#3832 & # 3696 SCOTLAND DRIVE
City of London

BRE-EX CONSTRUCTION INC.

CONCEPTUAL SERVICING REPORT
Issued for Approval

BLACK CREEK ENGINEERING INC.

Project No. 2041.02
June 20, 2023

CONCEPUAL SERVICING REPORT

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1.0 INTRODUCTION

It is proposed to develop the parcel of land known as #3696/3832 Scotland Drive to allow for concrete and asphalt batching plants. This development would be supported by using aggregate extracted from the licensed area of the property. The operations would continue in its current fashion including the recycling of manufactured materials derived from mineral aggregates. Along with this proposal, we intend to construct a new office and shop for operational support.

This conceptual report outlines the servicing for the proposed development, including the layout of the proposed facilities, access & egress from the site and parking.

2.0 SITE DESCRIPTION

The parcel of land known as #3696 Scotland Drive is generally described as:

- Concession 5 S, Part Lot 19 (geographic Township of Westminster) and RP 33R8503 Part 1
- municipal roll# 080020193000000

The parcel of land known as #3832 Scotland Drive is generally described as:

- Concession 5 S, Part Lot 20 (geographic Township of Westminster)
- municipal roll# 080020191000000

The properties to be developed are bounded by aggregate extraction, asphalt and concrete batch plants to the north, agricultural and residential properties to the east, agricultural and landfill operations to the south and aggregate extraction, agricultural and Highway 401 to the west.

The land in the area is slightly rolling and generally slopes from south to north. Surface water flows towards the Bannister-Johnson Drain, which is a municipal drain that flows northerly along the east side of the subject property.

The topography of the site was defined using drone survey equipment. The topographic mapping of the site is illustrated on drawing EC.

Report No. 56 of the Ontario Soil Survey, the Soils of Middlesex County, identifies the surficial soils in the area of the subject properties as a combination of Burford and Muriel Loams. These soils are moderately-well to well drained with moderate infiltration rates and moderate rates of water transmission.

3.0 PROPOSED DEVELOPMENT

It is proposed to develop the parcel of land known as #3696/3832 Scotland Drive to allow for concrete and asphalt batching plants. This development would be supported by using aggregate extracted from the licensed area of the property. The operations would continue in its current fashion including the recycling of manufactured materials derived from mineral aggregates. Along with this proposal, we intend to construct a new office and shop for operational support.

4.0 STORM WATER MANAGEMENT

4.1 EXISTING DRAINAGE

The western portion of #3696/3832 Scotland Drive drains towards the northern portion of the property and the eastern portion drains towards the Bannister-Johnson Drain. The central portion drains towards the existing berm along the boundary with the Scotland Drive road allowance. The area drains to an existing catchbasin/manhole, which also takes runoff from a portion of the north side of the Scotland Drive road allowance via an existing catchbasin in the north road ditch.

4.2 DESIGN OBJECTIVES

The design objectives for storm water management include the following:

- Reproduce the pre-development hydrological conditions;
- Confine development and construction activities to the least critical areas;
- Minimize changes to the existing topography, and
- Preserve and utilize the natural drainage system.

4.3 STORM WATER MANAGEMENT MEASURES

Storm water management practices include several different methods to control water quantity and water quality. Several methods considered in this report include the following:

4.3.1 Storm water lot level (source) controls

Storm water lot level controls involve measures to treat storm water before it reaches the conveyance system. Source controls can include restricting the number of roof drains, outletting roof leaders to the rear yard, rear yard catchbasins, implementing catchbasin restrictors in rear yard catchbasins to create rear yard storage, reduced rear yard grading to allow greater ponding of storm water and infiltration, pumping foundation drains to rear yard ponding areas, and use of soakaway pits.

4.3.2 Storm water conveyance controls

Storm water conveyance controls are implemented as part of the storm water conveyance system. Storm water is conveyed from developed areas by either sewers or grassed swales. Storm water conveyance controls involve the use of pervious pipe systems, pervious catch basins (catch basins have a larger sump connected to exfiltration storage media), and grassed swales.

