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TO:	CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON JULY 17, 2012
FROM:	JOHN BRAAM, P.ENG. ACTING EXECUTIVE DIRECTOR PLANNING, ENVIRONMENTAL & ENGINEERING SERVICES & CITY ENGINEER
SUBJECT	MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT STUDY FOR TRIBUTARY 'C' STORM/DRAINAGE & STORMWATER MANAGEMENT, TRANSPORTATION AND SANITARY TRUNK SERVICING

RECOMMENDATION

That, on the recommendation of the Acting Executive Director, Planning, Environmental & Engineering Services & City Engineer the following action **BE TAKEN** with respect to the Municipal Class Environmental Assessment (EA) Study Schedule "C" for Tributary 'C' Storm/Drainage and Stormwater Management (SWM), Transportation and Sanitary Trunk Servicing Works located within the Downstream Thames River Subwatershed Area:

- (a) That the Municipal Class EA Schedule "C" Environmental Study Report (ESR) for the Tributary 'C' Storm/Drainage and SWM, Transportation and Sanitary Servicing **BE ACCEPTED** in accordance with the Municipal Class EA process requirements; it being noted that the preferred servicing alternative of the EA Study for Storm/Drainage and SWM servicing works (option 10B Enhanced) identifies three Regional Municipal SWMFs: one infiltration SWM Facility 'A', one Wet SWM facility 'J', one On-line linear Infiltration conveyance/facility 'G' and various minor/major storm/drainage conveyance system as well as the Permanent Private System (PPS) controls; the preferred servicing alternative/option for the proposed Transportation and Sanitary servicing works as identified in option 4B;
- (b) the Civic Administration **BE REQUESTED** to report back to the Civic Works Committee regarding the stormwater management lands required through Sifton Properties' commercial block;
- (c) the Civic Administration **BE AUTHORIZED** to undertake all the administrative acts that are necessary in connection with this work; and
- (d) the Environmental Study Report **BE PLACED** on public record for a 30-day review period.

PREVIOUS REPORTS PERTINENT TO THIS MATTER
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ETC June 1997 – Riverbend Community Plan that was completed by Proctor & Redfern Limited, was accepted

ETC 2008-10-24; Appointment of Consulting Engineer for Municipal Class Environmental Assessment for a Tributary 'C' Drainage Area (2008-A03-00-00/W05-00, 1/19/ETC)

ETC 2009-05-11; Appointment of Consulting Engineer for Municipal Class Environmental Assessment for the Tributary 'C' Drainage Area (2009-A03-00) (AS AMENDED) (2/10/ETC)

ETC 2009-11-16; Appointment of Consulting Engineer for Municipal Class Environmental Assessment for the Tributary 'C' Drainage Area

BNEC 2011-02-14; Additional Engineering Fees for Municipal Class Environmental Assessment (EA) Study for the Tributary 'C' Drainage Area

BNEC 2011-10-31; Status Report for Environmental Assessment Study for Tributary 'C' Drainage Area

CWC 2012-06-19; Phasing of Stormwater Management Facilities

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BACKGROUND

Purpose:

The purpose of this report is to recommend that the Municipal Class EA ESR for Storm/Drainage and SWM, Transportation and Sanitary Servicing Works for the Tributary 'C' drainage area, located in the Downstream Thames Subwatershed be accepted which identifies the preferred servicing option #10B Enhanced for Storm/Drainage and SWM servicing works (option 10B Enhanced) identifies three Regional Municipal SWMFs: one infiltration Stormwater WM Facility 'A', one Wet SWM facility 'J', one On-line linear Infiltration conveyance/facility 'G' and various minor/major storm/drainage conveyance system as well as the Permanent Private System (PPS) controls; the preferred servicing alternative/option for the proposed Transportation and Sanitary servicing works as identified in option 4B (location maps shown in Appendix' B')

Context:

The Downstream Thames River Subwatershed Study was accepted by Council in 1995. This Subwatershed study identified the SWM criteria, environmental targets and governing principles to manage water resources and ecological health of the system.

