

то:	CHAIR AND MEMBERS PLANNING & ENVIRONMENT COMMITTEE
FROM:	JOHN M. FLEMING MANAGING DIRECTOR, PLANNING AND CITY PLANNER
SUBJECT:	APPLICATION BY: KAIZEN HOMES INC. 9345 ELVIAGE DRIVE PUBLIC PARTICIPATION MEETING ON FEBRUARY 18, 2014

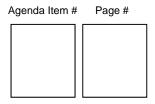
RECOMMENDATION

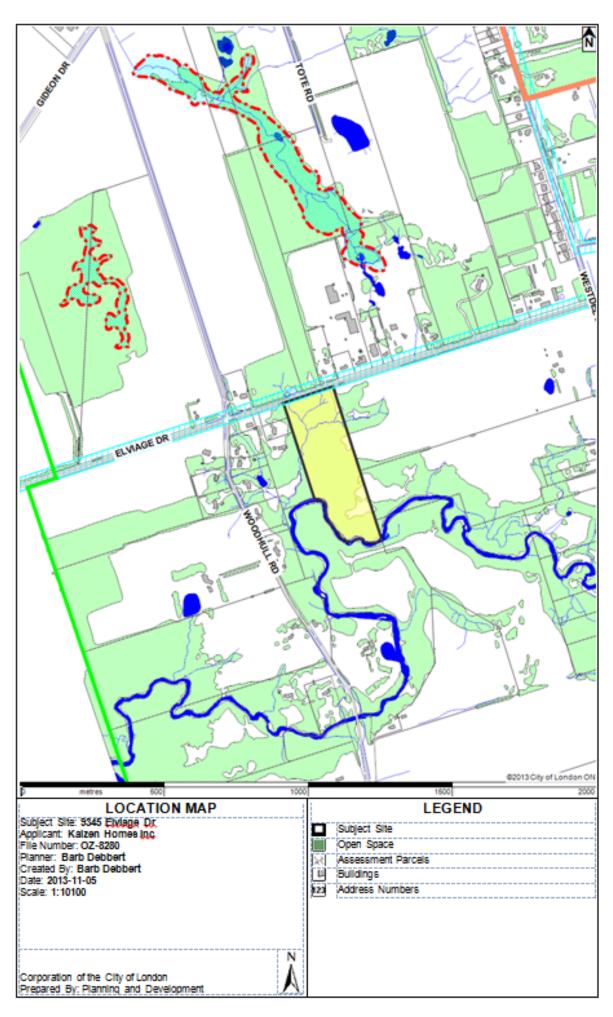
That, on the recommendation of the Managing Director, Planning and City Planner, the following actions be taken with respect to the application of Kaizen Homes Inc. relating to the property located at 9345 Elviage Drive:

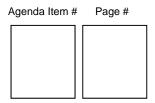
- the request to amend the Official Plan **BY ADDING** a special policy to Chapter 10 Policies for Specific Areas, to permit one single detached dwelling at the north-east corner of the property in the Open Space designation, **BE REFUSED** for the following reasons:
 - i) The proposal is not consistent with the Wise Use and Management of Resources policies of the Provincial Policy Statement (PPS);
 - ii) The proposal is not in keeping with the policies of Chapter 15 Environmental Policies, of the Official Plan.
 - iii) The proposal is not in keeping with the policies of Chapter 10 Policies for Specific Areas, of the Official Plan.
- the request to amend Zoning By-law No. Z.-1 to change the zoning of the subject property FROM a Holding Open Space (h-2•OS4) Zone which permits conservation lands and works; golf courses, private and public parks, and recreational golf courses without structures; cultivation or use of land for agricultural/horticultural purposes, and sports fields without structures; an Open Space (OS5) Zone which permits conservation lands and works, passive recreation uses and managed woodlots; an Environmental Review (ER) Zone which permits conservation lands and works, passive recreational uses, managed woodlot and agricultural uses; and a Holding Agricultural (h-2•AG2) Zone which permits agricultural uses, livestock facilities, a farm dwelling, forestry uses, kennels, conservation lands, wayside pits, a nursery, passive recreation use, a farm market and a small wind energy conversion system, BY ADDING a special provision to the Open Space (OS5) Zone to permit a single detached dwelling in the north-east corner of the property, BE REFUSED for the following reasons:
 - i) The proposal is not consistent with the Wise Use and Management of Resources policies of the Provincial Policy Statement (PPS);
 - ii) The proposal is not in keeping with the policies of Chapter 15 Environmental Policies of the Official Plan.
 - iii) The proposal is not in keeping with the policies of Chapter 10 Policies for Specific Areas, of the Official Plan.

PREVIOUS REPORTS PERTINENT TO THIS MATTER

March 19, 2013 - Information Report in response to request for delegation status by the applicant.





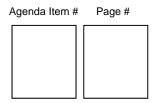


PURPOSE AND EFFECT OF RECOMMENDED ACTION

The recommendations for refusal of the application would prevent the construction of a single detached dwelling serviced by a private septic system on the subject property.

RATIONALE

- Review agencies which commented on this application, including the Ministry of Natural Resources and the Upper Thames River Conservation Authority (UTRCA) have raised serious concerns about construction on this property based on their evaluation of the submitted supporting materials in the context of their policies and regulations.
- The Ecological and Environmental Planning Advisory Committee (EEPAC) has reviewed the technical submissions in detail and provided the opinion that there is no developable area on this property.
- Planning Staff disagree with the boundary delineation of the Environmentally Significant Area (ESA) in accordance with municipal policies and guidelines, and noted the omission of the confirmation of the wetland boundary and appropriate buffers for the PSW and other environmental features and ecological functions for which the area has been identified. The applicant has not demonstrated that there will be no negative impacts on the natural features or their ecological functions.
- Based on the above input and that these lands are ecologically significant, a developable area on the property cannot be identified.
- There is no requirement to issue a building permit because the property is an existing lot of record when the Official Plan designation and zoning do not permit the use.
- Refusal of this application is consistent with the Provincial Policy Statement and the City of London Official Plan.
- The recommendation is consistent with the decision of the Ontario Municipal Board which upheld the decision of Council in 1997 to designate these lands Open Space and Environmental Review, through OPA 88.
- The subject site does not meet the Official Plan criteria to permit a site-specific development proposal notwithstanding the existing land use designation which does not permit the use.



BACKGROUND

Date Application Accepted: October 21, 2013 | Agent: Zelinka Priamo Inc.

REQUESTED ACTION:

Change the Official Plan **BY ADDING** a special policy to Chapter 10 – Policies for Specific Areas, to permit one single detached dwelling at the north-east corner of the property in the Open Space designation.

Change Zoning By-law Z.-1 **FROM** a Holding Open Space (h-2•OS4) Zone which permits conservation lands and works; golf courses, private and public parks, and recreational golf courses without structures; cultivation or use of land for agricultural/horticultural purposes, and sports fields without structures; an Open Space (OS5) Zone which permits conservation lands and works, passive recreation uses and managed woodlots; an Environmental Review (ER) Zone which permits conservation lands and works, passive recreational uses, managed woodlot and agricultural uses; and a Holding Agricultural (h-2•AG2) Zone which permits agricultural uses, livestock facilities, a farm dwelling, forestry uses, kennels, conservation lands, wayside pits, a nursery, passive recreation use, a farm market and a small wind energy conversion system, **BY ADDING** a special provision to the Open Space (OS5) Zone to permit a single detached dwelling in the north-east corner of the property.

SITE CHARACTERISTICS:

- Current Land Use primarily vacant woodlot
- **Frontage** 179 metres (587.3 feet)
- **Depth** irregular
- Area 8.9 ha (21.99 ac.)
- Shape roughly rectangular

SURROUNDING LAND USES:

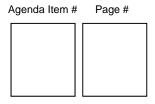
- North low density residential, agriculture and open space
- South Dingman Creek, agriculture and open space
- East Agriculture and open space
- West single detached dwellings, some on private road

OFFICIAL PLAN DESIGNATION: (refer to Official Plan Map)

Agriculture, Open Space and Environmental Review

EXISTING ZONING: (refer to Zoning Map)

 Holding Agricultural (h-2•AG2), Holding Open Space (h-2•OS4), Open Space (OS5) and Environmental Review (ER)



PLANNING HISTORY

Land Use History

The subject lands were annexed by the City of London in 1993 from Delaware Township. At that time, the lands were designated Rural (Agriculture) under the Delaware Township Official Plan and zoned Agriculture (AG) and Hazard Land (HL) under the Township By-law #8-1984. The Agriculture (AG) Zone permitted accessory single family dwellings in association with an agricultural use, subject to setbacks from watercourses and animal operations. The zone also permitted passive recreation and conservation uses. The Hazard Land (HL) Zone permitted agriculture and conservation uses. The Rural designation remained on the land until 1997 and the zones remained in force until 2005 when Council approved the Annexed Area Zoning Bylaw.

In 1997, the subject lands were designated Environmental Review and Open Space under OPA 88 on Schedule A – Land Use and identified as a Class 1-3 wetland, an Environmentally Significant Area (ESA) and potential ESA on Schedule B – Flood Plain and Environmental Features.

The adjacent parcel to the west was also re-designated at this time. In 1997, both property owners appealed the land use designations. As a result of the OMB hearing only a small portion of the site on the adjacent lands, the table lands designated Agriculture were permitted for residential development. Subsequent to the hearing, the adjacent lands underwent a review to determine the extent of the natural heritage system and the City applied a residential zone to permit the severance of the land into 3 residential lots. The subject site was considered at the OMB and the Open Space and Environmental Review land use designations as applied through OPA 88 remained.

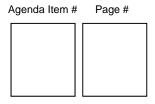
In 2004, a previous landowner removed trees along the east portion of the property to construct a driveway with the intention of developing two residential dwellings. Staff advised the owner that any additional work will first require the completion of an EIS (to the satisfaction of the City) that demonstrates how the proposed development will have no negative impact on the natural features and ecological functions for which the area has been identified. In addition, appropriate permits would need to be obtained from the UTRCA.

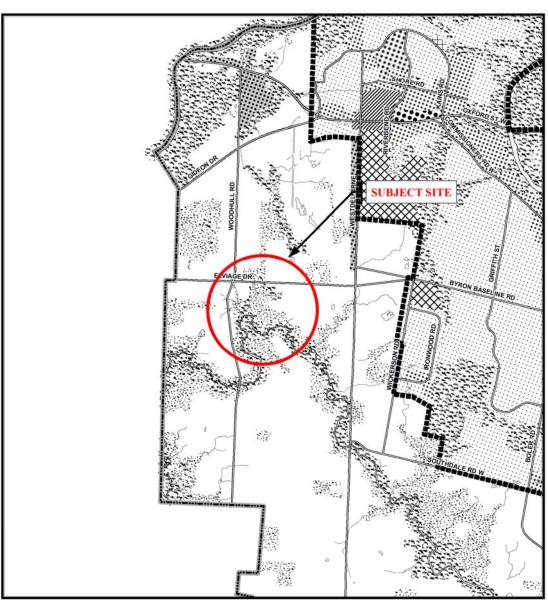
On June 27, 2005 Council approved the Annexed Area Zoning By-law which deleted the five township zoning by-laws and applied Zoning By-law Z.-1 (the City of London Zoning By-law) to the annexed lands. Through this process the subject lands were zoned Holding Open Space (h-2•OS4), Open Space (OS5), and Environmental Review (ER) with a small portion along the middle of the east property line zoned Holding Agricultural (h-2•AG2). In July 2005, the property owner appealed the proposed zoning amendments to the Ontario Municipal Board with the intention of developing a portion of the lands for a residential dwelling. In July 2006, the owner withdrew their appeal at the OMB.

2006 Application for Six Residential Lots

In 2006, the current owner applied for Official Plan and Zoning By-law amendments to facilitate the development of up to six single detached residential lots with an 18 metre public right of way on the subject property. In October, 2006, the City's Ecologist Planner advised that:

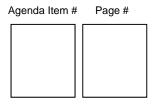
"...On the Flood Plain and Environmental Features map for Schedule B, the property has a Provincially Significant Wetland (PSW) and is an Environmentally Significant Area (ESA) and Potential Environmentally Significant Area. The area also has a 100 year erosion line indicating slope hazards.

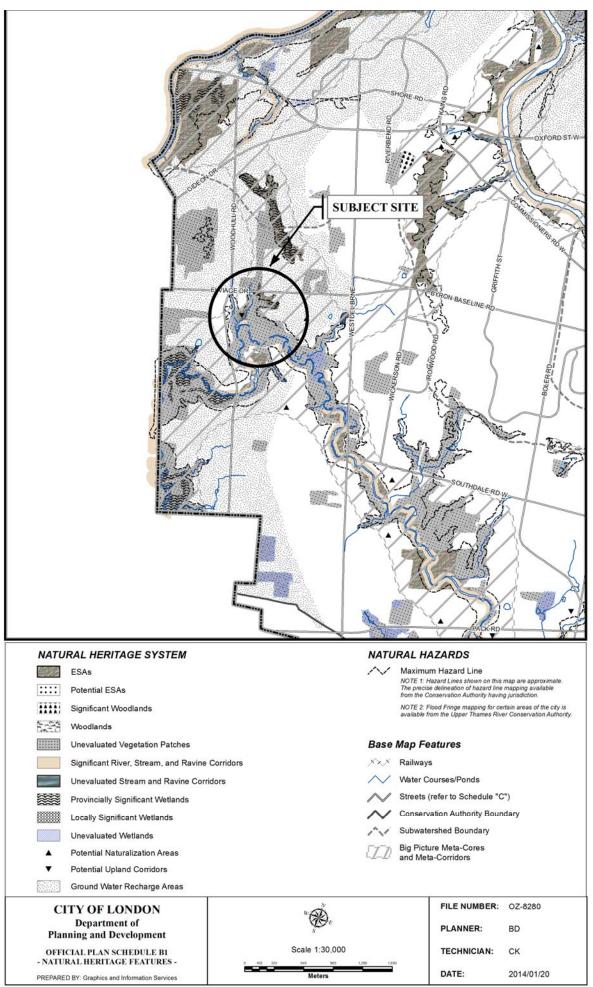


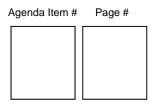


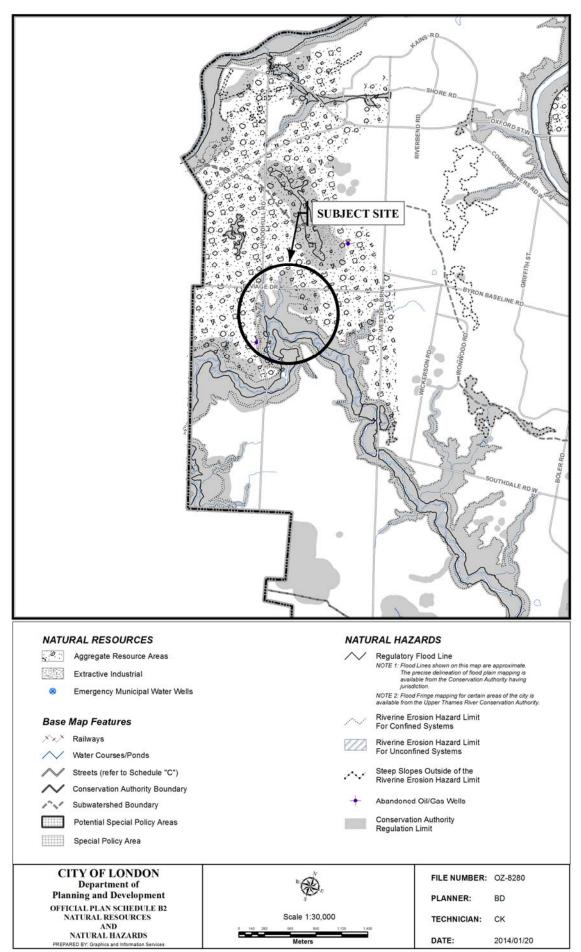


 $PROJECT\ LOCATION:\ e.\ landing \ projects \ possible and work consolo 0 \ locations and the plane should be a project of the project of th$