4.3.3 End of pipe storm water management facilities

End of pipe storm water management facilities receive storm water from a conveyance system and discharge the treated water to the receiving system. End of pipe facilities can include wet ponds, wetlands, dry ponds, infiltration basins and/or trenches, filter or buffer strips, or oil/grit separators.

4.3.4 Low Impact Development

Low impact development (LID) comprises a set of site design strategies that minimize runoff and provide distributed, small scale structural practices that mimic natural or predevelopment hydrology through the processes of infiltration, evapotranspiration, harvesting, filtration and detention of stormwater.

4.4 STORM WATER MANAGEMENT PROPOSALS

Proposals that have been considered in order to minimize the effects of the storm water runoff from the proposed development are as follows:

- All storm runoff will be contained on the sites and will be directed to the existing gravel pits.

- Wash bays will be constructed to treat the wash water from the washing of concrete trucks

4.5 HYDROLOGY

The storm drainage required for the proposed development shall be designed to the City of London Design Standards for Stormwater Management.

4.6 PROPOSED DRAINAGE

Storm drain design shall be in accordance with City of London design guidelines. The storm drainage would be designed for storms up to the 250-year storm event (Hurricane Hazel).

4.6.1 Proposed Lot Level Controls

It is proposed that the parcel for the proposed office and shop will be regraded to the north at a slope of 1.0%.

It is proposed that the parcel for the proposed concrete and asphalt batch plants will be lowered and regraded at a slope of 0.5% towards the existing berms to create an area of storm water storage.

4.6.2 Proposed Storm Water Conveyance Controls

It is proposed to construct a new catchbasin and storm drain to direct the runoff to in a north-easterly direction with an outlet to the existing gravel pit.

4.6.3 Proposed End of Pipe Management Facilities

It is proposed to utilize the existing gravel pits as an outlet for the stormwater system.

5.0 SANITARY SEWERS

5.1 EXISTING FACILITIES

Sanitary sewers do not exist along Scotland Drive.

5.2 PROPOSED SANITARY

It is proposed to construct a conventional raised septic bed, which would serve the office and shop as well as the concrete and asphalt batch plants

6.0 POTABLE WATER SUPPLY

6.1 EXISTING FACILITIES

An existing watermain exists along Scotland Drive and the property known as #3832 is currently serviced with a 50mm water service.

6.2 PROPOSED POTABLE WATER

It is proposed that, in addition to the existing water service, the asphalt and concrete batch plants would also be serviced with new water services.

7.0 ACCESS AND PARKING

7.1 EXISTING ACCESS

Both properties have an existing access, however, the access to the property known as #3832 serves as the main entrance for both properties.

7.2 PROPOSED ACCESS

It is proposed that both of the existing accesses be reconstructed wider to allow for two-way traffic. The driveway aprons would be paved to the property line.

The access and turning movements on the site will be designed using the Transportation Association of Canada (TAC) MSU and WB-20 design trucks, which we anticipate would also be sufficient for any emergency vehicles used within the City of London.

7.3 PROPOSED PARKING

Parking is proposed throughout the site. The parking for the proposed new office would include an asphalt surface while the others would be a gravel surface.

8.0 SUMMARY

The measures outlined in this conceptual report will meet the quantitative and qualitative requirements based on City of London standards.

All storm runoff will be contained on the sites and will be directed to the existing gravel pits.

It is proposed to construct a conventional raised septic bed.

A new water service would be required for the concrete batch plant

It is proposed that both of the existing accesses be reconstructed wider to allow for two-way traffic. The driveway aprons would be paved to the property line.

9.0 SITE DEVELOPMENT

It is proposed that measures will be taken during development of the site during construction.

During site servicing construction, straw bales and/or silt fence shall be placed to prevent erosion and the migration of sediment.

Trucks will be closely monitored to prevent mud from being tracked onto the street. Berms, swales and grassed areas shall be seeded immediately after completion.

10.0 CONSTRUCTION

All construction is to be carried out as per the City of London standards and the Ontario Provincial Standard Specifications and Drawings.

Report prepared by:

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