owner shall align Oriole Drive/Street ‘C’ opposite Oriole Drive to the west of Hamilton Road, to the satisfaction of the City Engineer.

44. Prior to the issuance of any Certificate of Conditional Approval, the Owner shall make an application to the City to lift the existing 0.3 metre reserves at the east limits of Bobolink Lane and Oriole Drive, to the satisfaction of the City.

45. In conjunction with Focused Design Studies submission, the Owner shall submit a concept plan to show how Municipal Nos. 1742 and 1746 Hamilton Road will be serviced and accessed and identifying the location of an easement over Blocks 70, 71 and 75 if needed for servicing and access of 1746 Hamilton Road.

46. The Owner shall register an easement for access from the easterly limit of Street ‘C’ to 1742 and 1746 Hamilton Road, to the satisfaction of the City Engineer.

47. Prior to the issuance of any Certificate of Conditional Approval, the Owner shall provide access for 1752 and 1754 Hamilton Road to Oriole Drive/Street ‘C’ and close and restore the boulevard for the existing accesses to Hamilton Road, to the satisfaction of the City, at no cost to the City.

48. The Owner shall contact the City to request the closure and conveyance of the existing road allowance within this plan, to the satisfaction of the City.

Sidewalks/Bikeways

49. The Owner shall construct a 1.5 (5’) sidewalk on one side of the following streets:
    i) Street ‘C’ – north and west boulevard
    ii) Bobolink Lane – west boulevard from Hamilton Road to Street ‘B’
    iii) Oriole Drive – west boulevard
    iv) Street ‘B’ – north boulevard

Street Lights

50. Within one year of registration of the plan, the Owner shall install street lighting on all streets and walkways in this plan to the satisfaction of the City, at no cost to the City. Where an Owner is required to install street lights in accordance with this draft plan of subdivision and where a street from an abutting developed or developing area is being extended, the Owner shall install street light poles and luminaires, along the street being extended, which match the style of street light already existing or approved along the developed portion of the street, to the satisfaction of the London Hydro for the City of London.

Boundary Road Works

51. The Owner shall red-line this plan to align Oriole Drive and opposite Oriole Drive in the subdivision on the west side of Hamilton Road, to the satisfaction of the City Engineer.

52. The Owner shall construct Bobolink Lane at the intersection of Hamilton Road with a minimum pavement width of 10.0 metres for a minimum storage length of 30.0 metres tapered back over a distance of 30.0 metres to a minimum pavement width of 8.0 metres on the standard road width of 20.0 metres.

53. The Owner shall align the travelled portion of Bobolink Lane perpendicular to Hamilton Road, to the satisfaction of the City Engineer.

54. The Owner shall construct Oriole Drive at the intersection of Hamilton Road with a minimum pavement width of 9.0 metres on a right-of-way width of 20.5 metres for a minimum storage length of 30.0 metres tapered back over a distance of 30.0 metres to the standard road width of 20.0 metres.

55. Prior to the issuance of a Certificate of Conditional Approval, the Owner shall undertake external works on Bobolink Lane and Oriole Drive, to construct fully serviced public street connections to the subdivision, all to the specifications and to the satisfaction of the City, at no cost to the City.

56. The Owner shall make minor boulevard improvements on Hamilton Road adjacent to this Plan, to the specifications of the City and at no cost to the City, consisting of clean-up, grading and sodding as necessary.

57. Prior to the issuance of any Certificate of Conditional Approval, the Owner shall install temporary street lighting at the intersection of Hamilton Road and Oriole Drive, and the intersection of Hamilton Road and Bobolink Lane, to the specifications of the City, at no cost to the City.

58. If the temporary access to 1691 Hamilton Road is still in place and functioning, prior to the issuance of any Certificate of Conditional Approval, the Owner shall construct a restricted access to Bobolink Lane in accordance with City standards, to the satisfaction of the City Engineer, at no cost to the City. Access to Bobolink Lane is to be restricted to right in/right out until such time as the temporary access to 1691 Hamilton Road is removed and decommissioned to the satisfaction of the City Engineer.

    Sufficient security shall be provided to remove the restricted access in the future, if necessary, to the satisfaction of the City Engineer.

59. The Owner shall remove the right in/right out access on Bobolink Lane at such time as the temporary access to 1691 Hamilton Road is removed and decommissioned, to the satisfaction of the City Engineer.

Road Widening

60. The Owner shall dedicate sufficient land to widen Hamilton Road to 18.0 metres (59.06') from the centreline of the original road allowance.

61. The Owner shall dedicate 6.0 m x 6.0 m "daylighting triangles" at the intersection of Oriole Drive with Hamilton Road in accordance with the Z-1 Zoning By-law, Section 4.24.

Vehicular Access

62. The Owner shall restrict access to Hamilton Road by establishing blocks for 0.3 metre (1') reserves along the entire Hamilton Road frontage, to the satisfaction of the City. All vehicular access is to be via the internal subdivision streets.

Construction Access/Second Access Roads

63. The Owner shall direct all construction traffic associated with this draft plan of subdivision to utilize Hamilton Road or other routes as designated by the City.

64. Should an emergency access be required to accommodate development, the Owner shall locate, construct, maintain and close the access to the satisfaction of the City Engineer.

65. The Owner shall ensure any emergency access required is satisfactory to the City with respect to all technical aspects, including adequacy of site lines, provisions of channelization, adequacy of road geometries and structural design, etc. and provide any necessary easements.

66. In the event any work is undertaken on an existing street, the Owner shall establish and maintain a Traffic Management Plan (TMP) in conformance with City guidelines and to the satisfaction of the City for any construction activity that will occur on existing public roadways. The Owner shall have it's contractor(s) undertake the work within the prescribed operational constraints of the TMP. The TMP will be submitted in conjunction with the subdivision servicing drawings for this plan of subdivision.

67. The Owner shall construct a temporary turning facility for vehicles at the following location(s), to the specifications of the City:

    i) Street 'B' – south limit
    ii) Street 'C' – south limit

    Temporary turning circles for vehicles shall be provided to the City as required by the City, complete with any associated easements. When the temporary turning circles(s) are no longer needed, the City will quit claim the easements which are no longer required, at no cost to the City.

68. The Owner shall notify the future owners of Blocks 70 and 71 that only one access will be permitted for the blocks to Street 'C'. A joint access agreement must be established for the shared access, to the specifications and satisfaction of the City.

GENERAL CONDITIONS

69. The Owner shall comply with any requirements of all affected agencies (eg. Hydro One Networks Incorporated, Ministry of Natural Resources, Upper Thames River Conservation Authority, etc.), all to the satisfaction of the City.

70. The Owner shall comply with all City of London standards, guidelines and requirements in the design of this draft plan and all required engineering drawings, to the satisfaction of the City. Any deviations from the City's standards, guidelines or requirements shall be satisfactory to the City.

71. Prior to the issuance of a Certificate of Conditional Approval for each construction stage of this subdivision, all servicing works for the stage and downstream works must be completed and operational, in accordance with the approved design criteria and accepted drawings, all to the specification and satisfaction of the City.

72. Prior to final approval, the Owner shall make arrangements with the affected property owner(s) for the construction of any portions of services or grading situated on private lands outside this plan, and shall provide satisfactory easements over these works, as necessary, all to the specifications and satisfaction of the City, at no cost to the City.

73. In conjunction with the Focused Design Studies submission, the Owner shall provide, to the City for review and acceptance, a geotechnical report or update the existing geotechnical report recommendations to address all geotechnical issues with respect to the development of this plan, including, but not limited to, the following:
    i) servicing, grading and drainage of this subdivision

ii) road pavement structure
iii) dewatering
iv) foundation design
v) removal of existing fill (including but not limited to organic and deleterious materials)
vi) the placement of new engineering fill
vii) any necessary setbacks related to slope stability for lands within this plan
viii) identifying all required mitigation measures including Low Impact Development (LIDs) solutions,
ix) Addressing all issues with respect to construction and any necessary setbacks related to erosion, maintenance and structural setbacks related to slope stability associated with the Thames River, existing ravines and proposed Lots and Block(s) within this plan, if necessary, to the satisfaction and specifications of the City. The Owner shall provide written acceptance from the Upper Thames River Conservation Authority for the final setback.

and any other requirements as needed by the City, all to the satisfaction of the City.

74. The Owner shall implement all geotechnical recommendations to the satisfaction of the City.

75. Once construction of any private services, ie: water, storm or sanitary, to service the lots and blocks in this plan is completed and any proposed relotting of the plan is undertaken, the Owner shall reconstruct all previously installed services in standard location, in accordance with the approved final lotting and approved revised servicing drawings all to the specification of the City Engineer and at no cost to the City.

76. The Owner shall connect to all existing City services and extend all services to the limits of the draft plan of subdivision, at no cost to the City, all to the specifications and satisfaction of the City Engineer.

77. In the event the draft plan develops in phases, upon registration of any phase of this subdivision, the Owner shall provide land and/or easements along the routing of services which are necessary to service upstream lands outside of this draft plan to the limit of the Plan.

78. In conjunction with Focused Design Studies submission, the Owner shall have his consulting engineer submit a concept plan which shows how all servicing (water, sanitary, storm, gas, hydro, street lighting, water meter pits, Bell, Rogers, etc.) shall be provided to condominiums/street townhouses indicated on Street ‘B’. It will be a requirement to provide adequate separation distances for all services which are to be located on the municipal right-of-way to provide for required separation distance (Ministry of Environment Design Standards) and to allow for adequate space for repair, replacement and maintenance of these services in a manner acceptable to the City.

79. The Owner acknowledges that servicing for Block 72 must be approved through Site Plan Approval by the City prior to any installation of servicing.

80. The Owner shall have the common property line of Hamilton Road graded in accordance with the City of London Standard “Subdivision Grading Along Arterial Roads”, at no cost to the City.

Further, the grades to be taken as the centreline line grades on Hamilton Road are the existing centreline of road grades as determined by the Owner’s professional engineer, satisfactory to the City. From these, the Owner’s professional engineer is to determine the ultimate elevations along the common property line which will blend with the existing road grades, all to the satisfaction of the City.

81. The Owner shall advise the City in writing at least two weeks prior to connecting, either directly or indirectly, into any unassumed services constructed by a third party, and to save the City harmless from any damages that may be caused as a result of the connection of the services from this subdivision into any unassumed services.

    Prior to connection being made to an unassumed service, the following will apply:

    i) In the event discharge is to unassumed services, the unassumed services must be completed and conditionally accepted by the City;

    ii) The Owner must provide a video inspection on all affected unassumed sewers;

    Any damages caused by the connection to unassumed services shall be the responsibility of the Owner.

82. The Owner shall pay a proportional share of the operational, maintenance and/or monitoring costs of any affected unassumed sewers or SWM facilities (if applicable) to third parties that have constructed the services and/or facilities to which the Owner is connecting. The above-noted proportional share of the cost shall be based on design flows, to the satisfaction of the City, for sewers or on storage volume in the case of a SWM facility. The Owner's payments to third parties shall:

    i) commence upon completion of the Owner's service work, connections to the existing unassumed services; and
    ii) continue until the time of assumption of the affected services by the City.

83. With respect to any services and/or facilities constructed in conjunction with this Plan, the Owner shall permit the connection into and use of the subject services and/or facilities by outside owners whose lands are served by the said services and/or facilities, prior to the said services and/or facilities being assumed by the City.

    The connection into and use of the subject services by an outside Owner will be conditional upon the outside Owner satisfying any requirements set out by the City, and agreement by the outside Owner to pay a proportional share of the operational maintenance and/or monitoring costs of any affected unassumed services and/or facilities.

84. If, during the building or constructing of all buildings or works and services within this subdivision, any deposits of organic materials or refuse are encountered, the Owner shall report these deposits to the City Engineer and Chief Building Official immediately, and if required by the City Engineer and Chief Building Official, the Owner shall, at his own expense, retain a professional engineer competent in the field of methane gas to investigate these deposits and submit a full report on them to the City Engineer and Chief Building Official. Should the report indicate the presence of methane gas then all of the recommendations of the engineer contained in any such report submitted to the City Engineer and Chief Building Official shall be implemented and carried out under the supervision of the professional engineer, to the satisfaction of the City Engineer and Chief Building Official and at the expense of the Owner, before any construction progresses in such an instance. The report shall include provision for an ongoing methane gas monitoring program, if required, subject to the approval of the City engineer and review for the duration of the approval program.

    If a permanent venting system or facility is recommended in the report, the Owner shall register a covenant on the title of each affected lot and block to the effect that the Owner of the subject lots and blocks must have the required system or facility

designed, constructed and monitored to the specifications of the City Engineer, and that the Owners must maintain the installed system or facilities in perpetuity at no cost to the City. The report shall also include measures to control the migration of any methane gas to abutting lands outside the Plan.

85. Should any contamination or anything suspected as such, be encountered during construction, the Owner shall report the matter to the City Engineer and the Owner shall hire a geotechnical engineer to provide, in accordance with the Ministry of the Environment "Guidelines for Use at Contaminated Sites in Ontario", "Schedule A – Record of Site Condition", as amended, including "Affidavit of Consultant" which summarizes the site assessment and restoration activities carried out at a contaminated site, in accordance with the requirements of latest Ministry of Environment and Climate Change "Guidelines for Use at Contaminated Sites in Ontario" and file appropriate documents to the Ministry in this regard with copies provided to the City. The City may require a copy of the report should there be City property adjacent to the contamination.

    Should any contaminants be encountered within this Plan, the Owner shall implement the recommendations of the geotechnical engineer to remediate, removal and/or disposals of any contaminates within the proposed Streets, Lot and Blocks in this Plan forthwith under the supervision of the geotechnical engineer to the satisfaction of the City at no cost to the City.

    In the event no evidence of contamination is encountered on the site, the geotechnical engineer shall provide certification to this effect to the City.

86. The Owner's professional engineer shall provide inspection services during construction for all work to be assumed by the City, and shall supply the City with a Certification of Completion of Works upon completion, in accordance with the plans accepted by the City Engineer.

87. In conjunction with the Focused Design Studies submission, the Owner shall have its professional engineer provide an opinion for the need for an Environmental Assessment under the Class EA requirements for the provision of any services related to this Plan. All class EA's must be completed prior to the submission of engineering drawings.

88. The Owner shall have its professional engineer notify existing property owners in writing, regarding the sewer and/or road works proposed to be constructed on existing City streets in conjunction with this subdivision, all in accordance with Council policy for "Guidelines for Notification to Public for Major Construction Projects".

89. The Owner shall not commence construction or installations of any services (e.g. clearing or servicing of land) involved with this Plan prior to obtaining all necessary permits, approvals and/or certificates that need to be issued in conjunction with the development of the subdivision, unless otherwise approved by the City in writing (e.g. Hydro One Networks Inc., Ministry of the Environment Certificates, City/Ministry/Government permits: Approved Works, water connection, water-taking, crown land, navigable waterways, approvals: Upper Thames River Conservation Authority, Ministry of Natural Resources, Ministry of the Environment, City, etc.)

90. Prior to any work on the site, the Owner shall decommission and permanently cap any abandoned wells located in this Plan, in accordance with current provincial legislation, regulations and standards. In the event that an existing well in this Plan is to be kept in service, the Owner shall protect the well and the underlying aquifer from any development activity.

91. In conjunction with the engineering drawings submission, in the event the Owner wishes to phase this plan of subdivision, the Owner shall submit a phasing plan identifying all required temporary measures, and identify land and/or easements required for the routing of services which are necessary to service upstream lands outside this draft plan to the limit of the plan to be provided at the time of registration of each phase, all to the specifications and satisfaction of the City.

92. If any temporary measures are required to support the interim conditions in conjunction with the phasing, the Owner shall construct temporary measures and provide all necessary land and/or easements, to the specifications and satisfaction of the City Engineer, at no cost to the City.

93. The Owner shall remove any temporary works when no longer required and restore the land, at no cost to the City, to the specifications and satisfaction of the City.

94. The Owner shall decommission any abandoned infrastructure, at no cost to the City, including cutting the water service and capping it at the watermain, all to the specifications and satisfaction of the City.

95. The Owner shall remove all existing accesses and restore all affected areas, all to the satisfaction of the City, at no cost to the City.

96. All costs related to the plan of subdivision shall be at the expense of the Owner, unless specifically stated otherwise in this approval.

97. The Owner shall make all necessary arrangements with any required owner(s) to have any existing easement(s) in this plan quit claimed to the satisfaction of the City and at no cost to the City. The Owner shall protect any existing municipal or private services in the said easement(s) until such time as they are removed and replaced with appropriate municipal and/or private services at no cost to the City.

    Following the removal of any existing municipal or private services from the said easement and the appropriate municipal services and/or private services are installed and operational, the Owner shall make all necessary arrangement to have any section(s) of easement(s) in this plan quit claimed to the satisfaction of the City, at no cost to the City.

98. The Owner shall make all necessary arrangements to have adequate private easements registered on title and included in the Agreement of Purchase and Sale or Lease and in the transfer of deed of the external lands to the north of this Plan (1746 Hamilton Road), a covenant by the purchaser or transferee stating that the purchaser or transferee of the said Lots and/or Blocks, to allow the owner 1746 Hamilton Road, to access the external lands for private access, to the satisfaction of the City, at no cost to the City.

99. The Owner shall provide access for 1746 Hamilton Road in order to not create a land locked parcel and the existing hydro services for the residential property at 1746 Hamilton Road are to be relocated, all to the satisfaction of the City and London Hydro, at no cost to the City.

100. In conjunction with the first submission of engineering drawings, the Owner shall submit a Development Charge work plan outlining the costs associated with the design and construction of the DC eligible works. The work plan must be approved by the City Engineer and City Treasurer (as outlined in the most current DC By-law) prior to advancing a report to Planning and Environment Committee recommending approval of the special provisions for the subdivision agreement.

101. At the time this plan is registered, the Owner shall register all appropriate easements for all existing and proposed private and municipal servicing required

in this plan, to service external lands, all to the satisfaction of the City Engineer, at no cost to the City.

102. Prior to the issuance of any Certificate of Conditional Approval, the Owner shall make adjustments to the existing works and services within this draft plan (e.g. Lot 16) and on Hamilton Road, Oriole Drive and Bobolink Lane, adjacent to this plan to accommodate the proposed works and services on this street to accommodate the lots in this plan fronting this street (e.g. private services, hydro poles, street light poles, traffic calming, etc.) in accordance with the approved design criteria and accepted drawings, all to the satisfaction of the City Engineer, at no cost to the City.

103. The Owner shall include in the Agreements of Purchase and Sale or lease and in the transfer of deed of Block 70 in this plan, a covenant by the purchaser or transferee stating that the purchaser or transferee of the said lots to observe and comply with the private easements and private sewer services needed for the servicing of Block 71 in this plan. No landscaping, vehicular accesses, parking access, works or other features shall interfere with the above-noted municipal or private maintenance accesses, servicing, grading or drainage that services other lands.

