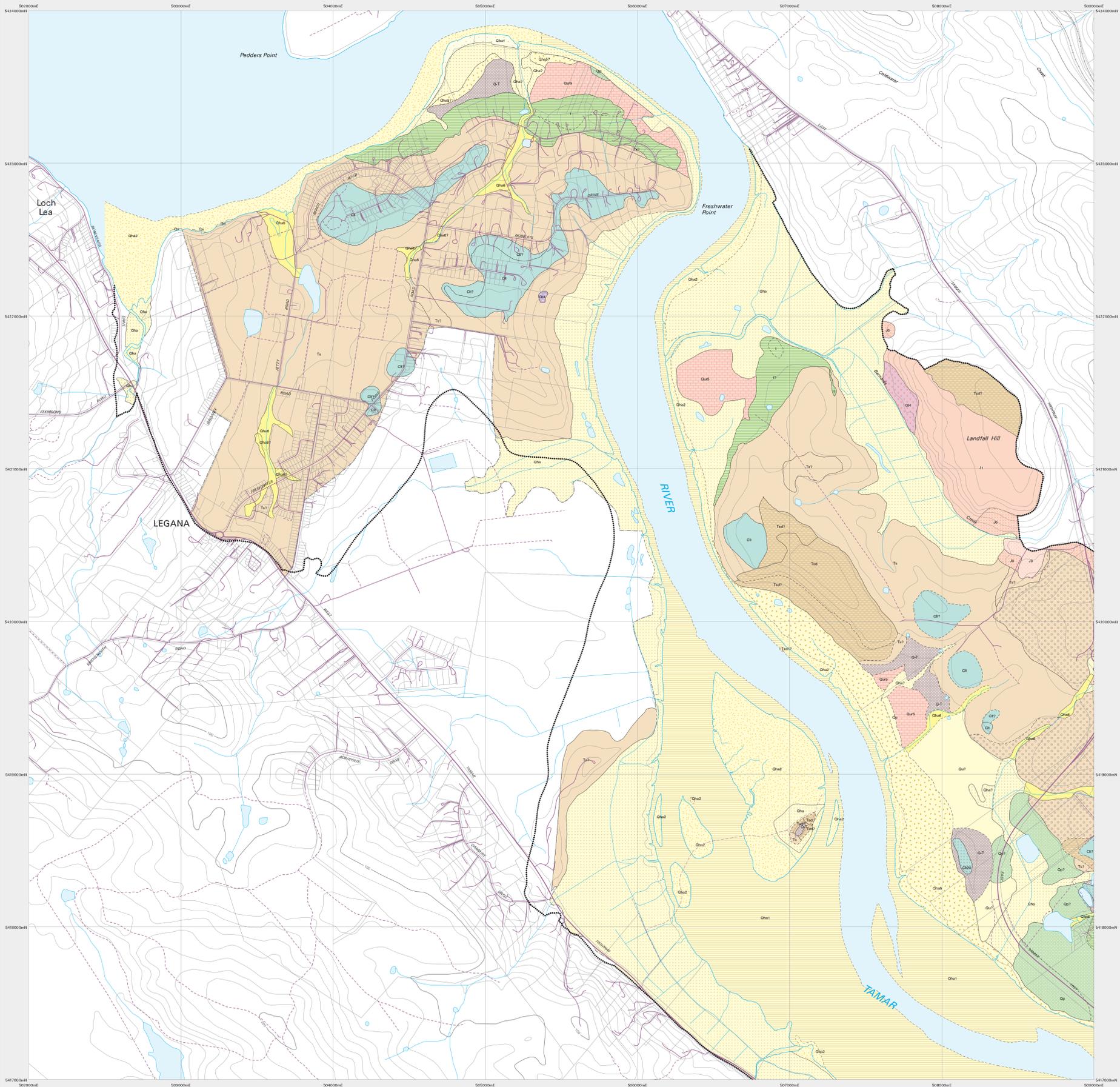


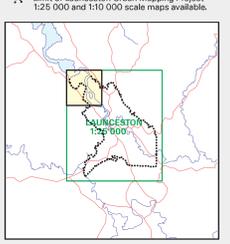
# MINERAL RESOURCES TASMANIA LAUNCESTON - GEOLOGY LEGANA

LAUNCESTON URBAN MAPPING PROJECT  
TASMANIAN GEOLOGICAL SURVEY  
MINERAL RESOURCES TASMANIA



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

### LOCATION DIAGRAM

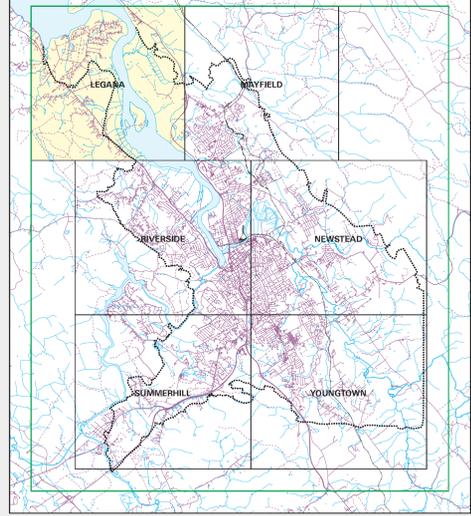


**THIS MAP IS TO BE USED FOR GENERAL GUIDANCE ONLY AND DOES NOT REMOVE THE NEED FOR SITE SPECIFIC INVESTIGATIONS**  
This map forms part of a project funded jointly by the Launceston City Council, West Tamar Council, Mayor's Valley Council and Mineral Resources Tasmania.  
Field work for the study was 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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### INDEX TO 1:10 000 LAUNCESTON MAPS



