

APPENDIX B

Water Demand & WTP Capacity Calculations



Project: Glenelg Phase 3
 Project No.: 1060-6220
 Date: 2023.05.26
 Prepared By: PM
 Checked By: JL'A

Preliminary Water Design Flow
(Including School Block)

Site Area	33.27 ha
<u>Number of Residential Units</u>	
Number of Residential Units, Single Detached	290 units
Number of Residential Units, Semi Detached	24 units
Number of Residential Units, Townhouses	74 units
Total Number of Residential Units	388 units
Person Per Residential Unit (2021 Census Data)	2.61 persons/unit
Residential Population	1013 persons
<u>Institutional Population & Area</u>	
Institutional Population, Students	700 students
Institutional Area	3.35 ha
Total Institutional Area	3.35 ha
<u>Unit Water Flows</u>	
Residential (Per Township Engineering Stds.)	255 L/C/day
Institutional per Student (per City of Toronto Engineering Stds.)	140 L/student/day
<u>Total Design Water Flows</u>	
Average Residential Daily Flow	2.99 L/s
Average Institutional Daily Flow	1.13 L/s
Average Total Daily Flow	4.12 L/s
Max Day Peak Factor (per MOE Design of Water Works Table 3-1)	2.50
Max Day Demand Flow	10.31 L/s
Peak Hour Factor (Min. per Township Engineering Stds.)	4.50
Peak Hour Flow	18.56 L/s



Project: Glenelg Expansion
 Project No.: 1060-6220
 Date: 26-May-23
 By: AM
 Check: JL'A

Dundalk Water System Capacity Evaluation

DESCRIPTION	2023	UNITS
Available Capacity	2,817	m3/day
Max Day Flow	1,008	m3/day
Reserve Capacity	1,809	m3/day
Serviced Households	1,487	ERUs
Persons Per Existing Residential Unit (2021 Census Data)	2.66	Persons
Maximum Day Per Capita Flow	0.255	m3/day
Persons Per New Equivalent Residential Unit (2017 DC Background Study)	2.61	Persons
Additional population that can be served	7099	Persons
Additional ERUs that can be served	<u>2720</u>	ERUs

TOTAL EQUIVALENT RESIDENTIAL UNIT (ERU) SUMMARY OF OCCUPIED, COMMITTED AND UNCOMMITTED UNITS

DEVELOPMENT	OCCUPIED UNITS 2023	COMMITTED UNITS	UNCOMMITTED UNITS
White Rose (Phase 1 & 2)	66	0	0
White Rose (Phase 3)	0	30	47
Flato North (Phase 3)	46	0	0
Flato North (Phase 4)	22	0	0
Flato North (Phase 5)	59	0	0
Flato North (Phase 6)	68	0	0
Glenelg (Phase 1)	31	152	0
Flato West Block 75	21	35	0
Flato East (Phase 7, 8 & 10)	0	188	0
Flato East (Phase 11)	0	123	50
Flato East (Commercial Block)	0	29	0
Infill Lots	0	5	0
TOTAL COMMITTED UNITS 2021		<u>562</u>	<u>97</u>
White Rose (Phase 3)	0	0	47
Flato East (Phase 9)	0	0	47
Flato East (Phase 11)	0	0	50
Glenelg (Phase 2)	0	0	155
Glenelg (Phase 3)	0	0	459
Flato North West	0	0	250
TOTAL UNCOMMITTED UNITS			<u>1457</u>
Total Number of Available ERUs			2720
Total Projected ERUs of Reserve Capacity Available Upon Occupation of Committed Units			2158
Projected ERUs of Reserve Capacity Available Upon Occupation of The Above Uncommitted Units			701