104. Prior to the issuance of any Certificates of Conditional Approval, the Owner shall have the existing access and services to 1738 Hamilton Road, 1742 Hamilton Road and 1752 and 1754 Hamilton Road relocated and/or reconstructed to the satisfaction of the City should the existing dwellings on Lots 65 and 68 and Block 71 be retained. Any portion of the existing services not used shall be removed or abandoned and capped to the satisfaction of the City, at no cost to the City. In addition, the Owner shall regrade areas within Lots 65 and 68 to be compatible with the proposed subdivision grading and drainage, to the satisfaction of the City.

PLANNING

105. In conjunction with the Focused Design Studies submission, the owner shall prepare and submit a tree preservation report and plan for lands within the proposed draft plan of subdivision. The tree preservation report and plan shall be focused on the preservation of trees within lots and blocks. The tree preservation report and plan shall be completed in accordance with current approved City of London guidelines for the preparation of tree preservation reports and tree preservation plans, to the satisfaction of the City Planner. Tree preservation shall be established first and grading/servicing design shall be developed to accommodate maximum tree preservation as per the Council approved Tree Preservation Guidelines.

106. The Owner shall construct 1.5m high chain link fencing without gates in accordance with current City park standards (SPO 4.8) or approved alternate, along the property limit interface of all existing and proposed private lots adjacent to existing and/or future Park and Open Space blocks. Fencing shall be completed to the satisfaction of the City Planner, within one (1) year of the registration of the plan.

107. The Owner shall construct 1.8m high continuous chain link fencing adjacent the Hydro One Networks Inc. (HONI) transmission corridor from Lots 1 to 3 and Lots 4 to 12, with no gates leading to back or side yards.

108. Where lots or blocks abut an open space area, all grading of the developing lots or blocks at the interface with the open space areas are to match grades to maintain existing slopes, topography and vegetation. In instances where this is

not practical or desirable, any grading into the open space shall be to the satisfaction of the Manager of Environmental and Parks Planning.

109. The Owner shall develop and deliver to all purchasers and transferees of the lots in this plan, a homeowner guide/education package as approved by the Manager of Parks Planning and Design that explains the stewardship of natural areas and the value of existing tree cover, as well as indirect suburban effects on natural areas. The Owner shall submit the homeowner guide/education package for review and acceptance, in conjunction with the Focused Design Studies submission.

110. The Owner shall implement the recommendations of the Old Victoria East Subdivision 1691, 1738, 1742 Hamilton Road, London, Ontario Environmental Impact Study Addendum prepared by Natural Resource Solutions Inc. dated July 2015 for the lands on the east side of Hamilton Road, and updated by subsequent addendums, to the satisfaction of the City. In conjunction with the Focused Design Studies submission, the Owner shall provide a schedule indicating how each of the accepted Environmental Impact Study Addendum recommendations will be implemented and satisfied as part of the subdivision approval process.

111. The Owner shall convey Blocks 73, 74, 75, 76, and 77 to the City in order to satisfy a portion of the required parkland dedication based on the rates for hazard, open space and constrained lands. The remaining parkland dedication will be taken as cash-in-lieu as per By-law CP-9, to the satisfaction of the Manager of Environmental and Parks Planning.

112. Prior to undertaking any works or site alteration including filling, grading, construction or alteration to a watercourse in a Conservation Regulated Area, the Owner shall obtain a permit or receive clearance from the Upper Thames River Conservation Authority.

113. Prior to final approval, the Owner shall ensure that any lot located adjacent to the hydro easement shall have registered on title to the lot, and included in agreements of purchase and sale or lease, the appropriate Hydro One Networks Inc. (HONI) warning clause(s), to the satisfaction of the City.

114. In conjunction with the Focused Design Studies submission, the Owner shall have a qualified acoustical consultant prepare a noise study concerning the impact of traffic noise on future residential uses adjacent arterial roads. The noise study shall be prepared in accordance with the Ministry of the Environment Guidelines and the City of London policies and guidelines. Any recommended noise attenuation measures are to be reviewed and accepted by the City. The final accepted recommendations shall be constructed or installed by the Owner, or may be incorporated into the subdivision agreement.

115. The Owner shall carry out a Stage 1-2 Archaeological Assessment by a licensed archaeologist. Implementation recommendations as a result of the assessment must be addressed, to the satisfaction of the Approval Authority. No final approval shall be given, and no grading or other soil disturbance shall take place on the subject property prior to the owner providing confirmation that the Ministry of Tourism, Culture, and Sport has reviewed and accepted the Stage 1-2 Archaeological Assessment into the Ontario Public Register.

116. In conjunction with the Focused Design Studies submission, the owner shall provide a conceptual park plan delineating the alignment of the west-east Thames Valley Parkway (TVP multi-use pathway) from Whites Bridge to the eastern boundary of the proposed plan of subdivision with approval from all impacted agencies and utilities, to the satisfaction of the Manager of Environmental and Parks Planning. If approval of the alignment cannot be secured, redline revisions

to the plan of subdivision will be required to accommodate the 10 meter wide multi-use pathway corridor.

117. In conjunction with the Focused Design Studies submission, the owner shall prepare and submit a restoration plan and compensation plan as identified in the recommendations of the Environmental Impact Study and Addendum prepared by Natural Resource Solutions Inc. dated July 2015. The restoration plan shall also include a monitoring program for the restoration and compensation lands for a period of five (5) years. Prior to submitting the focused design study, the Owner and his consultants, shall meet with staff to scope out the requirements of the restoration and compensation plan.

118. Prior to Final Approval of this Plan, the Owner shall submit a Municipal Address Change Application with the City, to change the addresses of 1742 and 1746 Hamilton Road, all related costs shall be solely at the Owner's expense and at no cost to the City.

UTRCA

119. The Owner shall complete a Final Stormwater Management Plan/Report which addresses the Conservation Authority's outstanding concerns (as noted in their correspondence dated May 1, 2018), to the satisfaction of the UTRCA.

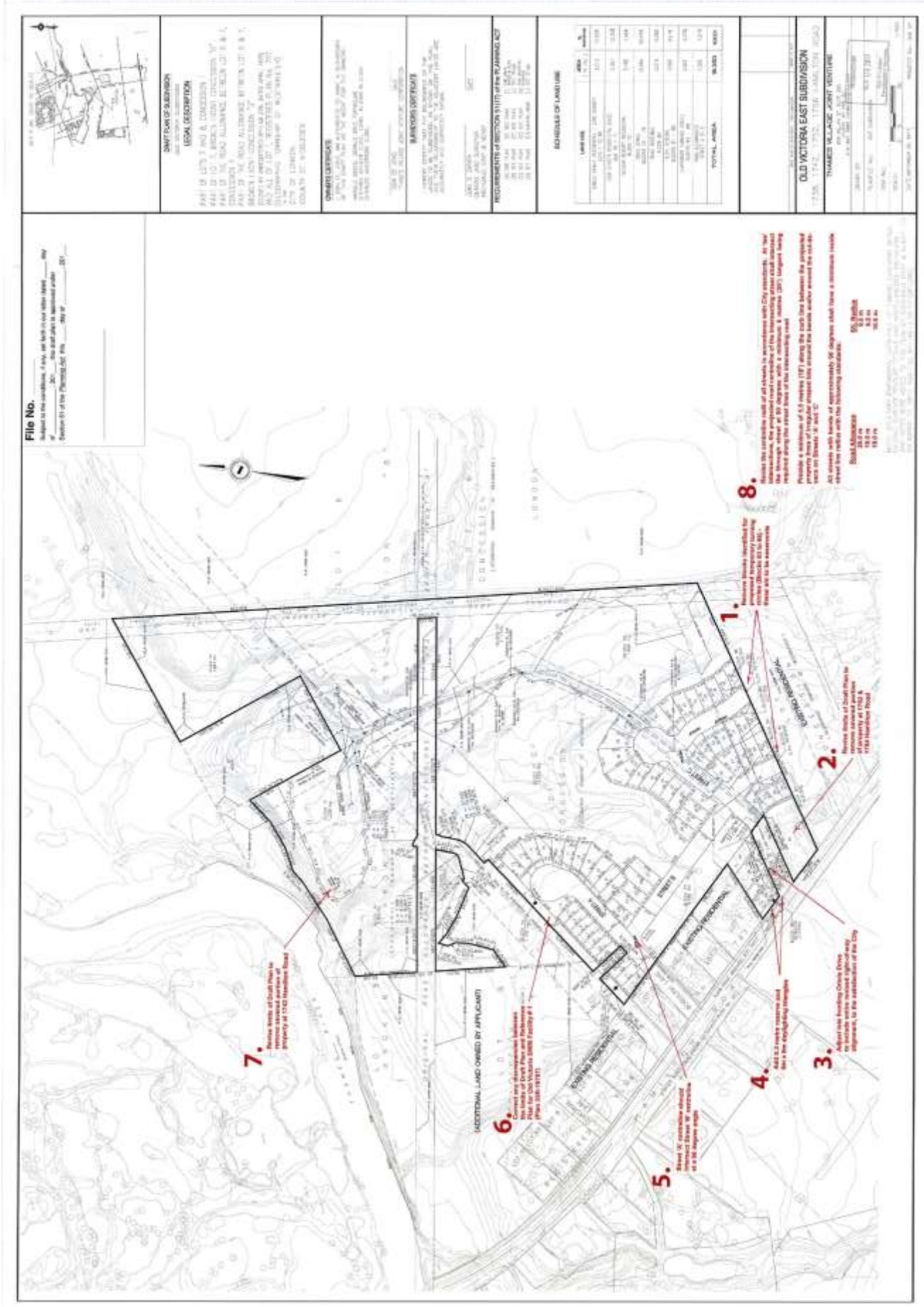
120. The Owner shall complete a Final Environmental Impact Study which consolidates all of the various ecological submissions and addresses the Conservation Authority's outstanding concerns (as noted in their correspondence dated May 1, 2018),to the satisfaction of the UTRCA. A Homeowners Information Package shall also be prepared, to the satisfaction of the UTRCA.

121. The Owner shall complete a Final Hydrogeological Assessment and Water Balance Analysis which addresses the Conservation Authority's outstanding concerns (as noted in their correspondence dated May 1, 2018), to the satisfaction of the UTRCA.

122. If it is determined through the review of the Final Environmental Impact Study, Hydrogeological & Water Balance and Stormwater Management studies that there is a need for a larger buffer to protect the natural hazard and natural heritage lands and their functions, the draft plan be redlined to accommodate the required buffer.

File: 39T-17502 / OZ-8147
Planner: L. Mottram

Recommended Red-Line Revisions/Notes to Draft Plan



File: 39T-17502 / OZ-8147
Planner: L. Mottram

Summary of Red-Line Revisions/Notes to Draft Plan

1. Remove blocks identified for proposed temporary turning circles (Blocks 83 to 86) - these are to be easements

2. Revise limits of Draft Plan to remove severed portion of property at 1752 & 1754 Hamilton Road

3. Adjust lots fronting Oriole Drive to include entire revised right-of-way alignment, to the satisfaction of the City

4. Add 0.3 metre reserve and 6m x 6m daylighting triangles

5. Street 'A' centreline should intersect Street 'B' centreline at a 90 degree angle

6. Correct any discrepancies between the limits of Draft Plan and Reference Plan for Old Victoria SWM Facility # 1 (Plan 33R-19767)

7. Revise limits of Draft Plan to remove severed portion of property at 1742 Hamilton Road

8. Revise the centreline radii of all streets in accordance with City standards. At 'tee' intersections, the projected road centreline of the intersecting street shall intersect the through street at 90 degrees with a minimum 6 metres (20') tangent being required along the street lines of the intersecting road

   Provide a minimum of 5.5 metres (18') along the curb line between the projected property lines of irregular shaped lots around the bends and/or around the cul-de-sacs on Streets 'A' and 'C'

   All streets with bends of approximately 90 degrees shall have a minimum inside street line radius with the following standards:

Road Allowance	S/L Radius
20.0 m	9.0 m
19.0 m	9.5 m
18.0 m	10.0 m

File: 39T-17502 / OZ-8147
Planner: L. Mottram

Appendix "A-4"

1738, 1742, 1752 and 1756 Hamilton Road - Thames Village Joint Venture
Draft Plan
39T-17502

Related Estimated Costs and Revenues

Estimated DC Funded Servicing Costs	**Estimated Cost** (excludes HST)
Claims for developer led construction from CSRF - No eligible claims	NIL
Total	NIL
Estimated Total DC Revenues (2018 Rates)	**Estimated Revenue**
CSRF	$3,113,014
UWRF	$280,492
TOTAL	$3,393,506

1 There are no anticipated claims associated with this development.

2 Estimated Revenues are calculated using 2018 DC rates and may take many years to recover. The revenue estimates includes DC cost recovery for "soft services" (fire, police, parks and recreation facilities, library, growth studies). There is no comparative cost allocation in the Estimated Cost section of the report, so the reader should use caution in comparing the Cost with the Revenue section.

Reviewed by:

May 22/2018
Date

Matt Feldberg
Manager, Development Services (Subdivisions)

File: 39T-17502 / OZ-8147
Planner: L. Mottram

Appendix B – Public Engagement

Community Engagement

Public liaison: On May 17, 2017, Notice of Application was sent to 26 property owners in the surrounding area. Notice of Application was also published in the *Public Notices and Bidding Opportunities* section of *The Londoner* on June 1, 2017. An Updated Notice of Application was sent out to surrounding property owners on November 21, 2017, and Notice of Application was published in *The Londoner* on December 7, 2017. A "Planning Application" sign was also posted on the site.

4 replies were received

Nature of Liaison: The creation of a residential subdivision consisting of low density single detached dwellings, cluster dwellings, street townhouse dwellings, open space lands, and public road access via local street connections to Hamilton Road.

Responses: A summary of the various comments received include the following:

Concern for:
Future development of street townhouses backing onto existing single family homes:

Will there be fencing along the rear property lines of existing homes on Hamilton Road adjacent the future street townhouse block?

Development Services also received concerns with respect to the growth of long weeds and grass on the subject lands; as well as requests for general information and approximate timing for development.

Responses to Public Liaison Letter and Publication in "The Londoner"

Telephone	Written
Brad Sparling – 1716 Hamilton Road	Mark McManus / Valco Consultants
James Elsley / McKenzie Lake Lawyers LLP	
Jameson Lake / Cushman & Wakefield Southwestern Ontario	

File: 39T-17502 / OZ-8147
Planner: L. Mottram

Agency/Departmental Comments:

1. Upper Thames River Conservation Authority
2. Hydro One Network Inc. (HONI)
3. EEPAC Working Group comments to PEC October 10, 2017
4. Letter response to the EEPAC Working Group comments prepared by Natural Resource Solutions Inc.

UPPER THAMES RIVER
CONSERVATION AUTHORITY
"Inspiring a Healthy Environment"

The Thames
A Canadian
Heritage River

May 1, 2018

City of London - Development Services
P.O. Box 5035
London, Ontario N6A 4L9

Attention: Larry Mottram (sent via e-mail)

Dear Mr. Mottram:

Re: File No. 39T-17502/OZ-8147 – Updated Application for Draft Plan of Subdivision and Official Plan & Zoning By-Law Amendment
UTRCA Comments & Conditions of Draft Plan Approval
Applicant: Thames Village Joint Venture Corp.
1738, 1742, 1752 & 1756 Hamilton Road, London

The Upper Thames River Conservation Authority (UTRCA) has reviewed this updated application with regard for the policies in the *Environmental Planning Policy Manual for the Upper Thames River Conservation Authority (June 2006)*. These policies include regulations made pursuant to Section 28 of the *Conservation Authorities Act,* and are consistent with the natural hazard and natural heritage policies contained in the *Provincial Policy Statement (2014)*. The *Upper Thames River Source Protection Area Assessment Report* has also been reviewed in order to confirm whether these lands are located in a vulnerable area. The Drinking Water Source Protection information is being disclosed to the Municipality to assist them in fulfilling their decision making responsibilities under the Planning Act.

PROPOSAL

The applicant is proposing a residential plan of subdivision comprised of 69 single detached residential lots, two cluster housing blocks, one street townhouse block and seven open space blocks.

CONSERVATION AUTHORITIES ACT

As shown on the enclosed mapping, the subject lands are regulated by the UTRCA in accordance with Ontario Regulation 157/06 made pursuant to Section 28 of the *Conservation Authorities Act*. The regulation limit is comprised of riverine flooding and erosion hazards and wetland features including the surrounding areas of interference. The UTRCA has jurisdiction over lands within the regulated area and requires that landowners obtain written approval from the Authority prior to undertaking any site alteration or development within this area including filling, grading, construction, alteration to a watercourse and/or interference with a wetland.

1424 Clarke Road, London, Ont. N5V 5B9 · Phone: 519.451.2800 · Fax: 519.451.1188 · Email: infoline@thamesriver.on.ca www.thamesriver.on.ca

UTRCA ENVIRONMENTAL PLANNING POLICY MANUAL (2006)
The UTRCA's Environmental Planning Policy Manual is available online at:

http://thamesriver.on.ca/planning-permits-maps/utrca-environmental-policy-manual/

The following policies are applicable to the subject lands:

3.2.2 General Natural Hazard Policies
These policies direct new development and site alteration away from hazard lands. No new hazards are to be created and existing hazards should not be aggravated. The Authority also does not support the fragmentation of hazard lands through lot creation which is consistent with the Provincial Policy (PPS).

3.2.3 Riverine Flooding Hazard Policies
These policies address matters such as the provision of detailed flood plain mapping, floodplain planning approach, and uses that may be allowed in the flood plain subject to satisfying UTRCA permit requirements.

3.2.4 Riverine Erosion Hazard Policies
The Authority generally does not permit development and site alteration in the meander belt or on the face of steep slopes, ravines and distinct valley walls. The establishment of the hazard limit must be based upon the natural state of the slope, and not through re-grading or the use of structures or devices to stabilize the slope.

The UTRCA has reviewed multiple geotechnical submissions for the proposed development the most recent being titled ***Thames Village Joint Venture Ltd. Consolidated Slope Stability Investigation Thames Village Residential Development 1742 Hamilton Road London, Ontario*** prepared by exp dated July 2017. We are generally satisfied with the submission but will require a FINAL Consolidated Geotechnical Report as a condition of draft plan approval. The report shall be properly stamped sealed and signed by a professional engineer.

Based on discussion with City staff, we understand that a recreational pathway/trail is being considered/proposed on the subject lands. The UTRCA has not had the benefit of reviewing the location of this pathway and remind planning staff that any proposed pathway/trail shall be located outside of the riverine erosion/slope hazard lands which includes the 6 metre erosion access allowance. We also recommend that the draft plan be redlined to identify the location of the pathway/trail.

3.2.6 & 3.3.2 Wetland Policies
New development and site alteration is not permitted in wetlands. Furthermore, new development and site alteration may only be permitted in the area of interference and /or adjacent lands of a wetland if it can be demonstrated through the preparation of an Environmental Impact Study (EIS) that there will be no negative impact on the hydrological and ecological function of the feature.

