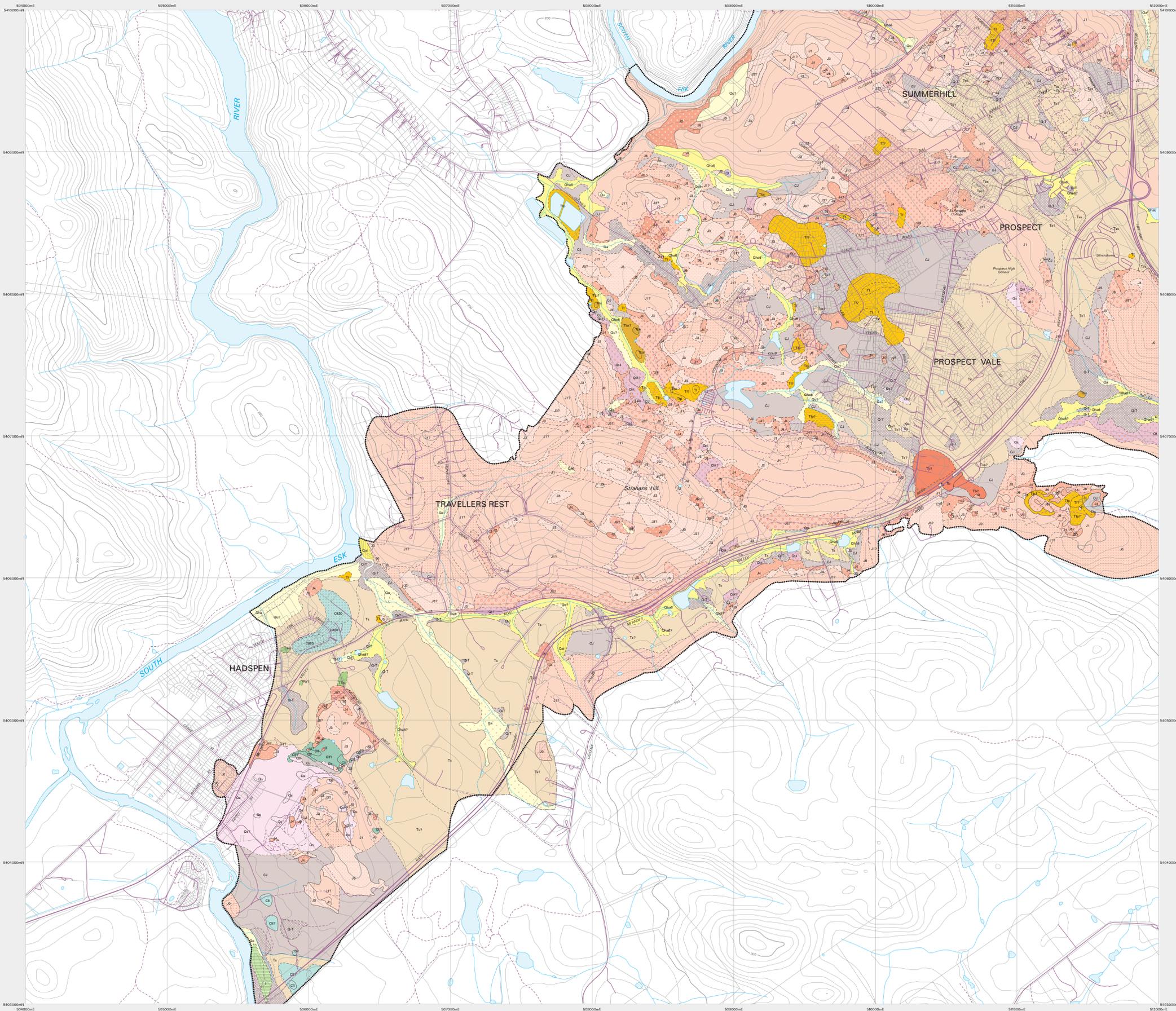


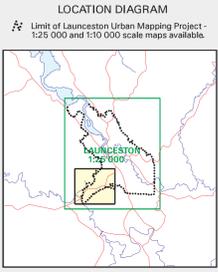
MINERAL RESOURCES TASMANIA LAUNCESTON - GEOLOGY SUMMERHILL

LAUNCESTON URBAN MAPPING PROJECT
TASMANIAN GEOLOGICAL SURVEY
MINERAL RESOURCES TASMANIA



Scale: 1:10 000
0 200 400 600 800 1000m

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| <p>HOLOCENE</p> <ul style="list-style-type: none"> Qa Un differentiated alluvial, estuarine and associated deposits of all sand, gravel and mud. Qba Alluvial, estuarine, deltaic and swamp deposits of silt, sand, mud or gravel situated on the flood plain or modern and recent channels. Qbal Submerged to emergent estuarine deposits of silt, mud, sand or gravel. Qba2 Freshwater estuarine deposits of silt, mud, sand or gravel. Qba3 Estuarine and other deposits of silt, mud, sand or gravel with land surface generally above high water mark. Qba4 Estuarine deposits of silt, mud, sand or gravel, emerged as land between 1915 and 1917. Qba5 Alluvial and associated deposits of silt, mud, sand and gravel. Qba6 Alluvial deposits predominantly of cobbles, boulders, pebbles and sand. Qba7 Alluvial fan deposits predominantly of silt, mud, sand with pebbles and stones. <p>HOLOCENE-PLEISTOCENE</p> <ul style="list-style-type: none"> Qat Alluvial deposits including common boulders or cobbles of dolerite and rounded on terraces slightly higher (1-5m) than the modern flood plain of minor streams. Qat1 Alluvial deposits commonly of dolerite and some siliceous clasts, located on terraces distinctly higher (5-10m) than the modern flood plain of minor streams. Qat2 Alluvial deposits with specific development of dolerite cobbles, pebbles, and ferruginous siltstone, on terraces distinctly higher than the modern flood plain. Qat3 Low (< 1-5m) terrace deposit of Tamar Estuary with gravel deposits above present sea level. Qat4 Terrace deposit of major estuary or stream with alluvium gravel below present sea level, siliceous dolerite sand, silt and mud, and of probable Pleistocene age. Qat5 Alluvial fan deposit predominantly of dolerite clasts. Qat6 Aeolian sand and some slope deposits of sand. Qat7 Tala of locally derived material (D). Qat8 Slope deposits derived from Cambrian strata and exhibiting locally incised morphology. Qat9 Tala with dolerite cobbles derived from tertiary strata. Qat10 Tala with siliceous clasts. Qat11 Tala and silt with predominantly ferruginous and/or basaltic clasts. | <ul style="list-style-type: none"> Q15 Tala with predominantly basaltic clasts. Q16 Tala and silt with predominantly clasts derived from Jurassic dolerite. Q17 Poorly oriented ferruginous. <p>PLEISTOCENE-LATE TERTIARY</p> <ul style="list-style-type: none"> CP1 Terrace deposits - 10m above sea level, of silt, clay, sand, pebbles and cobbles, loose to poorly consolidated. CP2 Terrace deposits - 20m above sea level and of gravel, silt, clay, sand, pebbles and cobbles, loose to poorly consolidated or cemented, clasts include dolerite, siliceous rocks and ferruginous siltstone. CP3 Terrace deposits - 25-50m and 50m above sea level or local base level and of gravel, silt, clay, sand, pebbles and cobbles, loose to poorly consolidated or cemented, clasts include dolerite, siliceous rocks and ferruginous siltstone. CP4 Terrace deposits - 70m above sea level, and of gravel, silt, clay, sand, pebbles and cobbles, rarely boulders, loose to poorly consolidated or cemented, clasts include dolerite, siliceous rocks and ferruginous siltstone. CP5 Terrace deposits - 70m above sea level, and of gravel, silt, clay, sand, pebbles and cobbles, rarely boulders, loose to poorly