

APPENDIX B

Water Demand & WTP Capacity Calculations



Project: Glenelg Phase 3
Project No.: 1060-6220
Date: 2023-08-14
Prepared By: AM
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	301 units
Number of Residential Units, Semi Detached	24 units
Number of Residential Units, Townhouses	75 units
Total Number of Residential Units	400 units
Person Per Residential Unit (2021 Census Data)	2.61 persons/unit
Residential Population	1044 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	3.08 L/s
Average Institutional Daily Flow	1.13 L/s
Average Total Daily Flow	4.22 L/s
Max Day Peak Factor (per MOE Design of Water Works Table 3-1)	2.50
Max Day Demand Flow	10.54 L/s
Peak Hour Factor (Min. per Township Engineering Stds.)	4.50
Peak Hour Flow	18.97 L/s



Project: Glenelg Phase 3
 Project No.: 1060-6220
 Date: 8/11/2023
 By: AM
 Check: JL'A

Dundalk Water System Capacity Evaluation

DESCRIPTION	2023	UNITS
Available Capacity	2,817	m ³ /day
Max Day Flow	1,008	m ³ /day
Reserve Capacity	1,809	m ³ /day
Serviced Households	1,487	ERUs
Persons Per Existing Residential Unit (2021 Census Data)	2.66	Persons
Maximum Day Per Capita Flow	0.255	m ³ /day
Persons Per New Equivalent Residential Unit (2022 DC Background Study)	2.61	Persons
Additional population that can be served	7094	Persons
Additional ERUs that can be served	<u>2718</u>	ERUs

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

DEVELOPMENT	OCCUPIED UNITS 2022	REMAINING UNITS AT END OF 2022	UNCOMMITTED UNITS
White Rose (Phase 1 & 2)	3	0	0
White Rose (Phase 3)	0	30	0
Flato West Block 75	21	35	0
Flato North (Phase 3)	4	0	0
Flato North (Phase 4)	22	0	0
Flato North (Phase 5)	49	0	0
Flato North (Phase 6)	48	0	0
Flato East (Phase 7, 8 & 10)	0	188	0
Flato East (Phase 11)	0	173	0
Flato East (Phase 11 - Block 344)	0	29	0
Glenelg (Phase 1)	31	152	0
Annual Infill Lots	0	5	0
TOTAL COMMITTED UNITS 2022	<u>178</u>	<u>612</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	400
Flato North West (Ida)	0	0	250
TOTAL UNCOMMITTED UNITS			<u>949</u>
Total Number of Available ERUs			2718
Total Projected ERUs of Reserve Capacity Available Upon Occupation of Committed Units			2106
Projected ERUs of Reserve Capacity Available Upon Occupation of The Above Uncommitted Units			1157