The UTRCA has reviewed various Environmental Impact Studies (EIS) and submissions for the subject lands including the ***Old Victoria East Subdivision 1691, 1738, 1742 Hamilton Road London, Ontario Environmental Impact Study Addendum*** prepared by Natural Resource

Solutions Inc. (NRSI) dated January 2015, revised July 2015, and a series of responses, the most recent being incorporated in the Hydrogeological Assessment dated April 13, 2018. Thank you for the additional assessment of the degree to which the ESA natural features are influenced by groundwater verses surface water hydrological inputs and the anticipated thermal regime of Tributary 2 and 2 C watercourses.

The UTRCA is generally satisfied that:

1. All of the groundwater locations have been identified.

2. The protocol for classifying stream thermal regimes is consistent with Chu et. al 2009[1].

3. The thermal tolerance of fish species from Coker et al. 2001[2] was considered when determining if a potential increase of 1.4 °C or 1.6 °C will impact these species.

However, the following concerns will need to be addressed in a Final Consolidated EIS, prepared to the satisfaction of the Conservation Authority:

1. Given that calculations are being deferred to the detailed design stage, the UTRCA cannot confirm whether:

   a) maintaining 100% of the pre-construction infiltration volume through subsurface exfiltration system and lot-level BMPs and LIDs that will capture and treat up to the 95th percentile rain event will mitigate the reduced infiltration from the increase in impervious surfaces.

   b) orifice controls are adequate measures to control outlet flow rates.

   Please address in the Final EIS.

2. The Final EIS shall confirm/demonstrate how the SWH (i.e. small localized occurrences of apparent groundwater upwelling) will be protected, including appropriate buffers. If it is determined through the review of the FINAL EIS, Hydrogeological & Water Balance and Stormwater Management studies that there is a need for a larger buffer, the draft plan will have to be redlined to accommodate the required buffer.

3. Please provide a discussion as to how the exfiltration trenches will address salt from the road runoff they are capturing and exfiltrating into the surrounding native soils through perforated pipes.

4. Please provide a discussion as to how backyard pools will be drained, given that the rear lot areas of the majority of the lots will be directing water toward rear-lot ponding areas, where the runoff will be captured and allowed to passively infiltrate. Note that excess runoff from these areas will be allowed to naturally sheet flow directly into the ESA features. The UTRCA's concern is the amount of untreated pool water (with chemicals such as chlorine, salt) that will be released into the natural heritage features without any form of treatment. A Homeowners Information Package shall be prepared for the development to the satisfaction of the UTRCA which among others matters shall address backyard pools (and run off).

5. What is the mitigation plan if the temperature of the tributaries increases such that the existing cool water stream is not maintained? What is the mitigation plan if surface and ground water levels are not maintained? What is the mitigation plan if these quality parameters are not maintained?

   The UTRCA will require a baseline water temperature established on two (2) years of data rather than just one (1). For water temperature, the consultant needs to collect the daily maximum water temperature from July 1 to August 31 between 4pm and 6pm. The loggers must record at least 1 data point during that time of day.

   In addition to the minimum two year baseline requirement, the UTRCA will require that monitoring/measurements continue throughout construction, and then 5 years of monitoring post project completion.

6. The UTRCA requires the monitoring plan to include justification supporting the level of effort and methodologies (e.g. monitoring durations, frequency, timing, etc.).

3.3.3.1 Significant Woodlands Policies

The UTRCA does not permit new development and site alteration in woodlands considered to be significant. Furthermore, new development and site alteration is not permitted on adjacent lands to significant woodlands unless an EIS has been completed to the satisfaction of the UTRCA. As indicated, the UTRCA is generally satisfied with the ecological information that has been provided however, a Final Consolidated EIS will be required as a condition of draft plan approval to address our interests and outstanding concerns.

UTRCA PEER REVIEW COMMENTS ON TECHNICAL REPORTS

Hydrogeological Study & Water Balance

The UTRCA has reviewed the ***Revised Report Hydrogeological Assessment Old Victoria East Subdivision – North Parcel, London, Ontario*** prepared by Golder Associates Ltd. dated April 2018. The Site is the north parcel of the Old Victoria East Subdivision (Thames Village Joint Venture) and the area proposed for development is an ecologically important natural heritage feature. On Site and immediately surrounding the proposed development are groundwater dependent ecosystems (GDE's). Further, some of the existing residents on Hamilton Road have self- supplied well water from the shallow aquifer.

The hydrogeological Assessment is comprehensive. The current report incorporated data with seasonal high and lows measured in multiple wells over a year period (2017-2018), continuous data and a number of comprehensive water analyses have been completed in February 2018. A significant attempt to integrate the natural heritage and hydrogeology has been completed.

Low impact development (LID) measures have been proposed to compensate for changes proposed to pre and post development. LID features, if placed in pertinent areas to maintain groundwater quantity and quality may provide some protection to the existing natural heritage. The LID and stormwater components have not been detailed at this point. At this stage, it is possible for development to proceed with the recommended further investigation and monitoring.

Areas of concern to be elaborated and/or discussed in the FINAL Hydrogeological Report include:

1. The groundwater contours developed on Site reflect the table land areas more than the areas of sensitive groundwater features. It is unclear when one combines all the data sets provided (quality and quantity) that the contours reflect the gradient and flow direction. It is established that groundwater dependent ecosystems are present throughout the Site (both seeps and wetlands) and groundwater upwelling occurs in a number of locations.

   a. Shallow aquifers reflect surface topography and to some extent confining layers at depth (gradient often changes). The contours do not reflect the topography or shallow water table in the natural heritage areas or between the upland and lowland areas. In many cases the water table indicated is above the topography (Figure 7a and 7b).

   b. Streams and watercourses are documented as gaining. Water table contours should reflect this and divert up-gradient.

   c. The implication of the results of the piezometers are not discussed or integrated. Piezometers are normally installed to investigate the gradient at a location. The piezometer water should be sampled to compare and contrast groundwater to surface water at its exit point.

      i. P1 appears to have a higher static than P2; similarly P4 is often higher than P3: what does this indicate? What was the purpose of installing piezometers at this location? Piezometers are sometimes installed at locations such as skunk cabbage to understand gradients within a wetland and determine if the setting is ephemeral or wet or whether sustained groundwater level is needed for some plant species.

2. The wetland is also a GDE and the interpretation of groundwater and this feature needs expansion. There is more discussion with respect to the seeps which is also important.

3. The shallow aquifer appears to be semi-confined at depth- by a till (see Figure 3 cross sections- till varies between 249-252 m ASL). The elevation of the till appears to control the GDE type of feature and the gradient of the water table. Above the till, where the shallow aquifer is present- wetlands are present. Where the shallow aquifer pinches out -seeps are more common. The upper part of the till acts as an aquifer (see BH 103 screened in till). The highest water table variation (indicates high conductivity) in BH 202 and hydraulic conductivity estimated as 9*10-5 m/s. The 200 series monitoring wells have similar responses on Figure 4a and likely indicates something about recharge at these locations.

4. Water Quality. The surface water quality appears to be significantly affected by groundwater input. NRSI documented gaining streams. A straight line between end members on the Piper diagram (Figure 6) indicates mixing groundwater and surface water. With the exception of sodium and chloride the remaining major cations and anions for all samples are similar (also indicated in the cation and anion section of the Piper diagram).

   a. BH 2 is currently in a farm field. Outline possible sources of sodium chloride at BH 2 (e.g. pool drainage, septic system/ water softener?) If pool drainage, how might this apply on Site and how can this be controlled? These levels exceed half MAC for drinking water and will

the domestic wells be impacted by increased de-icing, pool drainage etc.? Similarly, road de-icing can impact natural heritage.

b. Compare and contrast sodium (and chloride) levels in BH 2 with the shallow monitor BH 203 adjacent to Hamilton Road where road de-icing would be expected.

c. Compare and contrast sodium (and chloride) levels in BH 2 with surface water measurements. Is groundwater contaminating surface water?

d. Will the location of recreational pools and pool drainage affect LID design, performance and maintenance? Dissolved anions and cations are poorly remediated in LID systems.

e. Water temperature: Provide further discussion of the water temperature variations. The graph is very difficult to read. The water temperature (less variation) varies significantly from the air temperature. Groundwater recharge normally occurs when the daily maximum is above 0 degrees C. Recharge appears to occur on days when the temperature is below 0 air temperature. Confirm the air temperature and document- is it daily average versus daily maximum. Provide discussion on trends in locations. For example Tmp 3 is coldest throughout the period of record and Tmp 2 is the warmest and what might that mean with regard to groundwater input?

f. Other anthropogenic influences do to change in landscape are nutrients. Nutrients are often soluble and not filtered in LID situations. Nitrate in groundwater is only elevated in BH2 at this time. Address nutrient reduction in proposed development areas.

More work is needed to clarify the wetland features and the dynamics between wetlands, seeps and groundwater recharge/ discharge. Overall, the integrated approach has demonstrated many relationships but further work is required however the proposed development can likely move ahead for draft plan approval. The LID appear to be the panacea but the details of water quality (including temperature and salt), water quantity and where the recharge occurs in the LID is not adequately addressed at this stage of the development and is the limiting factor.

Follow Mitigation program indicated in Section 8.1 (Recommendations). Follow monitoring plan as indicated in Section 8.2. This is a significant local feature with groundwater dependence.

Urban environments significantly alter the nature of recharge to underlying aquifers. The change from rural to urban varies depending on the type of infrastructure used to manage stormwater. It is generally accepted that an increase in impervious surfaces associated with urbanization can lead to locally reduced groundwater recharge rates and increased surface runoff. Changes to groundwater recharge resulting from conversion of land for development is less documented due to lack of data from field-based studies. Therefore, it is important to monitor post development for five (5) years, in order to determine that the design features maintain the natural heritage system and mitigate for the groundwater changes to quality and quantity as predicted. In addition, to ensure that existing residents on self- supply drinking water are maintained in quantity and quality during and following development.

Stormwater Management Report

The UTRCA has reviewed the ***Proposed Functional Stormwater Management Plan Proposed Old Victoria East Subdivision – Phase 2 and Phase 3 1742 Hamilton Road, London ON*** prepared by ENGPLUS dated February 2017, revised April 10, 2018 (received April 18, 2018). We offer the following comments:

1. The UTRCA requires the staging and sequencing of the erosion and sediment control drawings for the SWM LIDs proposed for the site at Detailed Design. The drawings shall be signed, sealed and dated by a P.Eng.

2. The UTRCA regulatory storm event is the 250 – year storm. Please update the SWM report by reporting the 250- year storm flows under the pre and post-development conditions at the detailed design stage.

3. Please provide detailed design/calculations of the proposed SWM LIDs at the detail design stage as mentioned in the report.

4. Please check the printing/font error in the sheet no. SK1.

5. Please provide a FINAL Stormwater Management Plan to the satisfaction of the UTRCA at the detailed design stage.

DRINKING WATER SOURCE PROTECTION

Clean Water Act

The *Clean Water Act* (CWA), 2006 is intended to protect existing and future sources of drinking water. The Act is part of the Ontario government's commitment to implement the recommendations of the Walkerton Inquiry as well as protecting and enhancing human health and the environment. The CWA sets out a framework for source protection planning on a watershed basis with Source Protection Areas established based on the watershed boundaries of Ontario's 36 Conservation Authorities. The Upper Thames River, Lower Thames Valley and St. Clair Region Conservation Authorities have entered into a partnership for The Thames-Sydenham Source Protection Region.

The Assessment Report for the Upper Thames watershed delineates three types of vulnerable areas: Wellhead Protection Areas, Highly Vulnerable Aquifers and Significant Groundwater Recharge Areas. We wish to advise that the subject lands are identified as being within a vulnerable area. Mapping which shows these areas is available at:

http://maps.thamesriver.on.ca/GVH_252/?viewer=tsrassessmentreport

Provincial Policy Statement (PPS, 2014)

Section 2.2.1 requires that: *"Planning authorities shall protect, improve or restore the quality and quantity of water by:*

e) implementing necessary restrictions on development and site alteration to:
1. *protect all municipal drinking water supplies and designated vulnerable areas; and*
2. *protect, improve or restore vulnerable surface and ground water features, and their hydrological functions."*

Section 2.2.2 requires that "*Development and site alteration shall be restricted in or near sensitive surface water features and sensitive ground water features such that these features and their related hydrologic functions will be protected, improved or restored.*"

Municipalities must be consistent with the Provincial Policy Statement when making decisions on land use planning and development.

Policies in the *Approved Source Protection Plan* may prohibit or restrict activities identified as posing a *significant threat* to drinking water. Municipalities may also have or be developing policies that apply to vulnerable areas when reviewing development applications. Proponents considering land use changes, site alteration or construction in these areas need to be aware of this possibility. The *Approved Source Protection Plan is available at:*

http://www.sourcewaterprotection.on.ca/source-protection-plan/approved-source-protection-plan/

RECOMMENDATION

The UTRCA is generally satisfied with the technical studies that have been submitted to support this development application. While there are lingering concerns as indicated in our correspondence, the Conservation Authority is of the opinion that these likely can be addressed in the required FINAL technical reports at Detailed Design. Accordingly, the UTRCA offers the following conditions of draft plan approval:

That a Final Stormwater Management Plan/Report which addresses the Conservation Authority's outstanding concerns (as noted in this correspondence) be prepared to the satisfaction of the UTRCA.

That a Final Environmental Impact Study which consolidates all of the various ecological submissions and addresses the Conservation Authority's outstanding concerns (as noted in this correspondence) be prepared to the satisfaction of the UTRCA. A Homeowners Information Package shall also be prepared to the satisfaction of the UTRCA.

That a Final Hydrogeological Assessment and Water Balance Analysis which addresses the Conservation Authority's outstanding concerns (as noted in this correspondence) be prepared to the satisfaction of the UTRCA.

That if it is determined through the review of the FINAL EIS, Hydrogeological & Water Balance and Stormwater Management studies that there is a need for a larger buffer to protect the natural hazard and natural heritage lands and their functions, that the draft plan be redlined to accommodate the required buffer.

That the draft plan be redlined to identify any proposed pathway/trail which shall be located entirely outside of the natural hazard lands which includes the 6 metre erosion access allowance.

That the necessary Section 28 approvals be obtained from the UTRCA prior to undertaking any site alteration or development within the regulated area.

UTRCA REVIEW FEES

Consistent with UTRCA Board of Directors approved policy, Authority Staff are authorized to collect fees for the review of Planning Act applications and peer review of technical reports. Our fee to review this application is $5,850.00 and the UTRCA's fee to peer review the technical reports is $4,100.00. We will invoice the applicant under separate cover. Furthermore, the UTRCA will collect peer review fees when the FINAL technical reports are submitted at Detailed Design.

Thank you for the opportunity to comment. If you have any questions, please contact the undersigned at extension 293.

Yours truly,
UPPER THAMES RIVER CONSERVATION AUTHORITY

Christine Creighton
Land Use Planner
IS/TT/ LN/IB/CC/cc

Enclosure – Regulations Mapping (please print on legal size paper to ensure that the scales are accurate)

c.c. Sent via e-mail -
Applicant – Thames Village Joint Venture Corp.
UTRCA – Mark Snowsell & Brent Verscheure – Land Use Regulations Officers

File: 39T-17502 / OZ-8147
Planner: L. Mottram

Hydro One Networks Inc.
Facilities & Real Estate
P.O. Box 4300
Markham, Ontario L3R 5Z5
www.HydroOne.com

Courier:
185 Clegg Road
Markham, Ontario L6G 1B7

VIA E-MAIL ONLY TO LMOTTRAM@LONDON.CA

December 8, 2017

City of London
Development Services
300 Dufferin Ave, PO Box 5035
London, ON N6A 4L9

Attention: Larry Mottram

Dear Mr. Mottram:

Re: Draft Plan of Subdivision, Thames Village Joint Venture
1738, 1742, 1752, 1756 Hamilton Road
City of London
File: 39T-17502

Please be advised that Hydro One Networks Inc. ("HONI") has completed a preliminary review of the proposed plan titled "Old Victoria East Subdivision", dated September 2017 and attached to the City of London circulation dated November 21, 2017 ("the Plan"). As the subject property is abutting and/or encroaching onto a HONI high voltage transmission corridor (the "transmission corridor"), HONI **does not** approve of the proposed subdivision at this time, **pending review and approval of the required information**.

The comments detailed herein **do not** constitute an endorsement of any element of the subdivision design or road layout, nor do they grant any permission to access, use, proceed with works on, or in any way alter the transmission corridor lands, without the express written permission of HONI.

The following should be included as **Conditions of Draft Approval:**

1. Prior to HONI providing its final approval, the developer must make arrangements satisfactory to HONI for lot grading and drainage. Two copies of the lot grading and drainage plans (true scale), showing existing and proposed final grades, must be submitted to HONI for review and approval. The drawings must identify the transmission corridor, location of towers within the corridor and any proposed uses within the transmission corridor. Drainage must be controlled and directed away from the transmission corridor.

2. Any development in conjunction with the subdivision must not block vehicular access to any HONI facilities located on the transmission corridor. During construction, there must be no storage of materials or mounding of earth, snow or other debris on the transmission corridor.

3. At the developer's expense, temporary fencing must be placed along the transmission corridor prior to construction. Permanent 1.8 meter high continuous chain link fencing must be installed along the transmission corridor after construction is completed with no gates leading to back or side yards of the subdivision.

4. The costs of any relocations or revisions to HONI facilities which are necessary to accommodate this subdivision will be borne by the developer. The developer will be responsible for restoration of any damage to the transmission corridor or HONI facilities thereon resulting from construction of the subdivision.

5. HONI's easement rights are to be protected and maintained.

6. Blocks 78 and 79 as shown in the Plan will be transferred to the City as open space. Structures or obstructions of any nature which may interfere with the safe and efficient operation of the transmission line are not permitted within these Blocks.

7. Public access to the corridor is not permitted. A gate must be installed between Lots 3 and 4 on the Plan in order to prevent public access to the corridor. The City of London may use and access this gate for maintenance purposes.

8. When available, detailed designs for access and multi-use servicing affecting the transmission corridor (near Units 22 & 23 on the Plan) must be submitted to HONI for review and approval.

9. Historically, HONI has had access to the transmission corridor from Hamilton Road, through Street C and the area north of Street C, as shown in the Plan. HONI requires the same continuous access during and after construction of the subdivision has been completed, and will require an easement to maintain this access if the area is designated as a private road.

In addition, HONI requires the following be conveyed to the developer as a precaution:

10. The transmission lines abutting the subject lands operate at either 500,000, 230,000 or 115,000 volts. Section 188 of Regulation 213/91 pursuant to the *Occupational Health and Safety Act*, require that no object be brought closer than 6 metres (20 feet) to an energized 500 kV conductor. The distance for 230 kV conductors is 4.5 metres (15 feet), and for 115 kV conductors it is 3 metres (10 feet). It is the developer's responsibility to be aware, and to make all personnel on site aware, that all equipment and personnel must come no closer than the distance specified in the *Act*. They should also be aware that the conductors can raise and lower without warning, depending on the electrical demand placed on the line.

