



URBAN ENGINEERING GEOLOGY SERIES - MAP 3

ENGINEERING GEOLOGY ULVERSTONE

F. Whippy B.App.Sc.

SCALE 1:10 000
Contour interval 10 metres

- Asper hole.
 - Test pit.
 - Test pit and Dutchman sounding.
 - Borehole.
 - Test pit and borehole.
 - Well or water bore - position approximate.
 - Surface grab sample site.
- Geological Symbols:**
- Abandoned mine.
 - Quarry.
 - Mine waste deposits (MWD).
- Topographic Symbols:**
- Contour line.
 - Contour line with water conductivity (μS/cm).
 - Ancient landable area.
 - Reclamation landable.
 - Thrust or reverse fault, north on upper plate.
 - Concealed fault.

Project jointly funded by the Ulverstone Municipal Council and the Department of Resources and Energy. This map is only intended as a guide to the nature of materials and potential hazards. It does not replace the need for specific site inspections and investigations.

Geology by F. Whippy, B.App.Sc. adopted from Burns, K.L. 1983. Geological Atlas One Mile Series, Sheet 29, Devonport, with contributions by R. C. Donaldson, M.App.Sc., and W. L. Matthews, B.Sc. Geological map produced by the Cartographic Section of the Geological Survey, Division of Mines and Mineral Resources, Department of Resources and Energy, Hobart.

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| AGE | UNIT DESCRIPTION |
|------------------------|---|
| QUATERNARY | Recent and alluvial plain deposits. |
| | Slope deposits. |
| TERTIARY | Recent. |
| | Intra- and sub-basaltic sediments. |
| CAMBRIAN - PRECAMBRIAN | Basement rock - volcanic, metamorphic, sandstone, quartzite, schist and gneiss. |
| | Outcrop, this overlying soil. |

| USC | LIQUID LIMIT (%) | PLASTICITY INDEX (%) | LINEAR SHRINKAGE (%) | SHEAR STRENGTH PARAMETERS | EMERSON CLASS No. | POTENTIAL HAZARDS/DEVELOPMENT CONSIDERATIONS | | | | | | | | | |
|-------|------------------|----------------------|----------------------|---------------------------|-------------------|--|-----|----|-------|-----|-----|---|---|--|--|
| | range | range | range | range | range | | | | | | | | | | |
| SP | 27-105 | 58 | 7-81 | 35 | 2-21 | 11 | 4 | 18 | 18 | 1-5 | 3 | Excavation difficulties in gravel and cobble areas. | Shallow water table, variable soil thickness; varying sand; strongly silty clay. | | |
| CL CH | 46-168 | 100 | 23-129 | 60 | 10-29 | 20 | 3-5 | 4 | 10-31 | 21 | 1-6 | 4 | Excavation difficulties in surface rock areas; clay and silt of high shrink-swell and dispersion potential. | May be unsuitable for septic tanks. | |
| CH MH | 75-140 | 101 | 35-68 | 65 | 16-28 | 21 | 2-5 | 4 | 18-21 | 25 | 1-6 | 5 | Landslide; high shrink-swell potential; variable soil thickness; moderate to high dispersion; piping and tunnel erosion potential; shallow (perched) water table in some areas. | | |
| OH | 80-93 | 88 | 41-44 | 43 | 15-18 | 17 | - | - | - | - | - | 6 | 6 | High shrink-swell potential; variable soil thickness; moderate to high dispersion potential. | |
| SC CH | 45-112 | 88 | 24-79 | 59 | 8-20 | 16 | 2* | 2 | 8 | 8 | 1-6 | 4 | Excavation difficulties; potential aggregate source. | | |
| CL CH | 43-74 | 61 | 17-47 | 38 | 0-14 | 12 | 2* | 2 | 15 | 15 | 5-6 | 6 | High shrink-swell, piping and dispersion potential in clayey areas; excavation difficulties (gravel, siltstone and cemented sand); potential aggregate source; soil thickness variable. | | |
| CH | 50-128 | 94 | 23-87 | 55 | 12-22 | 17 | 2* | 3 | 11 | 11 | 1-6 | 4 | Moderate to high shrink-swell and dispersion potential. | | |

* Strength tests on one sample only.