consolidated or cemented, clasts include dolerite, siliceous rocks and ferruginous siltstone. <p>TERTIARY</p> <ul style="list-style-type: none"> T1 Ferruginous, laterite and basaltic with cemented and soft layers. T2 Ferruginous and basaltic with cemented and soft layers, and some terraces. T3 Dominantly interbedded poorly consolidated mudstone and clayey siltstone, subordinate light, conglomerate with cemented layers, and siliceous sandstone, some ferruginous cemented layers and concretions, and some terraces. T4 Sequence of poorly consolidated light to medium quartz-rich sandstone and conglomerate interbedded with siltstone and mudstone, underlies Tertiary basalt at Aitah Hill. T5 Moderately consolidated, diversity cobble grade with basaltic pebbles and basaltic gravel dolerite conglomerate, some sandstone and rare siltstone. T6 Moderately coarse-grained, diversity cobble grade with basaltic pebbles and basaltic gravel dolerite conglomerate, some sandstone and rare siltstone, pebbles and cobbles cemented, some ferruginous and basaltic siltstone. T7 Dominantly coarse to pebble grade dolerite conglomerate and sandstone, some sandstone, some siltstone, pebbles and cobbles cemented, some ferruginous and basaltic siltstone. Some age. | <ul style="list-style-type: none"> Ta2 Dominantly dolerite cobble conglomerate, sandstone, light and calcareous beds, Contact 1, basal Zone micaceous of Palaeocene age. Tr1 Moderately (B) bedded, interbedded freshwater quartz sandstone and micaceous shaly siltstone. P Moderately (B) bedded, medium bedded, glauconitic sandy clayey siltstone with sandstone on some horizons, Contact of Bogen (see Group). <p>UNDIFFERENTIATED</p> <ul style="list-style-type: none"> CU Undifferentiated Holocene and Pleistocene deposits. CF Undifferentiated Cambrian deposits and rocks. CU1 Undifferentiated sedimentary deposits and rocks or Jurassic dolerite. CU2 Undifferentiated deposits located within the Tamar Estuary - 5m above sea level. <p>KINEZOIC ROCKS</p> <p>TERTIARY</p> <ul style="list-style-type: none"> Tb Basalt, slightly to extremely weathered. <p>JURASSIC</p> <ul style="list-style-type: none"> J0 Dolerite, fresh to extremely weathered. Indicated from previous mapping (Logan et al. 1995). Base 1959 and/or from aerial photo interpretation. J1 Dolerite, fresh to extremely weathered. J2 Dolerite, surface expression - extensive in situ rock. J3 Dolerite, surface expression - some in situ rock. J4 Dolerite, surface expression - some in situ boulders. J5 Dolerite, sub-surface zone of in situ dolerite derived clay showing residual texture and mottling dolerite boulders. J6 Dolerite, sub-surface zone of extremely weathered dolerite or in situ derived material, may include dolerite boulders grading down to rock. J7 Dolerite, low or no in situ boulders or rock at land surface - probable thick and/or extremely weathered rock. J8 Dolerite, surface indication of remnant fossil soil. | <ul style="list-style-type: none"> J9 Dolerite, some transported and/or in situ boulders at surface, depth to rock uncertain. J10 Dolerite, surface expression - broken dolerite fragments in soil between soil. J11 Dolerite, surface expression - rock benches partly buried by talus. <p>FOOTNOTES</p> <ul style="list-style-type: none"> Address of "1" indicates derived from aerial photo interpretation (1:10 000 scale only). Partly as indicated by Lands Department mapping based on 1976 aerial photography. |
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THIS MAP IS TO BE USED FOR GENERAL GUIDANCE ONLY AND DOES NOT REMOVE THE NEED FOR SITE SPECIFIC INVESTIGATIONS