Our preliminary review only considers issues affecting HONI's transmission facilities and transmission corridor lands. For any proposals affecting distribution facilities (low voltage), the developer should consult the local distribution supplier.

If you have any questions, please contact me at dennis.derango@hydroone.com or at 905-946-6237.

Yours truly,

Dennis De Rango
Specialized Services Team Lead, Real Estate
Hydro One Networks Inc.

cc: Joan Zhao – Hydro One Networks Inc.
Dan White – Hydro One Networks Inc.
Paul Hinde – Tridon Group

File: 39T-17502 / OZ-8147
Planner: L. Mottram

EEPAC Working Group Comments

THAMES VILLAGE

Documents reviewed:

- 2015 Thames Village (Old Victoria East Subdivision 1691, 1732, 1742 Hamilton Road) EIS prepared by Natural Resource Solution (EIS 7-2015);
- 2015 exp's Hydrogeological Assessment and Water Balance;
- 2017 Golders' Hydrogeological Assessment;
- 2013 exp's Slope Stability Investigation;
- 2017 exp's Consolidated Slope Assessment; and
- 2015 AECOM's Old Victoria SWM Facility No., Functional Design Volume II- Supplemental Reports.
- consultant's document dated April 12, 2017 reply to City and UTRCA

Submitted by: Berta Krichker, Sandy Levin, Alison Regehr, Ian Whiteside
August 24, 2017 EEPAC meeting

INTRODUCTION

This EIS should not be accepted until a "holistic" document is prepared for review by the City and agencies. In its current form, with multiple documents, is confusing and liable to misinterpretation and understanding. EEPAC is concerned that it will be difficult for staff to provide clear conditions of development which is important as this development is being shoehorned adjacent to an ESA.

Ideally, the City should buy lands in this area to avoid having a development on each side of the ESA "finger" (Tributary 2c)

EEPAC is disappointed that it has not been involved in the review of this proposal since its review of the 2013 draft of the EIS addendum. It only received at its May meeting, a copy of the April 12, 2017 letter from the consultant which was a collection of responses from the consultant to the City and the UTRCA. EEPAC was not invited to the April 14, 2015 meeting referred to in the July 2015 version of the addendum (EIS 7-2015). In fact EEPAC only received EIS 7-2015 (which contained the consultant's comments to EEPAC's 2013 comments, when it asked for a single comprehensive version in June, 2017.

Further, EEPAC has grave concerns about this development proposal as will be detailed below. In general, it is being shoehorned into an ESA with many hopeful comments in the EIS that all will be right with the ESA after construction. However, the EIS is weak on considering and mitigating post construction impacts. It generally relies on standard conditions to provide the protection for the ESA post construction. This report includes recommendations for additional conditions of development and holding provisions meant to provide for a more detailed review of those post EIS Plans mentioned in the EIS 7-2015.

The Impact Analysis in EIS 7-2015 ignores the continued access to the Hydro corridor and the impact of grading which will not match existing grades. It appears permission has been given to encroachments (p. 93) that were permitted so that the constraints fit the development. The development should be sized to

fit the constraints instead. It is also quite amazing that the impact analysis claims no significant impact from increased human entry into an ESA that has no managed trail system or Conservation Master Plan. There is also no mention of cats and dogs in the impact analysis either.

If, despite the deficiencies, the City recommends changes to the land uses, EEPAC has the following recommendation.

RECOMMENDATION #1: A specific holding provision(s) be applied to this subdivision and no Draft Conditions for this subdivision be issued by the City until all required clarifications and details listed below be provided by the owner and its consultants for EEPAC acceptance, all to the satisfaction of the City, MOECC and the supported by UTRCA:

- the hydrogeological assessment including water balance;
- the slope stability investigation and its buffers, dewatering detailed methodology and measures;
- specific water quality/quantity and erosion control monitoring program under the pre (existing baseline conditions) and post construction conditions (including, but not be limited to, water quality basic chemistry and biological monitoring-BioMap);and
- a cumulative impact evaluations of major features and functions of environmental/ecological system that may be impacted by the proposed land development and services.

Theme 1 - GROUND WATER AND INFILTRATION

The EIS references that discharge to the Thames from the Tributaries is cold water. We have concern is geochemistry/ temperature changes from dewatering/ surface water drainage (and flow into Thames) could have deleterious impact on habitat.

It appears that there is groundwater discharge along the entire length of the tributaries (Tributary 1, 2, 2a, 2b, 2c, and 6) with the presence of Skunk Cabbage, Marsh Marigold, and Watercress indicating the presence of groundwater discharge - groundwater discharge is not just confined to the visible seeps. This likelihood is further supported by the groundwater flow map prepared by Golders, which indicates the groundwater table of the unconfined aquifer is higher than ground surface and is therefore likely discharging to the tributaries. The report should address the potential impact to groundwater discharges along the entire length of the Tributaries.

RECOMMENDATION #2: This matter requires further commentary/ analysis prior to acceptance of the report. Impacts to the tributaries must be quantified.

Post development infiltration needs to be given a second look, with a more holistic approach that looks at the development as a whole (including the impact of the SWM facility) rather than piecemeal. EEPAC has two concerns:

The report we reviewed was in isolation to the other areas being developed. Groundwater flow to the tributaries will come from both the upland

portions and the site covered by the Golders report, and post development infiltration for the entire site needs to be considered.

The addendum to the exp report from June, 2015 that discussed post development infiltration is insufficient and inconclusive:

- A), infiltration in the developed areas, even after mitigation measures, is expected to range between 40 and 65%, well below the 90% target cited in the Golders report.
- B) The assumptions regarding post development infiltration in Parcel 6, which is essentially the ESA, is likely wrong. The report assumes that run-off from adjacent parcels is treated as precipitation in Parcel 6; it is not, in my opinion (precipitation is evenly distributed over the entire site, whereas run off is a point source and will likely not infiltrate into the water table. As well, infiltration upstream in the areas being developed is much more important given groundwater flow into the upper reaches of the tributaries. Regardless, relying on infiltration outside of the development site to achieve one's "80%" target is not consistent with the Guidelines. The target should be applicable to the areas being developed only, not the developed areas plus adjacent areas.

RECOMMENDATION #3: The report not be accepted until this matter is clarified and the 80% infiltration target is demonstrated to be accurate.

RECOMMENDATION #4:

A. Clarification and specific required details be integrated in the final Hydrogeological Assessment report, that demonstrate the proposed required hydrogeological systems performance and the system components correlation with: seepage, aquifers connections, wetlands, surface water infiltration areas and discharges, major water resources functions and features.
B. Also, all of the above-noted information be integrated in the water balance evaluations for the pre and post-construction conditions for the subject lands. In this report the proposed hydrogeological systems' performance under post-construction conditions be designed to mimic the pre-construction conditions or at a minimum to meet a post construction water balance target of 80% of the pre-construction water balance conditions and infiltration measures be maximized to maintain the environmental/ecological health of this system.
C. The site specific mitigations measures, dewatering methodology and procedure be included in the Hydrogeological Assessment report in coordination with the infrastructure and grading final design for this subdivision.

THEME 2 - SITE MONITORING DURING CONSTRUCTION ACTIVITIES

The report references the likely need for a Permit to Take Water during construction activities, as the likely dewatering volumes are in excess of 400,000 litres per day. Additionally, we reference the City of London guidelines for Sediment and Erosion, which specifies that controls must be put in place to ensure adequate protection of water quality in open watercourses within the

City's boundaries. EEPAC has concern that dewatering during construction, as well as construction in general, could have an adverse impact on the adjacent ESA related to potential erosion and/ or increase in sediment entering the water course.

RECOMMENDATION #5:

A. The dewatering plan should include an Erosion Sediment Control Plan, as well as appropriate measures to ensure the nearby watercourses located in the ESA are note impacted by the dewatering activities. The effectiveness of these measures should be evaluated consistent with groundwater monitoring program discussed in Section 8.
B. Post-construction/dewatering, groundwater quality sampling should be conducted again to ensure no change to the baseline conditions. The wells being sampled post construction should be downstream of the construction site.
C. For certainty, the parameters being analyzed should include BTEX as discussed in Section 4.2.

RECOMMENDATION #6:

A. Clarifications and specific details be provided in the Consolidated Slope Assessment Report, the Hydrological Assessment Report and the final design of grading and storm/drainage SWM proposed servicing. This information needs to reaffirm that all surface water from the subject lands will be directed from the slope stability areas (as identified in the exp Slope Stability Investigation report).

B. The final Slope Assessment report be required to confirm that the proposed slope stability buffers are based on all applicable engineering, environmental/ecological requirements and be required to identify the applicable dewatering detailed methodology/measures, the monitoring requirements to protect slope stability during construction activities.

THEME 3 - POST DEVELOPMENT GROUNDWATER INFILTRATION/ SURFACE WATER RUN-OFF

EEPAC would like to have a more detailed assessment of the pre and post development water balance. The report noted that it is important that the post-development water infiltration be sufficient to maintain the groundwater seeps into watercourses. These seeps are cited as being important to maintain.

In particular, EEPAC is concerned with the following:

The minimum post-development infiltration required to maintain the seeps is 90% of the pre-infiltration level (Section 6.2.4). Exp Services Inc. in their Hydrological Assessment and Water Balance Report on the Thames Village Residential Development (February, 2015) estimated the post-development infiltration will be 41.9% without mitigation measures, and from 71.0% to 89.6% with mitigation measures. While the Report discussed potential mitigation measures to increase post development infiltration, none were quantified. EEPAC recommends two additional mitigation measures:

THAMES VILLAGE

RECOMMENDATION #7

A. increase the depth of topsoil throughout the development, as a thicker layer of topsoil is able to infiltrate/store/evaporate more water
B. take actions to reverse soil compaction before laying topsoil (or reduce soil compaction in the first place) (e.g. http://www.sustainabletechnologies.ca/wp/home/urban-runoff-green-infrastructure/low-impact-development/soakaways-infiltration-trenches-and-chambers/catchment-scale-evaluation-of-rear-yard-soakaways-and-soil-amendments/)

RECOMMENDATION #8:

A - Quantify the impact of the proposed mitigation techniques in order to demonstrate achieving a minimum 90% pre-development infiltration rate.

B - Incorporate these design elements into the site plan.

C - Post-development, monitor the site to ensure that the groundwater seeps remain and that groundwater infiltration is not less than 90% of the pre-development infiltration rate.

Reports identify the subject site as not being connected to the storm water management pond. Rather, surface water (including stormwater runoff) from the site will presumably drain to the tributaries, bypassing the SWM Facility. Section 6.2.1 states there will be an increase in surface runoff post-development owing to an increase in impermeable areas, which could result in significant difference in the flow pattern after a rain event (peak flow will occur sooner and will be higher). This increase in the peak discharge may result in an increase in erosion and an increase in suspended solids in the watercourse.

RECOMMENDATION #9:

A. - Incorporate design elements into the site plan such that the peak discharge into the watercourses is not more than the current peak discharge.

B. - Ensure that appropriate sediment control measures are put in place to limit sediment discharge from the site to that which existed prior to site development.

RECOMMENDATION #10: All infiltration measures must be to the satisfaction of the UTRCA and the City. This is particularly important as page 11 of the April 2017 document repeatedly says "where feasible" without explaining what would make measures feasible.

RECOMMENDATION #11: A hydrogeological monitoring program must be developed in the detail design stage (page 7 of the April 2017 document) to the satisfaction of the City and the UTRCA. This requirement must be a condition of development. Holdbacks must also be required because if the monitoring determines that there has been harm to the wetlands, there must be a consequence.

RECOMMENDATION #12: if the wetland feature and/or function is harmed, the proponent must either contribute to the creation of a wetland in another part of subwatershed or contribute to the City's Woodland Acquisition Fund or to the completion and/or implementation of the Meadowlily ESA Conservation Master Plan. This should be a condition of development.

THEME 4 - WATER QUALITY

EIS 7-2015 on page 108 suggests that a water quality monitoring program should be implemented and should be completed in conjunction with the requirements for the SWM facility. It is unclear to EEPAC if any of this coordination has taken place. The detail design work is done for the SWM facility and construction is imminent. It is probably too late to coordinate programs unless such work has already taken place.

RECOMMENDATION #13: A water quality monitoring program for the development must be prepared and approved by the City and the UTRCA as a condition of development.

OVERLAP BETWEEN SWM POND WORK AND DEVELOPMENT WORK

EIS 7-2015 and EEPAC's 2013 comments all refer to the work undertaken by a separate consultant for the City for the soon (August 2017) to be built SWM pond and outlet. EEPAC has not received the details design nor the restoration plan for the site. How the City's restoration plan and the proponent's plans will work in concert remains a mystery.

RECOMMENDATION #14: There be coordination between the SWM Unit, Development Services and Environment and Parks Planning on restoration and protection measures for the ESA, including monitoring.

CLINE LANDS

(See page 108 of EIS 7-2015). EEPAC is concerned about water quality impacts of the future development. It is stated that an oil grit separator (OGS) requiring periodic maintenance will be required. Given the lands will be in private ownership after development, how realistic is this? What mechanism does the City have to compel such works? If it does, where does such information go? Are there any examples in London where an OGS have been installed, inspected and reported? With new LID requirements coming into place in Ontario, there will be a greater need for a process to be in place if not already. Regardless, the EIS relies heavily on the detail design stage of development to provide details of such a system

RECOMMENDATION #15: Development Services implement a program for receiving and confirming the regular maintenance of OGS where installed on private property.

RECOMMENDATION #16: UTRCA and City approval be required of the lot level controls.

RECOMMENDATION #17: Consideration be given to the road to the condo having curb and gutter with OGS rather than a gravel shoulder.

The pre-construction water quality/quantity monitoring program components are critical and important components for this monitoring program and will require to record the existing baseline conditions under dry and wet season conditions.

RECOMMENDATION #18:

A. The water quality/quantity and erosion control monitoring program for the pre (existing baseline conditions) and post construction conditions (including, but not limited to, water quality basic chemistry and biological monitoring-BioMap) be developed and undertaken by the Owner and its consultant.

B. The Draft Plan Conditions for this subdivision be required to incorporate all requirements for this water quality/quantity and erosion control monitoring program.

THEME 5 - BUFFERS AND ENCROACHMENT

It is unfortunate that the consultants used 10 year old city buffer Guidelines when Beacon's more recent Buffer Guideline work for the Credit Valley Conservation Authority has been used by a number of consultants. Regardless, EEPAC notes that EIS 7-2015 page 85 says that the City has agreed to buffers and the ESA boundary. Page 87 indicates the success of buffering is "provided the buffer is actively restored with native species. "

EEPAC also notes that City staff confirmed that the proposed townhouse road can occur in the ESA buffer. This meeting was April 18, 2016. EEPAC was not in attendance and would not have supported such an agreement.

EIS 7-2015 repeatedly states for each small encroachment that it is not anticipated to cause a negative impact to the adjacent features. What the consultants ignore is the cumulative impact post construction. The entire document is weak in dealing with post construction impacts leaving much to future "Plans" yet to be developed. It is post development impacts generally that have negative impacts on flora and fauna.

EEPAC also takes issue with Table 1 on page 13 of the April 2017 document. It would have been much better to enlarge Area L and revegetate it. Area K is adjacent to the SWM facility. Not much of a useful buffer really, given it will probably be an access point for a path and or the outlet.

RECOMMENDATION #19: The success of the buffers depends not only on successful restoration, but also active post construction monitoring and enforcement. Sadly, the lack of a completed CMP for the ESA makes this post construction future questionable. City staff should move immediately to restart the CMP process or at least explain to Council the lack of action since they took office.

THAMES VILLAGE

RECOMMENDATION #20: Given that Sifton Properties is developing adjacent to the west side of Patch 09028, and that the Thames Village consultants did not have access to this site, the buffers for the east side of the patch must be reviewed with the City prior to acceptance of EIS 7-2015.

RECOMMENDATION #21: A holding provision be applied to the site until a cumulative impact analysis is provided to the satisfaction of the City.

EEPAC is also concerned that the consultant recommends on page 12 of the April 2017 document that the proposed extension of the ESA boundary provides an opportunity for passive regeneration of this existing rear lot area into a more natural feature over time. It is unclear from any of the documentation what happens if this opportunity fails? There is a risk that the area will be overrun with invasive species. Hence, EEPAC asks for the following as a condition of the monitoring program:

RECOMMENDATION #22: If the passive regeneration opportunity does not show results during the monitoring period of three years, the proponent be required to re-naturalize it with species approved by a City ecologist.

THEME 6 - TRIBUTARY 2

EEPAC is concerned about the possible negative impact to the fish in this Tributary. Page 101 points out that the proposed culvert, if installed wrong, could create a new barrier to fish.

RECOMMENDATION #23: All in water work, must (not should as stated in EIS 7-2015) must comply with DFO and MNRF requirements.

RECOMMENDATION #24: A qualified person (aquatic biology preferred) should be on site during the construction and have authority to stop work if the work on the culvert would create a barrier to fish movement.

All pre and post construction stage mitigation measures made in the EIS must be included in conditions of development. EEPAC has the following to add to these conditions.

THEME 7 - PRE-CONSTRUCTION CONDITIONS

RECOMMENDATION #25: A cavity tree assessment for bats and bat maternal colonies be a condition of approval (as suggested on page 94 of the January 2015 version of the EIS)

THEME 8 – CONSTRUCTION CONDITIONS

RECOMMENDATION #26: Any lay down, storage or fuelling must be 30 m outside setbacks and never adjacent to natural features, especially, watercourses. EEPAC is most concerned that this will be difficult to achieve for the Cline lands development.

RECOMMENDATION #27: A Sediment Erosion Plan (mentioned at page 104 of EIS 7-2015) must be required as a condition of development. It must include direction that the storage of soils must be a minimum 30 m from all watercourses, slopes, and ravines.

On page 105, the consultants mention there should be an Environmental Management Plan to ensure sediment and erosion control measures are installed, maintained and functioning. As sediment control measures are a standard condition, EEPAC recommends the following additional requirements:

RECOMMENDATION #28: An ecologist/biologist, selected to the satisfaction of the City, with authority to stop work, be on site during construction.

RECOMMENDATION #29: A Flood Response Plan (mentioned at page 105 of EIS 7-2015) must be required as a condition of development. In that plan, it must mention that work must (not just should) not take place during high volume rain events or snow melts/thaws (see p.105-6 of EIS 7-2015).

RECOMMENDATION #30: Clean Equipment Protocol must be followed and be a condition of the development agreement.

THEME 9 - TRAIL PLANNING

Trails appear to be outside the scope of the addendum (p. 109 EIS 7-2015) given it is the development that gives urgency to having a trail system in place to handle the increase in human traffic. While EEPAC agrees that the standard condition, fences with no gates is a must, EEPAC also recommends:

RECOMMENDATION #31: The homeowner material include an explanation of why no gates should be ever installed in the fence.