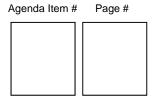


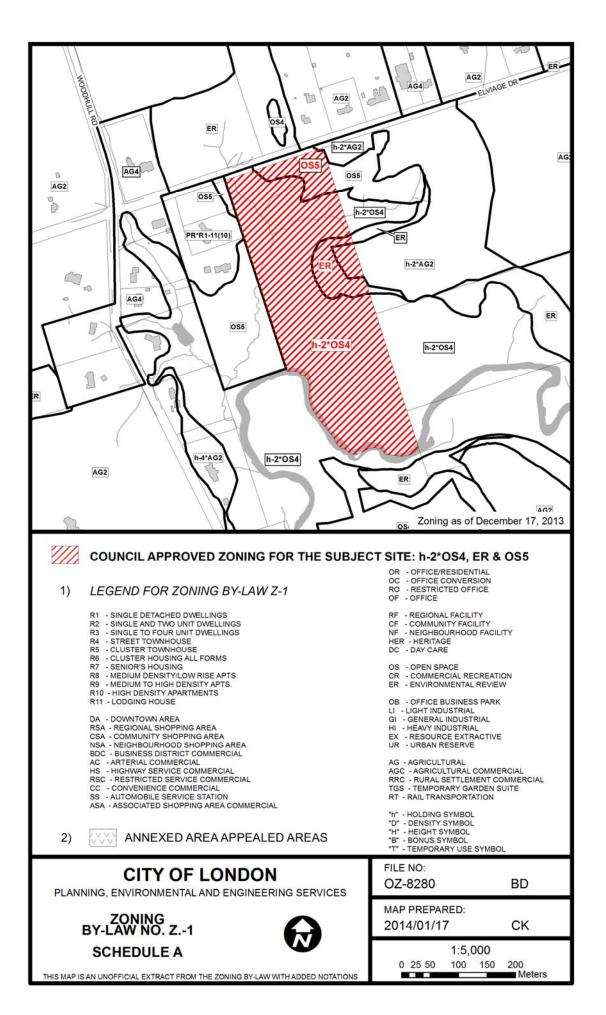


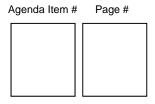


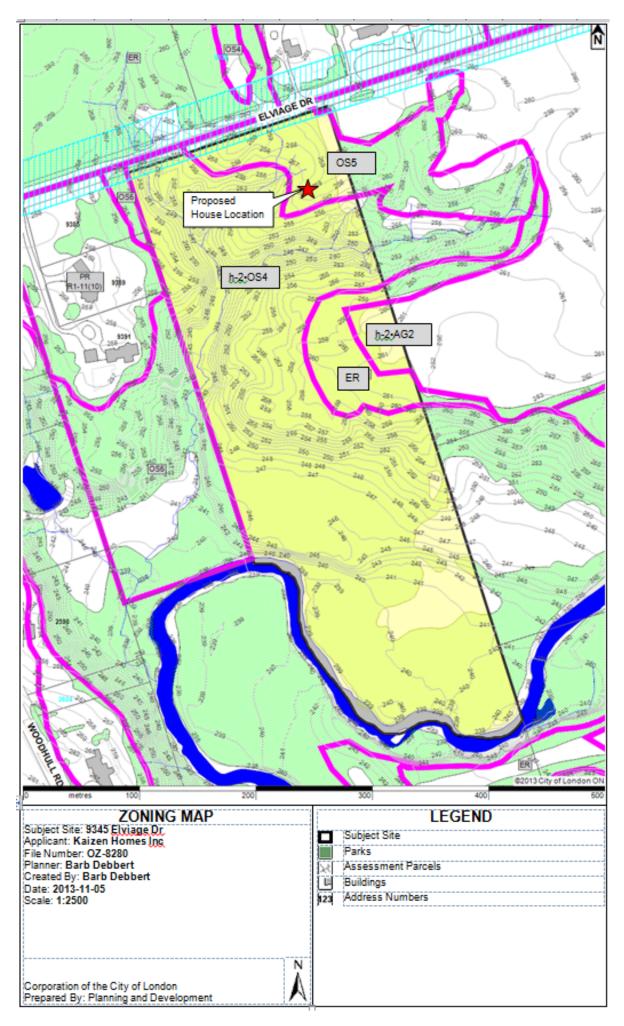


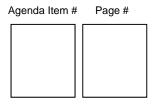
 $PROJECT LOCATION: e. \parbox{$\langle p$ is hedule B2_b\&w_8x14.mxds_templates} \label{projects} was a simple to the control of the$











The wetland is a fen which crosses the top of the property near Elviage Drive, thus posing a significant constraint to creating an access road, as no development is allowed within a PSW in accordance with Provincial Policy. The City also does not permit development within an ESA.

There is virtually no developable land on this property, except for a small piece of agricultural land which is only accessible from the lands to the east and subject to stringent EIS requirements to demonstrate no negative impacts to the PSW and the ESA....".

Notwithstanding this information, in September 2008, Biologic on behalf of Kaizen Homes submitted an Issues Scoping Report for the review of the environmental features on the site. In October 2008, Parks Planning staff advised that the work program submitted was incomplete and offered the following points:

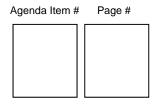
- The consultant has failed to identify and complete an assessment of the Environmental Review areas of the vegetation patch as part of the Lower Dingman Creek ESA.
- Road and driveway access from Elviage Road is not possible to develop without resulting in significant negative impacts to features and functions for which the area has been identified.
- While we agree that it may be possible for a single family residential home to be constructed in the vicinity of community 10 and 5a (above the top of slope), there is no viable access to these areas except through the agricultural fields of the adjacent property. Without a viable access, this proposal is not supported and an EIS for the development proposal in Figure 10 will not be approved.

A further meeting was held with staff, the applicant and the applicant's agent in December 2008 regarding the feasibility and scope of the EIS for proposed development on these lands. At the meeting, staff re-iterated the City and UTRCA's position regarding the limited feasibility of development on this parcel of land, in particular as it relates to the physical constraints of a future access from Elviage Drive to a small potentially developable portion within the Agricultural Zone, which would need to be accessed via lands owned by others, or via the environmentally sensitive lands adjacent to Elviage Drive. Specifically:

- The ravine that would need to be crossed is steep and supports an unusual fen wetland designated as Provincially Significant by the Ministry of Natural Resources.
- This wetland has been mapped as two pockets separated by a narrow opening less than 30 meters wide.
- The surrounding natural features include watercourses within valleylands identified as an ESA and potential ESA.
- Shallow or near-surface groundwater associated with the wetland extends through the area and supports the wetland features.
- The entire area is regulated by the UTRCA, requiring a Section 28 permit.

Despite these significant constraints, resulting in limited opportunity for the regulatory agencies to issue approvals to proceed, the applicant requested the opportunity to explore the potential of overcoming the constraints with an engineered solution that would not result in significant impacts to the identified features and ecological functions. As such staff and the UTRCA compiled the following list of technical work that would need to be completed prior to any approvals. If Provincial and UTRCA approvals are feasible, the City requirements include:

- 1. The boundaries of the wetland must be evaluated and staked in the field between May and July when indicator plants are growing. The MNR must be consulted and invited to participate in this exercise and review of the EIS as they are the provincial agency responsible for wetlands. MNR sign-off is required prior to proceeding with any further steps as it is unlikely that provincial agencies will support any disturbance of the wetland area and adjacent lands.
- 2. The Council approved guidelines for ESAs Identification and Boundary Delineation (ESA



Boundary Delineation Guidelines) must be applied to all areas of existing vegetation to formalize the ESA designation on these lands.

- 3. Appropriate ecological buffers and development setbacks must be determined through application of the Council approved Guidelines for Setbacks and Buffers.
- 4. Construction of the proposed road access will likely result in direct loss of features and functions identified as ESA as well as potential loss of Provincially Significant Wetlands. The EIS will have to demonstrate how this meets Official Plan Environmental Policies and the Provincial Policy Statement for no negative impact.
- 5. Life science data collection covering the spring and summer seasons will be required to document species of plants and wildlife potentially affected by the development proposal.
- 6. A geotechnical study is required to determine slope stability in the ravine crossing location, the stable slopes along the ravine and top-of-bank in the vicinity of the development parcel.
- 7. A hydrogeological study must be completed to the satisfaction of the City of London, with particular attention paid to the shallow surface flow and hydrological linkages that exist between the wetland units. Protection of this linkage is important for the protection and integrity of the wetland.

City staff attempted to bring the application forward to Planning Committee on several occasions based on the information that had been submitted to date, but continued to defer the application based on commitments from the applicant's consultant that the required information would be submitted. The required wetland evaluation, application of the ESA Boundary Delineation Guidelines, the establishment of appropriate setbacks and buffers, and the EIS were not submitted, and the application was closed due to inactivity, on June 25, 2010.

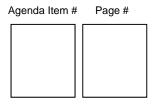
Current Application for One Single Detached Dwelling

Following extensive discussions between City staff and the applicant beginning in late 2009, the applicant, with a new consultant, initiated the formal Pre-Application Consultation process in February 2012 for the necessary planning approvals to permit one single detached dwelling near the front of the property. City staff identified the following as requirements for a complete application:

- PSW boundary delineation to the satisfaction of the Ministry of Natural Resources;
- ESA boundary delineation in accordance with the Council approved Guidelines for ESAs Identification and Boundary Delineation;
- Followed by:
 - Planning justification report;
 - Scoped Environmental Impact Study;
 - o Geotechnical Report;
 - Hydrogeological report;
 - Minimum Distance of Separation analysis (Ministry of Agriculture).

To facilitate the PSW boundary delineation, certified wetland evaluators D. Hayman, B. Bergsma and W. Huys staked the boundary of the PSW on May 2, 2012. The wetland boundary was to be confirmed with MNR by the applicant's ecologist, followed by the application of the boundary delineation guidelines for the ESA and scoping of the requirement for the completion of the EIS.

Given the heavy dependence of the outcome of a potential planning application on the resolution of environmental issues, City staff agreed to depart from the normal planning process and review a scoped EIS prior to the submission of a formal Official Plan and Zoning By-law amendment application. The applicant submitted an EIS in September 2012 for staff to review. However, the usual scoping process was not undertaken before preparing that work, which relied instead on scoping requirements established in 2008 for a different development proposal at a different location on the property. On November 21, 2012, the City's Ecologist Planner provided comments on the EIS and the development potential on the site. The Ecological and Environmental Planning Advisory Committee also reviewed the document and provided



comments. In December 2012, Planning Services sent a letter to the owner outlining the significant environmental issues facing any proposal for development of these lands.

In response, the applicant requested delegation status at the Planning and Environment Committee (PEC) to discuss the matter. At the PEC meeting on March 19, 2013, the applicant's agent sought direction from Council for staff to work with the applicant to determine a suitable dwelling location on the property through an Official Plan and Zoning By-law amendment.

On March 27, 2013, Council advised Kaizen Homes that if they wish to proceed with the matter, they should submit the appropriate application for processing and consideration in accordance with the regulations contained in the *Planning Act*.

The application under consideration was submitted to the City on September 20, 2013, and accepted as a complete application on October 21, 2013 following the submission of outstanding items. However, the applicants had not obtained sign-off from the Ministry of Natural Resources of the revised wetland boundary, contrary to the requirements for a complete application.

SIGNIFICANT DEPARTMENT/AGENCY COMMENTS

Ministry of Natural Resources

The MNR has reviewed the Environmental Impact Statement (EIS) completed for 9345 Elviage Drive in the City of London. MNR understands the EIS was completed to support the development of a residence on the property. MNR's review was specific to the wetlands on the property. The EIS appears to identify new wetlands on the subject lands. Figure 6 of the EIS shows the wetland boundary that was delineated on site by the consultants and City of London staff. Figure 6 identifies a wetland that is significantly different than MNR's boundary. MNR has not received any information or request for an amendment the existing Provincially Significant Wetland (PSW) boundary on site. Based on the Ecological Land Classification (ELC) provided in the EIS, MNR recommends the following ELC communities are considered: MAM3-9 (6a in the EIS) and SWD (6b and 6C in the EIS) and FOD (2b in the EIS), when re-evaluating the wetland using Ontario Wetland Evaluation Manual (Southern Manual 3rd Edition, Version 3.2 2013) (OWES).

As the approval authority for determining significance of wetlands, the following information needs to be provided for MNR to consider a proposed update to a wetland boundary using OWES.

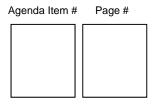
- Work must be completed by a trained OWES evaluator, using the approved OWES methodology.
- A map showing the location of the proposed boundary
- Demonstration of how the 50% rule was utilized, including field notes justifying the boundary (this information will be added to the wetland evaluation file).
- A shapefile of the proposed revised boundary, if available.

Once this information is provided, MNR technical staff will review and MNR will make one of the following determinations:

- 1. the information provided will result in an update to the wetland evaluation file;
- 2. additional information is required to determine whether an update is appropriate; or
- 3. the information provided does not support an update to the wetland evaluation file.

Detailed Comments

Section 4.2 Biological Settings under Wetland Communities (page 8) the EIS states, "Soil probes were taken on site on April 25, 2012 to establish preliminary wetland boundaries and



terrestrial ELC communities." Please note that wetland boundaries should be delineated using the OWES. OWES uses the 50% rule as the dominate way to determine wetland boundaries.

Section 5.2 Municipal Policy states, "The wetland communities are within a Provincially Significant Wetland Complex (distinctive areas). This wetland complex was not re-assessed as part of this review" (page 17). As noted in the Natural Heritage Reference Manual, 2010, "if an initial site assessment identifies potential significant natural heritage features or areas, then evaluation of these features or areas to determine significance may be required" (page 120). In this specific case with development taking place within 120m of an existing PSW and with new wetlands being identified on site and within meters of the proposed development, MNR would recommend that without an updated wetland evaluation the Provincial Policy Statement cannot be met.

Section 15.4.2 Wetlands, states, "There are wetland features within the subject lands. These will need to be protected" (page 18). Before these can be protected they must be first appropriately identified, evaluated and delineated before impacts can be identified and mitigation can be determined.

Section 6.0 Development Proposal states, "A septic system which is required for the site must be setback from property limits and 15m from the wetland feature" (page 23). MNR recommends this should take into consideration the updated wetland boundary.

Upper Thames River Conservation Authority

The Upper Thames River Conservation Authority (UTRCA) has reviewed this 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 (2005). The Upper Thames River Source Protection Area Assessment Report has also been reviewed in order to confirm whether the subject 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.

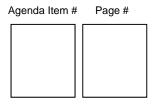
PROPOSAL

The applicant is proposing to construct a single detached house on the property.

CONSERVATION AUTHORITIES ACT

As shown on the enclosed mapping, the entire property is regulated by the UTRCA in accordance with Ontario Regulation 157/06, made pursuant to Section 28 of the <u>Conservation Authorities Act</u>. The regulation limit is comprised of riverine flooding and erosion hazards associated with Dingman Creek as well as the Provincially Significant Dingman Creek Fen Wetland Complex and the surrounding area 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.

While the UTRCA had previously issued a conditional approval for the construction of a single detached dwelling on the property (January 9, 2012 - permit No. 135/10), that approval was based on the applicant advising that no approvals pursuant to the Planning Act were required for the development of these lands. Apparently City Building Officials were ready to issue the necessary approvals once they had received our sign-off. Subsequently City planning staff informed the Authority that both an Official Plan and Zoning By-Law Amendment would be required for the proposal. Our policy is that prior to the issuance of our Section 28 approvals, all planning matters should be resolved to the satisfaction of the City of London and the UTRCA. We also note that this proposal to construct a residential dwelling on the subject property involves a different location than originally considered by the Conservation Authority.