This map forms part of a project funded jointly by the Launceston City Council, West Tamar Council, Maudslayi Valley Council and Mineral Resources Tasmania.

Field work for the study was carried out by Project Geologist S. M. Forsyth, Mineral Resources Tasmania between 1991 and 1993.

Reference this map as: Forsyth, S.M. 1996, Geology Map, Launceston Area, Urban Engineering Geology Series, Tasmanian Geological Survey.

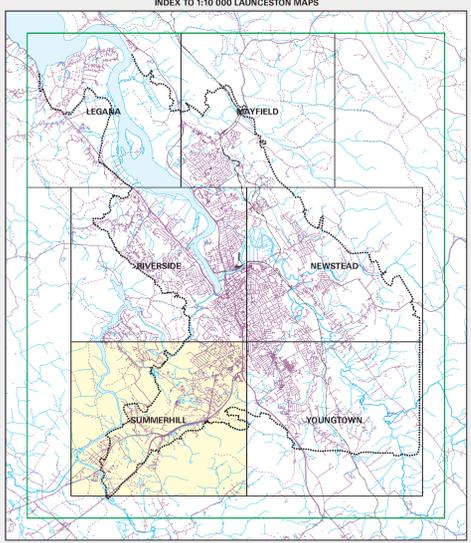
Digital base information from Information and Land Services, Department of Primary Industries, Water and Environment, Cadastre information (depicted in grey), as at April 2003 and supplied by Information and Land Services, Department of Primary Industries, Water and Environment.

Map produced September 2003 by Data Management Branch, Mineral Resources Tasmania using G.I.S. software.

AGD66 - AMG Zone 58, Contour Interval: 20 metres.

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