THEME 10 - MANAGEMENT PLAN AND MONITORING

There is no information about species to be planted other than noting "native species" there is nothing about dealing with invasive species including Japanese Knotweed which was noted in an FOD7-4 community as well as Phragmites in Tributary 2C. It is unclear from all of the various documents in EEPAC's hands what the actual plan is other than to allow buffer areas to naturally regenerate. There is no list of plant species proposed for which area (given the mix of ecosites, one "size" will not be appropriate to all areas). NRSI's letter to the UTRCA and the City dated April 12, 2017 received by EEPAC at its May meeting, suggests that this natural regeneration will be monitored and if not satisfactory (to who?), "a plan could possibly be implemented." This is hedging of the first order and is not acceptable. In the many documents there is no detail provided. Given the location adjacent to a large section of an ESA, a formal plan must be in place prior to construction.

RECOMMENDATION #32: A condition of rezoning (a holding provision) be applied until a formal management plan, including invasive species management, species to be planted listed, monitoring periods and hold backs for remediation

and subsequent plantings if natural regeneration fails, is approved by the City. If such a condition is not possible on zoning, it **must** be a condition of development approval.

There is woodland amphibian breeding habitat within the FOD5 community (page 5, April 12, 2017 letter). It is suggested that the 10 m buffer is sufficient protection. According to the MNRF's Significant Wildlife Habitat Mitigation Support Tool development on adjacent land can have significant impacts on breeding pond functions if it alters ground or surface water quality or quantity. Woodland ponds which dry up before larvae transform as a result of disruptions to hydrological function become unsuitable sites for reproduction. Adjacent development can have a very high impact if it separates breeding habitat from summer or winter habitat. Residential and commercial development may result in the release of contaminants (i.e., sediments, high nutrient concentrations)

RECOMMENDATION #33: The monitoring plan must include baseline information, monitoring and reporting of the health of the SWH. The plan must also include compensatory mitigation if SWH is lost.

The letter of April 12, 2017 on page 6 also notes that "... the location and orientation of the seeps on site (also Significant Wildlife Habitat) may be altered, this is not expected to negatively affect their function to support wildlife and provide a course of vegetation biodiversity with the ESA." While it is almost certain the seeps will be altered, there is also a real possibility that they will be negatively affected.

RECOMMENDATION #34: The monitoring plan must include baseline information and monitoring of the seeps ecological function and vegetation biodiversity. If function or vegetation biodiversity are lost, compensatory mitigation will be required from holdbacks.

RECOMMENDATION #35: Any areas planted as part of the restoration plan include signage explaining why it is a restoration area to encourage people to avoid damaging it while restoration is taking place. Thorny native plants such as hawthorns should be included in the planting plan as an additional deterrent to human entry.

RECOMMENDATION #36: The monitoring plan should be for a minimum of 3 "cycles." In other words, if planting is in the spring of 2018, the last inspection would occur in the spring of 2021.

RECOMMENDATION #37: Due to the plan to cut tree roots to construct the new road to the Cline property, monitoring of tree health should be for 5 years with a holdback for tree planting or other compensatory mitigation to replace trees killed.

Although EEPAC appreciates that p. 117 EIS 7-2015 recommends that the clock start on the monitoring at 90% build out, EEPAC recommends revised wording.

RECOMMENDATION #38: The monitoring period begin the spring after 90% build out of the single family units or the 3rd spring after construction starts, whichever occurs first.

While EEPAC agrees with monitoring of the anthropogenic impacts (also page 117), the document is short on details of what will be done by who. For example, "warning of fines for unauthorized activities" signage is generally only installed at access points of managed trails. If there are no managed trails, the reminder of fines is an empty warning. It is unclear what mechanism exists to require the proponent to implement measures. What holdbacks will there be? What actions are taken by Development Services? This is particularly a concern because of the "phasing" of the development.

RECOMMENDATION #39: A holding provision be put on the Cline property subject in order to determine what impacts the single family development has had on the ESA prior to permitting the rezoning to come into force and effect. It might be necessary to make alterations to the development or site plans at that time.

THEME 11 - EDUCATIONAL MATERIAL FOR RESIDENTS

Anecdotally, a former EEPAC member who received "educational material" from the homebuilder found that it was included with a great deal of other information a new homeowner received. In other words, it was easy to miss and temporal at best. Therefore, EEPAC recommends for this addition to the standard condition.

RECOMMENDATION #40: In addition to the standard educational brochure, the proponent be required to:

a. Contribute to the creation of an informational kiosk about the ESA at one or more trail heads nearest (within 50 m) to the development.
b. Pay for a city mailing of the "Living With Natural Areas" brochure and EEPAC's "cat" brochure to all property owners 6 months after 70% of the units are occupied.

File: 39T-17502 / OZ-8147
Planner: L. Mottram

NATURAL RESOURCE SOLUTIONS INC.
Aquatic, Terrestrial and Wetland Biologists

June 4, 2018 Project No. 1469

Maneesh Poddar
Planner
Tridon Group

Dear Mr. Poddar,

Re: Old Victoria East Subdivision, 1738, 1742, 1752-1754 Hamilton Road, London
Response to EEPAC comments dated June 12, 2017

Staff of Natural Resource Solutions Inc. (NRSI) have had a chance to review the City of London Environmental and Ecological Planning Advisory Committee (EEPAC) letter, received by the EEPAC Chair on June 12, 2017. The EEPAC comments are based on their review of NRSI's July 2015 Environmental Impact Study (EIS) Addendum, and a subsequent NRSI comment-response letter to the Upper Thames River Conservation Authority (UTRCA) and City of London dated April 12, 2017. Responses have been provided according to the themes outlined in the EEPAC letter. Certain EEPAC comments appear to be directed to City planning staff (e.g., recommendations for holding provisions); we have not responded directly to those comments.

Theme 1 – Groundwater and Infiltration

Watercourse Thermal Regime

Tributary 2 within the subject property is considered to have a coolwater thermal regime based on the presence of coolwater-dependent fish species within the watercourse as presented in the EIS Addendum. The coolwater thermal regime is also explained through the known occurrence of various groundwater seepages and upwellings along its length within the subject property. However, the majority of flow derives from warmwater upstream sources (e.g., from an upstream stormwater management pond and agricultural field tile drainage), which likely transitions into a coolwater regime as the flows incorporate groundwater inputs downstream towards the confluence with the Thames River. Tributary 2 is not considered a coldwater feature due to a lack of known fish species occurrences that would be indicative of coldwater conditions. The single occurrence of a Brown Trout (*Salmo trutta*) at one location, during one UTRCA sampling year (NRSI 2015) is considered anomalous in the context of the other species observations and we conclude that its presence is not indicative of a coldwater regime within Tributary 2.

As described in the Proposed Functional Stormwater Management Plan (Eng Plus 2018), an Etobicoke Exfiltration System has been proposed, which is designed to

provide on-site subsurface runoff volume storage for major storm events up to the 100-year storm event. The storage capacity and extended runoff detention durations achieved through this system will reduce surface storage and mitigate thermal impacts. By enhancing infiltration potential within the development and reducing runoff that enters the Environmentally Sensitive Area (ESA) through surface flow paths, hydrological inputs to the adjacent natural features will be thermally cooled to maintain an existing coolwater thermal regime in the receiving watercourses.

Water temperature monitoring will be undertaken during and post-construction and compared against pre-construction baseline conditions. This monitoring is required to ensure a coolwater thermal regime is maintained within Tributary 2 and remains suitable habitat for the coolwater-dependent fish species. Existing data loggers installed by NRSI on February 2, 2018 will be used to collect baseline temperature data and monitor long-term trends.

Infiltration and Groundwater Seepages

Refer to Sections 3.3.1, 3.3.3 and 6.1.2 of the Revised Hydrogeological Assessment (Golder 2018) for discussion of the impact assessment to groundwater discharge.

Specifically, Section 6.1.2 states that "*based on the results of monitoring and site observations, water levels within the tributaries and south branch of the Thames River are not fully dependent on direct groundwater discharge. There are areas of localized groundwater upwelling and seepage that contribute to streamflow, but the watercourses on the Site are not anticipated to be fully reliant on groundwater to be sustained. NRSI's 2018 supplementary field data collection efforts* [as presented in Appendix E of the Revised Hydrogeological Assessment report] *have confirmed characterization of the natural watercourse features as being supported by a combination of both surface water and groundwater inputs. As a result, surface water levels are not anticipated to be impacted by any proposed construction dewatering.*"

The impact assessment in the context of the subdivision development, Section 6.2.4 discusses the following: "*Without mitigation, the anticipated decrease in groundwater recharge may lead to a localized reduction in the seepage volumes along the valley walls of the watercourses and within the ESA. Given that appropriate mitigation measures will be implemented to maintain at least 90% of the pre-development infiltration, the development is not expected to cause a decrease in the volume of groundwater seepage, though when combined with the cumulative effect of the recently constructed stormwater management facility (SWMF) at the Site, overall Site development may potentially impact the locations and/or orientations of the existing seeps. It is anticipated that seeps will remain in their local catchments and drain to the same ultimate receptors, despite the expected minor changes in location and orientation*".

With respect to the infiltration targets, the link has been made between the 90% target and the water balance completed by Eng Plus (2018) in Section 6.3 of the Golder hydrogeological assessment report.

Theme 2 – Site Monitoring During Construction Activities

The hydrogeological assessment report (Golder 2018) was designed to meet the needs of the proponent and UTRCA for approval. It is not currently designed to support a Permit to Take Water (PTTW) application due to the fact there are some unknowns with respect to excavation depths etc. that would be resolved during further design stages. A PTTW application package can be developed by Golder on behalf of the project team when required. The PTTW application package would include minor scope additions such as dewatering calculations and refinement of the proposed monitoring program in Section 8.2 of the Hydrogeological Assessment report (Golder 2018) to ensure parameters of concern are analyzed during baseline, construction and post-construction periods.

Responses to Recommendations:
#3A: By current industry standards in London, any dewatering plan prepared by a contractor generally includes or refers to (as part of a design drawing/tender package) a comprehensive Erosion and Sediment Control Plan. The Groundwater Monitoring Program (GWMP) (a component of the comprehensive Monitoring Plan to be prepared during detailed design) presented in Section 8.2 (Golder 2018) would be refined nearer to the date of construction.
#3B: The GWMP would include details of a post-construction monitoring phase (this is already referred to in Section 8.2 (Golder 2018) but would be refined).
#3C: Petroleum hydrocarbons (to include BTEX) are included in the parameter list in Section 8.2 (Golder 2018).

Theme 3 – Post-Development Groundwater Infiltration/Surface Water Runoff

Infiltration, Water Balance and Monitoring

The stormwater management plan has been designed to maintain 100% of the pre-construction infiltration volume, which will be captured, stored and infiltrated in the Etobicoke Exfiltration System up to the 90th percentile rain event in London (28mm). The system has been designed to maintain the pre-construction water balance within each of the existing catchment areas that contribute hydrological inputs to the natural features, and by exceeding the 90% infiltration target that was identified (Golder 2018) to achieve a water balance. This system will infiltrate runoff sources within their existing catchment areas such that infiltrated flows will continue to be directed to the same general areas of slope seepage as under current conditions. The proposed infiltration measures are not expected to cause a decrease in the volume of groundwater seepage within the ESA, although minor variations in the location and/or orientation of the seepages may occur along the valley walls. Runoff will be infiltrated as close to the source as possible and will be maintained within existing pre-construction catchment areas. This will allow infiltrated water to maintain similar flow paths such that the seepage area locations along the valley slopes are not significantly altered. This will mitigate potential for changes in the area and composition of groundwater-associated vegetation species within down-gradient forest slope and wetland areas.

Monitoring recommendations were made in the Hydrogeological Assessment report (Golder 2018), which include monthly groundwater level and surface water level monitoring across pre-, during- and post-construction monitoring periods. Water level

monitoring is proposed to ensure that water balance is being achieved as anticipated and that negative impacts associated with water quantity inputs are not occurring within the natural features. The seepage areas will also be regularly documented as part of the GWMP across pre-, during-, and post-construction phases. Refinement of the GWMP will occur nearer to the construction period as mentioned above. A Trigger Action Response Plan (TARP) may be suitable for the GWMP to indicate trigger levels and accountability in the context of detected impacts.

As further described under the response to Theme 10, vegetation monitoring at seepage locations will also be incorporated into the Monitoring Plan to monitor vegetation species composition and identify any changes that may be occurring in response to altered groundwater seepage conditions. The Monitoring Plan will outline corrective measures to be implemented in the event that hydrogeological and/or vegetation monitoring suggests negative impacts to the existing groundwater seepage functions within the ESA.

Surface Water Runoff

As described in the Proposed Functional Stormwater Management Plan for the proposed development (Eng Plus 2018), a portion of the development (post-development catchment areas A100 and A101) will drain toward the City's adjacent stormwater management facility. See the Stormwater Management Plan for the post-development drainage plan prepared by Eng Plus (sheet number SK2). Stormwater collected within the remainder of the development will ultimately drain into the adjacent watercourses (Tributaries 2 and 2C) according to the stormwater management plan. As described in the plan, stormwater will be collected and infiltrated, and excess runoff will drain to the watercourses at designated outlet sites as shown on the post-development drainage plan.

The stormwater management plan has been designed to provide on-site runoff volume storage for major storm events up to the 100-year storm event. Post-development peak flow rates will be controlled to pre-development rates before leaving the site to mitigate erosion and flooding impacts on the existing downstream drainage system (Eng Plus 2018). Stormwater runoff volume will be contained on-site within the subsurface exfiltration trenches for temporary volume storage. Additional storage is provided within roadway low areas to a maximum ponding depth of 300mm. Runoff that is released from the exfiltration trenches at the proposed outlet locations will be controlled to pre-development flow rates using orifice controls (Eng Plus 2018).

A detailed Erosion and Sediment Control Plan will be provided as a condition of development. Various erosion and sediment control recommendations were provided in the Proposed Functional Stormwater Management Plan (Eng Plus 2018).

Theme 4 – Water Quality

Monitoring

Should the City have a monitoring program in place for the adjacent stormwater management facility, we will work with the City to ensure that the monitoring program for

the development is compatible with the program undertaken for the stormwater management facility to facilitate data sharing, integration, and interpretation.

Water Quality Control Plan

A robust plan for water quality control within the development has been described in the Proposed Functional Stormwater Management Plan (Eng Plus 2018). As described in the plan, stormwater runoff from the 90th percentile storm event (28mm) will be retained and infiltrated into the ground using an Etobicoke Exfiltration System. The storage volume provided by the exfiltration system exceeds the water quality requirements objective for the Enhanced protection level (i.e., 100% controlled for the 90th percentile rainfall event) (Eng Plus 2018).

Additional lot-level controls will be provided by directing roof runoff from downspouts onto grassed surfaces that will sheet flow to shallow ponding areas at the rear-lot limits. This flow path will allow for natural filtration of the relatively clean rooftop runoff prior to temporary retention and infiltration within the rear-yard ponding areas.

Oil-grit separator (OGS) units will also be incorporated as lot-level controls within the development. Maintenance of the OGS units will be the responsibility of the condominium corporation. Pre-treatment devices such as goss traps will be placed in all catchbasins to capture any spillage and floatable contaminants before entering the exfiltration trenches (Eng Plus 2018).

Theme 5 – Buffers and Encroachment

North of Hydro Corridor

The EEPAC letter states that EEPAC would not have agreed to the City's acceptance of the proposed condominium road being located within the ESA buffer north of the hydro corridor, as was discussed during an April 18, 2016 meeting. As shown on Map 8c and as stated in NRSI's April 2017 letter, the proposed condominium road is to be located entirely outside of the 10m ESA buffer north of the hydro corridor.

Perimeter of Agricultural Fields

The areas of proposed ESA buffer encroachment are all located within areas of the Cline Lands that have been under agricultural production, and will therefore not require removal of natural vegetation features. The total area of ESA buffer encroachment presented in the July 2015 EIS Addendum is reduced from an earlier development concept based on discussions held with City staff, and has been offset by a larger area of lands that have been added to the ESA buffer as shown on Map 9a and described in EIS Section 6.3.

As stated in the EEPAC letter, the greater potential for ESA impact derives from post-development human occupation and use of the lands. As indicated in Section 6.5 of the EIS Addendum, all lots will be developed with permanent fences with no gates along their rear limits to prevent unauthorized access into the ESA. Other measures to

mitigate induced human impacts are being proposed including creation and distribution of a homeowners' brochure to educate homeowners about the sensitivity of the ESA and the buffer restoration areas, the installation of an educational/information sign, and additional homeowner information mail-outs (see responses to Themes 10, 11 below). ESA buffers that occur on lands that have been used for agriculture will be actively restored with native vegetation plantings. Dense, thorny species will be planted in areas of reduced buffer (<10m) to further inhibit human encroachment into the ESA. Post-construction monitoring of the buffers and adjacent ESA areas will be completed to document any evidence of human use disturbance that may be occurring. A detailed Monitoring Plan to be developed during the detailed design stage will outline additional mitigative steps to be taken if ESA disturbances are documented during monitoring activities. These measures have been proposed to mitigate induced impacts on the adjacent natural features, monitor and respond to any observed disturbances, and to compensate for the reduced buffers widths where those have been proposed.

The areas of expanded buffer presented in Table 1 of the April 2017 NRSI letter and as shown on Map 9a far exceed the amount of proposed buffer encroachment, by a value of 1,555m^2. This will provide an overall benefit through additional naturally-vegetated ESA buffer lands, in combination with the human induced impact mitigation measures stated above. We disagree with EEPAC's conclusion that Buffer Enlargement Area K does not provide a useful buffer. There are currently no plans for a path or stormwater management facility outlet access point in that location. If a pathway is proposed through that area at a later date, impacts associated with that undertaking will be addressed separately.

Buffer to Vegetation Patch 09028

EEPAC's Recommendation #16 states that the City should review buffers for the east side of the Vegetation Patch 09028 prior to acceptance of the EIS. It is NRSI's understanding that development approvals for the proponent's lands adjacent to Patch 09028 (referred to as the Mistretta Lands in the EIS Addendum) have already been issued, and that construction has commenced. The recommended buffers from this feature were in conformance with City of London guidelines for minimum buffer widths. These buffers were proposed based on our precautionary assumption that the Patch 09028 features were ecologically significant, since we could not directly characterize them on the ground due to site access limitations.

Southeast Development ESA and Buffer Extension

As stated in NRSI's April 2017 letter, NRSI delineated an extension of the ESA boundary and associated buffer with additional lots that were proposed by the proponent at the southeast end of the development (to the rear of Lots 46-48). Lands within this extended buffer area will be allowed to naturally regenerate from its current condition as mowed lawn. As part of the monitoring plan requirement to inspect the natural regrowth occurring within ESA buffer areas, the buffer area behind Lots 46-48 will be inspected to document the species types (e.g., native vs. non-native), diversity and coverage density that is occurring. This information will be provided to the UTRCA and City as part of regular monitoring reports. If considered necessary based on consultation between NRSI, the City and UTRCA, NRSI will undertake active buffer management (e.g.,

invasive species removal) and/or native species planting to achieve the desired vegetative form and function within the buffer. A planting strategy for the buffer will be discussed and agreed to with City and UTRCA staff prior to planting.