The RiverBend Community Plan was completed by Proctor & Redfern Limited in May 1997 with various amendments completed in 2000. As part of the community planning process a Servicing Plan was completed and identified a preferred preliminary approach to storm/drainage and SWM servicing within the RiverBend development area. The water resources strategy recommended that the development area be serviced by a combination of conveyance and SWM system, and other SWM measures.

In November 2008, Council recommended AECOM to undertake the Municipal Class EA study for the Tributary 'C' drainage area. Further, in May 2009, Council accepted an enlargement of the Municipal Class EA Study scopes and objectives to include an Environmental Impact Study (EIS) and a review of the proposed Transportation and Sanitary servicing works options.

The field information completed for the EIS identified a cold fishery designation for a majority of the existing watercourse located on the subject lands. Based on the environmental and ecological sensitivity and requirements of the study area, it became evident that it would be beneficial to evaluate the proposed transportation and sanitary trunk works in coordination with the storm/drainage and SWM servicing works within one Municipal Class EA process. An increase in project scope was accepted by Council in November 2009, to incorporate road and sanitary trunk servicing works as a component of the study.

The coldwater fishery within the Tributary 'C' drainage area is believed to be the last water resource of its kind within the City of London. Cooler water supplied by the subsurface springs, provides base flow and creates a habitat for resident trout and other coldwater fauna within the creek. These species require cooler water temperatures to survive.

In February 2011, an increase in project scope was accepted by Council to address additional assessments requested by approval agencies to ensure protection against adverse impacts for London's last remaining coldwater fishery. Further analysis was carried out on source control measures as the SWM Best Management Practices (BMP's), low impact development (LID) options, and base flow to protect, recharge and discharge functions of the Tributary 'C' drainage area.

Duty to consult with First Nations is regarded as an essential step in stakeholder consultation in the Environmental Assessment process. In August 2011, the Munsee Delaware Nation expressed interest in the project and ultimately requested to carry out a peer review of work completed by AECOM. In November 2011, Council authorized staff to proceed with the First Nation's request of the engineering and legal peer review of the ESR.

Development applications were submitted for the majority of the undeveloped parcels of land within the study area and the intent of this study's recommendations are to develop infrastructures that will service the subject lands and minimize the potential adverse environmental impacts.

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Discussion:

The major objectives of the study are:

- a) Develop storm/drainage and stormwater management servicing, transportation servicing including the appropriate collector road alignment and crossing location, and related sanitary trunk sewer servicing routing and crossing of Tributary C for the study area;
- b) Meet the Downstream Thames River Subwatershed targets, SWM criteria and environmental targets by:
 - Optimizing water resources management;
 - Maintaining and/or enhancing the existing receiving water resources system by:
 - Minimizing erosion;
 - Maintaining channel stability and ensuring conveyance capacity exists at a tributary level to accommodate increased stormwater flows;
 - Protecting and enhancing water quality;
 - Minimizing adverse impacts to the downstream watercourse;
 - Minimizing flood risk to existing properties.
- c) Ensure preservation of the cold water fishery and address thermal requirements associated with the proposed storm/drainage and stormwater management servicing ;
- d) Provide adequate conveyance capacity for the ultimate upstream sanitary trunk sewer service area south of Oxford Street;
- e) Minimize the adverse effects of the transportation system on natural environments and communities;
- f) Provide for the identification, protection and rehabilitation of significant natural heritage areas;
- g) Address City and approval agency (Ministry of Environment, Upper Thames River Conservation Authority, Ministry of Natural Resources and Department of Fisheries and Oceans), requirements; required approvals and permits will be identified including DFO's Fisheries Act approvals and the UTRCA's new Regulation permit requirements for any alternative within their regulation; and
- h) Provide the most efficient and cost effective servicing solution for the study area in combination with the ability to maintain the main function of the existing water resources and natural heritage components.

Twenty six options were evaluated by AECOM and reviewed by City's staff for this study in order to deliver a preferred storm/drainage and SWM servicing option 10B that will be:

- completed in accordance with the Municipal Class EA process;
- meeting the City and approval agencies' standards and requirements;
- taking in consideration landowners' expectations and needs;
- based on the system approach; and
- blended well with the Natural Heritage System.

The recommended servicing option will provide storm/drainage and stormwater management (SWM) for approximately 108ha and will discharge directly to Tributary C and the Thames River via the RiverBend Mews SWM facility under post development conditions.

