



April 4, 2019
Our File: 117165

City of Guelph
1 Carden Street
Guelph ON N1H 3A1

Attention: Mary Angelo, P.Eng.

Re: Functional Servicing Letter
Zone Change Amendment
Omar and Alma Street
City of Guelph

Dear Mrs. Angelo;

In support of the Zone Change Amendment for the proposed residential development located at the corner of Alma Street, Omar Street, and the unopened Lucan Street right-of-way in the City of Guelph, GM BluePlan Engineering herein provides a general review of the servicing availability for the subject property.

SITE INFORMATION

The 0.246 hectare subject property located at the corner of Alma Street, Omar Street, and the unopened Lucan Street right-of-way was created as Part of Lot 63 and All of Lots 62, 64, and 65, Registered Plan 258. Two existing houses at #7 and #9 Omar Street are currently located on the property. These houses will be demolished and the lots redeveloped as part of the proposed plan.

The remainder of the site has undergone an extensive soil remediation as part of a Record of Site Condition due to environmental impacts. It is our understanding that the on-site soils are clean and free of contaminants. The site was graded to 0.7m below the Alma Street centerline with 3:1 side slopes as part of a Site Alteration Permit No. 10/17 dated October 5, 2017.

For the purpose of this letter, Omar Street is assumed to run north-south and is located east of the subject property. Alma Street is assumed to run east-west and is located south of the subject property.

The site is bound to the north by existing residential properties, bound to the east by the unopened Lucan Street right-of-way and an existing railway corridor, bound to the south by the Alma Street right-of-way, and bound to the west by Omar Street. Under existing conditions, the site generally sheetflows southeasterly towards the unopened Lucan Street right-of-way.

The unopened Lucan Street right-of-way has an existing gravel path providing a pedestrian connection from Alma Street to Raglan Street.

As part of the site remediation, several monitoring wells were installed on-site by the Environmental Consultant. The groundwater was reported to us at approximately 3 to 4m below existing ground elevation. The native on-site soils were also reportedly sand and gravel with a high permeability. The soils which were also imported on-site were reportedly sand and gravel. The site is currently graded 0.7m below the Alma Street centerline and no standing water exists 24 hours after a rainfall event.

PROPOSED DEVELOPMENT

A Preliminary Grading Plan has been prepared by GM BluePlan which shows the existing topographical information, preliminary building footprints, preliminary grades, preliminary services and the sediment and erosion control fence. As provided on the Plan, two single family residential houses are proposed fronting onto Alma Street, and two new single family homes are proposed fronting onto Omar Street, replacing the existing dwellings at 7 and 9 Omar Street. The proposed residential properties have been graded as split drainage, tying into existing grades at property lines to ensure stormwater runoff is either retained on site, or directed towards the Alma and Omar Street right-of-ways. Light Duty sediment fence was installed along the perimeter of the proposed residential properties as part of the Site Alteration process. The following services are proposed:

Storm Sewers

- An existing 300mm diameter storm sewer is located in the Alma Street right-of-way.
- The existing storm sewer in the Alma Street right-of-way is too shallow to provide a gravity connection for the proposed residential foundation drainage.
- Sump pumps will be installed in the proposed houses discharging to the rear yards.
- A 200mm diameter perforated subdrain is proposed on-site which will be located beneath the swales shown on the Preliminary Grading Plan. The perforated subdrain will be wrapped in a clear stone jacket to promote infiltration. The 200mm diameter perforated subdrain will ultimately connect to the 300mm diameter storm sewer located in the Alma Street right-of-way. Overland flow for major storms will be directed to a rear yard catch basin along the unopened Lucan Street right-of-way. Flows which exceed the on-site stone storage capacity will be directed to the Alma Street right-of-way.
- An existing low point is located at the rear of the property. The low point is lower than the unopened Lucan Street right-of-way and is too low to drain to the proposed perforated subdrain. A 1m wide by 1m deep by 5m long clear stone infiltration gallery is proposed at the low point to help promote infiltration.