Theme 6 – Tributary 2

Authorization for In-Water Works

We agree with EEPAC's statement that all in-water work must comply with federal Department of Fisheries and Oceans (DFO) and Ontario Ministry of Natural Resources and Forestry (MNRF) requirements. All proposed in-water works will be subject to review against DFO criteria to assess the potential for serious harm to fish and fish habitat. NRSI aquatic biologists will complete a self-assessment following the DFO criteria as outlined on-line at:
http://www.dfo-mpo.gc.ca/pnw-ppe/index-eng.html.

If through this assessment it is determined that a DFO review is required, then we will submit a Request for Review. The DFO will review the proposed activities against *Fisheries Act* criteria to determine if an authorization under the Act is required.

The requirement for DFO review will be determined based on the detailed design of the development. Any works that could cause serious harm to fish or fish habitats can only proceed subject to formal review under this DFO process. This requirement is stated in Section 6.3.4 of the EIS Addendum.

Construction Inspection

If closed-bottom (e.g., CSP) culverts are installed at watercourse crossings, a qualified aquatic biologist will undertake an inspection of the constructed culverts to ensure that they do not represent a barrier to fish movement. The EIS Addendum recommended that any culvert works be completed in the dry if possible. If this is not possible, all in-water works will be undertaken according to DFO and MNRF requirements including timing windows, and if necessary, watercourse work zone isolation and fish relocation to watercourse areas outside of the culvert work zone.

Theme 7 – Pre-Construction Conditions

A bat cavity tree assessment will be completed according to MNRF protocol prior to site development as stated in Section 6.3.3 of the July 2015 EIS Addendum. This assessment will be completed to determine whether the proposed development may cause a negative impact to Species at Risk bats and their habitat, in conjunction with MNRF consultation.

Theme 8 – Construction Conditions

We agree with EEPAC's recommendation that all laydown, storage or fuelling activities occur greater than 30m from the ESA buffers and never adjacent to the significant

features and watercourses. This requirement is feasible to accomplish during development of the Cline Lands.

A Sediment and Erosion Control Plan will be provided as a condition of development, and will include the requirement that all soil stockpiles be located at least 30m from all watercourses, slopes and ravines.

An Environmental Inspector or other qualified individual will be responsible to ensure that all measures outlined in the Environmental Management Plan are being adhered to and/or are functioning as appropriate (e.g., silt fencing). The Environmental Inspector or qualified individual will have the authority to stop work if required and to immediately address any noted issues or deficiencies.

A Flood Response Plan will be provided as a condition of development. The Flood Response Plan will stipulate that work not take place during high volume rain events or heavy snow melts/thaws.

A Clean Equipment Protocol will be included as a condition of the development agreement.

Theme 9 – Trail Planning

The homeowner information brochure will include information about the significance and sensitivity of the adjacent ESA natural features and their naturally restored buffers. The brochure will indicate why permanent fences with no gates were installed along rear-lot areas backing on to the ESA and the importance of ensuring that the ESA natural features are protected from human disturbance. The brochure will also include information about how homeowners can help protect and be good stewards of the adjacent features and wildlife species, such as by encouraging that cats not be allowed to roam outdoors due to the hazard posed to birds and other small wildlife.

Theme 10 – Management Plan and Monitoring

Buffer Restoration, Monitoring and Management

As part of the pre- and post-construction monitoring plan, NRSI biologists will inspect the ESA buffers for the presence, relative abundance and spatial coverage of non-native/invasive species. Many non-native species establish in lands subject to disturbance or changes from active agriculture to fallow conditions. However, many of these are annual agricultural weeds which through succession will give way to native goldenrods, asters and other early successional native plants. At the same time, we anticipate seed rain from the adjacent natural areas to give rise to native tree seedlings. If significant non-native/invasive species growth occurs, such that it is or may limit the growth or success of native vegetation species in the buffer or limit the buffer species diversity, then an Invasive Species Management Plan will be created to address the problem and outline specific controls. We recommend that such a plan not be created at this time as it is would have to cover a wide range of potential species. In adaptively managing this potential problem we would be able to develop a plan as needed that

would be tailored to the problem at hand. The Invasive Species Management Plan would be submitted for review and approval by the City and/or UTRCA.

As stated in Section 6.6 of the EIS Addendum, areas of ESA buffer that contain existing vegetation (i.e., adjacent to the proposed condominium development, and behind Lots 46-48 as stated above under Theme 5) are expected to continue naturally regenerating along the edges of the ESA, which will ultimately enhance the existing natural feature edges and make them more robust to mitigate disturbances. Passively regenerating buffer areas will be monitored to ensure that they are naturally regenerating with a species assemblage and diversity (e.g., not dominated by non-native/invasive species) to the satisfaction of the City and/or the UTRCA. If satisfactory results are not observed through the passive regeneration process, invasive species will be managed according to the Invasive Species Management Plan and the buffers will be actively restored with native species plantings according to a buffer restoration plan to be approved by the City and/or the UTRCA.

The ESA buffers that occur within lands that were under active agricultural cultivation, including all expanded compensation buffer areas, will be actively restored with native vegetation plantings according to a buffer restoration plan to be approved by the City and/or the UTRCA. These buffer areas will also be monitored according to the requirements of the detailed Monitoring Plan to ensure that restoration plantings are successfully established and to manage non-native/invasive species growth as required according to the Invasive Species Management Plan.

A detailed list of vegetation species to be planted within the ESA buffers will be provided as part of a buffer restoration plan to be presented to the City and/or the UTRCA during the detailed design stage. Species will be selected that are ecologically appropriate to particular sections of ESA buffer, to be reflective of and consistent with the vegetation species that occur within the adjacent ESA sections, that are appropriate to the site conditions (e.g., soil type, sunlight exposure), and represent the desired transition between the core ESA natural features and the adjacent developed area. The buffer restoration plan will be reviewed and approved by the City and/or the UTRCA prior to construction.

As stated in EEPAC's Recommendation #32, an educational/information sign will be installed in a suitable location (e.g., adjacent to the condominium road where it passes adjacent to the buffer near the Tributary 2 crossing, or adjacent to Street B where it crosses Tributary 2C) to inform residents and other members of the public about the significance and sensitivity of the Meadowlily Woods ESA and will provide some information about the ecological communities and species that occupy the adjacent features. The sign will also state that the ESA buffers have been ecologically restored and why this is important to protect the functional integrity of the interior features. The draft content of the sign will be reviewed by the City and the UTRCA during the detailed design stage.

Amphibian Breeding Habitat Monitoring

Based on amphibian call surveys completed by NRSI as part of EIS field studies, no Significant Wildlife Habitat (SWH) for woodland amphibian breeding was identified on or adjacent to the subject property based on MNRF criteria (MNRF 2015). However, based

on field surveys completed by AECOM in association with the City's stormwater management facility development, it was assumed that the FOD5-1 forest community (approximately corresponding to NRSI's FOD5 and FOD5-2 communities) represented Amphibian Breeding Habitat (Woodland) SWH (AECOM 2015). AECOM made this assessment based on their detection of two SWH indicator species (Gray Treefrog (*Hyla versicolor*) and Spring Peeper (*Pseudacris crucifer*)) beyond 100m of their survey stations on the subject property, and was made on a precautionary basis since the AECOM survey records for these species included no estimate of species abundance. The approximate locations of these species were not mapped; they were simply recorded as beyond the point count radius (e.g. >100m). The required habitat criteria from the MNRF's Ecoregion Criterion Table for determining woodland amphibian breeding SWH is: "*presence of a wetland, pond or woodland pool (including vernal pools) >500m^2 (about 25m diameter) within or adjacent (within 120m) to a woodland (no minimum size). Some small wetlands may not be mapped and may be important breeding pools for amphibians*" (MNRF 2015). Based on NRSI fieldwork (Ecological Land Classification), there are no known vernal pools, ponds or other wetlands located within this forest polygon. It is our opinion that there is no amphibian breeding habitat within this forest polygon.

The criteria for Amphibian Breeding Habitat (Woodland) SWH is considered met when, among other criteria, it has been determined that two or more indicator species occur at a relative abundance that equals at least 20 individuals or a call level code of 3 (MNRF 2015). Given that the AECOM study did not provide any assessment of species relative abundance, we do not agree that the forest community should be assumed as SWH. We therefore do not believe that there is sufficient rationale to support the need for long-term monitoring of amphibian breeding habitat, based on NRSI's assessment that the adjacent forest communities do not provide amphibian breeding habitat SWH or otherwise.

Groundwater Seepage Monitoring

Monitoring recommendations were made in the Hydrogeological Assessment report (Golder 2018), which include monthly groundwater level and surface water level monitoring across pre-, during- and post-construction monitoring periods. Water level monitoring is proposed to ensure that water balance with the adjacent natural features is being achieved as anticipated and that negative impacts associated with water quantity inputs are not occurring within the natural features. Groundwater quality monitoring is also proposed.

As part of the Monitoring Plan to be finalized during the detailed design stage with the City and the UTRCA, NRSI will complete inspections of the ESA groundwater seepage areas to assess whether changes to the species assemblage is changing over time in a manner that may suggest changes in groundwater seepage volumes, spatial extent or locations (e.g., shift to species preferring drier conditions, or notable changes in the number and spatial coverage of species that are indicative of groundwater inputs (e.g., Skunk-cabbage (*Symplocarpus foetidus*)). These inspections will take place in conjunction with the post-construction monitoring plan for the subject property that is agreed to with the City and the UTRCA. The monitoring requirements for groundwater seepage areas will have regard for, and will coordinate with, groundwater seepage vegetation monitoring that had been recommended following construction of the City's

stormwater management facility (AECOM 2015). The specific methodology will be aligned with the seepage vegetation monitoring being completed for the City to allow for direct comparison and compatibility of the data to better interpret the data and inform the need for corrective actions. This plan, which will assess the vegetative biotic response to any potential changes in groundwater hydrogeology that could affect the seeps, will relate the vegetation monitoring results against the monitoring results collected by Golder. This information will be presented together as part of comprehensive monitoring reporting to be provided to the City and UTRCA according to an agreed-to schedule.

Monitoring Program Timing and Duration

In its letter dated May 1, 2018, the UTRCA stated that 5 years of post-construction monitoring would be required. Specific details of the monitoring requirements will be further discussed with City and UTRCA staff in conjunction with completion of the formal Monitoring Plan to be prepared during the detailed design stage.

Regarding EEPAC's Recommendation #34 to monitor tree health in the development, we suggest that 3 years of post-construction tree health inspection is adequate to identify any potential health or die-back issues, rather than the recommended 5 years.

We agree to EEPAC's Recommendation #35 that the post-construction monitoring period begin the spring after 90% build-out of the single family units or the 3rd spring after construction starts, whichever occurs first.

Theme 11 – Educational Materials for Residents

In response to EEPAC's Recommendation #37(a), see our response above under Theme 10, which was provided in response to EEPAC's Recommendation #32. As stated above, an educational/information sign will be placed at a prominent location near the ESA/buffer to inform residents about the significance and sensitivity of the adjacent ESA natural features.

The proponent agrees to EEPAC's Recommendation #37(b), to pay for a city mailing of the "Living With Natural Areas" brochure and EEPAC's "cat" brochure to all property owners of the development 6 months after 70% of the units are accepted.

I trust that these responses sufficiently address the comments provided in EEPAC's letter submission. Please don't hesitate to contact the undersigned with any additional comments or questions.

Sincerely,
Natural Resource Solutions Inc.

Ryan Archer, M.Sc.
Terrestrial and Wetland Biologist

References

AECOM. 2015. City of London Old Victoria SWM Facility No. 1 – Functional Design Environmental Impact Study. June 4, 2015.

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Golder. 2018. Hydrogeological Assessment. Old Victoria East Subdivision – North Parcel, London, Ontario. Submitted to Mr. Don de Jong, Thames Village Joint Venture Ltd. March 2018.

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Ontario Ministry of Natural Resources and Forestry (MNRF). 2015. Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E. January 2015.

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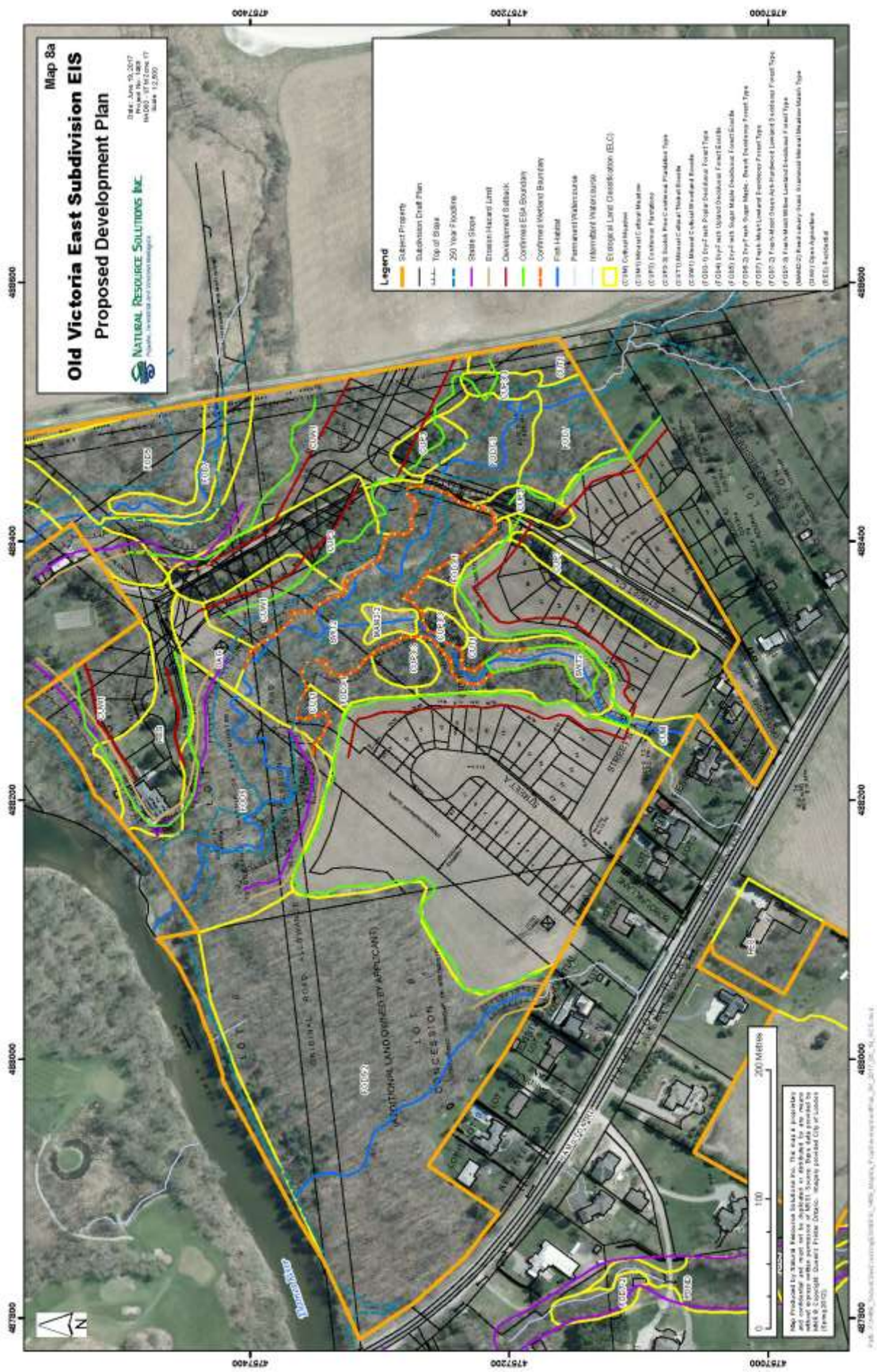
Planner: L. Mottram



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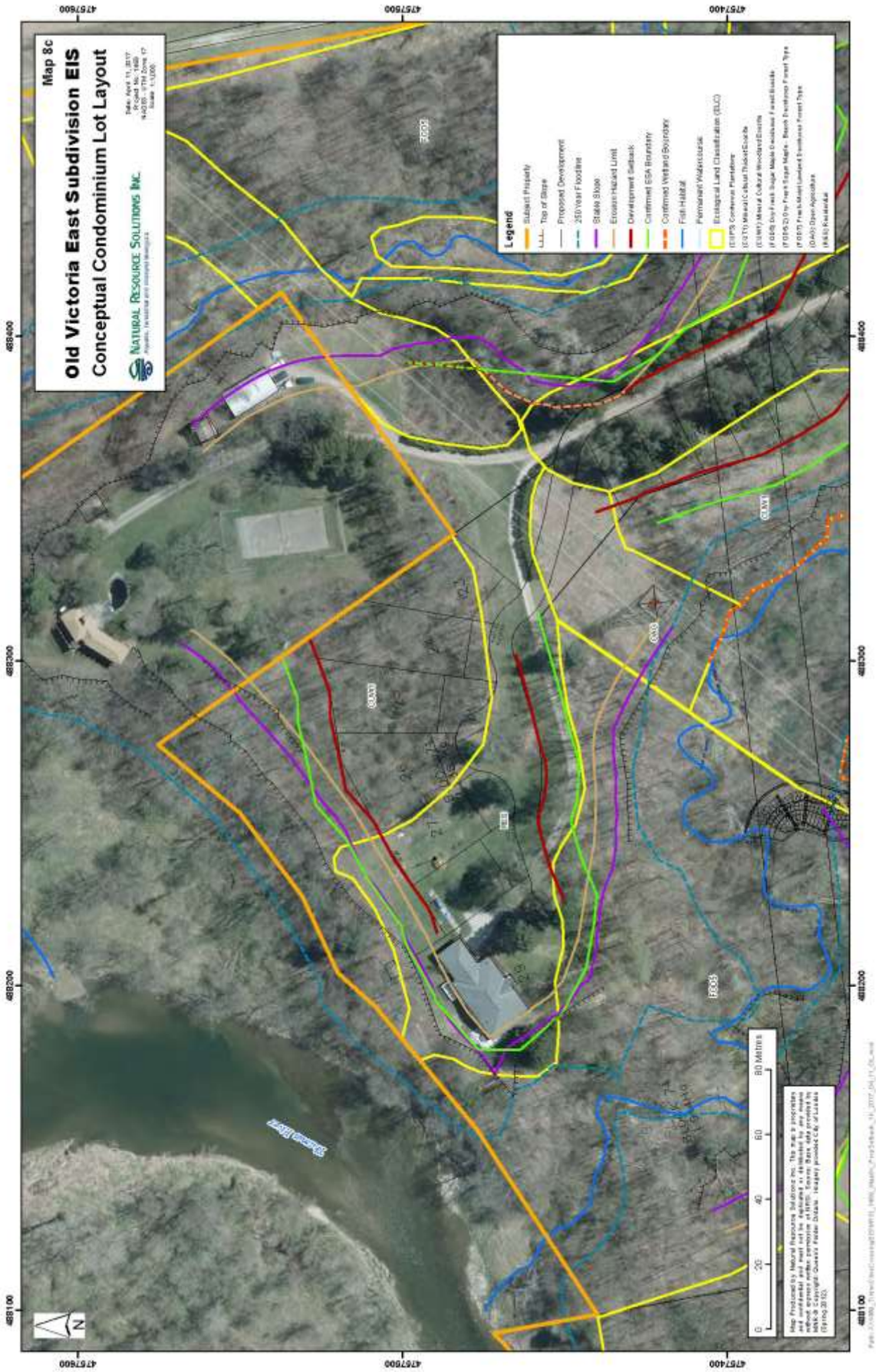