Details on the proposed strategy design to mimic existing conditions with respect to geomorphology, peak flow rates, infiltration and thermal conditions include:

- 1.90 ha Infiltration SWM facility A
- 2.55 ha two tier Wet SWM facility F
- 1.25 ha On-Line Linear infiltration SWM facility G

The storm sewer network will include:

- Trunk storm sewers to convey 2 year event along arterial roads
- Trunk storm sewers to convey 100 year event from SWMF G to SWMF A

Details on the proposed sanitary servicing and secondary collector road alignment and crossing include:

- The extension of 675-750mm diameter sanitary sewer along the proposed Kains Road alignment and extension southerly to Oxford Street.
- A culvert crossing the tributary for the full width of the proposed Kains Road.

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- Kains Road will consist of a two lane urban cross section, complete with sidewalks along one side. The road intersection alignment with Oxford Street corresponds with Gideon Drive.

To protect and enhance the sensitive natural heritage features within Tributary “C”, the following are recommended as part of an environmental management plan for the proposed works:

- A provision for ecological buffers along the tributary and the wetland community;
- The enhancement of buffer areas thru ecological plantings and seeding with native grasses, sedges, herbaceous plants, shrubs and trees;
- An enhanced sediment and erosion control measures and monitoring during construction; and
- The implementation of an environmental monitoring program to ensure that the cold water habitat and wetland features are not adversely affected by SWM facility operations.

The preliminary cost estimate for all proposed servicing works including storm/drainage and SWM, transportation and sanitary servicing works is broken down as follows:

Preliminary Cost Splits	Storm/Drainage & SWM Servicing Works	Transportation Servicing Works	Sanitary Sewer Servicing	Totals
City's Services Development Charges	\$ 7,014,000	\$1,400,000	\$1,700,000	\$10,114,000
Owner's Estimated Cost	\$ 3,282,000	\$ 640,000		\$ 3,922,000
Totals	\$10,296,000	\$2,040,000	\$1,700,000	\$14,036,000

On August 19, 2011, Chief Waddilove of the Munsee-Delaware First Nation undertook discussions with the City's staff and attended Public Meeting #3 for this Class EA study. In these discussions, the Munsee-Delaware First Nation - Chief Waddilove was seeking confirmation that the City, as the proponent, will ensure that the proposed stormwater flow that would be discharged to the cold water fishery stream would not adversely affect the environment and/or ecological habitat conditions of this system. It is our understanding that the Chief of Munsee-Delaware First Nation is primarily concerned with the following issues:

- Preservation of the Tributary ‘C’ in relation to the water quality;
- Preservation of the Tributary ‘C’ in relation to temperature control;
- Preservation of the Tributary ‘C’ in relation to the fishery and aquatic habitat; and
- Preservation of springs that are supplying and feeding the cold water stream (Tributary ‘C’) and the setbacks associated with maintaining the cold water fishery functions.

The City provided the Munsee-Delaware First Nation with the 1st Draft ESR for this Class EA on September 19, 2011.

Duty to consult with First Nations is regarded as an essential step in stakeholder consultation under the Municipal Class EA process and the Environmental Assessment Act of Ontario. It is unfortunate that their concerns were not raised at the end of this process and the City was not aware of these concerns until the August 19, 2011 Public Meeting (2.5 years after the commencement of this study when we first informed the Munsee-Delaware First Nation). The Munsee-Delaware First Nation engaged the Consulting Team for the engineering component - Kevin J.D. Ridley, Ph.D., P.Eng. (ON, AB), P.Geol. (AB) QP Red Lea Environmental Corporation and from legal perspective -Willms Shier Environmental to undertake the Peer Review of the Draft ESR report of the Municipal Class EA Study for Tributary ‘C’.

On December 5, 2011, the City received the First Nation's Consultants' peer review work plan and schedule at a cost of \$91,430, excluding HST. Although, this cost estimation was higher than the previously presented estimation in November, 2011, the City accepted the work plan and it appears to be more comprehensive than we anticipated but still within the scope of the Peer Review Guidelines for Professional Engineers of Ontario.

