

Fairfax Phase 2 Site Servicing Strategy

October 15, 2025

This brief letter report summarizes the proposed servicing concept for the latest version of the proposed second Phase of the Fairfax Community Housing Project.

The concept plan prepared by ZZAP and ABLE Engineering shows two single family lots reserved on the east side of Donald Skeir Way at the intersection with Paris Lane for future three bedroom children's homes; a mix of 32 units (semis, row homes, townhouses) on the west side of Donald Skeir Way; plus, two 12-unit townhouses proposed on the east side of Donald Skeir Way.

Total Units: 2BDRM - $32 + 24 + 6 = 62$ at 510 lpd/unit = 31,620 lpd

It is also proposed to connect the existing Family Centre and Daycare to the new shared system, although this has not been finalized. But some capacity for this is planned for, assumed to be about 10,000 lpd

Therefore the total design flow for a new shared system is 42,000 lpd

Using a conservative planning level relationship between land area and treated sewage flow for land based dispersal (no outfalls, no central sewer charges) the area for dispersion would be approximately 4200 Square Metres, and will be built out to 5000 to allow for contingency development, and possible expansion.

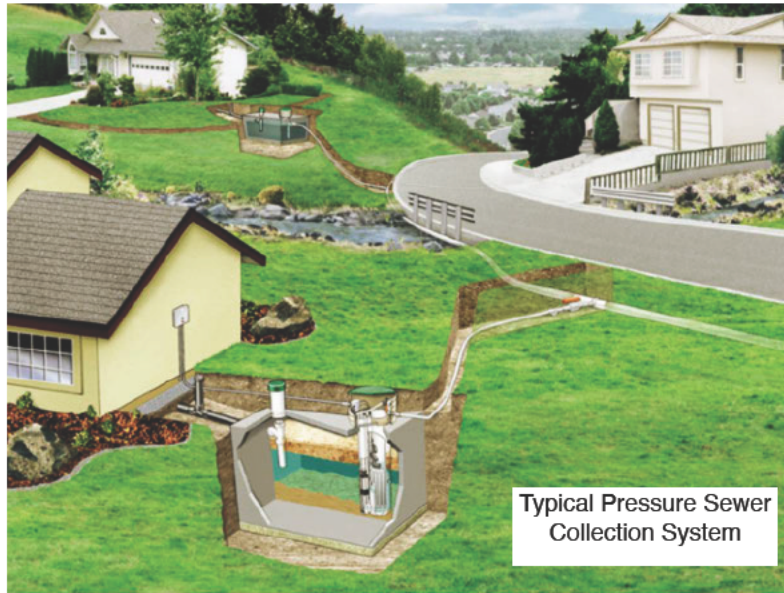
The plan also shows expansion of Fairfax 1 with 3 semis (6 infill units) proposed to be on smaller on-site systems. This is shown as a combination of using the existing systems and building some new ones, close to the units being served.

Shared Sewage Management System

The sewage management concept is proposed to work with a central water supply extension further along Donald Skeir Way. Current economics related to sanitary sewage collection in Nova Scotia where there is shallow bedrock, as expected here, have essentially rendered central sewage collection by gravity unfeasible due to the costs of running pipe and dealing with leaks into pipes and manholes over time. In addition, treatment using on-site land dispersion methods are not well suited to old technology gravity sewers that are subject to large volumes of water entering the collection system and overwhelming treatment and dispersion mechanisms.

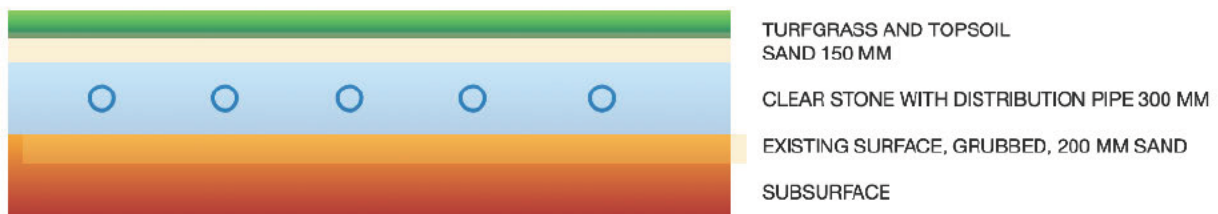
The best solution available in 2025 is the collection of septic tank effluent via small

diameter pipes, using gravity where possible, but normally using pressure sewers to move the liquid septic tank effluent to a central location where it can be highly treated, in an economical manner, using modern technologies.



We recommend the use of a packed bed filter type approach due to the low energy requirements, low land use requirements, simplicity of process, and high quality effluent resulting from these systems. It is normal to expect the treated effluent to meet discharge quality requirements that would meet the toughest standards NS Environment might apply anywhere. In this case, it will be returned to the ground.

In this location, we see an opportunity to construct a dispersion area for the treated effluent that can be used for this purpose, but also can address the poor drainage on the adjacent playfield and playground. We proposed constructing a new dispersion area using gravel and sand and some geotextile, large enough to disperse all of the treated effluent, that would also be suitable for use as a sport field, park or just green open space. This has been done in several places in Nova Scotia, including a kids' medical recovery camp (Brigadoon), Barrington High School, and Bayview High School, with no risk to the health of the users.



NEW SPORTS FIELD/DISPERSION BED



5209 St, Margaret's Bay Road,
Suite 201, Upper Tantallon,
Nova Scotia, B3Z 1E3

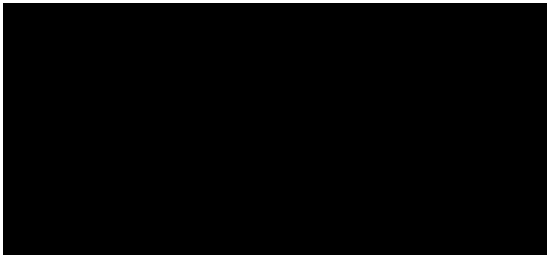
Phone: (902) 820-3255
Fax: (902) 273-3072
Cell: (902) 221-2368
Email: jeff@ableinc.ca

The sewage and water servicing concept is shown on the next page.

The conceptual serving plan shows, generally, how the proposed systems could work for this project. Water and sewer are kept apart, reducing risk of contamination and ensuring a safe water supply. The sewage collection system is expandable, with a main pressure sewer line and Septic Tank Effluent Pumping systems connecting to it, for conveyance to a central treatment area. From there, the treated effluent is dispersed over a number of zones in the dispersion area using a controlled series of dosing pumps. None of the pumps used in this system is expensive and they are all easy to replace. Once commissioned, this system has the capacity to manage the sewage from Phase 2, and additional use, such as the Children's Centre, and other developments that may arise.

We trust this addresses your requirements at this time.

Regards,



Jeffrey Pinhey M.A.Sc., P.Eng.,
Vice President, ABLE Engineering Services Inc.

