

Table of Contents

EXECUTIVE SUMMARY

1.0	Introduction.....	1
1.1	Study Area.....	1
2.0	Physical Characteristics of the Sandilands Area.....	3
2.1	Regional Bedrock Geology.....	3
2.2	Regional Quaternary Geology.....	3
2.3	Regional Hydrogeology.....	4
2.4	Regional Hydrology.....	5
3.0	Field Investigations.....	6
3.1	Exploration Drilling Program.....	6
3.1.1	Study Area Stratigraphy.....	6
3.1.2	Preliminary Water Quality and Transmissivity Results.....	8
3.2	Preliminary Pumping Test.....	8
3.3	Groundwater Monitoring.....	9
3.4	Full Scale Pumping Test.....	10
3.4.1	Full Scale Test Well Construction.....	10
3.4.2	Observation Well Network.....	10
3.4.3	72 Hour Pumping Test.....	11
3.4.4	Calculated Transmissivity and Storativity.....	13
3.4.5	Water Quality Results.....	14
4.0	Assessment of Results.....	16
4.1	Well Capacity.....	16
4.2	Estimated Drawdown Effects at a Distance.....	16
4.3	Potential Third Party or Environmental Impacts.....	17
4.4	Aquifer Sustainability.....	19
5.0	Conclusions.....	21
6.0	Recommendations.....	23
7.0	References.....	24
8.0	Limitations.....	25

List of Tables

- Table No. 1 – Static (Non-pumping) Groundwater Elevations
- Table No. 2 – Full Scale Pumping Test Monitoring Program

List of Figures

- Figure No. 01 Study Area
- Figure No. 02 Existing Land Uses
- Figure No. 03 Test Hole and Well Locations
- Figure No. 04 Section A
- Figure No. 05 Surficial Geology
- Figure No. 06 Regional Stratigraphy West
- Figure No. 07 Regional Stratigraphy East
- Figure No. 08 Upper Sand Groundwater Levels
- Figure No. 09 Lower Sand Groundwater Levels
- Figure No. 10 Surface Drainage Basins
- Figure No. 11 Section B
- Figure No. 12 Section C
- Figure No. 13 Groundwater Elevations Upper Sand Unit
- Figure No. 14 Groundwater Elevations Lower Sand Unit
- Figure No. 15 Groundwater Elevations Sandstone Unit
- Figure No. 16 Pumping Well Location Detailed Plan
- Figure No. 17 Distance-Drawdown Measurements
- Figure No. 18 Predicted Distance Drawdown Effects

List of Appendices

- Appendix A Previous Test Hole/Water Well Logs
- Appendix B Current Test Hole/Water Well Logs
- Appendix C 150 mm Well Pumping Test Results
- Appendix D Water Quality Results
- Appendix E Groundwater Exploration Permit
- Appendix F Crown Land Easement Application
- Appendix G 72 Hour Pumping Test Results
- Appendix H 72 Hour Pumping Test Analyses