Sanitary Sewers

- An existing 900mm diameter trunk sanitary sewer is located in the Alma Street right-of-way.
- An existing 300mm diameter local sanitary sewer is located in the Alma Street right-of-way to provide sanitary outlet for two of the proposed residential houses. This sewer has adequate depth to provide gravity sanitary outlet for the proposed lots on Alma Street.
- Each lot fronting Alma Street is proposed to have a 100mm diameter sanitary lateral extended from the existing 300mm diameter sanitary sewer at 2% slope to provide a gravity connection.
- The two proposed single family residential homes on Alma Street are expected to increase the sanitary sewer flow rate by $1.38 \times 10^{-4} \text{m}^3/\text{s}$ which is considered minor.
- The existing homes fronting Omar Street are serviced via the existing 225mm diameter sanitary sewer located in the Omar Street right-of-way.
- The redeveloped lots fronting Omar Street will continue to be serviced via the existing 225mm diameter sanitary sewer located in the Omar Street right-of-way.
- Each lot fronting Omar Street is proposed to have a 100mm diameter sanitary lateral extended from the existing 225mm diameter sanitary sewer at 2% slope to provide a gravity connection.
- The two proposed single family residential homes on Omar Street are not expected to increase the sanitary sewer flow rate.

Watermain

- An existing 150mm diameter watermain is located in the Alma Street right-of-way.
- Each of the two proposed residential homes fronting Alma Street will have a 25mm diameter water service extended from the existing 150mm diameter watermain.
- An existing fire hydrant is located at the corner of Alma Street and the unopened Lucan Street right-of-way.
- The existing residences fronting Omar Street are serviced via the existing 150mm diameter (assumed) watermain in the Omar Street right-of-way.
- Each of the two proposed residential homes fronting Omar Street will have a 25mm diameter water service extended from the existing 150mm (assumed) diameter watermain.

Utilities

Preliminary discussions with Union Gas and Guelph Hydro Electric Systems (Guelph Hydro) have been undertaken to determine the availability of electrical and natural gas services along Alma Street.

Union Gas

- Union Gas has indicated that the proposed homes will have access to an existing 50mm (2 inch) steel gas main on the opposite side of Alma Street.
- There is also a 25mm (1 inch) main on the same side as the proposed development, which is currently unable to service the proposed homes.
- Union Gas main access is available for the proposed residential homes fronting Omar Street.

Guelph Hydro

- Guelph Hydro has indicated that the overhead secondary distribution on the poles in front of the site on Alma Street and Omar Street will have enough capacity to service both the proposed residential houses.

To summarize, all necessary municipal services and utilities are available to service the proposed residential development.

- The proposed lots are graded to tie into existing grades at property line. Stormwater runoff is either retained on site or directed to the Alma Street and Omar Street right-of-ways.
- Foundation drainage for the proposed and redeveloped residential homes will be provided by a sump pump discharging to the rear yards.
- A 200mm perforated subdrain will be provided on-site to promote infiltration. Overland flow will be directed towards the Alma Street and Omar Street right-of-ways.
- The proposed residential homes fronting Alma Street will be serviced by a 100mm diameter sanitary lateral connected to the existing 300mm diameter sanitary sewer on Alma Street.
- The proposed residential homes fronting Alma Street will be serviced by a 25mm diameter water service connected to the existing 150mm diameter watermain on Alma Street.
- The proposed residential homes fronting Omar Street will be serviced by a 100mm diameter sanitary lateral connected to the existing 225mm diameter sanitary sewer on Alma Street.
- The proposed residential homes fronting Omar Street will be serviced by a 25mm diameter water service connected to the existing 150mm (assumed) diameter watermain on Alma Street.
- Both Union Gas and Guelph Hydro have confirmed that there are adequate electrical and natural gas services along Alma Street and Omar Street to service the proposed single family residential homes.
- Sediment fence was installed along the perimeter of the site during the Site Alteration process.

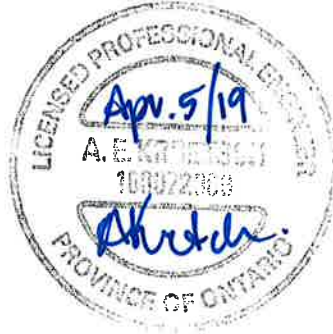


We trust this is the information that you require at this time. If you have any questions or require additional information, please do not hesitate to call us.

Yours truly,
GM BLUEPLAN ENGINEERING LIMITED
Per:

A handwritten signature in blue ink, appearing to read 'AKroetsch'.

Angela Kroetsch, P.Eng.
AK/rdj



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