UTRCA ENVIRONMENTAL PLANNING POLICY MANUAL

Policy which is applicable to the subject lands includes:

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. This policy is consistent with the Provincial Policy (PPS) and is intended to limit the number of owners of hazardous land and thereby reduce the risk of unregulated development etc.

3.2.3 Riverine Flooding Hazard Policies

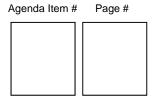
These policies address matters such as the provision of detailed flood plain mapping, floodplain planning approach (one zone vs. two zones), and uses that may be allowed in the flood plain subject to satisfying UTRCA permit requirements

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.

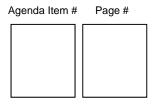
The UTRCA reviewed Revised <u>Slope Stability Assessment</u>, <u>9345 Elviage Drive</u>, <u>London</u> dated August 24, 2011 prepared by exp. Services Inc. This submission did not fulfill the UTRCA's requirements and the following comments were provided:

- 1. Please provide a site plan which must include all of the geotechnical features required for review and shall be supported by contour and grading information. The plan shall be submitted as a full size 24" x 36" drawing having suitable scale and shall be signed, sealed and dated by a professional engineer. The plan must be georeferenced by using suitable datum. The plan must show the following technical features at minimum:
 - a. Complete and accurate property boundary dimensions, existing/pre-development features, proposed/post-development features and structures if any, land used conditions and finished grades;
 - b. The existing/pre-development toe of slope, top of the existing/pre-development slope, existing/pre-development top of bank of watercourse (if applicable), proposed top of the slope, proposed toe erosion if any, proposed 6 meter erosion access allowance and regulatory floodplain (where defined);
 - c. Cross sections undertaken for the stable slope analysis;
 - d. Subsurface exploration locations;
 - e. Drainage features such as gullies, swales, creeks, gullies etc;
 - f. The north arrow should be provided in the top right corner of all plans; and
 - g. Legend showing all the details on the plans for the existing/pre-development and proposed/post-development conditions.
- 2. The existing/pre-development and proposed/post-development profiles of the slope shall be based on actual surveyed cross-sections. Also, the top of the slope and the toe of the slope shall be surveyed in the field and shall not be based on contour information. The top of the slope shall be established such that relatively flat ground exists after the top of the slope. The proximity of any watercourse to the slope toe shall be shown on the cross section and supported by survey information. The information shown on the cross sections shall match with the information on the site plan. The location of the cross sections shall be at critical locations of the site and should be based on a site inspection. Justification for the location of the cross sections should be provided in the report. A



description of how the toe and top of the slope have been established shall be provided in the report. Cross sections shall show the following information:

- a. The profile of the slope under the existing/pre-development conditions and proposed/post-development conditions;
- b. The existing/pre-development and proposed/post-development angle of inclination based on the actual survey;
- c. Suitable horizontal and vertical scale;
- d. Top or crest of the existing/pre-development and proposed/post-development slope, toe of the slope, erosion limit (if any), toe erosion limit, 6 m erosion access allowance, regulatory floodline, location of structures if any;
- e. Existing drainage features such as surface runoff, swales, gully etc on the slope. Please note the UTRCA does not allow any drainage feature within the 6 m erosion access allowance:
- f. Submit each cross section on 11" x 17" paper duly signed, sealed and dated by a professional engineer;
- g. The cross sections shall be extended to cover the entire floodplain and shall show the regulatory floodline, bank of the watercourse or river, toe of the bank and depth of water as part of the stable slope analysis, if applicable; and
- h. Suitable toe erosion limit shall be provided in accordance with the Technical Guide, River and Stream System: Erosion Hazard Limit, Ontario Ministry of Natural Resources (MNR) 2002 for confined and unconfined systems.
- 3. Please summarize data and analysis used to evaluate slope stability. Discuss the analysis used in selecting the F.O.S for safe and stable slope;
- 4. Please describe the nature and occurrence of groundwater if any. Provide an opinion on likely seasonal variations in groundwater levels or flows and the possibility for changes from those encountered at the time of exploration;
- 5. Any external loading on the site that may jeopardize the stability of the slope such as structures, fill etc shall be analyzed and mention in the report to make sure that it will not jeopardize the stability of the slope;
- 6. The report shall discuss the existing/pre-development and proposed/post-development site drainage including surface runoff and seepage. The location and proximity of any nearby drainage features or water bodies (i.e. marshy ground, swale, channel, gully, springs, stream, creek, etc) should be noted. The UTRCA does not support ditches or swales within the 6 m erosion access allowance. Please indicate how the surface runoff from the site will be discharged under the post-development conditions; and
- 7. Soil erosion is a naturally occurring process and commonly the agents of soil erosion include water and wind, each contributing a significant amount of soil loss. Soil erosion may be a slow process that continues relatively unnoticed, or it may occur at an alarming rate causing serious loss of topsoil, which may cause slope failure. The loss of soil due to erosion from a site may be reflected in lower surface water quality, damaged drainage



networks, slope failure and loss of property and life. Please discuss the soil erosion, if any, on the site.

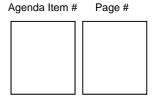
The UTRCA has reviewed the submission tilted <u>Review of Current House Location</u> dated September 17, 2013 prepared by exp. This submission does not include the supporting technical information that was previously requested by the Authority (for a different house location) and therefore the geotechnical assessment must still considered to be incomplete.

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 the <u>Environmental Impact Study Report</u> prepared by Biologic dated September 2013 and offers the following comments.

- 1. A scoped EIS for this development is not justified, given the significant environmental features found on and adjacent to the legal parcel, irrespective of whether the property is a Lot of Record. A full EIS is required, with a full three season inventory, delineation of natural heritage features and hydrogeological study, to determine if a suitable location for the development envelope exists on the legal parcel. The following comments justify this position further.
- 2. Please show the MNR approved boundary of the Dingman Creek Fen Provincially Significant Wetland Complex and the boundary of the Environmentally Significant Area on an aerial photo of the entire legal parcel and also on the subject lands. Is the May 2, 2012 field staked wetland boundary on the subject lands different than the MNR approved boundary? Has the MNR approved this newly staked portion of the wetland boundary on the subject lands? Is the ESA boundary different than the existing OS5 zone? Please provide justification for any differences.
- 3. Please show the location of all seepage areas on an aerial photo and explain how seepage on the subject lands contributes to the entire wetland feature (i.e. found on and outside the subject lands). Page 12 acknowledges that the seeps of the slopes are features that contribute to the wetlands. Are these a major source of groundwater for the entire fen? How much of a setback is needed to protect these areas?
- 4. High perched water tables caused by clay sub soils may be causing seepage in north corner. Where is this in relation to the development envelope? The UTRCA concurs with page 19, Section 15.4.9 that groundwater resources will need to be considered further and requests a full hydrogeological report to address these issues, as well as to ensure that the fen (which is primarily fed by groundwater) will not be impacted by any development within the legal parcel. Show how water quality, quantity and timing will be maintained to the wetland.
- 5. We agree that the entire vegetation patch extends beyond the legal limits of the parcel. Although it may not be possible to conduct field inventories on the entire patch, the significance of the features on site must be considered in relation to the entire patch. On Page 7 it is stated that only the vegetation within the legal parcel was classified and yet all the descriptions and figures only show the classification for the subject lands (a small subcomponent of the larger legal parcel). The UTRCA requests that the vegetation on the entire legal parcel be inventoried in order to determine if a suitable location for the development envelope exists on the legal parcel.
- 6. The ELC considers disturbance processes in the classification process. Since the ELC was used to delineate the community boundaries in the subject lands, it is inappropriate to modify the FOD 5-3 into a "cultural" community in Table 1. The UTRCA requests that the consultant

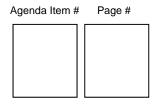


instead add community 2b to the "natural successional" community and refer to it as a Sugar Maple and Oak Deciduous Forest.

7. On Page 7, Section 4.2.1 it is stated that Will Huys conducted vegetation inventories on April 25, May 2, and August 10, 2012. When comparing the list of plant species that Mr. Huys recorded to those gathered by Gerry Waldron and Peggy Hurst on November 6, 2009 and June 11, 2013 in Appendix C, the lists of Mr. Huys seem incomplete. Since it appears that Mr Huys only recorded the most abundant species, and Mr. Waldron and Ms. Hurst only surveyed in the late spring and very late fall / early winter (not appropriate times for wetland plants); then it is not possible to conclude that there are no rare or unusual plant species. The UTRCA requests a full 3 season inventory (spring, summer, fall) of all plant species found in the subject lands, including community number, the date they were recorded, MCC, CW and their status, in a single table.

Note the following cut-offs for seasons:
Spring- April to mid-June
Summer – late June to early August
Fall- late August to late October
Winter – January to March

- 8. Since the terrestrial communities extend beyond the subject lands into the legal parcel (and beyond), and animals are highly mobile when compared to plants, it is not acceptable to complete a Significant Wildlife Habitat analysis (Appendix F) or an analysis of habitat for faunal species listed by the MNR based on inventory work for only the portion of the feature found on the subject lands. Instead, the UTRCA requests that both a significant wildlife habitat analysis and faunal inventory be conducted on the entire legal parcel and that habitat for faunal species listed by the MNR are screened for the remainder of the feature from aerial photos. As stated on page 12, the woodlands contiguous with the subject lands may have habitat for seasonal concentrations of wildlife and / or specialized habitats for wildlife that must be known prior to the placement of a development envelope to ensure appropriate buffer and setbacks are respected to protect these significant habitats.
- 9. We do not disagree that the swamp communities are functioning to buffer the fen components. However, these swamp communities are part of the larger PSW Complex and therefore the swamp communities also need buffers to protect them. The PSW is not significant only because of the fen communities, but is significant because of all the wetland communities that make up the complex.
- 10. Section 4.2.2 (pg. 9) of the report discusses aquatic habitat on the subject lands. Please note Department of Fisheries and Oceans (DFO) Canada Aquatic Species at Risk (SAR) mapping identifies both watercourses on the subject lands as potential habitat for federally and/or provincially protected Species at Risk fish and mussels. Our sampling data indicates recent records of both Silver Shiner (Notropis photogenis) and Rainbow Mussel (Villosa iris) less than 0.5 km from the proposed development location. We note this section of the report discusses whether or not the habitat of the Sanford Drain or the unnamed tributary to the south would or would not directly support fish and/or these SAR fish/mussels. However, there does not appear to be any supporting documentation or aquatic habitat assessments included in this report to confirm the assumptions noted.
- 11. In reference to pg. 15, Section 5.1 (2.1.5. Fish Habitat): the report states "Fish habitat of the subject lands will need to be considered during construction on site." We recommend mitigation measures (including development setbacks) to protect fish habitat be considered at the outset of a project and ideally addressed during the EIS. In the absence of a detailed aquatic habitat assessment, the minimum development setback adjacent a cold-water watercourse would be 30 metres from top-of-bank. In the absence of a detailed aquatic habitat assessment, the minimum development setback adjacent a watercourse containing aquatic species at risk may be greater. In the latter case, the setback should be based on knowledge of the life cycle requirements of the particular species in combination with



recommended mitigation measures taken from recent literature including approved federal and/or provincial Recovery Strategy documents.

- 12. In reference to pg. 19, Section 5.2 (15.4.8. Fish Habitat): the report states "Fish habitat will need to be protected." We concur. Please provide recommendations and mitigation measures (including development setbacks) to indicate how this will be achieved.
- 13. Notwithstanding the previous three comments, we note mapping included in the report does not clearly identify location of the watercourses in relation to the proposed development envelope. Perhaps if mapping outlined the setbacks (in metres or to scale) currently proposed, it would be easier to determine if appropriate setbacks from the streams are already in place.

In addition, please provide the following information:

- A. What is the area of the subject lands and the development envelope?
- B. What is the yellow line shown on Figures 7 9?
- C. ELC data sheets list wetland community 6b as SWD 3 and wetland community 6c as SWD 7-2. It also lists community 2b as FOD 5-3. Please include these full descriptions on all figures and associated tables that refer to these communities. Also note the typographical errors in Table 1 under the "polygon" column, and the absence of data in the S-rank and area columns. Please correct.
- D. How close is the ANSI north of Elviage to the feature on the legal parcel?
- E. In Appendix F (Faunal Report) Table 1 shows two sampling dates. In the analysis of the presence of snake hibernacula, it states that three surveys were conducted. Please clarify this discrepancy. Also, page 16 of the faunal report states "Norfolk County".

Recognizing that the City of London must be satisfied with the analysis of the ESA, we provide the following comments with respect to the ESA only for consideration:

<u>ESA Criterion 5</u>: The vegetation communities within the subject lands may contribute to the biodiversity of the entire patch and therefore this is likely not a criterion that can be evaluated without looking at the entire patch.

<u>Boundary Delineation Planning Consideration #2</u>: Does this apply when the development envelope is not adjacent to a pre-existing development?

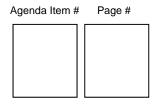
3.3.3.1 Significant Woodlands Policies

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 (within 50 metres) unless an EIS has been completed to the satisfaction of the UTRCA.

The UTRCA is providing the following comments to assist the City in assessing the natural heritage implications of the proposal as it relates to the broader landscape perspective. The woodland feature that is located on the property has been identified as being significant in the Middlesex Natural Heritage Study (MNHS, July 2003). The MNHS assessed woodland patches across the County of Middlesex at a landscape level, including the City of London to determine criteria that could be utilized as indicators of significance. The study's conclusions included that those patches which met one criterion are significant woodland patches on the Middlesex landscape and should be protected as key elements of the natural heritage framework. The woodland on the property meets 4 criteria for significance.

3.3.6 Policies for the Habitat of Endangered Species, Threatened Species, Species of Special Concern & Locally Rare Species

The Authority does not permit development and site alteration in the habitat of endangered and threatened species. Furthermore development and site alteration is not permitted on lands



which are adjacent (within 50 metres) to the habitat of endangered and threatened species unless an EIS has been completed.

According to our records, there are species at risk located on or within the vicinity of the subject property. We recommend that the Ministry of Natural Resources be contacted to obtain the most up to date information regarding the species that may be located on this property.

DRINKING WATER SOURCE PROTECTION

The <u>Clean Water Act</u> (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. Drinking Water Source Protection represents the first barrier for protecting drinking water including surface and ground water from becoming contaminated or overused thereby ensuring a sufficient, clean, safe supply now and for the future.

Assessment Reports:

The Thames-Sydenham Source Protection Region has prepared <u>Assessment Reports</u> which contain detailed scientific information that:

- □ identifies vulnerable areas associated with drinking water systems;
- □ assesses the level of vulnerability in these areas; and
- □ identifies activities within those vulnerable areas which pose threats to the drinking water systems, and assess the risk due to those threats.

The Assessment Report for the Upper Thames watershed delineates three types of vulnerable areas: Well Head Protection Areas, Highly Vulnerable Aquifers and Significant Groundwater Recharge Areas. The subject property has been identified as being within an area with Highly Vulnerable Aquifers as well as a Significant Groundwater Recharge Area. Mapping which shows these areas is available at:

Highly Vulnerable Aquifers:

http://www.sourcewaterprotection.on.ca/downloads/assessment_reports/UTRCA/Appendices/A 1-Maps/Map4-3-2_Highly%20Vulnerable%20Aquifers.pdf

Significant Groundwater Recharge Areas:

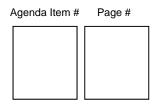
http://www.sourcewaterprotection.on.ca/downloads/assessment_reports/UTRCA/Appendices/A_1-Maps/Map4-2-2%20SGRA%20Vulnerability.pdf

Source Protection Plans:

Using the information in the Assessment Report, a Proposed Source Protection Plan has been developed for the Upper Thames watershed. This Plan along with any written comments, have now been submitted to the Province for approval by the Minister of the Environment. The Proposed Source Protection Plan is available at:

http://www.sourcewaterprotection.on.ca/sp_planning_protectionplan.html

The Proposed Plan consists of a range of policies that together, will reduce the risks posed by the identified water quality and quantity threats in the vulnerable areas. These proposed policies include a range of voluntary and regulated approaches to manage or prohibit activities which pose a threat to drinking water. Activities that can lead to; low, medium and significant threats have been identified in Appendix 10 of the Upper Thames River Source Protection Area Assessment Report, dated August 12, 2011 and is available at:



http://www.sourcewaterprotection.on.ca/downloads/assessment_reports/UTRCA/Appendices/A 10-Threats%20and%20Risk%20Assessment.pdf

AREA OF VULNERABILITY	VULNERABILITY SCORE	THREATS & CIRCUMSTANCES
Highly Vulnerable Aquifer (HVA)	6	Moderate & Low Threats
Significant Groundwater	2 & 4	No Threats
Recharge Area (SGRA)	6	Moderate & Low Threats

NOTE: At this time, certain activities on this property may be considered Moderate or Low threats to drinking water.