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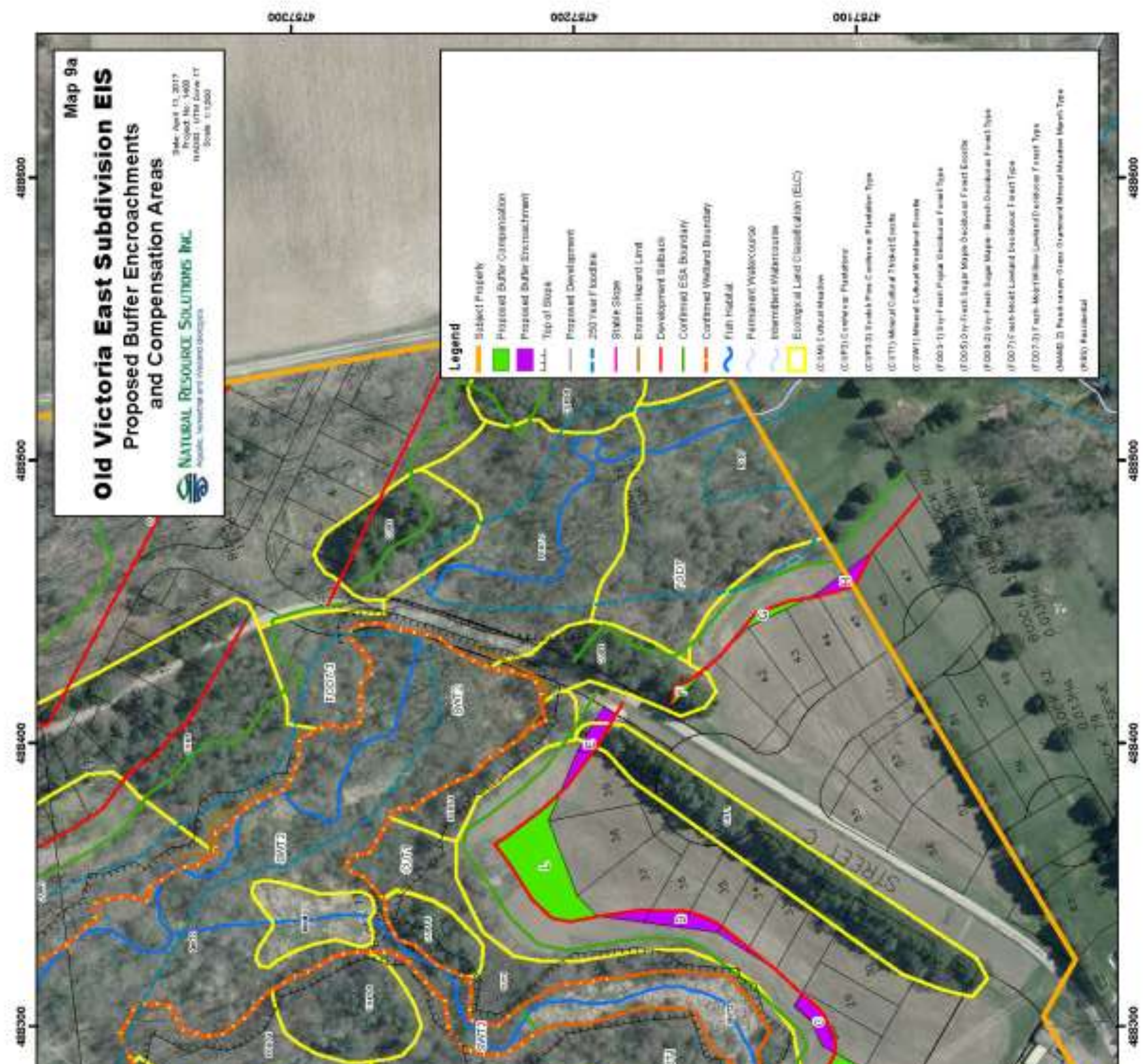


Appendix C – Policy Context

The following policy and regulatory documents were considered in their entirety as part of the evaluation of this requested Draft Plan of Subdivision and land use change. The most relevant policies, by-laws, and legislation are identified as follows:

Old Victoria Area Plan

In 2007, City Council adopted the Old Victoria Area Plan as a guideline document for review of planning applications within the area bounded by the Thames River on the north, Commissioners Road East on the south, the Old Victoria Road alignment on the east and the lands that include the Victoria on the River subdivision on the west. The same area was the subject of Official Plan Amendment No. 427 which applied land use designations, environmental mapping delineations, transportation corridors and area specific policies in section 3.5.18 of the Plan.

The Area Plan concept supports a significant open space component along the Thames River and tributary ravines, as well as a mix of housing forms and densities. Elements of this proposed draft plan that accurately reflect and implement the Council-approved Area Plan include the Low Density Residential lots and blocks, Medium Density Residential street townhouses, stormwater management facility, and extensive Open Space associated with the ravine lands and river corridor. There have been various discussions with the applicant during the draft plan review process to identify possible routings for a future multi-use trail system that utilizes the open space lands, creek corridors, SWM pond and hydro corridor lands; connecting the neighbourhood with the broader community. The multi-use trail system is referenced in policy 3.5.18.viii) of the Official Plan and Section 4.4 of the Area Plan.

Community Design Guidelines were adopted with the Area Plan to assist in implementing a common vision for the Old Victoria Planning Area by providing specific guidelines that can be applied through the subdivision design, zoning, public infrastructure works and site plan approval process. The Community Design Guidelines are referenced in policy 3.5.18.xii) of the Official Plan and outlined in Section 4 of the Area Plan. The guidelines have been implemented in the subdivision design, for example, by the recommended special zone provisions to allow street townhouse units with reduced front yard setbacks and reduced road widths to encourage a more intimate streetscape.

The draft plan of subdivision as recommended by staff is found to be in keeping with the Old Victoria Area Plan.

Official Plan

In 2007, City Council adopted Official Plan Amendment No. 427 which confirmed land use designations, road alignments and environmental features on Map Schedules “A”, “B” and “C” of the Official Plan.

In addition to mapping modifications, OPA 427 also included the adoption of area specific policies in Section 3.5.18 of the Official Plan, which provide further guidance with respect to the form of development, public infrastructure facilities and environmental protection measures to be supported within the Old Victoria Community Planning Area. The matters addressed in 3.5.18 include:

- guidelines to provide for the delineation of development boundaries and identification of setbacks from the Thames River Valley Corridor;
- identification of opportunities for re-vegetation and enhancement of lands within and adjacent to the ESA;
- identification and protection of tree preservation areas;
- criteria for the allocation of active/passive parkland, and the alignment of a multi-use trail system within the area;
- recognition of the Municipal Class EA for Storm Drainage and Stormwater Management Servicing Works as the basis for the location and design of stormwater infrastructure within the area; and

- the adoption of Community Design Guidelines that are intended to supplement the City's standard criteria and standards for matters such as road geometry, landscaping, building orientation and pedestrian access.

The land use pattern in the proposed plan of subdivision, the recommended zoning and permitted uses reflects the designations identified on Schedule "A" - Land Use. Schedule "B" delineation of the ESA boundary and buffers has been refined through preparation of an Environmental Impact Study, and may be further refined at the detailed design stage if necessary to address Conservation Authority concerns with respect groundwater resources and measures to mitigate potential impacts, including a proposed LID (Low Impact Development) solution to be incorporated into the subdivision stormwater management design and drainage plans.

Schedule "C", Transportation Corridors map is recommended to be amended by deleting the "Secondary Collector" road classification on the east side of Hamilton Road. The alignment was configured as short "loop" or "crescent" connecting future development with access to Hamilton Road. The subdivision draft plan continues to incorporate the basic configuration, except to the standards of a local street. The City's Transportation Planning and Design and Development Services staff have reviewed the proposed draft plan and have no concerns with the change in classification to a local street.

The proposed plan of subdivision together with the conditions of draft approval and recommended zoning, are considered to be in conformity with the Official Plan.

London Plan

With respect to The London Plan, which has been adopted by Council but is not yet fully in force and effect pending appeals, the subject lands are within the "Neighbourhoods" Place Type permitting a range of uses such as single detached, semi-detached, duplex, triplex, and townhouse dwellings, and small-scale community facilities; and the "Green Space" Place Type. Uses within the Green Space place type are dependent upon the natural heritage features and areas contained on the subject lands, the hazards that are present, and the presence of natural resources which are to be protected. Various type of public parks are permitted; private green space uses such as cemeteries and private golf courses; agriculture, woodlot management, horticulture and urban gardens; conservation; essential public utilities and municipal services, storm water management, and recreational and community facilities. The range of dwelling types, open space and conservation uses permitted by the recommended zoning conforms to the Place Type policies and uses identified on Map 1 of the London Plan.

The City Building Policies of the London Plan have been reviewed, and consideration given to the how the proposed Draft Plan of Subdivision contributes to achieving those policy objectives, including the following policies most pertinent to this application:

Neighbourhood and Design Objectives

203_ Neighbourhoods should be planned to include one or more identifiable and accessible focal points that contributes to the neighbourhood's character and allows for community gathering.

As noted previously, Street 'B' ties the neighbourhood together and it represents the focal point of the neighbourhood providing a "window" street and access to open space. Integration of the adjacent stormwater management facility lands will also contribute to the neighbourhood's character and provide exposure to natural heritage features. The SWM maintenance access road may be utilized for access around the SWM pond to the future multi-use recreational trail. At the same time, the existing hydro transmission corridor and HONI easement rights must be protected. As requested by HONI, a condition of draft plan approval will require chain link fencing along the rear yards and Street 'A' interface to restrict access and protect against encroachments into the hydro easement (D.P. Condition No. 107). Staff will continue to work with HONI to look for opportunities for another pathway connection over the hydro corridor between the bulb of Street 'A' and the future multi-use trail crossing the SWM outlet.

204_ Natural heritage is an important contributor to the character of an area and influences the overall street network. Neighbourhoods should be designed to preserve view corridors to natural heritage features and landmarks through lotting patterns, window streets, and building placement.

The natural heritage features contribute to the character of the neighbourhood, and influence the street network. A window street will be incorporated at a central location within the neighbourhood providing public access to open space and views looking down into a natural wooded ravine corridor.

Street Network

212_ The configuration of streets planned for new neighbourhoods will be of a grid, or modified grid, pattern. Cul-de-sacs, deadends, and other street patterns which inhibit such street networks will be minimized. New neighbourhood street networks will be designed to have multiple direct connections to existing and future neighbourhoods.

Due to the configuration of the site area and the fixed locations of Oriole Drive and Bobolink Lane at Hamilton Road, it is difficult to design a street pattern that avoids short streets and cul-de-sacs. There is an existing private road which is being proposed to be utilized for the cluster housing blocks on the other side of the ravine corridor. A public road access would not be practical here as there is not enough room to accommodate a public road at the crossing or within the blocks themselves. Provision has been made for temporary turning circles at the end of the two legs connected to Street 'B' and Street 'C' providing future road connections to the adjacent lands to the south.

218_ To support connectivity, blocks within a neighbourhood should be of a size and configuration that supports connections to transit and other neighbourhood amenities within a typical ten minute walk.

The subdivision plan supports connectivity with two public access points to Hamilton Road, and planning for a future multi-use trail through the area and around the adjacent SWM facility to the north, will provide good opportunities for walking and cycling to amenities outside of the immediate area.

Public Space

246_ Public spaces should be designed and located as part of, and to support, the active mobility network.

A conceptual park plan delineating the alignment of the west-east Thames Valley Parkway (TVP multi-use pathway), as shown on the Active Mobility Network mapping, will be required as a condition of draft plan approval (D.P. Condition No. 116).

Active Mobility

332_ To achieve a high level of connectivity that can support all forms of mobility, street networks within new neighbourhoods will be evaluated for their connectivity ratio. A ratio of 1.5 or higher will be used as a target.

The connectivity ratio is calculated at 1.2. However, the ratio is calculated at 1.75 if the two temporary turning circles representing dead end streets are not included.

348_ Active mobility features will be incorporated into the design of new neighbourhoods and, where possible, enhanced in existing neighbourhoods to ensure connections to the street and transit system.

A future multi-use trail is being planned to be incorporated within the proposed subdivision lands.

357_ Cycling routes and pedestrian pathways will provide linkages between open space areas, neighbourhoods, centres, corridors, employment areas and the public transit services and will enhance the convenience, safety and enjoyment of walking and cycling.

The recommended Draft Plan Conditions implement such aspects as the walking and cycling routes identified in the Active Mobility Network mapping (D.P. Condition No. 116).

Provincial Policy Statement 2014

The recommended draft plan and the recommended Official Plan and Zoning By-law amendments are consistent with the PPS 2014, as summarized as follows:

1. Building Strong Healthy Communities

   The subject lands are located within the City's Urban Growth Boundary where adequate servicing capacity exists or is planned. A comprehensive land use plan to guide future development in this area has been prepared and adopted by Municipal Council, referred to as the "Old Victoria Area Plan". The proposed subdivision and accompanying Official Plan and Zoning By-law Amendments, are in keeping with the Area Plan and meet the objectives of Section 1.1.1 of the PPS by creating healthy, liveable, safe, and sustainable communities by promoting efficient and resilient development patterns; accommodating an appropriate range and mix of housing; and is in close proximity to employment areas, recreational and public open space uses. The proposed development will make use of existing and planned municipal water, sanitary sewers, and a new stormwater management facility. The subdivision plan has taken into account coordination with the existing hydro corridor easement (D.P. Conditions No. 69, 107 & 113), and protection of natural heritage features on adjacent lands through implementation of the Environmental Impact Study recommendations (D.P. Conditions No. 110 & 117).

2. Wise Use and Management of Resources

   The subject lands are located within an area of existing wooded ravines, watercourses and wetland features. An Environmental Impact Study has been prepared to provide for protection of the natural heritage feature, and to demonstrate that there will be no negative impacts on the feature or its functions. There has been much back-and–forth between the applicant/consultant and Conservation Authority during the review of the EIS and Hydrogeological Assessment with respect to groundwater impacts on natural heritage features and functions. The review has progressed to a point now that UTRCA has advised that Draft Plan Approval can proceed, and that their outstanding concerns will be addressed at the detailed subdivision design stage and through conditions of Draft Plan Approval (D.P. Conditions No. 119 to 122).

   There are no identified concerns for protection of agricultural, mineral aggregates, or cultural heritage and archaeological resources. An assessment of archaeological resource potential was completed as part of the area plan process. Stage 3 and Stage 4 Archaeological Assessments were carried out over the majority of the subject lands in 2010. However, additional lands have since been added to the holdings and will require that a Stage 1-2 Archaeological Assessment be undertaken, in accordance with the recommended draft plan conditions (D.P. Conditions No. 115).

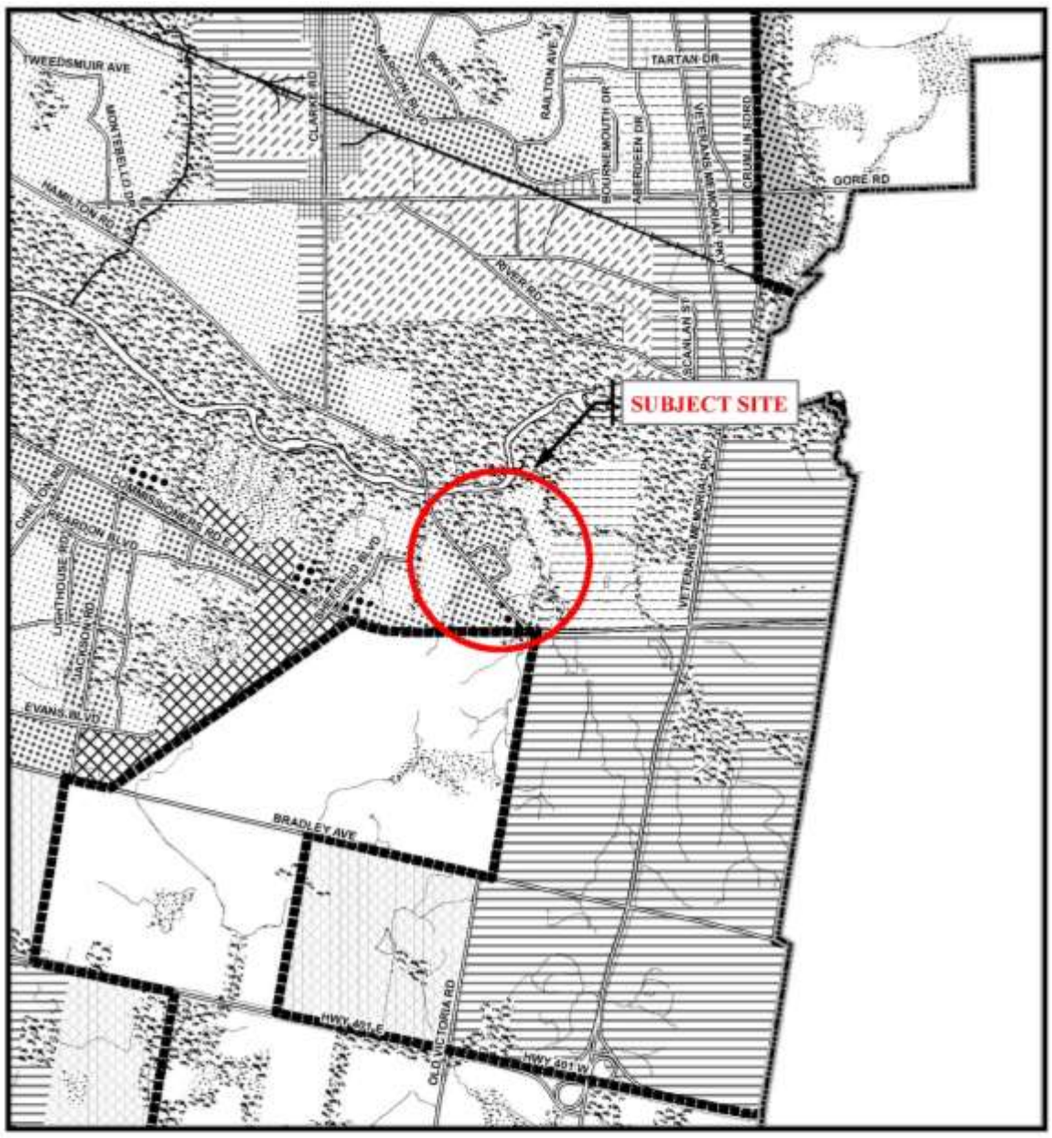
3. Protecting Public Health and Safety

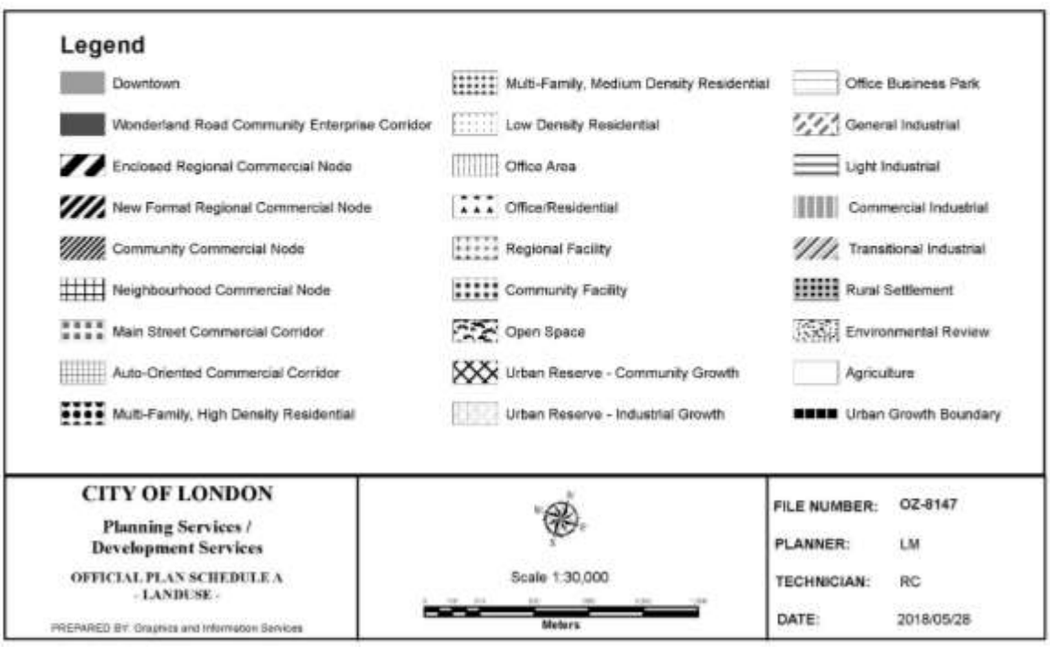
   The recommended draft plan of subdivision, Official Plan and zoning amendments do not pose any public health and safety concerns, and there are no known human-made hazards.