The First Nation's Consultants' Engineering and Legal Peer Review Fees was approved by the City Council in the amount of \$91,430 in December 2011.

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Initially the expected completion date for the Munsee Delaware First Nation's Consulting Team's Peer Review was on February 20, 2012. However, the City received the first draft comments on April 30, 2012 and at the time of drafting this report; we do not have the finalized comments from the Peer Review Team. However, the City made considerable progress and the City's staff is under the opinion that we will be able to finalize this issue within the Class EA process mandatory consultation period of the 30 days from Council acceptance.

On April 18, 2012, the MOE provided review comments for the Draft ESR report of the Municipal Class EA Study for Tributary 'C' and the City is still in discussions to address these comments. City staff is under the opinion that we will be able to finalize this issue within the Class EA process mandatory consultation period of the 30 days from Council acceptance.

We conducted numerous meetings (approximately 20 meetings) with the Owners to ensure that they are informed consulted and agree in principal with the recommended preferred servicing options.

On June 30, 2012, Bob Stratford – Consulting Engineer on behalf of Sifton issued a letter to the City with a request that the land cost for a portion of the proposed On-Line Infiltration Lineal SWM Facility 'G' proposed to be located on Sifton's lands, which is presently zoned for commercial development, be established by the City prior to Council accepting this Class EA study. The Developer's position is that they should be compensated for the land at a cost of \$500,000 per acre. City Council's Development Charges By-law provides for the purchase of lands required for SWM facilities within the Urban Growth Boundary at a cost of \$100,000 per acre with no differentiation in regards to table land use. In order to facilitate a compromise, City Staff will work with the Developer and look at options to maintain the amount of commercially zoned land within the area owned by Sifton and will report back to committee with appropriate options.

Conclusion:

In November 2008, the City commenced the Tributary 'C' EA to establish the preferred option to recommend the storm/drainage and SWM servicing works to provide responsible management of growth. In an effort to promote environmental stewardship and responsible management of growth in conjunction with meeting landowner, agency and other stakeholders expectations, twenty six options have been evaluated by AECOM and reviewed by City staff in order to deliver the most efficient and cost effective stormwater and storm/drainage servicing, sanitary servicing and collector road alignment for the study area.

The recommended preferred servicing alternative of the EA Study for Storm/Drainage and SWM servicing works (option 10B Enhanced) identifies three Regional Municipal SWMFs: one infiltration SWM Facility 'A', one Wet SWM facility 'J', one On-line linear Infiltration conveyance/facility 'G' and various minor/major storm/drainage conveyance system as well as the Permanent Private System (PPS) controls and the preferred servicing alternative/option for the proposed Transportation and Sanitary servicing works as identified in option 4B.

Staff recommend that the Municipal Class EA Environmental Study Report for Tributary 'C' Storm/Drainage and Stormwater Management (SWM), Transportation and Sanitary Servicing Works be accepted which identifies the preferred servicing option #10B Enhanced.

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Next Steps:

Upon acceptance by Council:

- 1) The study report will be filed for review by the public and governing review agencies in order to complete the public review portion of the Class EA process.
- 2) A “Notice of Completion” be published identifying that the study report is available for public review for the mandatory 30 calendar days.
- 3) Stakeholders are encouraged to provide input and comments regarding this study during this time period.
- 4) Should stakeholders feel that issues have not been adequately addressed, they provide written notification within the 30-day review period to the Minister of the Environment requesting further consideration. This process is known as a “Part II Order” (formerly known as a Bump-Up Request).
- 5) Subject to no requests for a Part II Order being received, the project will be in a position to move forward to the design and construction stages in accordance with the recommendations of the study and in accordance with the expected timelines of the City’s Growth Management Implementation Strategy.

SUBMITTED BY:	RECOMMENDED BY:
BERTA KRICKER, M.ENG., F.E.C., P. ENG. MANAGER OF STORMWATER STORMWATER MANAGEMENT UNIT	JOHN BRAAM, P.ENG. ACTING EXECUTIVE DIRECTOR PLANNING, ENVIRONMENTAL & ENGINEERING SERVICES & CITY ENGINEER

July 11, 2012

Attach: Appendix “A” – Location Map

c.c. AECOM