Under the CWA, the Source Protection Committee has the authority to include policies in the <u>Proposed Source Protection Plan</u> that 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.

Provincial Policy Statement (PPS, 2005):

Section 2.2.1 states that:

"Planning authorities shall protect, improve or restore the quality and quantity of water by: d) 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 states 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. The foregoing information is provided to assist the municipality in moving forward on this application.

RECOMMENDATION

Based on the geotechnical submission as well as the EIS information submitted to date in support of the proposed new house location, the UTRCA is not convinced that there is a development envelope on this property. We therefore recommend that this application be deferred in order to provide the applicant with the opportunity to respond to our comments.

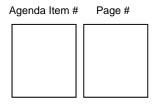
Environmental and Ecological Planning Advisory Committee

It is in the opinion of EEPAC that there is no suitable area for development on the subject site

Recommendation 1: EEPAC recommends that the application be refused given that there is no suitable area within subject lands that can accommodate the proposed development without harm to this part of the Natural Heritage System.

THEME #1 - Inconsistent application of Boundary Delineation Guidelines

Page 21 of the EIS argues that there is a "lot of record" for this property and therefore a "theoretical building envelope needs to be considered." (p. 21). Not only is this a misinterpretation of guideline 10, it was clearly stated in the staff report to the committee dated



March 19, 2013 that an existing "lot of record" has no bearing on whether the parcel of land can be developed on or not.

The EIS also relies on an incorrect application of the section of the Guidelines entitled "Other Planning Considerations." Optional areas are limited to cultural habitat or plantations, bays or mantels of vegetation along the perimeter of the ESA, or satellite wooded areas; projections of vegetation extending from the main body of the ESA, such as satellite woodlands, marshes, etc. The area in question is none of these. Therefore the other planning considerations listed on page 21 of the EIS are irrelevant. However, this section of the Guideline is applied correctly to include the bay on the subject site.

Recommendation 2: Guideline 10 (residential building envelopes) cannot be used to justify placing a new building in an envelope created after ... clearing of ER/OS-5 lands. Allowing this application of guideline 10 would create a dangerous precedent. EEPAC recommends that this application of guideline 10 be refused.

Recommendation 3: Guideline 7 is applied correctly and the bay (which was created by ... logging in the first place) should be within the boundaries of the ESA. To suggest that Guideline 7 is optional as is suggested on page 21 of the report is a misapplication of this section of the Guideline.

Recommendation 4: This site does not meet the criteria in the section "Other Planning Considerations" of the Boundary Delineation Guideline. As such, it should not be considered as an "optional area" as claimed on page 21 of the EIS.

Recommendation 5: Lot of record, as per the city staff report of March 19, 2013, has no basis in law and is irrelevant to the application of the Boundary Delineation Guidelines.

THEME #2 -Buffer identification is completely missing from EIS

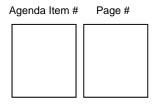
A superficial site inspection suggests that the "wetlands" of the subject site are more extensive than implied and extend further up slope into 2a and 2b. The wetlands are generally "fens" and result from discharge of shallow perched aquifers. The distribution of wetlands species like skunk cabbage (p26) are not a result of wicking upwards of swamp water, but indicate the high level of outflow. Great care has to be taken in predicating precise development plans on generalised and inaccurate mapping.

City of London Environmental Management Guidelines p. 128 indicate that an Ecological buffer of >~30m from the boundary of an ESA and PSW is required. The subject lands are part of an ESA and the subject lands contain a PSW, yet no buffers are indicated anywhere in the EIS. Appropriate application of buffers within this site leaves no suitable area for construction of a single family dwelling and septic system.

What the report seems to suggest is that the ESA itself should be a buffer from the building, rather than having a buffer or critical habitat zone identified for the ESA. There is NO buffer for the ESA delineated. The building envelope is essentially buffered from the fen by the swamp! The "buffer" on the east (Figure 6) is community FOD4 (part of the ESA). This creates a "buffer" between the building envelope and the edge of the wetland (Community 6C). The building is 2.5 m from 6C!

Even the EIS, on page 16, applies the criteria for significance to the **subject site itself** and determined that it meets 4 of the 7 criterion for significance and for protection (even though this is an inappropriate application of the Guidelines as they are to be applied to a patch or patch cluster).

Page 26 suggests the wetland is buffered by 5 to 10 m of skunk cabbage. Skunk cabbage only grows in groundwater saturated wet areas, and this area is part of the wetland rather than a buffer. The EIS seems to claim that the proposed "boundary" will protect the features and



functions, but there is no plan for how people, domestic animals and invasive plants will be kept out. Indeed, Figure 8 seems to suggest that the building footprint does not include lawn or other modifications to the vegetation. We find it difficult to accept any EIS in this location without a landscaping plan.

The land use assessment does not seem consistent with observed and likely wetland extent and continuity. The wetland should extend downstream. There appears to be a high level groundwater discharge zone at the site that is not adequately mapped, being variously designated 2a, A1.

Recommendation 6: The proposal lacks clarity. The impact is potentially greater than implied. The plan contravenes the proponents own specifications. The plan should be provided in a coherent form using accurate and clear mapping.

Recommendation 7: Given it is illogical and unacceptable to use an ESA to buffer another part of an ESA, this application is contrary to City Policy (section 15 of the Official Plan). The subject site is part of a larger patch (10003) and is part of the ESA. A buffer of at least 30m is required at this site. Applying such a buffer would show that the proposed development could not occur.

THEME #3 - Surface and Ground Water Hydrology

Development will increase runoff intensity from the building site, delivering water to the steep slopes surrounding the building site. Page 27 (and p27 Trow/EXP Jan 26 2011) recommends that roof leaders should be directed away from the adjacent slopes and some could be directed towards the rear of the site and the remainder to the "expanded wetland area to the southeast" (Area W on Figure 9). There is little consideration of how this enhanced runoff will impact the slopes and receiving wetland.

Water well data have been downloaded from Ministry of the Environment in support of the hydrogeological assessment. However, there is no location or elevation data for the wells, no stratigraphic information or references to prior work preventing informed analysis. There is no basis for the hydrogeological description, nor the claim of immunity from development. The site sits very close to a complex set of seasonal and perennial groundwater controlled wetlands that need to be understood if the construction, slope stability, altered runoff and septic seepage are to be demonstrated harmless.

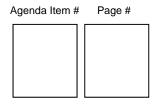
The local scale hydrogeology is indicated to be groundwater recharge. But this seems contrary to the mixed permeability materials encountered during site assessment. Wet season conditions are critical to accurate assessment.

The wetlands are identified as "not hydrogeologically connected" (p1). Given the poor mapping and lack of any substantial information, it is difficult to see how this conclusion can be drawn. A basic analysis of the setting suggests that the wetlands at the site consist of multiple level seeps corresponding to a number of aquifer horizons exposed by the ravine.

Recommendation 8: Any approval must be subject to surface and ground water baseline data being collected and subsequently after construction, monitored by the owner and reported annually to city staff. However, this is an empty recommendation as revisions to surface water flows are unlikely post construction and should not be relied on as a reason for approval.

Recommendation 9: The intimate relationship between the groundwater discharge wetland, seasonal seepage faces and hydrogeology needs to be correctly mapped and worked out in detail if the intent is to demonstrate slope stability, runoff and seepage are acceptable.

Recommendation 10: Site hydrogeology should be reported with appropriate wet season mapping and conceptual groundwater model.



THEME #4 - Septic System

The design and layout of the septic system indicates a weeping tile system installed in fill material deployed along and west of the driveway and above the wetland. This will significantly alter the site morphology and hydrology, delivering nutrient rich water above the wetland.

Recommendation 11: City Staff and the UTRCA should not approve the location of a septic system in such a challenging location

THEME #5 – Mitigation

The EIS (p. 24) recommends planting 8 trees (2:1) to replace the four mature trees to be removed. This does not offset the ... clearing that was done by the previous owner in 2004. While it is appreciated that the proponent proposes to remove the phragmites on site, it is unclear how the application of herbicide will not leach into the wetland area and reduce it rather than expand it as stated on page 24. It is unclear how the proponent proposes to establish "an area of upland vegetation adjacent to the expanded wetland area (Area U on Figure 9)." There is no planting plan or species list. Similarly, page 25 wisely recommends the "development and implementation of a buckthorn management plan for the wetland communities." While this is appreciated, there are no details. More time on such a plan would be time better spent than on a tree preservation report for the house construction and installation of the septic system.

Recommendation 12: A requirement of any agreement with the proponent will require a holding provision for the receipt of a buckthorn management plan with timelines included and the ability for the city to enter the site to determine compliance with the plan.

Recommendation 13: Clear plans of upland and wetland naturalization are needed including species lists.

Recommendation 14: An accurate tree removal request should be provided.

THEME #6 - Construction Impacts

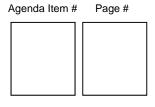
EEPAC does not support construction on this site. The limits of construction are not marked in the EIS and since the construction "envelope" is wider than the building footprint, it is unlikely impacts on the ESA can be avoided. The ridge top site is a challenging location as the apparent building footprint extends close to the crest and conflicts with wetlands. This leaves no buffer zone or maneuvering/stockpiling space. While all the "standard" mitigation measures are included, this is a unique site and standard procedures are not good enough. Page 26-7 mentions temporary soil stockpiling that may occur. It ignores that there is only one place on the subject site to stockpile soil — south of the building site because north of the building site would block the access to the site or require additional clearing. This is unacceptable.

Recommendation 15: Development not be permitted in such a constricted site with no place for stockpiling and maneuvering.

THEME #7 - Monitoring

Page 26 reviews recommendations for construction monitoring but none for post construction monitoring and follow up. On page 27, the EIS recommends a homeowner brochure that includes "appropriate measures to protect the natural heritage components within and beyond the property boundaries." Since the EIS specifically excludes lands outside the property boundary, this sudden interest in areas outside is curious. There are no detailed measures provided in the EIS to protect the natural heritage components within the property let alone beyond. If despite EEPAC's best advice, development is permitted:

Recommendation 16: The proponent must permit the city to approve a monitoring program that would permit the city to inspect the site for at least two years post-construction and to hold a bond to allow for remediation and compensation if the natural heritage features and functions within and beyond the property boundaries experience negative impacts as a result of this site being developed.



Recommendation 17: Clean Construction Protocols must be followed

Recommendation 18: Seeding and planting only with native, non-invasive species consistent with the area, with no lawn.

THEME #8 – Missing Data Collection as per "Data Collection Standards for Ecological Inventory"

Starting at page 7, the EIS lists dates of data collection. When referring back to the Standards, it is clear that the work is incomplete.

- Despite the existence of a tributary of the Dingman, no benthic inventory has been done.
- Vegetation field work was done on Apr 25, May 2, and Aug 10, 2012 (p. 7). Floral inventories were completed Nov 6, 2009 and June 11, 2013 (p. 9). The Standards indicate late May to early September.
- Faunal site inventory done May 15 and June 14 2013. One season only and neither done before dawn or dusk or later (p. 11 and Appendix F).
- No fall migratory bird study was completed (page 11).
- Amphibian monitoring done April 15, May 6, May 15, and June 15, 2013. Study done too late to identify early calling frogs (page 12). The second visit on June 15th seems too late to identify mating calls. The Standard cites late March to early April as to when to identify salamanders, wood and chorus frogs, and spring peepers
- Little effort was made to do aquatic habitat work. NHIC identified three potential Species at Risk in the Sandford Drain. The EIS notes (p. 10) that "possible habitat for aquatic species at risk may be further downstream within the Sandford Drain. However, potential impacts from development on this site are not even discussed.

Recommendation 19: Three of the five data collection points for the vegetation survey were done outside the time period specified in the Data Collection Standards. This means the data collection is incomplete and does not meet the Standards required by the City. A complete 5 season inventory needs to be conducted within the required time windows.

Recommendation 20: Potential impacts on the aquatic habitat downstream must be included in the EIS.

THEME #9 – Other relevant points

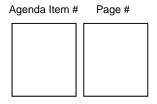
- This was already adjudicated at the OMB (see city report of March 19, 2013).
- UTRCA actions are not an approval. They are subject to and contingent on city actions.
- The site is part of Patch 10003. On page 7 of the EIS, the author points out data were only collected on the proponent's property. This "slicing and dicing" an ESA is inappropriate and unscientific. This approach could lead to a patchwork of patches.

Stormwater Management Unit

The SWM Unit has no objections to the proposed 9345 Elviage Dr. Application. All necessary servicing and drainage requirements/ controls, SWM, etc. will be addressed at Site Plan approval.

In addition to the application, the SWM Unit provides the following comments to be addressed at the site plan approval stage:

- The subject lands are located Tributary A of the Dingman Creek Subwatershed. The
 Owner shall be required to be consistent with the SWM criteria and environmental
 targets identified in the Updated Dingman Creek Subwatershed Planning Study,
 which may include but not be limited to quantity, quality and erosion control.
- The owner's Professional Engineer shall address minor, major flows, SWM measures (quantity, quality and erosion control), and identify outlet systems (major



and minor) in accordance with City of London Design Permanent Private Stormwater Systems and MOE's requirements, all to the satisfaction of the City Engineer.

- The C value for subject site could not be verified. Due to the lack of a viable storm outlet, the owner shall provide alternative on-site SWM which is designed and certified by a Professional Engineer for review and approval by the Environmental Services Department.
- Presently, the subject lands do not have a municipal storm outlet.
- The Owner agrees to promote the implementation of SWM Best Management Practices (BMP's) within this development application and all to the satisfaction of the City Engineer. The acceptance of these measures by the City will be subject to the presence of adequate geotechnical conditions within this plan and all to the satisfaction of the City Engineer.
- The Owner is required to provide a lot grading and drainage plan that includes, but it is not limited to, minor, major storm/drainage flows that are mostly contained within the subject site boundaries and safely conveys all minor and major flows up to the 250 year storm event that is stamped by a Professional Engineer, all to the satisfaction of the City Engineer.
- The Owner and their Consulting Professional Engineer shall ensure the storm/drainage conveyance from the existing external drainage through the subject lands are preserved, all to the satisfaction of the City Engineer.
- The owner shall be required to comply with the MOE and City's applicable Acts, Regulations, Standards, Specifications and Requirements including Drainage By-Law and acts (WM-4), to ensure that the post-development storm/drainage discharges from the subject lands will not cause any adverse effects to adjacent lands, all to the specifications of the City Engineer.

Planning Services Comment: Following confirmation that the Site Plan Control By-law will not apply to these lands, the SWM Unit modified their comments by adding that a holding provision should be placed on the subject lands until the conceptual design of the proposed storm/drainage and SWM servicing works addressing the points listed above are completed and accepted, all to the satisfaction of the City Engineer.

Wastewater and Drainage Engineering

No comment.

London Hydro

No objection.

Agenda Item #	Page #

PUBLIC LIAISON:

On November 14, 2013, Notice of Application was sent to 20 property owners in the surrounding area. Notice of Application was also published in the *Public Notices and Bidding Opportunities* section of *The Londoner* on November 14, 2013. A "Possible Land Use Change" sign was also posted on the site.