Data correct and plotted generated: 01-JUL-2005  
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- |   |   |   |   |
|---|---|---|---|
| <p><b>HOLOCENE</b></p> <ul style="list-style-type: none"> <li>Qa1 Undifferentiated alluvial, estuarine and associated deposits of silt, sand, gravel and mud.</li> <li>Qa2 Alluvial estuarine, deltaic and estuary deposits of silt, sand, mud or gravel situated on the flood plain of modern and recent streams.</li> <li>Qa3 Submerged to emergent estuarine deposits of silt, mud, sand or gravel.</li> <li>Qa4 Freshwater estuarine deposits of silt, mud, sand or gravel.</li> <li>Qa5 Estuarine and other deposits, of silt, mud, sand or gravel with local surface generally above high water mark.</li> <li>Qa6 Estuarine deposits of silt, mud, sand or gravel emergent as land between 1835 and 1915.</li> <li>Qa7 Alluvial fan deposits predominantly of silt, mud, sand with pebbles to boulders.</li> <li>Qa8 Alluvial deposits predominantly of cobbles, boulders, pebbles and sand.</li> <li>Qa9 Alluvial fan deposits predominantly of silt, mud, sand with pebbles to boulders.</li> </ul> <p><b>HOLOCENE-PLISTOCENE</b></p> <ul style="list-style-type: none"> <li>Qa10 Alluvial deposits including common boulders or cobbles of dolerite and located on terraces slightly higher (1-5m) than the modern flood plain of major streams.</li> <li>Qa11 Alluvial deposits commonly of dolerite and some siliceous clasts, located on terraces distinctly higher (5-20m) than the modern flood plain of minor streams.</li> <li>Qa12 Alluvial deposits with a patchy development of dolerite cobbles, pebbles, and ferruginous pebbles, on terraces distinctly higher than the modern flood plain.</li> <li>Qa13 Low (1-5 m) terrace deposit of Tamar Estuary with gravel deposits above present sea level.</li> <li>Qa14 Terrace deposits of major streams with siliceous gravel boulders present at level noticeably above sand, silt and mud, and of pebbles, boulders and cobbles.</li> <li>Qa15 Alluvial fan deposit predominantly of dolerite clasts.</li> <li>Qa16 Andean sand and some slope deposits of sand.</li> <li>Qa17 Tails of locally derived material (DOL).</li> <li>Qa18 Slope deposits derived from Cainozoic strata and exhibiting lamella recent morphology.</li> <li>Qa19 Tails with dolerite cobbles derived from Tertiary strata.</li> <li>Qa20 Tails with siliceous clasts.</li> <li>Qa21 Tails and coals with predominantly ferruginous and/or basaltic clasts.</li> </ul> | <ul style="list-style-type: none"> <li>Qa22 Tails with predominantly basaltic clasts.</li> <li>Qa23 Tails and coals with predominantly clasts derived from Jurassic dolerite.</li> </ul> <p><b>PLEISTOCENE-LATE TERTIARY</b></p> <ul style="list-style-type: none"> <li>CF Poorly cemented ferronites.</li> <li>CR10 Terrace deposits - 10m above sea level, of clay, silt, sand, pebbles and cobbles, loose to poorly consolidated.