

Appendix 'B'

Executive Summary

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Introduction

Dillon Consulting Limited (Dillon) was retained by the Corporation of the City of London (City) to complete the Class Environmental Assessment (EA) and design of improvements to the William Street Stormwater Outfall and channel in Huron Street Woods (the project) following the Municipal Class EA (October 2000, as amended in 2007, 2011 and 2015) for a Schedule 'B' undertaking. The Class EA was completed in conjunction with the Detailed Design of drainage infrastructure improvements to facilitate the future separation of combined sewers in the Old North neighbourhood and improve storm servicing along William Street.

Problem/Opportunity Statement

The Cheapside Street corridor, William Street and several other local streets in Old North require the combined sewers to be separated. The existing outfall structure and channel in Huron Street Woods does not have the capacity to accommodate additional flows from the new storm sewers. The outfall structure and channel need to be improved to accommodate increased flows and mitigate environmental impacts.

Existing Conditions

The project Study Area consists of lands adjacent to the existing outfall, low flow channel, Thames Valley Parkway (TVP) and a maintenance road. The channel is located in a valley in Huron Street Woods. There are residential properties to the south, along Harrison Crescent. The houses are at the top of the valley, with the backyards extending down the slope. Lands to the north of the channel include the TVP, which begins at the Huron Street/William Street intersection, and forms part of the City's multi-use recreational pathway which is adjacent to much of the Thames River in the City. The TVP within the Study Area traverses Huron Street Woods and connects to the North London Athletic Fields.

The outfall structure is located west of the Huron Street/William Street intersection. There is a sanitary pump station between the outfall and the intersection. The existing channel eventually flows to the North Thames River, which is located approximately 550 m northwest of the Study Area. The existing William Street storm sewer outfall is the final outlet location for an urban drainage system that is approximately 124 ha in size. The final sections of existing storm sewer consist of an 1800 mm concrete pipe sewer, which terminates at a concrete headwall located just north-west of the Huron Street pumping station.

Alternatives Solutions

As part of Phase 2 of the Class EA, alternative solutions to address the problem/opportunity were identified and evaluated. Four alternatives were developed:

- Alternative 1 – Do Nothing. The concept calls for minimal disturbance of the outlet channel and maintaining the existing headwall.
- Alternative 2 – Minor Improvements. Alternative 2 is similar to Alternative 1; however, the existing storm outfall headwall will be removed and the storm sewer extended approximately 35 m to the west. The concept was developed to address erosion and scour concerns within the first 35 m of the outfall channel. The alternative also introduces minor improvements to the low flow channel immediately downstream of the proposed headwall to improve hydraulic capacity, thereby reducing flooding of the adjacent lands. This was identified as the preferred solution.
- Alternative 3 – Extend Storm Sewer. Alternative 3 was developed to demonstrate the extent of work required to redirect stormwater runoff discharging from the William Street trunk storm sewer off of private property and contain all City storm infrastructure within the existing easement. The concept involves removing the existing storm sewer headwall and extending the existing storm sewer to a location downstream of the existing maintenance access road. The fully enclosed system would direct all storm runoff to the natural channel area downstream of the maintenance road and integrate the appropriate degree of erosion and scour protection at the outlet of the new storm sewer. Improvements to the maintenance access road would be incorporated into the grading work necessary to provide adequate frost protection of the sewer which would be placed at a grade similar to the invert of the existing natural channel. The grading work would require placement of significant amounts of fill within the regulated area and would isolate the low lying area at the rear yards of the residential homes on Harrison Crescent from the adjacent Thames River floodplain.
- Alternative 4 – Extend Storm Sewer and Rehabilitate Low Lying Area. Alternative 4 is a similar to Alternative 3, except that the existing low-lying swampy area at the rear yards of the homes on Harrison Crescent will be regraded and rehabilitated to eliminate the potential for future beaver activity in this area. The outfall concept is primarily focused on providing a storm sewer outfall that will not be subject to nuisance flooding caused by beaver activities and provides an opportunity to eliminate flooding on private property adjacent to the proposed storm sewer infrastructure.

Preferred Solution

Following the development and initial evaluation of the four alternatives, concern was raised regarding the general condition of the existing 600 mm watermain that would ultimately be situated directly adjacent to the proposed storm infrastructure. The condition of the existing watermain is unknown and was believed to be constructed in poor soil conditions within the floodplain area. During this study it was determined the watermain would be relocated to an adjacent roadway and an existing watermain chamber in the area (Chamber 13) would be abandoned. This will be completed as part of a separate project.

The proposed works will include the following:

- Construction of a new 1950 mm storm sewer, extending approximately 35 m from the end of the existing storm sewer
- Construction of a new energy dissipating headwall and outfall located approximately 35 m downstream of the existing outfall
- Enclosure of the existing channel from the existing headwall downstream to the new headwall
- Improvements to the existing low flow channel from the new outfall downstream to the limit of the project works, including channel re-alignment and habitat improvements
- Removal of the existing 600 mm culvert under the existing maintenance access road crossing, and replacement with an assembly of four corrugated steel pipe (CSP) culverts, consisting of two 1500 mm diameter CSP culverts and two 1050 mm CSP culverts (required if the watermain is not relocated and the chamber maintained)
- Re-grading and finishing of the maintenance access road crossing over the replacement culverts
- Restoration of the impacted areas.

Impacts and Construction Phase

An Environmental Impact Study (EIS) was completed on the preferred alternative solution. The EIS assessment identified various potential impacts to the identified natural heritage features and functions in the Study Area, and outlined applicable mitigations measures. If the mitigation measures are appropriately applied to the project, no negative impacts or residual effects are anticipated to occur to the natural heritage features and functions identified, while positive effects and improvements to the natural heritage system are anticipated to result from the project works, including a net improvement in fish habitat and potential turtle habitat, corridor and linkage connectivity, shoreline stability, and vegetation cover quality. This EIS concluded the project should proceed as outlined.

Construction of the outfall and channel improvements will be completed following relocation of the large watermain. The timing for the outfall improvements are not confirmed, but are anticipated to be completed within the next five years and will take approximately four to six weeks.

Consultation Activities

The Notice of Study Commencement was published in the October 6, 2016, and October 13, 2016, editions of *The Londoner* and was sent to the contact list on October 7, 2016. Two residents in the area identified existing concerns related to ponding water during storm events. Improvements at the outfall should improve ponding water on private property.

A Public Information Centre (PIC) was held March 23, 2017. Nineteen individuals signed the Record of Attendance. Several of the individuals who attended live on Harrison Crescent and back onto Huron Street Woods. They were supportive of any alternative which reduces the ponding water on their property. Several of those in attendance had questions about the upcoming construction on William Street.