3 replies were received

Nature of Liaison:

Change the Official Plan **BY ADDING** a special policy to Chapter 10 – Policies for Specific Areas, to permit one single detached dwelling at the north-east corner of the property in the Open Space designation.

Change Zoning By-law Z.-1 **FROM** a Holding Open Space (h-2•OS4) Zone which permits conservation lands and works; golf courses, private and public parks, and recreational golf courses without structures; cultivation or use of land for agricultural/horticultural purposes, and sports fields without structures; an Open Space (OS5) Zone which permits conservation lands and works, passive recreation uses and managed woodlots; an Environmental Review (ER) Zone which permits conservation lands and works, passive recreational uses, managed woodlot and agricultural uses; and a Holding Agricultural (h-2•AG2) Zone which permits agricultural uses, livestock facilities, a farm dwelling, forestry uses, kennels, conservation lands, wayside pits, a nursery, passive recreation use, a farm market and a small wind energy conversion system, **BY ADDING** a special provision to the Open Space (OS5) Zone to permit a single detached dwelling in the north-east corner of the property.

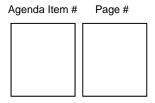
Responses:

- 2 respondents objected on the basis of a lack of need for a non-farm single detached dwelling outside the Urban Growth Boundary, poor property stewardship by previous landowners, and potential negative environmental impacts.
- 1 respondent expressed no objection.
- These responses are reproduced at the end of this report

ANALYSIS

SUBJECT SITE:

The subject property is an 8.9 ha. (22.0 acre) parcel with a frontage of approximately 179 metres (587 feet) located on Elviage Drive outside the Urban Growth Boundary. The property is primarily wooded and contains part of the Provincially Significant Dingman Creek Fen Wetland Complex. A portion of the property near Elviage Drive was cleared in 2004 by a previous property owner. There are significant grade changes on the property including steep slopes associated with tributaries of the Dingman Creek.



View of Area that was Cleared Without a Tree Cutting Permit, from Elviage Drive

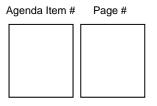


Edge of Wetland

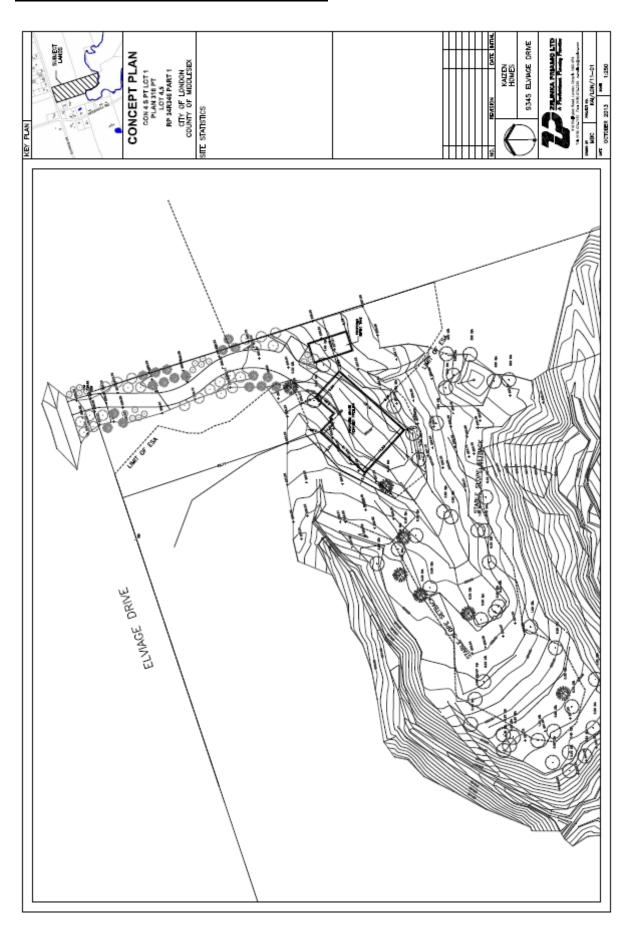


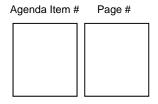
NATURE OF THE APPLICATION:

The applicant proposes to construct a single detached dwelling with a private septic system on the subject lands. The proposed construction is on lands zoned for open space, in close proximity to a PSW within an identified ESA, capitalizing on lands cleared by a previous owner.



Concept Plan Submitted with the Application





PROVINCIAL POLICY STATEMENT:

The Provincial Policy Statement, 2005 (PPS) provides policy direction on matters of provincial interest related to land use planning and development....The Provincial Policy Statement provides for appropriate development while protecting resources of provincial interest, public health and safety, and the quality of the natural environment."

The Planning Justification Report (Zelinka Priamo, September 19, 2013) identified Sections 2.1.1 and 2.1.2 of the PPS as having relevance to this proposal, indicating that "these sections relate to managing and directing land use to achieve efficient development and land use patterns, promoting economic development in employment areas and the efficient and cost effective use of infrastructure and public services." The analysis that follows indicates that the proposal is:

"...consistent with the PPS and the provision for "efficient land use and development patterns to support strong liveable and healthy communities" as follows:

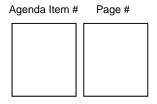
A scoped Environmental Impact Study (EIS) was prepared to assess the impacts of the proposed dwelling on the Natural Heritage Features on the property. The report concludes that not only does the proposed dwelling location offer the least impact to surrounding ecological features and functions, the introduction of the dwelling on the subject lands will allow a management strategy to be put in place that will remove and replace the native species on the property. Without a management strategy in place, the aggressive growth of the existing non-native species will expand into the protected wetland areas..."

Planning staff are of the opinion that the construction of one single detached dwelling on a 20 hectare parcel outside the Urban Growth Boundary on a mix of public and private services bears no relationship to the "urban oriented" PPS goals related to land use efficiency, economic development, etc. On the contrary, the policies pertaining to the protection of the natural heritage system are more salient to the proposal.

The PPS is to be read in its entirety. However, the Provincial interests that need to be addressed in the review of this application relate to Section 2.0 – Wise Use and Management of Resources. The following policies apply:

2.1 Natural Heritage

- 2.1.1 Natural features and areas shall be protected for the long term.
- 2.1.2 The diversity and connectivity of natural features in an area, and the long-term ecological function and biodiversity of natural heritage systems, should be maintained, restored or, where possible, improved, recognizing linkages between and among natural heritage features and areas, surface water features and ground water features.
- 2.1.3 Development and site alteration shall not be permitted in:
 - a) significant habitat of endangered species and threatened species;
 - b) significant wetlands in Ecoregions 5E, 6E and 7E;...
- 2.1.4 Development and site alteration shall not be permitted in:...
 - b) Significant woodlands south and east of the Canadian Shield;...
 - d) significant wildlife habitat;...
 - unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions.
- 2.1.5 Development and site alteration shall not be permitted in fish habitat except in accordance with provincial and federal requirements.



2.1.6 Development and site alteration shall not be permitted on adjacent lands to the natural heritage features and areas identified in policies 2.1.3, 2.1.4 and 2.1.5 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.

2.2 Water

- 2.2.1 Planning authorities shall protect, improve or restore the quality and quantity of water by: d) 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.
- 2.2.2 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".

It is noted that the applicant's analysis of the PPS requirements above, concludes that the proposed "dwelling location offers the <u>least</u> impact to surrounding ecological features and functions...". The PPS policies clearly state that the test for development in or adjacent to significant woodlands and significant wildlife habitat is that "it has been demonstrated that there will be <u>no</u> negative impacts on the natural features or on their ecological functions." Furthermore, no development or site alteration is permitted in the ecologically significant habitat of endangered or threatened species, or in significant wetlands in Southern Ontario, and development adjacent to these features and functions is also subject to a demonstration of no negative impact.

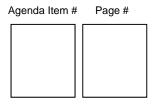
The wetland as staked in the field by local wetland evaluators has not been approved by the MNR, which is the final authority on wetland boundaries. Until the wetland boundaries have been confirmed, it is not possible to determine whether the proposed development meets the PPS with respect to wetlands. MNR has also provided project screening that identifies several endangered or threatened species, including American Chestnut, Eastern Hog-nosed Snake, Easter Flowering Dogwood, Blanding's Turtle and Milksnake, with known occurrences or general habitat on or adjacent to the site. Several environmental review agencies indicated that insufficient floral and faunal inventory was completed for the property. In the absence of adequate environmental inventory, it is not possible to rule out the possible disruption of the habitat of these species. The Environmental and Parks Planning Section identified significant wildlife habitat based on the presence of seeps within 5 metres of the proposed development site.

Several of the review agencies also indicated that insufficient information was provided with respect to the protection, improvement or restoration of vulnerable or sensitive surface and ground water features in the geotechnical/hydrogeological work and the EIS. Overall, the applicant has been unable to demonstrate "no negative impact" to the features and functions of the environmental features for which the area has been identified.

The proposed development of a single detached dwelling and septic system are not consistent with the Provincial Policy Statement.

OFFICIAL PLAN:

The Official Plan contains Council's objectives and policies to guide the short-term and long-term physical development of the municipality. The policies promote orderly urban growth and compatibility among land uses. While objectives and policies in the Official Plan primarily relate to the physical development of the municipality, they also have regard for relevant social, economic and environmental matters.



The area of the property subject to the application is designated Open Space in the Official Plan. This designation was upheld by the Ontario Municipal Board in 1997. These lands are intended to include public and private parks, private open space, hazard lands, components of the Natural Heritage System, and lands that contribute to important ecological functions. Where components of the Natural Heritage System are included with the Open Space designation, the provisions of Policy 15.3.2 - Permitted Uses in Natural Heritage Areas, prevails. The permitted uses do not include the construction of new residential structures on previously undeveloped properties. Most of the remainder of the property is designated on Schedule A – Land Use, as Environmental Review, with a small portion designated as Agriculture.

REQUEST FOR SPECIAL POLICY AREA

Chapter 10 – Policies for Specific Areas, of the Official Plan, provides for policies for Specific Areas to be applied where the application of existing policies would not accurately reflect the intent of Council with respect to the future use of the land. The policy sets out four criteria for considering a Chapter 10 policy. The *Planning Justification Report* (Zelinka Priamo, September 19, 2013) implies that the request for a special policy is to apply "a] change in land use [that] is site specific and is located in an area where Council wishes to maintain existing land use designations, while allowing for a site specific use".

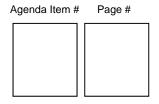
The proposed development site is located within lands shown as "Environmentally Significant Area" on Schedule B-1 – Natural Heritage Features, of the Official Plan. Section 15.4.1 of the Official Plan indicates that ESAs contain natural features and perform ecological functions that warrant their retention in a natural state, and are identified through the application of the City's Boundary Delineation Guidelines and through the application of Provincial Guidelines.

The City's ESA Boundary Delineation Guidelines are part of the Environmental Management Guidelines approved by Council in accordance with Section 19.2.2 – Guideline Documents, of the Official Plan. Guideline documents are intended to "provide detailed direction for the implementation of Official Plan policies. Guideline documents proposed pursuant to these policies and adopted by Council...may contain policies, standards, and performance criteria that are either too detailed, or require more flexibility, in interpretation or implementation, than the Official Plan would allow."

The Environmental Management Guidelines are subject to interpretation, but the guiding principles must still be met. In this particular case, the guiding principle of appropriately identifying and protecting the features and functions of an ESA is not met.

The *Planning Justification Report* (Zelinka Priamo) argues that the dwelling and septic system are proposed to be constructed in a cleared area on the property that has little to no natural heritage significance, and that the planning permission will also ensure that a management strategy is implemented for the preservation of the wetland and mitigation of the future impacts of invasive, non-native species on the subject lands. However, the lands proposed for development were cleared without a tree cutting permit by a previous owner. Left undisturbed, these lands will naturally regenerate and continue to perform their ecological function. By permitting these lands to be developed, a precedent may be established for the removal of trees in order to create parcels that would be eligible for development in the future. The Environmental review agencies are unable to agree with the applicant that the site is not environmentally significant, or that trading development rights for an environmental management strategy would be appropriate. There are no inherent development rights associated with this property by virtue of it being an existing lot of record.

Council's original intent in designating these lands as Environmental Review was to protect the natural heritage features and ecological functions for which it was identified. The value of these features and functions is still inherent to these lands, and there is no planning or legal reason to permit development on this site. Planning staff are of the opinion that the use of any of the four criteria to create a Special Area Policy to permit a single detached residence on the subject site is not warranted.



SIGNIFICANT FACTORS IN DETERMINING A DEVELOPMENT ENVELOPE

In terms of Environmental Features, Environmental and Parks Planning has indicated that there are three basic outstanding areas of concern arising from its review of the EIS (BioLogic, September 2013) affecting the identification of a building envelope on the property:

- Identification of the boundaries of the PSW (with confirmation from MNR)
- Identification of the boundaries of the ESA in accordance with City Guidelines
- Identification of appropriate buffers from the PSW and the ESA to the development.

Environmental and Parks Planning staff conclude that "The purpose of the EIS is to demonstrate (to the satisfaction of the City) that a proposed development will have no negative impact on the natural features and ecological functions for which the area has been identified, prior to potentially rezoning the lands to permit development. The EIS has not demonstrated that there will be no negative impact on the Environmentally Significant Area (ESA) and the Provincially Significant Wetland (PSW). Nor has it supported the applicant's position that the existing zoning could be changed to support development in an ESA."

Natural Hazards also have an impact on where development can occur. The subject property is affected by a Riverine Erosion Hazard Limit in proximity to the proposed construction site.

The identification of the environmental features and appropriate buffers, and confirmation of the limits of the environmental hazards is critical to the identification of an appropriate development envelope, which is based on the most restrictive of all of the factors. In this particular case, development limits may also be affected by the existence of habitat for species at risk and significant wildlife, and fish habitat.

MNR has recommended that in the absence of an updated wetland evaluation, the PPS cannot be met.

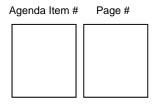
The City's Environmental and Park Planning Section noted that "...[the applicant] requested that we provide a process for them to examine these environmental constraints in more detail to determine the potential for construction of a single residence on the property. The results of this more detailed investigation, as presented in the BioLogic Scoped EIS report, confirm that these lands are ecologically significant, should not be rezoned from OS4/OS5 and cannot support residential development." Parks staff also indicated that the majority of its detailed comments provided on November 21, 2012 have not been adequately addressed. These comments dealt with matters (in addition to those noted above), such as:

- The impact of the construction of the proposed road access on the features and functions identified as ESA and the potential loss of PSW;
- Additional seasonal floral and faunal inventory;
- Geotechnical study to determine stable slopes along the ravine and top of bank:
- A hydrogeological study with particular attention to shallow surface flow and hydrological linkages between the wetland units.

EEPAC recommended refusal of the application on the basis that there is no suitable area for development on the subject site.

The UTRCA's recommendation was "Based on the geotechnical submission as well as the EIS information submitted to date in support of the proposed new house location, the UTRCA is not convinced that there is a development envelope on this property. We therefore recommend that this application be deferred in order to provide the applicant with the opportunity to respond to our comments."

The applicant was provided the opportunity to complete the additional required work/clarifications for submission and review, with the understanding that the application would not proceed to a public meeting until such time as the additional materials were submitted and a suitable period of time provided for the City Departments and agencies to review and comment



on the new submissions. The applicant opted to proceed to the next available public meeting on February 18, but on January 16, 2014 also submitted additional geotechnical/hydrogeological information in response to a request for additional information from the City's Ecologist Planner made on November 21, 2012. City and UTRCA staff did not have the opportunity to review this additional information prior to completion of this report and the applicant has indicated that they do not wish to defer this matter to a future PEC meeting where the additional geotechnical/hydrogeological information could be reviewed and incorporated into the staff analysis of the application.

