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TO:	CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON FEBRUARY 2, 2016
FROM:	JOHN BRAAM, P.ENG. MANAGING DIRECTOR ENVIRONMENTAL & ENGINEERING SERVICES AND CITY ENGINEER
SUBJECT:	WEST LONDON DYKE MASTER REPAIR PLAN MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT STUDY

RECOMMENDATION

That, on the recommendation of the Managing Director Environmental & Engineering Services and City Engineer, the following actions **BE TAKEN** with respect to the West London Dyke Master Repair Plan Municipal Class Environmental Assessment (EA):

- a) The Environmental Assessment Study **BE ACCEPTED** in accordance with the Municipal Class EA process requirements.
- b) A Notice of Completion **BE FILED** with the Municipal Clerk; and,
- c) The Municipal Class EA Schedule "B" project file for the West London Dyke Master Repair Plan **BE PLACED** on public record for a 30-day review period.

PREVIOUS REPORTS PERTINENT TO THIS MATTER
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Strategic Priorities and Policy Committee – January 28, 2016 – Downtown Infrastructure Planning and Coordination

Council – March 21, 2011 – UTRCA 2010 and 2011 Levies for Remediating Flood/Erosion Control, Dykes and Dam Structures within the City

Finance & Administration Committee – February 2, 2011 – Funding Agreement with UTRCA for Remediating Flood Control Works within the City

2015-2019 CORPORATE STRATEGIC PLAN ALIGNMENT

The 2016-2019 Strategic Plan identifies the following objectives that relate directly to the recommendations provided by the West London Dyke Master Repair Plan EA:

- BUILDING A SUSTAINABLE CITY: 1B-Manage and improve stormwater infrastructure and services; and
- BUILDING A SUSTAINABLE CITY: 1E-Fund innovative ways to adopt to Climate Change.

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BACKGROUND

Purpose:

The objective of this report is to present to Committee and Council a summary of the Environmental Assessment Master Planning process undertaken for the West London Dyke (Appendix “A”: Location Map). The Master Repair Plan EA recommends that the dyke be reconstructed in order to protect the West London neighbourhood from flooding during extreme storm events. It is recommended that this study be accepted and the Notice of Completion for this project be filed with the Municipal Clerk.

Context:

The West London Dyke is approximately 2.4 km long and runs along the westerly bank of the North Branch of the Thames River from Oxford Street to the forks of the Thames River and then along the northerly bank of the Main Branch to the west side of the Wharncliffe Road Bridge (Appendix “A”: Location Map). The West London Dyke was constructed in the 1880s to protect the West London neighbourhood from flooding during extreme storm events. The structure is currently at the end of its design life. A portion of the dyke was replaced in 2007 and subsequently a master repair plan EA was undertaken for the remaining portions of the dyke.

As dykes are a major part of the City’s flood protection system, any work reconstruction or maintenance related to dyke structures are undertaken in partnership with the Upper Thames River Conservation Authority (UTRCA). The West London Dyke and several other dykes throughout London are owned by the City of London and are maintained through an agreement with the Upper Thames River Conservation Authority (UTRCA). Stantec Consulting Ltd. was retained in 2009 to complete a Master Repair Plan covering the next 20 year period to address aging infrastructure, flood protection, public use, and integration of other City initiatives. The study was placed on hold in early 2013 while detailed work was undertaken to confirm the design flood elevation. With the updated information now available the Master Repair Plan has been completed.

As this study is being conducted as a Master Plan under the Municipal Class Environmental Assessment process, First Nations, agency, and public input was invited for incorporation into the planning and design for this study. As the various proposals and phases advance to design stages outside input will once again be sought and incorporated where appropriate.

DISCUSSION

Since 2004, various inspections, studies and rehabilitation projects have been carried out on the West London Dyke. In 2007 the first phase of the West London Dyke replacement was undertaken consisting of approximately 350 m of the dyke north from the Queens Avenue Bridge in 2007 to Rogers Ave (Figure 1). In 2009, Phase 2 was constructed as part of the Dundas/Queens pedestrian underpass.

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Figure 1 Phase 1 of West London Dyke Replacement.

The Master Repair Plan considered the need to replace aging infrastructure, flood protection, public use, and integration with other City initiatives. The Executive Summary of the West London Dyke Master Repair Plan is attached for information (Appendix B). Table E.1 in the Executive Summary (Appendix B) illustrates a comprehensive project implementation schedule. Generally this schedule will be followed, however, condition assessments, funding/budgeting, and other opportunities or constraints, may alter the timing on various phases of implementation. Typically each phase of reconstruction will generally range in length from 150m to 350m.