</li> <li>CR20 Terrace deposits - 20m above sea level and of gravel, silt, sand, pebbles and cobbles, loose to poorly consolidated or cemented, clasts include dolerite, siliceous rocks and ferruginous pebbles.</li> <li>CR30 Terrace deposits - 25-60m and 100m above sea level of local basalt and of gravel, silt, sand, pebbles and cobbles, loose to poorly consolidated or cemented, clasts include dolerite, siliceous rocks and ferruginous pebbles.</li> <li>CR40 Terrace deposits - 70m above sea level, of gravel, silt, sand, pebbles and cobbles, loose to poorly consolidated or cemented, clasts include dolerite, siliceous rocks and ferruginous pebbles.</li> <li>CR50 Terrace deposits - 10m above sea level, of gravel, silt, sand, pebbles and cobbles, loose to poorly consolidated or cemented, clasts include dolerite, siliceous rocks and ferruginous pebbles.</li> <li>CR60 Terrace deposits - 20m above sea level, of gravel, silt, sand, pebbles and cobbles, loose to poorly consolidated or cemented, clasts include dolerite, siliceous rocks and ferruginous pebbles.</li> <li>CR70 Terrace deposits - 25-60m and 100m above sea level of local basalt and of gravel, silt, sand, pebbles and cobbles, loose to poorly consolidated or cemented, clasts include dolerite, siliceous rocks and ferruginous pebbles.</li> <li>CR80 Terrace deposits - 70m above sea level, of gravel, silt, sand, pebbles and cobbles, loose to poorly consolidated or cemented, clasts include dolerite, siliceous rocks and ferruginous pebbles.</li> <li>CR90 Terrace deposits - 10m above sea level, of gravel, silt, sand, pebbles and cobbles, loose to poorly consolidated or cemented, clasts include dolerite, siliceous rocks and ferruginous pebbles.</li> </ul> <p><b>TERTIARY</b></p> <ul style="list-style-type: none"> <li>T1 Ferruginous laterite and basaltic with cemented and soft loams.</li> <li>T2 Lower remnants of ferruginous laterite profile grading down to very weathered rock, lacking siliceous and generally lacking substantial remnants of ferruginous cementation on dolerite.</li> <li>T3 Basaltic profile developed on pre-Tertiary rocks.</li> <li>T4 Moderately indurated poorly consolidated mudstone and clay shale sandstone, subordinate lignite, conglomerate with cemented layers and siliceous sandstone, some ferruginous cemented ferronites and concretions, and some leaf fossils.</li> <li>T5 Sequence of poorly consolidated slightly micaceous quartz-rich sandstone and conglomerate interbedded with siltstone and mudstone, underlies Tertiary basalt at Akela Hill.</li> <li>T6 Sequence of poorly consolidated slightly micaceous quartz-rich sandstone and conglomerate interbedded with siltstone and mudstone, underlies Tertiary basalt at Akela Hill.</li> <li>T7 Moderately cemented, dominantly cobble grade with lesser pebbles and boulder grade dolerite conglomerate, some sandstone and rare siliceous sandstone.</li> <li>T8 Dominantly cobble grade with lesser pebbles to boulder grade dolerite conglomerate, some sandstone and rare siliceous sandstone and calcareous cementation, underlies Tertiary basalt at Akela Hill. Overlying beds contain % sparse Zoro microflora, Eocene age.