Delineation of the Provincially Significant Wetland (PSW)

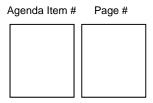
The determination of significant wetlands in accordance with the PPS is made by the Ministry of Natural Resources using evaluation procedures established by the Province. MNR has identified the Dingman Creek Fen Wetland Complex as a PSW. This PSW is identified on Schedule B1 – Natural Heritage Features and is also an ESA recognized by Council in the City's Official Plan. Section 15.4.2 – Wetlands, of the Official Plan states that "Development and site alteration shall not be permitted in Provincially Significant Wetlands, except for activities that create or maintain infrastructure, in accordance with Section 15.3.3.; or works subject to the Drainage Act."

The PSW is located on the subject property and adjacent lands, close to the proposed construction site. Given the proximity of the proposed development to the PSW, City staff required the confirmation of the PSW boundaries as part of a complete application. The wetland was staked in the field by certified wetland evaluators, but not confirmed with MNR using its established Ontario Wetland Evaluation procedures. The figure on the following page, taken from the *Review of Current House Location (exp. September 17, 2013)* illustrates the wetland communities as 6a, b and c, as staked in the field, in relation to the proposed house, septic tank and septic bed locations.

MNR indicated that "with development taking place within 120 metres of an existing PSW and with new wetlands being identified on site and within metres of the proposed development, MNR would recommend that without an updated wetland evaluation the PPS cannot be met."

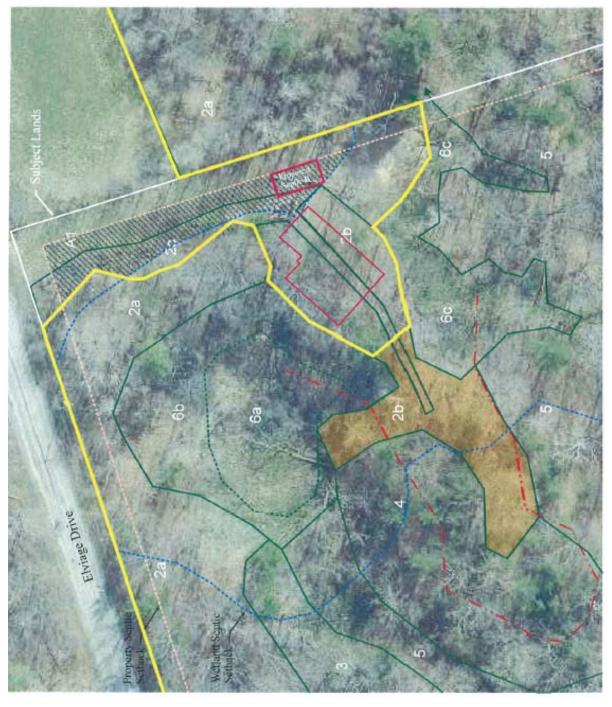
The UTRCA indicated that in accordance with its policies, "new development and site alteration is not permitted in wetlands. Furthermore, new development and site alteration may only be permitted in the area of interference and/or adjacent lands of a wetland if it can be demonstrated through the preparation of an EIS that there will be no negative impact on the hydrological and ecological function of the feature." The UTRCA reviewed the EIS (Biologic, September 2013) with respect to the potential impact of development on the wetland and in its comments pointed out significant technical deficiencies that need to be addressed. Some of these deficiencies can be generally characterized as follows:

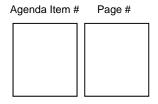
- the lack of confirmation by MNR of the new PSW boundary;
- discussion and investigation of seepage areas and how they contribute to the groundwater for the fen and how these areas need to be protected, this work to include a full hydrogeological report;
- requirement for a full three season inventory and the possibility that there are rare or unusual plant species;
- Significant Wildlife Analysis and faunal inventory to be completed on the entire parcel, not just in the area of the proposed house;
- Appropriate buffers not identified for the swamp communities;
- inadequate assumptions regarding lack of habitat for aquatic species at risk (SAR); and
- lack of recommendations and mitigation measures to indicate how fish habitat will be protected.



Submitted Wetland Boundaries (6a, b and c) and Proposed Building Site







A confirmed wetland boundary and a complete evaluation of the hydrological and ecological function of the feature is an important component for the consideration of possible development on these lands. The applicant, based on information submitted to date, has not demonstrated the proposed development is outside the wetland and that there is no negative effect on the area of interference and/or adjacent lands. Official Plan and Zoning By-law amendments to permit development would be contrary to the intent of the Official Plan and is not supported.

Delineation of the Boundary of the Environmentally Significant Area

The proposed single detached dwelling is located within lands shown as Environmentally Significant Area on Schedule B1 of the Official Plan, and immediately adjacent to lands shown as Environmental Review" on Schedule A – Land Use and as Potential ESA on Schedule B1 of the Official Plan. Lands designated Environmental Review are protected from activities that would diminish their functions pending the completion, review and acceptance of a detailed environmental study. Prior to completion of the EIS, City staff requested that the ESA Boundary Delineation Guidelines be applied to the site for the purpose of confirming the ESA boundaries and providing the platform for the determination of appropriate buffers and other mitigation measures, in accordance with Section 15.4.1.2 – Expansion of Environmentally Significant Areas, and 15.5.1 – Purpose of Environmental Impact Studies, of the Official Plan.

BioLogic, in its EIS for the subject lands dated September 2013, identified the land shown on the map on the previous page identified areas A1, 2B and 2C in the area of the proposed driveway, septic bed and dwelling as anthropogenic/cultural vegetation communities and excluded most of this area from the boundary delineation of the ESA, which would effectively remove lands that are already designated as ESA in the Official Plan. They based this exclusion on the application of Guideline 10 and Section 7.0 of the ESA Boundary Delineation Guidelines.

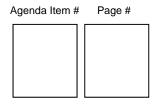
The Environmental and Parks Planning Section for the City has indicated that the City's ESA Boundary Delineation Guidelines are inappropriately applied in the submitted EIS. Among other details, staff disagree with the application of Guideline 10 of the ESA Boundary Delineation Guidelines. Guideline 10 indicates:

"Residential sites and institutional areas within or adjacent to a patch are subject to the following boundary considerations:

- a) Existing residential building envelopes and institutional building envelopes surrounding on at least three sides by a patch or forming "islands" within a patch are not affected by the protective designation. Building envelopes and access routes of existing structures within the patch must be determined on a site-specific basis.
- b) Existing residential building sites adjacent to a natural heritage feature are excluded from the patch."

According to Environmental and Parks Planning, "There is no existing building envelope on this property. There is an area along the east property boundary which was cleared in 2004 The applicants propose that this already disturbed area is an appropriate location for the driveway access and would form part of the area for the construction of the proposed single detached dwelling and septic system...

The boundary of the ESA on this parcel includes all of the existing vegetation (and vegetation existing prior to ... site alteration in 2004 which will eventually grow back). The EIS identified that the construction of the estate home and septic system would require the removal of trees...therefore, the residential development is clearly proposed to be inside the ESA within OS4/OS5 zoned lands which is unsupportable. Previous ... site alteration creating disturbed areas cannot now be used to justify the presence of a residential development in the ESA. Guideline 10 does not apply as this is not an "existing residential building" as trees are proposed to be removed from the ESA to create an envelope."



The submitted EIS also indicates that Guideline 7 [Section 7.0 – Other Planning Considerations] of the ESA Boundary Delineation Guidelines applies. Section 7.0 may be applied to ESA review areas identified as optional for inclusion in an ESA, and provides for the potential exclusion of parts of a potential ESA from the ESA boundary. These exclusionary areas must meet certain criteria and "are considered optional for inclusion on the grounds that they are not always critical to the long-term health and integrity of the ESA and their exclusion would not reduce in any way the ability of the patch to meet the ESA criteria." Furthermore, "In general, the intent will be to include the optional areas in the ESA where ecological benefits can be clearly demonstrated and, as determined through the review of other planning considerations, inclusion will not be onerous to the design and viability of community development." The EIS argues that exclusion of the proposed building envelope would contribute to logical road patterns and lotting arrangements, positively impact the overall planning/management for the ESA as an integrated landscape unit, and create the potential to complete restoration and enhancement of the disturbed areas outside the building envelope that would improve portions of the habitat for the net benefit of the ESA. The City's Environmental and Parks Planning Section indicates that "Section 7.0 Other Planning Considerations have...been incorrectly applied here as they only apply to the design and viability of a community development, not to permit the construction of an estate style home inside an ESA. The construction of the estate home and septic system would directly impact areas of mature, treed vegetation in the interior of the ESA and cause the direct loss of ESA area."

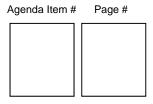
The City's Ecologist Planner has provided its interpretation of the ESA boundary in accordance with Section 4 – Interpretation, of the Guidelines for Assessing Ecological Boundaries of Vegetation Patches, of the ESA Boundary Delineation Guidelines.

Section 4.1 states:

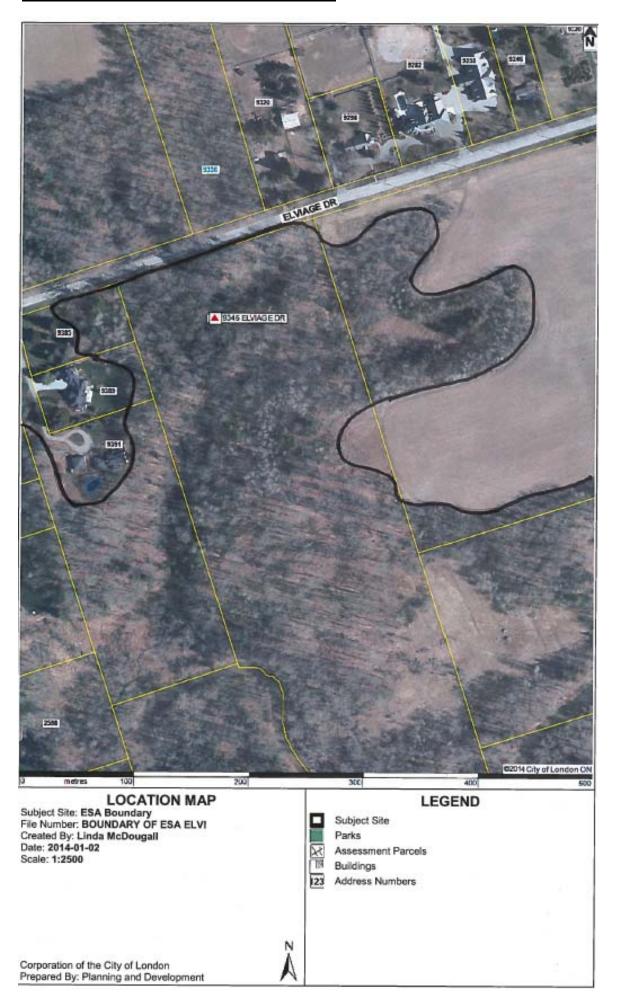
The initial boundary will be drawn at the interface between naturalized vegetation and the adjacent lands, generally conforming to the patch outline. The natural heritage feature so mapped will be outside the development area.

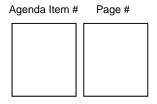
The patch boundary is then refined through the application of the boundary guidelines, of which Guideline 10 identified by BioLogic is one. The City Ecologist and EEPAC have rejected the application of Guideline 10 (as previously discussed), resulting in the approximate boundary being as depicted on the air photo shown on the following page.

The Ministry of Natural Resources, the UTRCA and/or the Environmental and Parks Planning Section have identified the ESA and the potential ESA as incorporating a significant woodland, habitat for and the existence of Species at Risk (endangered or threatened), and habitat for and the existence of significant wildlife. These features are afforded protection from development in some cases by Provincial legislation, and/or UTRCA policies and regulations. These features are also part of the criteria intrinsic to the site considered for the evaluation of ESAs in accordance with Chapter 15.4 of the Official Plan and the ESA Boundary Delineation Guidelines. The Environmental Management Guidelines, which incorporate the ESA Boundary Delineation Guidelines, provide protection to all of these features. More detailed evaluation of habitat and floral and faunal inventory as requested by the UTRCA, EEPAC and Environmental and Parks Planning may have a further impact on the final delineation of the ESA boundary.



City Staff Interpretation of the ESA Boundary





As previously mentioned, lands surrounding the proposed construction site on the property are located within the Environmental Review designation as the majority of the property has been identified as a Potential ESA on Schedule B1 – Environmental Features in the Official Plan. The policies of Chapter 8B – Environmental Review Land Use Designation, adopted in December, 2009, indicate that "The City will undertake an environmental study of the Environmental Review Lands outside of the Urban Growth Area during the first ten years of the Planning period. Lands not determined to be significant in accordance with the criteria for determining significance in Section 15.4 will be redesignated as Agriculture." The Environmental and Parks Planning Section will be undertaking this study in the near future. The ER land study will encompass the subject lands and may result in changes to the land use designations on the basis of the results of that study.

Establishing Environmental Buffers

Section 15.3.6 of the Official Plan addresses the use of ecological buffers which "serve to protect the ecological function and integrity of the Natural Heritage System. Ecological buffers will be required around, or adjacent to, components of the Natural Heritage System, based upon the recommendations of an approved Environmental Impact Study." The Official Plan states that "The location, width, composition and use of ecological buffers necessary to protect natural heritage areas from the impacts of development on adjacent lands will be specified through application of the Council approved Guidelines for Determining Setbacks and Ecological Buffers as part of a secondary plan and/or an environmental impact study".

All of the Environmental review agencies consulted by City staff for this application reviewed the EIS and provided comments related to the recommendations for mitigation.

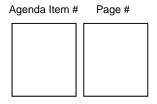
MNR noted that while the EIS acknowledges that the wetland features will need to be protected, "before the features can be protected they must first be appropriately identified, evaluated and delineated before impacts can be identified and mitigation can be determined." With respect to specific recommendations for the setback of the septic bed from the wetland, MNR recommended that the septic bed location should take into account consideration of the updated wetland boundary [which has not been confirmed].

The UTRCA indicated that "We do not disagree that the swamp communities are functioning to buffer the fen components. However, these swamp communities are part of the larger PSW Complex and therefore the swamp communities also need buffers to protect them. The PSW is not significant only because of the fen communities, but is significant because of all the wetland communities that make up the complex."

The Environmental and Parks Planning Section expressed "the identification of appropriate buffers from the PSW and ESA to development" as one of its outstanding issues of disagreement/omission.

EEPAC noted that "no buffers are indicated anywhere in the EIS. Appropriate application of buffers within this site leaves no suitable area for construction of a single family dwelling and septic system." Rather, "the report seems to suggest that the ESA itself should be a buffer from the building, rather than having a buffer or critical habitat zone identified for the ESA...The building envelope is essentially buffered from the fen by the swamp."

Based on the above noted comments, it is clear that appropriate buffers to protect the natural features and ecological functions for which the area has been identified and as required by the PPS, the Official Plan and the UTRCA's policies and regulations, have not been provided.



Geotechnical/Hydrogeological Review

The proposed construction site is immediately adjacent to the Riverine Erosion Hazard for Confined Systems shown on Schedule B2 – Natural Resources and Natural Hazards, of the Official Plan. The Natural Hazards policies of the Official Plan set out Natural Hazard objectives in Section 15.1.2. These objectives as they relate to the subject application include:

- iv) Identify flood plain, slope and erosion hazard areas, and prohibit or regulate land use activity in areas where public safety may be affected by natural hazards, in accordance with Provincial natural hazard management policies, and regulations under the Conservation Authorities Act.
- v) Minimize the risk to public safety and to property due to erosion and slope instability.

Section 15.7.- Erosion and Wetland Hazards of the Official Plan states that "Ravines, river valleys, stream corridors, slopes and wetlands may be subject to natural hazards that preclude or restrict land use and development activity. The lands susceptible to natural hazards are subject to the policies in this section and may be identified for reference purposes on Schedule "B2" – Natural Resources and Natural Hazards. In addition to satisfying the policies in this section, all site alteration, land use and development activity within the applicable Regulation Limit, will be subject to review and approval by the Conservation Authority having jurisdiction."