Project Funding

The design and construction of the future phases of the dyke replacement have already been captured in the current budget and the 20-year capital plan. This budget will leverage matching funding from the province's Water Erosion Control Infrastructure (WECI) program. Generally, WECI funding is available to conservation authorities for essential repairs and studies on water and erosion infrastructure owned or operated by the Conservation Authority. Funding up to 50% of the cost of the works is available and the UTRCA applies for the funding on behalf of the City.

Public Consultation:

As part of the study, a total of three (3) public meetings were conducted. Notifications for this meeting were published in the weeks preceding the Public Information Centres and a letter was sent to surrounding landowners. Meetings were held on June 16th, 2010, February 23rd, 2012, and September 10th, 2015 at the Kiwanis Community Centre, situated at 78 Riverside Drive. The meetings were attended by the public, affected property owners, and stake holders.

Notifications of the project were sent to Federal, Provincial, County, and Municipal stakeholders and consultation with local First Nation's was also undertaken.

Master Repair Plan Principles

The following principles were central to the West London Dyke Master Repair Plan Environmental Assessment recommendations:

1. The primary purpose of the West London Dyke is to provide flood protection and public safety and therefore any future changes or enhancements should be based on a risk management approach to determine:

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- Level of flood protection to be provided, including freeboard;
 - Preference for hard (passive) flood protection measures;
 - Identification of areas where active flood protection measures are required due to existing constraints and a process of identifying active areas on a periodic basis for incorporation into the overall flood management strategy; and,
 - Need to introduce changing risk due to climate change.
2. Recognizing the presence of the West London Dyke as a significant feature within the core of the downtown area, identify opportunities to incorporate amenity and functional improvements (pathway, recreation, etc.) as identified in the 2007 West London Dyke Flood Control Structure Master Plan or noted in other City initiatives into future works.
 3. Preference should be for long-term solutions over interim solutions.
 4. Identify opportunities to incorporate environmental considerations where possible to:
 - Minimize environmental impacts during construction;
 - Ensure no net loss in environmental quality as much as possible; and,
 - Provide for environmental gains as much as possible.

Master Repair Plan Recommendations

The Master Repair Plan and Class EA planning process recognized that there were several alternatives to address the principles outlined above. The recommended alternative for the majority of the structure is to replace the dyke by constructing a new dyke to the current regulatory standard plus additional freeboard to provide for climate change resilience. Appendix “C” “Master Repair Plan Recommendation” outlines the areas where the dyke will be replaced and the planned timing of construction. The Master Repair Plan also includes recommendations for amenity improvements including lookout areas, wider pathways, and seating. The design of these amenities will be in accordance with the Thames Valley Corridor Study, Bicycle Master Plan, and 2007 West London Dyke Amenity Master Plan.

Back to the River

As a portion of the West London Dyke is within the Forks area, the West London Dyke will be an important consideration during works related to the Back to the River initiative. If any significant changes are suggested as part of the Back to the River EA a minor addendum to the completed West London Dyke EA may be necessary. With this in mind, it is still recommended to finalize the West London Dyke EA in order to move ahead with the next phase of critical infrastructure improvements and to maximize provincial funding.

CONCLUSION

Recommendation:

Staff recommend that the West London Dyke Master Repair Plan Municipal Class EA study be accepted, identifying the preferred repair and servicing alternatives, which includes the reconstruction of portions of the dyke.

The implementation of the recommended works will be subject to written approval and UTRCA permits for the proposed repair and servicing works in accordance with Section

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28 of the Conservation Authorities Act.

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; and,
2. A “Notice of Completion” will be published identifying that the study report is available for public review for the mandatory 30 calendar days.

Stakeholders are encouraged to provide input and comments regarding this study during this time period. Should stakeholders feel that issues have not been adequately addressed, they can provide written notification within the 30-day review period to the Minister of the Environment and Climate Change requesting further consideration. This process is termed a “Part II Order” (formerly known as a Bump-Up Request).

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.

A submission to the Province, through the Water and Erosion Control Infrastructure (WECI) program will be made in early 2016 by the UTRCA. Detailed design will also be undertaken for the next phase of construction, tentatively scheduled for later this year.

This report was prepared by Chris McIntosh, P. Eng. of the Stormwater Engineering Division.

SUBMITTED BY:	REVIEWED AND CONCURRED BY:
SCOTT MATHERS, MPA, P.ENG. DIVISION MANAGER, STORMWATER	JOHN LUCAS, P. ENG. DIRECTOR, WATER AND WASTEWATER
RECOMMENDED BY:	
JOHN BRAAM, P. ENG. MANAGING DIRECTOR, ENVIRONMENTAL & ENGINEERING SERVICES & CITY ENGINEER	

January 25, 2016

- Appendix “A” – Study Area Map
- Appendix “B” – Executive Summary
- Appendix “C” – Master Repair Plan Recommendation