</li> <li>T9 Dominantly cobble to pebble grade dolerite conglomerate and calcareous cementation, underlies Tertiary basalt at Akela Hill. Overlying beds contain % sparse Zoro microflora, Eocene age.</li> </ul> | <ul style="list-style-type: none"> <li>Ta12 Dominantly dolerite, cobble conglomerate, sandstone, lignite and calcareous beds, contains 1, below zone microflora of Pleistocene age.</li> <li>Ta13 Dolerite, some transported and/or in situ boulders at surface, depth to rock uncertain.</li> <li>Ta14 Dolerite surface expression - broken dolerite fragments in red loamstone.</li> <li>Ta15 Dolerite surface expression - rock boulders partly buried by talus.</li> </ul> <p><b>TRASSIC</b></p> <ul style="list-style-type: none"> <li>TR Moderately bedded, interbedded freshwater quartz sandstone and micaceous shaly siltstone.</li> </ul> <p><b>PERMIAN</b></p> <ul style="list-style-type: none"> <li>P Moderately bedded, medium bedded, glauconitic sandy clayey siltstone with laminae in some horizons, contains of Bogan Coal Group.</li> </ul> <p><b>UNDIFFERENTIATED</b></p> <ul style="list-style-type: none"> <li>Qu Undifferentiated Holocene and Pleistocene deposits.</li> <li>Qa Undifferentiated Holocene and Pleistocene deposits.</li> <li>Q1 Undifferentiated Holocene and Pleistocene deposits.</li> <li>Q2 Undifferentiated Holocene and Pleistocene deposits.</li> <li>Q3 Undifferentiated Holocene and Pleistocene deposits.</li> <li>Q4 Undifferentiated Holocene and Pleistocene deposits.</li> <li>Q5 Undifferentiated Holocene and Pleistocene deposits.</li> <li>Q6 Undifferentiated Holocene and Pleistocene deposits.</li> <li>Q7 Undifferentiated Holocene and Pleistocene deposits.</li> <li>Q8 Undifferentiated Holocene and Pleistocene deposits.</li> <li>Q9 Undifferentiated Holocene and Pleistocene deposits.</li> <li>Q10 Undifferentiated Holocene and Pleistocene deposits.</li> <li>Q11 Undifferentiated Holocene and Pleistocene deposits.</li> <li>Q12 Undifferentiated Holocene and Pleistocene deposits.</li> <li>Q13 Undifferentiated Holocene and Pleistocene deposits.</li> <li>Q14 Undifferentiated Holocene and Pleistocene 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Dolerite surface expression - extensive in situ rock.</li> <li>J3 Dolerite surface expression - some in situ rock.</li> <li>J4 Dolerite surface expression - some in situ boulders.</li> <li>J5 Dolerite sub-surface zone of in situ dolerite derived clay showing residual texture and enclosing dolerite boulders.</li> <li>J6 Dolerite sub-surface zone of extremely weathered dolerite or in situ derived material, may include dolerite boulders grading down to rock.</li> <li>J7 Dolerite, few or no in situ boulders or rock at land surface - probable thick and/or extremely weathered rock.</li> <li>J8 Dolerite, surface indication of remnant fossil soil.</li> </ul> |
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WARNING: INKS ARE LIGHT SENSITIVE