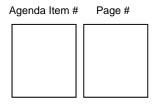
Section 15.7.1 – Riverine Erosion Hazards, states that "the risk of erosion is managed by planning for the 100 year erosion rate (the average annual rate of recession extended over a one hundred year time span... In keeping with the hazard avoidance approach, development and site alteration is generally not permitted in areas that are subject to riverine erosion hazards".

The alignment of the Riverine Erosion Hazard Limit on the subject property is determined by the City, in consultation with the Authority having jurisdiction. The delineations on Schedule "B2" are subject to interpretation and refinement without an amendment to the Official Plan, on the basis of geotechnical assessments, hydrogeological studies, river morphology studies, erosion control plans and/or other supporting technical studies as applicable prepared in accordance with policy 15.7.6. and completed to the satisfaction of the City, in consultation with the UTRCA.

Section 15.7.1 (iv) states that "...in keeping with Provincial policy, new development shall be directed away from lands that are subject to riverine erosion hazards. In areas of new development, the use of hazard avoidance, vegetative plantings and other non-structural solutions are the preferred method of addressing riverine erosion hazards."

The subject property is regulated by the UTRCA, meaning that landowners must obtain written approval from the Authority prior to undertaking any site alteration or development within the area, including filling, grading, construction, alteration to a watercourse and/or interface with a wetland. The UTRCA evaluates applications for development in accordance with the UTRCA Environmental Planning Policy Manual, which the UTRCA indicates is consistent with the PPS. The UTRCA's Riverine Erosion Hazard Policies state that "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."

Section 15.7.4. – Wetlands and Areas of Interference of the Official Plan states that "Wetlands and their surrounding areas of interference are subject to regulation under the Conservation Authorities Act due to the potential hazards associated with flooding, organic soils and interference with water source/recharge areas. Filling or draining can have an impact on the hydrologic functions of a wetland which, in turn, may influence the flooding and erosion



processes in the area. The incremental impact of widespread wetland interference can also have a significant impact on downstream hydrology."

The materials submitted by the applicant to support construction in the vicinity of the erosion hazard included a *Revised Slope Stability Assessment – 9345 Elviage Drive, London Ontario (exp., August 24, 2011)*, which was originally prepared and submitted to the UTRCA for the proposed development of a single detached dwelling at a different location on the same property. The submission was accompanied by an update in the form of a one-page supplementary letter and figure entitled *Review of Current House Location* (exp., September 17, 2013) which explained that the previous geotechnical study and recommendations are applicable to the proposed development. The UTRCA has indicated that when it originally reviewed the 2011 geotechnical report, supporting technical information was requested and has not been provided in the new submission, and therefore, the geotechnical assessment must still be considered incomplete.

The UTRCA also reviewed the submitted EIS with respect to wetlands and areas of wetland interference and offered detailed comments on items requiring further work and/or clarification. It concurred with the BioLogic statement on page 19 of the EIS that groundwater resources will need to be considered further and requested a full hydrogeological report to address these issues.

EEPAC also commented on hydrology and slope issues, stating that "Development will increase runoff intensity from the building site, delivering water to the steep slopes surrounding the building site. Page 27 (and p27 Trow/EXP Jan 26 2011) recommends that roof leaders should be directed away from the adjacent slopes and some could be directed towards the rear of the site and the remainder to the "expanded wetland area to the southeast" ... There is little consideration of how this enhanced runoff will impact the slopes and receiving wetland."

In the absence of complete information available for review for by the UTRCA, confirmation of the development limit from a hazard avoidance perspective cannot be completed. While important, it is likely based on the analysis related to natural heritage features that the geotechnical top of slope will not be a final determining factor in the availability of a development envelope on the property.

OTHER OFFICIAL PLAN POLICIES

Archaeological potential

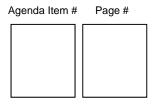
The subject site is identified in the Archaeological Master Plan as described in Section 13.4 – Archaeological Resources, of the Official Plan, as being a potential location with archaeological resources. Any development approval should be subject to a holding provision requiring an archaeological resource assessment.

Minimum Distance of Separation (MDS) (Ministry of Agriculture)

Section 9.2.10 – Minimum Distance Separation Requirements of the Official Plan addresses the potential impacts of non-farm development on existing agricultural operations and their potential expansion, to address the Provincial Policy Statement regarding the wise use of agricultural resources. Zelinka Priamo prepared an MDS 1 report to the satisfaction of Planning Services staff. The report indicated that the separation distances between the proposed dwelling and the adjacent Plunkett farm meet the MDS requirements.

ZONING BY-LAW:

The Zoning By-law is a comprehensive document used to implement the policies of the Official Plan by regulating the use of land, the intensity of the permitted use, and the built form. The key element of zoning regulation for the subject application is one of use.



The area proposed to be rezoned to permit a single detached dwelling is in the Open Space (OS5) Zone.

The Zoning By-law states that:

"The OS5 Zone variation applies to important natural features and functions that have been recognized by Council as being of City-wide or regional significance and identified as components of the Natural Heritage System on Schedule "B" of the Official Plan and regulated by policies in Section 15.3 of the Official Plan. These include Environmentally Significant Areas; Significant Woodlands; Locally Significant Wetlands; Significant Wildlife Habitat; Habitat of Vulnerable Species; River, Stream and Ravine corridors; Upland Corridors; and Fish Habitat and Naturalization Areas. In order to protect the identified features and functions, permitted activity is limited to a range of low-impact uses associated with passive recreation, conservation and ecosystem management. Development and site alteration is permitted only if it has been demonstrated through an appropriate study that there will be no negative impacts on the features and functions for which the area has been identified."

Permitted uses in the Open Space (OS5) Zone include conservation lands, conservation works, passive recreation uses which include hiking trails and multi-use pathways, and managed woodlots."

As discussed in the Official Plan analysis, the applicant has not demonstrated that there will be no negative impacts on the features and functions for which the area has been identified. Therefore a zoning by-law amendment to permit the use is not appropriate and is not recommended by staff.

The applicant has requested a special provision in the Open Space (OS5) Zone to permit one single detached dwelling. Should development potential be considered, the area zoned to permit the use should be tailored to a specific development envelope identified in an EIS accepted by the City.

LOT OF RECORD:

The issue of a "Lot of Record" has been expressed many times with this site. The Planning Division sought legal advice on this matter. The City's Legal Department advises that an "existing lot of record" has no bearing on whether the parcel of land can be developed or not.

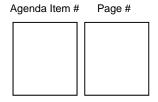
Section 1.2 of the City's Zoning By-law (Z.-1) states:

Compliance with Zoning By-law

No person shall, within the lands to which this by-law applies, use any land or erect or use any building or structure in whole or in part, except in conformity with the provisions of this by-law.

The subject lands are zoned Open Space (OS4) and Open Space (OS5). The OS4 zone is intended to be applied to hazard lands; specifically the floodway, steep slopes and lands that may be subject to erosion. Development within the OS4 Zone is regulated by the conservation authority and limited to low impact recreational facilities that do not normally include structures or buildings. The OS5 zone is applied to the City's most significant natural features and functions that have been identified on Schedules B1 and B2 in the Official Plan. In order to protect these areas of significance, permitted activities are limited to passive recreational uses and conservation uses. In both instances, residential development is not permitted.

The applicant has identified a small portion of Environmental Review (ER) and Holding Agriculture (h-2•AG2) lands that could facilitate the construction of a residential dwelling. Unfortunately, this portion of the site is inaccessible from the street without crossing the OS4 and OS5 zoned lands or via an abutting parcel of land owned by others.



The current property owner has previously been advised that the area is highly constrained and unable to support any form of development within the Open Space zones, which comprise approximately 98% of this parcel. The subject lands have been appealed twice to the OMB, where the Open Space designation and zones were confirmed.

DEVELOPMENT CONTROL TOOLS:

Planning Services is not recommending approval of this application to permit a single detached dwelling and septic system on the subject property. Should development be contemplated, a number of planning and regulatory tools would need to be identified and implemented in order to ensure that the UTRCA's regulations and provincial and municipal requirements are met and that the anticipated impacts on the natural features and ecological functions are minimized to the maximum extent possible.

CONCLUSION

Based on the review of documents submitted with the application and the technical expertise of the relevant staff of City Planning Services, the Ministry of Natural Resources and the UTRCA as well as the informed opinion of EEPAC, outstanding concerns remain as to whether the proposed building envelope can be developed without serious negative impacts on the features and functions of the Environmentally Significant Area and the Dingman Creek Fen Wetland Complex (PSW). While some technical issues with the submitted EIS and geotechnical report may potentially be addressed through the submission of additional materials to the review agencies, the confirmation of the PSW boundary by the MNR, proper application of the City's Boundary Delineation Guidelines for Environmentally Significant Areas, and the application of appropriate buffers to both the PSW and the ESA are unlikely to yield a suitable development envelope for a single detached dwelling. Furthermore, the fact that the subject property is an "existing lot of record" has no bearing on whether the parcel of land can be developed or not, given that the Zoning By-law does not permit the requested use. These lands are ecologically significant, cannot support residential development and it is recommended that they not be redesignated or rezoned to permit the proposal. The recommendation to refuse this application is consistent with the Provincial Policy Statement and the City of London Official Plan.

PREPARED BY:	REVIEWED BY:
BARB DEBBERT, SENIOR PLANNER, COMMUNITY PLANNING AND DESIGN	MICHAEL TOMAZINCIC, MCIP, RPP MANAGER, PLANNING REVIEW COMMUNITY PLANNING AND DESIGN
SUBMITTED BY:	RECOMMENDED BY:
JIM YANCHULA, MCIP, RPP MANAGER, COMMUNITY PLANNING AND DESIGN	JOHN M. FLEMING, MCIP, RPP MANAGING DIRECTOR, PLANNING AND CITY PLANNER

January 30, 2014

RD/

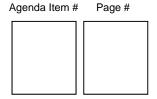
Attach.

Y:\Shared\implemen\DEVELOPMENT APPS\2013 Applications 8135 to\8280Z - 9345 Elviage Dr (BD)\OZ-8280 report to Planning and Environment.docx

Agenda Item #	Page #

Responses to Public Liaison Letter and Publication in "Living in the City"

Telephone	<u>Written</u>
	Terry Neill 2261 Westdel Bourne London ON N6K 4R2
	Mark Tiede 2237 Westdel Bourne London ON N6K 4R2
	Grace Archer 46 – 1502 Warbler Woods Walk London ON N6K 0A7



Attention Barb Debbert OS 8280

Objections to Land use Change proposal at 9345 Elviage Drive

- #1 This application for a building permit is outside the Urban Growth Boundary
- #2 This land is not zoned as agricultural use and therefore a tenant permit is not necessary
- #3 The applicant for this permit went ahead and started an excavation on this site 4 years ago and was halted by the objections to the city by the former neighbor / landowner.
- #4 This application for a permit on this property was denied four years ago really nothing has changed. (This property is still as environmentally sensitive as it ever was)
- #5 The applicant for this Land use change previously owned a property on Westdel Bourne which adjoined this property and while he was the owner he altered the natural flow of groundwater by allowing the dumping of 40 to 50 truckloads of construction debris and earth on this property. The Ministry of the Environment was contacted, The City of London was contacted, The Upper Thames River Conservation Authority was contacted and this applicant ignored the order to stop the dumping of this debris. This property has changed owners but this applicant is still responsible for this dumping.
- # 6 The applicant is not a good steward of the land and has demonstrated a lack of knowledge and is very irresponsible when it comes to observing proper application processes. Rather than allowing a Land use Change this applicant should be ordered to put back the property he has abused to its original state.
- #7 The property on Elviage Drive has tributaries and ditches that run directly into the Digman Creek and of course the Digman Creek runs directly into the Thames river. An excavation on this property will surely affect the groundwater and contaminate these watersheds.
- #8 The magnitude of both a basement and a septic tank excavation on this property will surely cause extensive and irrepairable damage to this property and therefore given one and or all of the above reasons, this application should be denied.

Terry Neill Mark Tiede Westdel Bourne Residents

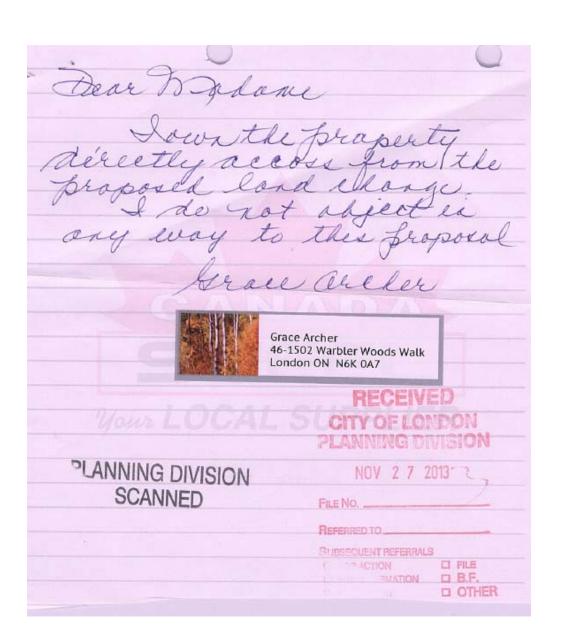
Agenda Item #	Page #

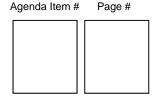
Debbert, Barb

From: Mark Tiede

Sent: Sunday, December 08, 2013 10:59 AM

To: Debbert, Barb
Subject: Land use change







Memorandum

Ms. Michelle Doornsbosch Zelinka Priamo Ltd.	From:	Botel Chiu, M. Eng., P. Eng.
January 15, 2014		
9345 Elviage Drive, London	Project No. :	LON00010139GE
Comments to Support the Geotechnical and Hydrogeological Studies		
Vickie J. Coatsworth, P. Eng.		
Zelinka Priamo Ltd., Kaizen Homes		
	Zelinka Priamo Ltd. January 15, 2014 9345 Elviage Drive, London Comments to Support the G Vickie J. Coatsworth, P. En	Zelinka Priamo Ltd. January 15, 2014 9345 Elviage Drive, London Comments to Support the Geotechnical and Vickie J. Coatsworth, P. Eng.

This memorandum is in response to the request from Ms. Michelle Doornsbosch of Zelinka Priamo Ltd. to respond to the Memorandum from the City of London Environmental and Parks Planning dated November 21, 2012. Specifically, two of the seven items (Items 6 and 7), have questions relating to the Geotechnical Slope Study and the Hydrogeological Study prepared by exp, and are quoted here for reference.

Item 6: Geotechnical Study – A top-of-slope was identified on Figure 1 without reference to the origin of the line.

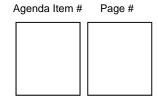
The top-of-slope was identified at the point where the slope is flatter than 4H:1V or a transition of the change of a gradient. The approach of delineating the top of slope at the point where the slope inclination becomes 4H:1V is an acceptable standard practice and has been utilized as an industry standard for many years. This practice is referenced in numerous technical documentation, including a rating score of zero on the Ontario Ministry of Natural Resources Rating Chart. At the proposed house location, there was no slope which is steeper than 4H:1V. No setback line is required for the proposed building.

It is further understood that this definition has historically been accepted by UTRCA staff, during previous investigations, site meetings and consultation.

Site review was carried out to confirm the suitability of this proposed house location by a geotechnical engineer from this office.

Item 7: Hydrogeological Study – Three testpits were completed between the wetland units 'under supervision of EXP'. The information and log of these tests was not presented in the report neither was the date of the testpits. The 2012 spring-summer season experienced a severe drought which could confound the results. This is confirmed by a Trow report dated April 2009 for the subject lands. It was reported that groundwater seepage was noted in all boreholes which caved in after drilling. They noted that the depth to the groundwater table may vary in response to climatic or seasonal conditions and that capillary rise effects should be anticipated within the fine-grained deposits of the sub-soil conditions. Therefore, it has not been adequately demonstrated that the shallow surface flow and hydrological linkages that exist between the wetland units will be protected from negative impact.

