TRITON ENGINEERING SERVICES LIMITED
Consulting Engineers

Memorandum

DATE:	November 10th, 2026
TO:	Ken Melanson
FROM:	Dustin Lyttle / Ray Kirtz
RE:	Briarwood Homes Municipal Servicing Assessment
FILE:	A4195A

Introduction:

Triton Engineering Services Limited (Triton) has conducted a *Municipal Servicing Assessment (MSA)* for the proposed 2.043 ha Briarwood Homes Development (the Development) in Dundalk. This MSA is intended to determine the expected impact of the proposed development on the downstream sanitary sewers and the expected available water from the municipal system for firefighting and domestic servicing purposes.

The following assessment utilized both WaterCAD and SewerCAD software to estimate the water and sanitary servicing available for the Development. Estimates for water and sanitary demand, as well as reserve capacity calculations, were based on the information provided by the Ministry of Environment's Design Guidelines and the 2026 Reserve Capacity Calculations (RCC) for Dundalk.



Figure 1 - Site Area

Existing Conditions

Water

An existing 200 mm PVC watermain is located along Ida Street and fronts the subject property. No other existing watermains are located within the vicinity that could reasonably service the site.

Sanitary

The nearest existing sanitary sewer available to service the site is a 600 mm concrete sewer extending from the south end of Hagan Street and running parallel to Ida Street within a 15.25 m easement toward the Dundalk Wastewater Treatment Facility (WWTF). This sewer is located approximately 450 m east of Ida Street, within the Development property.

Proposed Development:

Occupancy:

The most recent functional servicing report (FSR) for the development, dated September 2026, indicates the development will be an apartment building complex with two main buildings supporting 120 units each for a combined total unit count of 240 units. However, through various reviews and discussions with Municipal staff, we have determined it reasonable to assign one (1) apartment unit an equivalency of one (1) Equivalent Residential Unit (ERU). Therefore, for the purposes of this assessment it has been calculated that the 240 units proposed would be equivalent to **168 ERUs.**

Topography:

The site is relatively flat, with ground elevations ranging from approximately 511 m to 513 m. To capture the full potential operational fire-flow range, the full development elevation range was added into the model with the Dundalk water tower set to its normal day operational elevation (approximately 3m below their maximum water levels). Together, these conditions represent the anticipated range of typical flows available to provide conservative results.

Water:

Available Water Servicing

As per the FSR the development will be connected to the existing 200mm watermain via a 200mm internal watermain extending into the development. As per the FSR the fire flow required is noted at 19,000 L/min, this equates to approximately 316 L/s. The modelled fire flow as per Table 2 will not be able to meet this required fire flow. Note, domestic pressures indicated in Table 1 are at ground level, top floor pressures are expected to be approximately 20 psi lower.

Table 1 – Modelled Pressure and Fire Flow

Fire Flow (L/s)	Pressure (psi)
104 - 107	78 - 81

Reserve Capacity:

As discussed above the Development is estimated to consume 168 ERUs of water supply allocation from the Township. Granting of allocation is subject to with the Township's Allocation Policy.

Sanitary

Estimated Sanitary Loading

As noted, the site is expected to have an equivalent of 168 ERUs of sanitary treatment capacity. Assuming an ERU sanitary flow rate of 0.827 m^3/d/ERU indicated by the 2026 RCC for Dundalk this equates to an average

sanitary flow of **138 m^3/day** generated by the development. The peak flow from this development has been estimated using the Harmon peaking factor and is estimated to be **8.8L/s**. The site area is approximately 2.04 ha. Assuming an infiltration rate of 0.15 L/s/ha. This site is expected to generate an infiltration rate of approximately **26.4 m^3/d.**

Sanitary Conveyance

General:

As mentioned above, the nearest existing sanitary sewer runs through an easement which extends off of Hagan St and runs parallel to Ida Street towards the WWTF. To service this development a new sanitary forcemain would need to be extended approximately 300m – 400m to reach the existing sewer. This forcemain would be a private forcemain and would connect to an existing manhole.

Sewer Assessment:

Based on the above sanitary loadings there are no sewers downstream of the development that are approaching capacity.

Reserve Capacity:

As discussed above the Development is estimated to consume 168 ERUs of sanitary treatment capacity allocation from the Township. Granting of allocation is subject to with the Township's Allocation Policy.

Conclusions and Recommendations

Water Servicing

Based on the above findings is expected to have moderately high pressure sufficient to service the proposed multi-storey building. The estimated available fire flow of 104 – 106 L/s is insufficient to meet the required fire flow of 19,000 L/min outlined in the FSR. We recommend that the developer's engineer review and confirm the fire flow requirement, and if necessary, look for ways to reduce this requirement such that the municipal water system can provide the specified fire flow.

168 ERUs of water supply allocation from the Township is required to support this development.

Sanitary Servicing

Based on this analysis, the current sanitary sewer conveyance system is expected to have sufficient capacity to support the Development. A new forcemain will need to be extended approximately 250 – 300m to connect to the existing sanitary sewer easement.

168 ERUs of sanitary treatment allocation from the Township is required to support this development.

If there are any questions, please do not hesitate to contact