Appendix D – Relevant Background

Additional Maps

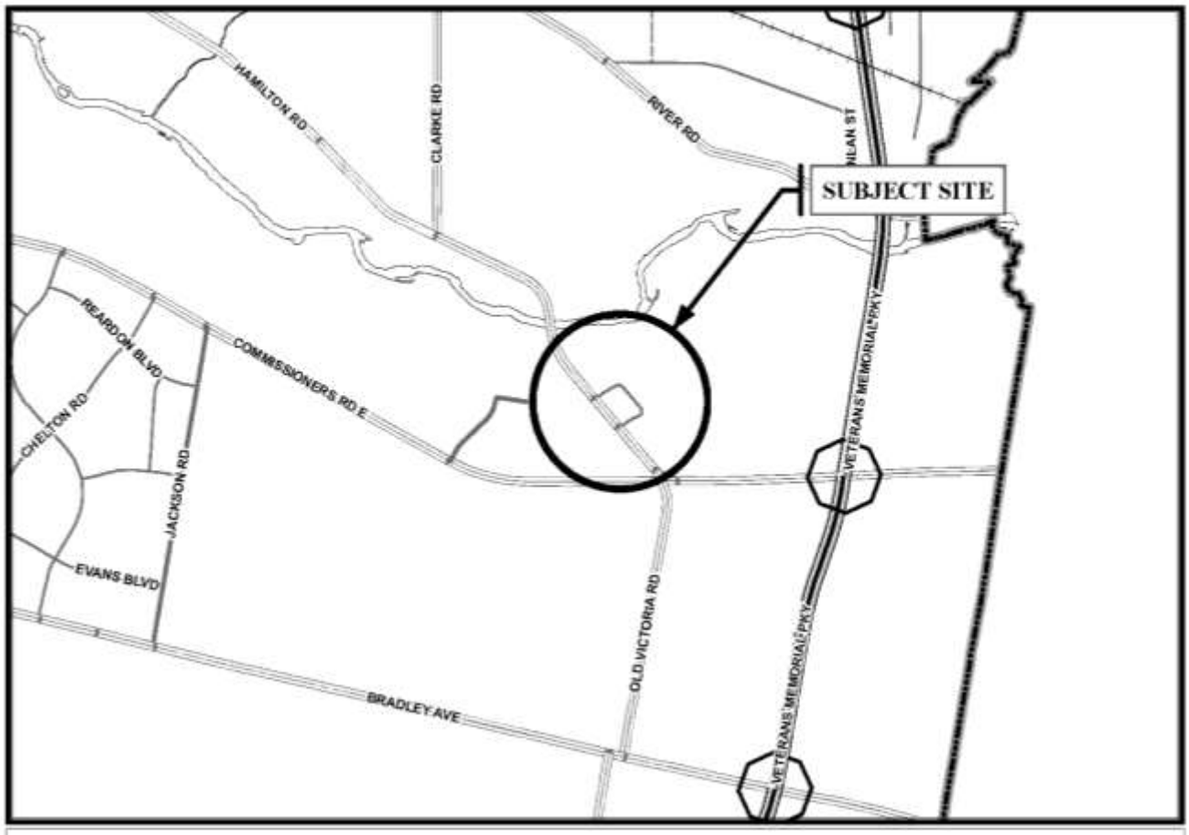
OFFICIAL PLAN SCHEDULE “A” –
LAND USE MAP EXCERPT





File: 39T-17502 / OZ-8147
Planner: L. Mottram

OFFICIAL PLAN SCHEDULE “C” –
TRANSPORTATION CORRIDORS EXCERPT



Legend

ROAD CLASSIFICATION

- Secondary Collector
- Primary Collector
- Arterial
- Freeway
- Expressway

PROPOSED ROAD CORRIDOR

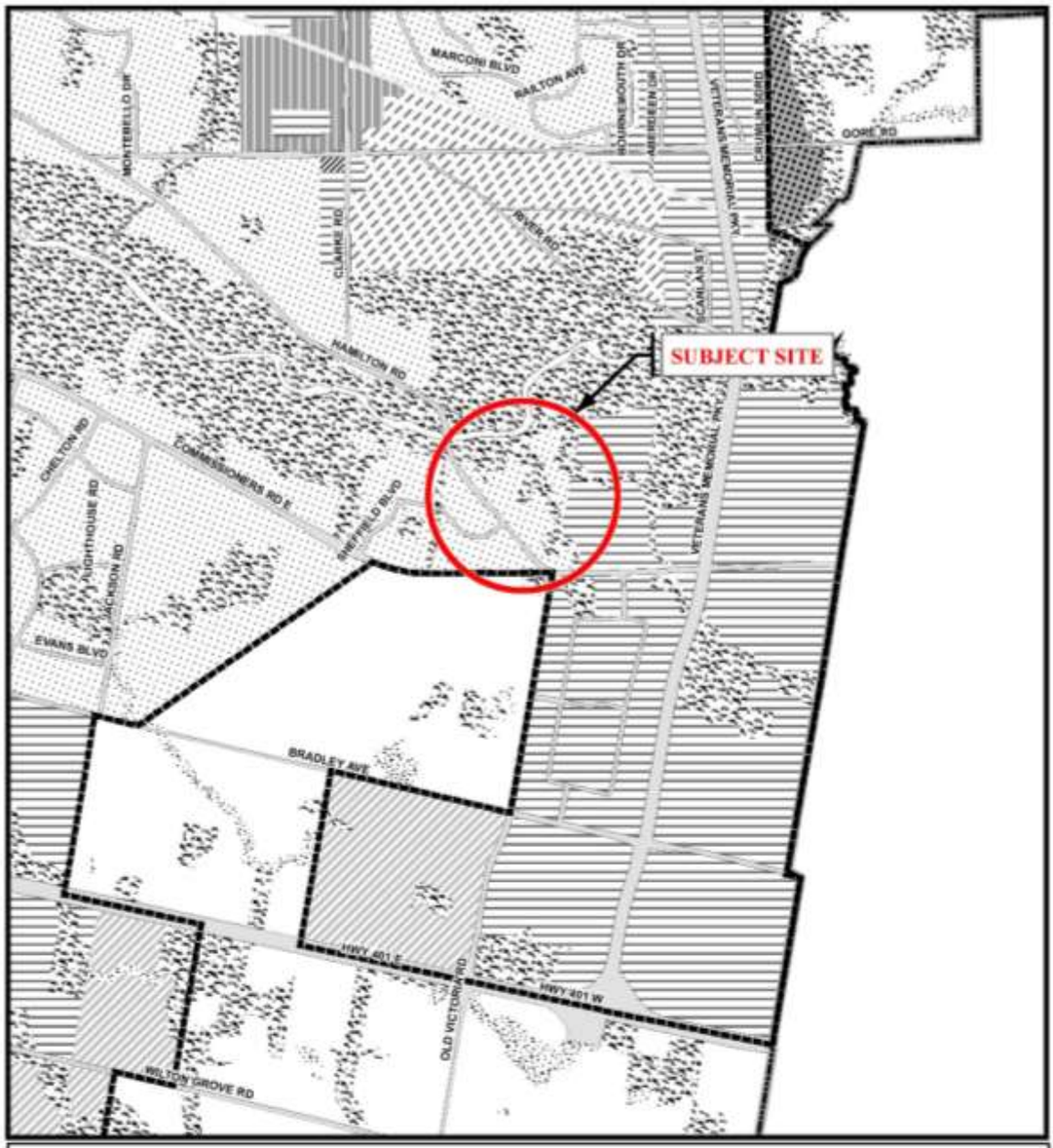
- Proposed Secondary Collector
- Proposed Primary Collector
- Proposed Arterial
- Proposed Freeway
- Proposed Expressway
- Proposed Interchange

THIS IS AN EXCERPT FROM THE PLANNING DIVISION'S WORKING CONSOLIDATION OF SCHEDULE C TO THE CITY OF LONDON OFFICIAL PLAN, WITH ADDED NOTATIONS

CITY OF LONDON **Planning Services / Development Services** OFFICIAL PLAN SCHEDULE C - TRANSPORTATION CORRIDORS - PREPARED BY: Graphics and Information Services	Scale 1:30,000 Meters	**FILE NUMBER:** OZ-8147 **PLANNER:** LM **TECHNICIAN:** RC **DATE:** 2018/01/25

File: 39T-17502 / OZ-8147
Planner: L. Mottram

THE LONDON PLAN MAP 1 –
PLACE TYPES EXCERPT



Legend

- Downtown
- Transit Village
- Shopping Area
- Rapid Transit Corridor
- Urban Corridor
- Main Street
- Neighbourhood
- Future Community Growth
- Heavy Industrial
- Light Industrial
- Future Industrial Growth
- Commercial Industrial
- Institutional
- Green Space
- Environmental Review
- Farmland
- Rural Neighbourhood
- Waste Management Resource Recovery Area
- Urban Growth Boundary

This is an excerpt from the Planning Division's working consolidation of Map 1 - Place Types of the London Plan, with added notations.

At the time of the printing of this map, the Rapid Transit EA is in progress. This map shows the Rapid Transit Corridors and Urban Corridors to recognize potential alignments. These Place Types will be modified to align with the results of the EA process for the final version of The London Plan.

CITY OF LONDON
Planning Services /
Development Services

LONDON PLAN MAP 1
- PLACE TYPES -

PREPARED BY: Planning Services

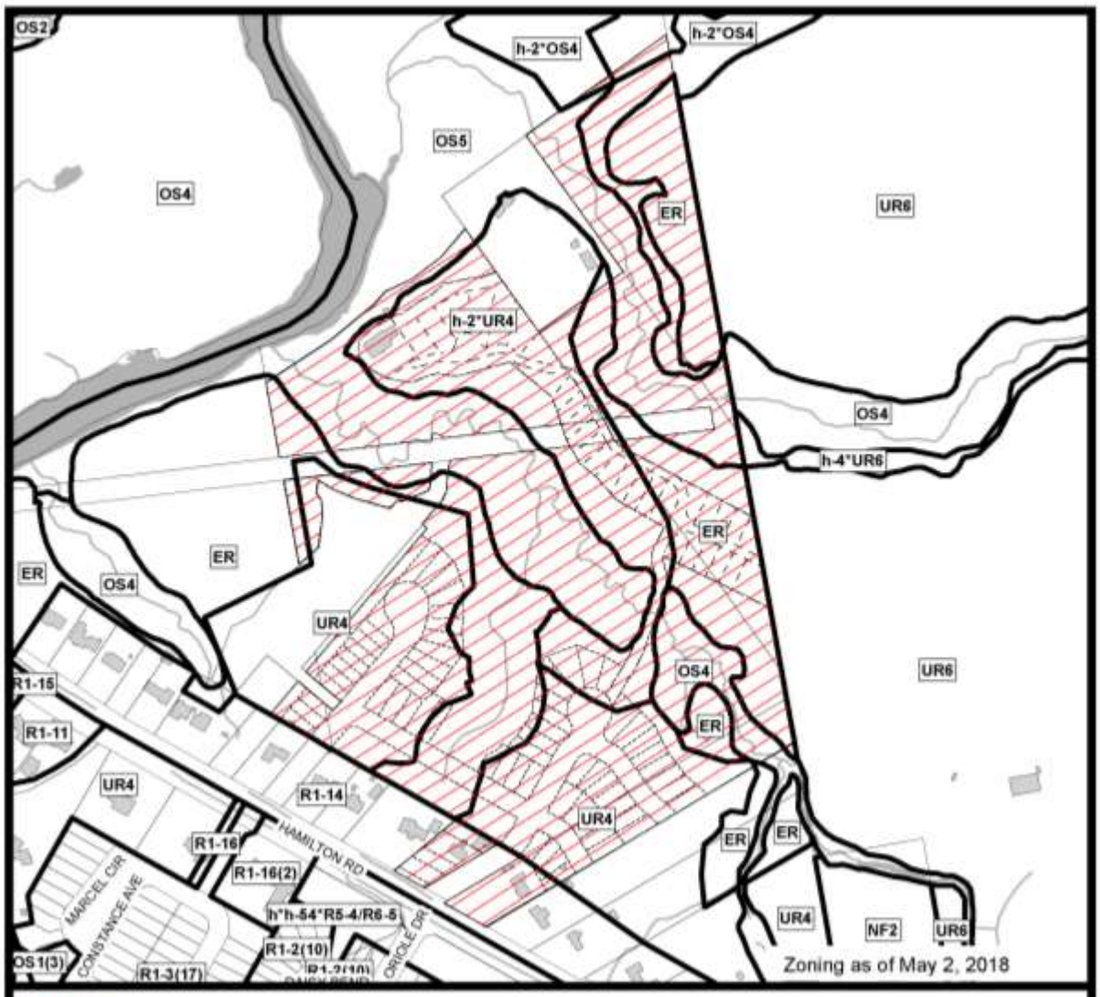
Scale 1:30,000

Meters

File Number:	OZ-8147
Planner:	LM
Technician	RC
Date:	05/28/2018

File: 39T-17502 / OZ-8147
Planner: L. Mottram

PRESENT ZONING BY-LAW MAP EXCERPT



COUNCIL APPROVED ZONING FOR THE SUBJECT SITE:

1) *LEGEND FOR ZONING BY-LAW Z-1*

R1 - SINGLE DETACHED DWELLINGS
R2 - SINGLE AND TWO UNIT DWELLINGS
R3 - SINGLE TO FOUR UNIT DWELLINGS
R4 - STREET TOWNHOUSE
R5 - CLUSTER TOWNHOUSE
R6 - CLUSTER HOUSING ALL FORMS
R7 - SENIOR'S HOUSING
R8 - MEDIUM DENSITY/LOW RISE APTS.
R9 - MEDIUM TO HIGH DENSITY APTS.
R10 - HIGH DENSITY APARTMENTS
R11 - LODGING HOUSE

DA - DOWNTOWN AREA
RSA - REGIONAL SHOPPING AREA
CSA - COMMUNITY SHOPPING AREA
NSA - NEIGHBOURHOOD SHOPPING AREA
BDC - BUSINESS DISTRICT COMMERCIAL
AC - ARTERIAL COMMERCIAL
HS - HIGHWAY SERVICE COMMERCIAL
RSC - RESTRICTED SERVICE COMMERCIAL
CC - CONVENIENCE COMMERCIAL
SS - AUTOMOBILE SERVICE STATION
ASA - ASSOCIATED SHOPPING AREA COMMERCIAL

OR - OFFICE/RESIDENTIAL
OC - OFFICE CONVERSION
RO - RESTRICTED OFFICE
OF - OFFICE

RF - REGIONAL FACILITY
CF - COMMUNITY FACILITY
NF - NEIGHBOURHOOD FACILITY
HER - HERITAGE
DC - DAY CARE

OS - OPEN SPACE
CR - COMMERCIAL RECREATION
ER - ENVIRONMENTAL REVIEW

OB - OFFICE BUSINESS PARK
LI - LIGHT INDUSTRIAL
GI - GENERAL INDUSTRIAL
HI - HEAVY INDUSTRIAL
EX - RESOURCE EXTRACTIVE
UR - URBAN RESERVE

AG - AGRICULTURAL
AGC - AGRICULTURAL COMMERCIAL
RRC - RURAL SETTLEMENT COMMERCIAL
TGS - TEMPORARY GARDEN SUITE
RT - RAIL TRANSPORTATION

"h" - HOLDING SYMBOL
"D" - DENSITY SYMBOL
"H" - HEIGHT SYMBOL
"B" - BONUS SYMBOL
"T" - TEMPORARY USE SYMBOL

CITY OF LONDON

PLANNING SERVICES / DEVELOPMENT SERVICES

ZONING BY-LAW NO. Z.-1 SCHEDULE A

THIS MAP IS AN UNOFFICIAL EXTRACT FROM THE ZONING BY-LAW WITH ADDED NOTATIONS

FILE NO: OZ-8147 / 39T-17502 LM

MAP PREPARED: 2018/05/24 RC

1:5,000

0 25 50 100 150 200 Meters

File: 39T-17502 / OZ-8147
Planner: L. Mottram

Additional Reports

Civic Works Committee Meeting on March 3, 2015 – Report from the Director of Roads and Transportation recommending closing of the untraveled road allowance between Concession 1 and Broken Front Concession ‘B’ in the geographic Township of Westminster lying east of Hamilton Road, commonly referred to as the “Base Line” road allowance, in order to incorporate the road allowance into a future residential subdivision development.