1507 Robin's Hill Road, Unit 2., London, ON N5V 0A5, Canada T. +1.519.963.3000 + F: +1.519.963-1152 + www.exp.com



Client: Kaizen Homes . Project Name: 9345 Elviage Drive, London Project Number: LON00010139GE Date: January 15, 2014

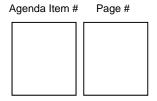
Three boreholes were drilled on April 2, 2009. Boreholes BH1 and BH2 were drilled to 30 feet and Borehole BH3 was drilled to 45 feet. The borehole logs are attached for reference. The boreholes indicated layers of silty sand and clayey silt over Clayey silt till. Seepage tends to occur at the interface between the sand and clayey silt layers. This seepage is generally from infiltration from surface water and is perched over the clayey silt layers in the upper zones. The natural groundwater table is typically set in the deeper till layers as can be seen by the piezometer reading of 5.1 m below ground surface recorded at Borehole BH2 on April 22, 2009.

Three test pits were advanced in April 2012. The purpose of the test pit assessment was to confirm the findings from the previous investigation near the proposed new house location. A summary of the test pit findings is shown below:

Test Pit Number	Depth (m)	Soil Description
<u>TP 1</u>		Vegetated ground surface
	0.00 - 0.6	FILL - Silty Sand - brown, trace organics, some gravel, moist
	0.60 2.00	CLAYEY SILT - brown, weathered in upper limits, stiff, moist
	2.00	Test pit terminated
		Test pit open and dry upon completion of excavation. No ground seepage observed.
<u>TP 2</u>		
	0.00 1.00	FILL - Silty Sand and Gravel - brown, trace clay
	1.00 - 2.40	CLAYEY SILT - brown, trace fine grained sand, stiff, moist
	2.40	Test pit terminated
		Test pit open and dry upon completion of excavation. No ground seepage observed.
TP 3		Vegetated ground surface
	0.00 - 0.50	ORGANIC SOIL - brown, peat/topsoil inclusions, very moist
	0.50 - 1.20	SILTY SAND water perched at 0.6 m depth, brown, trace gravel
	1.20 - 1.70	CLAYEY SILT brown, trace fine grained sand, stiff, moist
	1.70	Test pit terminated
		Test pit saturated upon completion of excavation. No ground seepage observed.

Note: Test pit excavated and backfilled by a backhoe on April 11, 2012. The approximate test locations are shown on the attached sketch.





Client: Kaizen Homes . Project Name: 9345 Elviage Drive, London Project Number: LON00010139GE Date: January 15, 2014

The test pits encountered similar soil types which were consistent with the borehole investigation in 2009. It was determined from the 2009 investigation that the stabilized groundwater level was at 5.1 m depth. The observation in the 2012 study confirmed that there are no seepage zones at the proposed house location. This observation was consitent with the previous study and revealed that no shallow surface flow and hydrological linkages from the proposed house to the wetland units.

The presence of a clayey stratum, with a very low hydraulic conductivity, at this site provides a natural barrier (or aquitard) to protect the groundwater table and wetlands. Based on Environment Canada records in 2009, the precipitation level was higher than the norm in the same period. The use of the data from the 2009 study should be representative for this site. The 2012 spring may have experienced lower than average precipitation levels, which would likely affect the water level in the open water bodies, rather than the localized groundwater table

The findings from both assessments are consistent. Only perched water was found at the interface of the underlying impervious stratum. No vertical hydrogeological connection was established. The proposed house foundation will be set well above the groundwater table and will not pose any significant impact to the groundwate table or the wetlands.

Should you have any questions or require any clarification, please do not hesitate to contact this office.

Yours very truly,

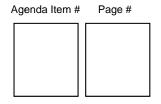
exp Services Inc.

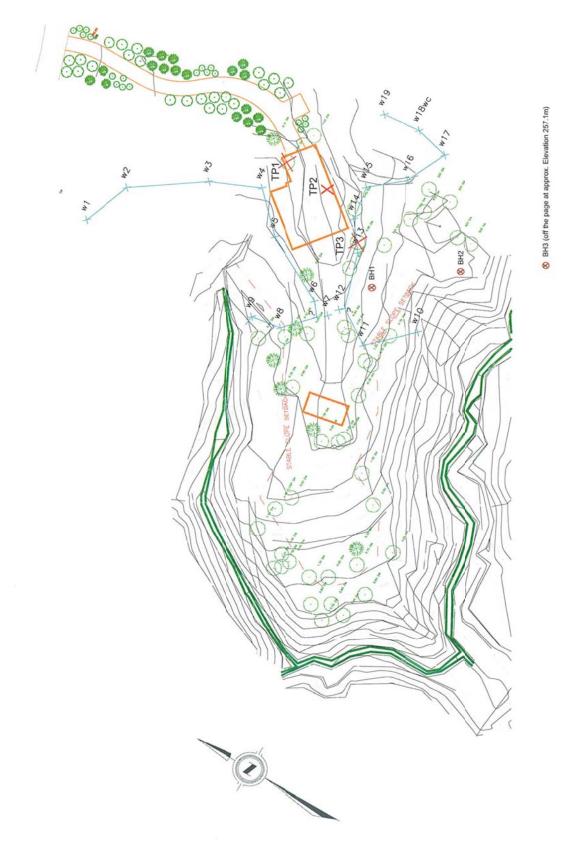
Vickie J. Coatsworth, P. Eng. Geotechnical Services

Botel Chiu, M. Eng., P. Eng. M F. CHIU Senior Discipline Manager, Earth & Environment, Southwestern Ontario

ROFESSION

VOE OF





Agenda Item #	Page #

Borehole No. 1



Driffing Equipment: solid stem

Depth to Water (m): 0.76

Hole Open To (m): 1.2

M.S.A. Explosimeter Reading: N/A

Project No: LNGE00010139A Project Name: 9345 Elviage Drive Project Location: London, Ontario

Engineer: 8W Field Supervisor: SH

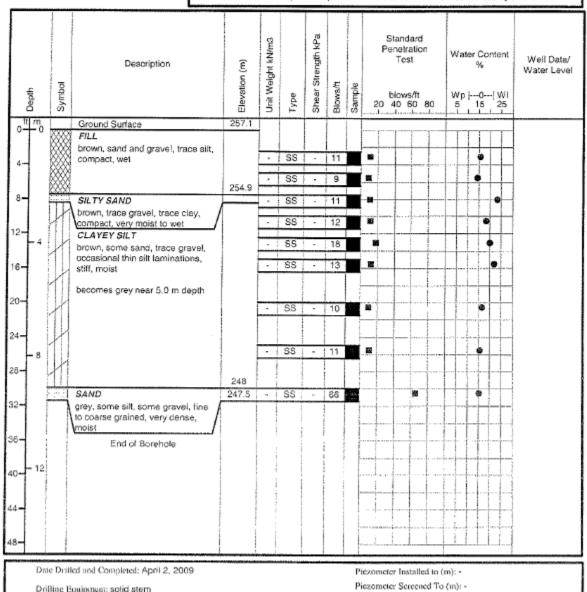
Note: Borehole data require interpretation assistance from Trow before use by others.

Bentonite Scaled To (m): -

Date of Measurement: -

Bentonite Seal Thickness (m): -

Piezometer Measurement (m): -



Agenda Item #	Page #

Borehole No. 2



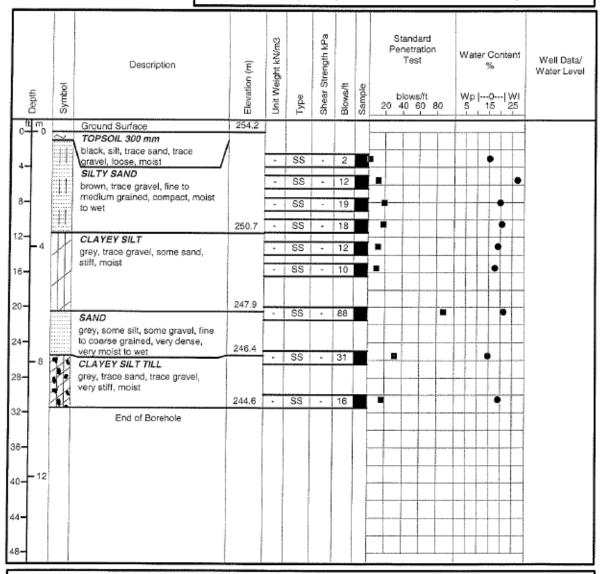
Project No: LNGE00010139A

Project Name: 9345 Elviage Drive

Project Location: London, Ontario

Engineer: BW Field Supervisor: SH

Note: Borehole data require interpretation assistance from Trow before use by others.



Date Drilled and Completed: April 2, 2009

Drilling Equipment: solid stem

M.S.A. Explosimeter Reading: N/A

Depth to Water (m): 5.3

Hole Open To (m): 8.7

Piezometer Installed to (m): 2.6

Piezometer Screened To (m): 8.7

Bentonite Sealed To (m): 8.7

Bentonite Seal Thickness (m): 2.6 Piezometer Measurement (m): 5.12

Date of Measurement: April 22/09

Agenda Item #	Page #

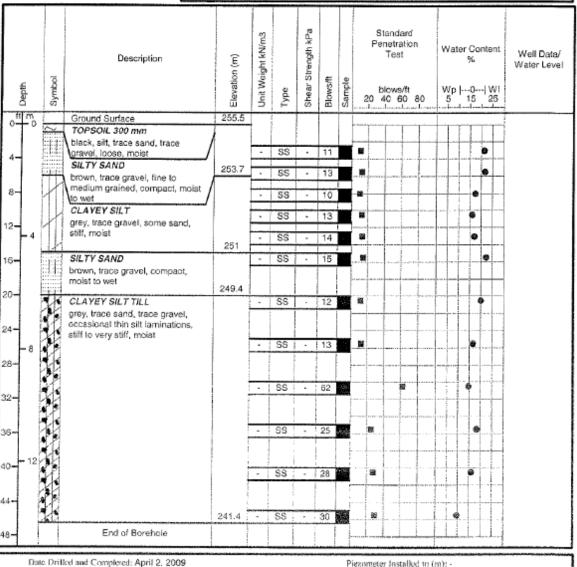
¥Trow

Borehole No. 3

Project No: LNGE00010139A Project Name: 9345 Elviage Drive Project Location: London, Ontario

Engineer: BW Field Supervisor: SH

Note: Borehole data require interpretation assistance from Trow before use by others.

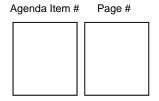


Date Drilled and Completed: April 2, 2009

Piezometer Installed to (m):
Piezometer Screened To (m):
Bestonite Scaled To (m):
Bestonite Scaled To (m):
Bestonite Scaled To (m):
Bestonite Scale Thickness (m):
Depth to Water (m): 1.1

Piezometer Measurement (m):
Hole Open To (m): 1.4

Date of Measurement: -



Bibliography of Information and Materials OZ-8280

Request for Approval:

City of London Official Plan and Zoning By-law Amendment Application Form, completed by Zelinka Priamo Ltd. (M. Doornbosch), September 19, 2013.

Zelinka Priamo Ltd., Cover letter, September 19, 2013.

Zelinka Priamo Ltd., *Planning Justification Report – Proposed Single Detached Dwelling – 9345 Elviage Drive*, September 19, 2013.

Zelinka Priamo Ltd., Concept Plan – 9345 Elviage Drive, October 2013.

Exp. Services Inc,. Review of Current House Location, September 17, 2013.

BioLogic Inc., *Environmental Impact Study Report*, September 2013. (which included as appendices the following:

Trow Associates Inc., Slope Stability Assessment – Proposed Residence – 9345 Elviage Drive, January 26, 2011.

Trow Associates Inc., Supplementary Comments on Groundwater Review, June 30, 2011.

Trow Associates Inc., *Draft Geotechnical Assessment – Gully Crossing – 934 Elviage Drive*, June 5, 2009.

Dave Martin. Kaizen Elviage Faunal Report, September 8, 2013.

Exp. Services Inc., Review of Current House Location, August 22, 2013.

Creighton, C., Upper Thames River Conservation Authority. Letter re: UTRCA Comments re Geotechnical Submission in support of a Proposed House Construction – 9345 Elviage Drive, July 26, 2011.

Exp. Services Inc., Response to UTRCA Letter Dated July 26, 2011. (which included as an attachment:

Exp. Services Inc., *Revised Slope Stability Assessment – 9345 Elviage Drive*, January 26, 2011, Revised August 24, 2011).

Reference Documents:

Ontario. Ministry of Municipal Affairs and Housing. *Planning Act, R.S.O. 1990, CHAPTER P.13*, as amended.

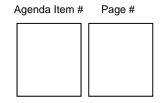
Ontario. Ministry of Municipal Affairs and Housing. Provincial Policy Statement, March 1, 2005.

City of London. Official Plan, June 19, 1989, as amended.

City of London. Zoning By-law No. Z.-1, May 21, 1991, as amended.

City of London. Guideline Documents for Environmentally Significant Areas Identification, Evaluation and Boundary Delineation, July 31, 1997.

City of London. Guideline Document for the Determination of Ecological Buffers and Development Setbacks, April 20, 2004.



Correspondence and Materials from File OZ-8280:

Tomazincic, M., letter of acceptance, October 31, 2013.

Debbert, B., status letter, December 20, 2013.

Doornbosch, M. and Debbert B., e-mail string re: PEC date and submission of additional materials, January 14 – January 17, 2014.

Dalrymple, D., London Hydro. Response memo, November 15, 2013.

Environmental and Parks Planning, City of London. Response memo, December 2, 2013, which included as an attachment:

B. Bergsma, Environmental and Parks Planning, City of London, Response memo, November 21, 2012.

Clavet, Y., Stormwater Management Unit, City of London, Response e-mail, December 4, 2013.

McClure, K., Ontario Ministry of Municipal Affairs and Housing., Response e-mail for Ministry of Natural Resources, December 5, 2013.

Creighton, C., Upper Thames River Conservation Authority. Response letter, December 16, 2013.

McDougall, L., Environmental and Parks Planning, City of London. ESA delineation e-mail, January 2, 2014.

McClure, K., Ontario Ministry of Municipal Affairs and Housing., Project screening e-mail, January 8, 2014.

McClure, K., Ontario Ministry of Municipal Affairs and Housing., e-mail, January 9, 2014.

Lysynski, H., Secretary Environmental and Ecological Planning Advisory Committee, City of London, EEPAC comments (Revised), January 21, 2014.

<u>Correspondence and Materials Preceding Submission of a Complete Application for OZ-8280:</u>

Snowsell, M., Upper Thames River Conservation Authority., Conditional approval letter, January 9, 2012.

Zelinka Priamo Ltd., Proposal Summary, February 29, 2012.

Planning Services. City of London., Record of Pre-Application Consultation, March 27, 2012.

BioLogic Inc., Kaizen Homes – Elviage Drive Scoped EIS, September 13, 2012.

Mercier, B., Secretary Environmental and Ecological Planning Committee, City of London., EEPAC comments, November 3, 2012.

Bergsma, B., Environmental and Parks Planning, City of London., Response memo, November 21, 2012.

Debbert, B., Community Planning and Design, City of London., letter to Zelinka Priamo Ltd., December 12, 2012.

Snowsell, M., Upper Thames River Conservation Authority., letter to Zelinka Priamo Ltd., February 13, 2013.

Zelinka Priamo Ltd., Request for Delegation Status, January 15, 2013.

Planning Services, Information Report re: 9345 Elviage Drive, March 19, 2013.

Page #

Saunders, C., City Clerk., Council Resolution, March 27, 2013.

Other:

Site visit May 2, 2012 and photographs of the same date.