LAUNCESTON URBAN MAPPING PROJECT
TASMANIAN GEOLOGICAL SURVEY
MINERAL RESOURCES TASMANIA

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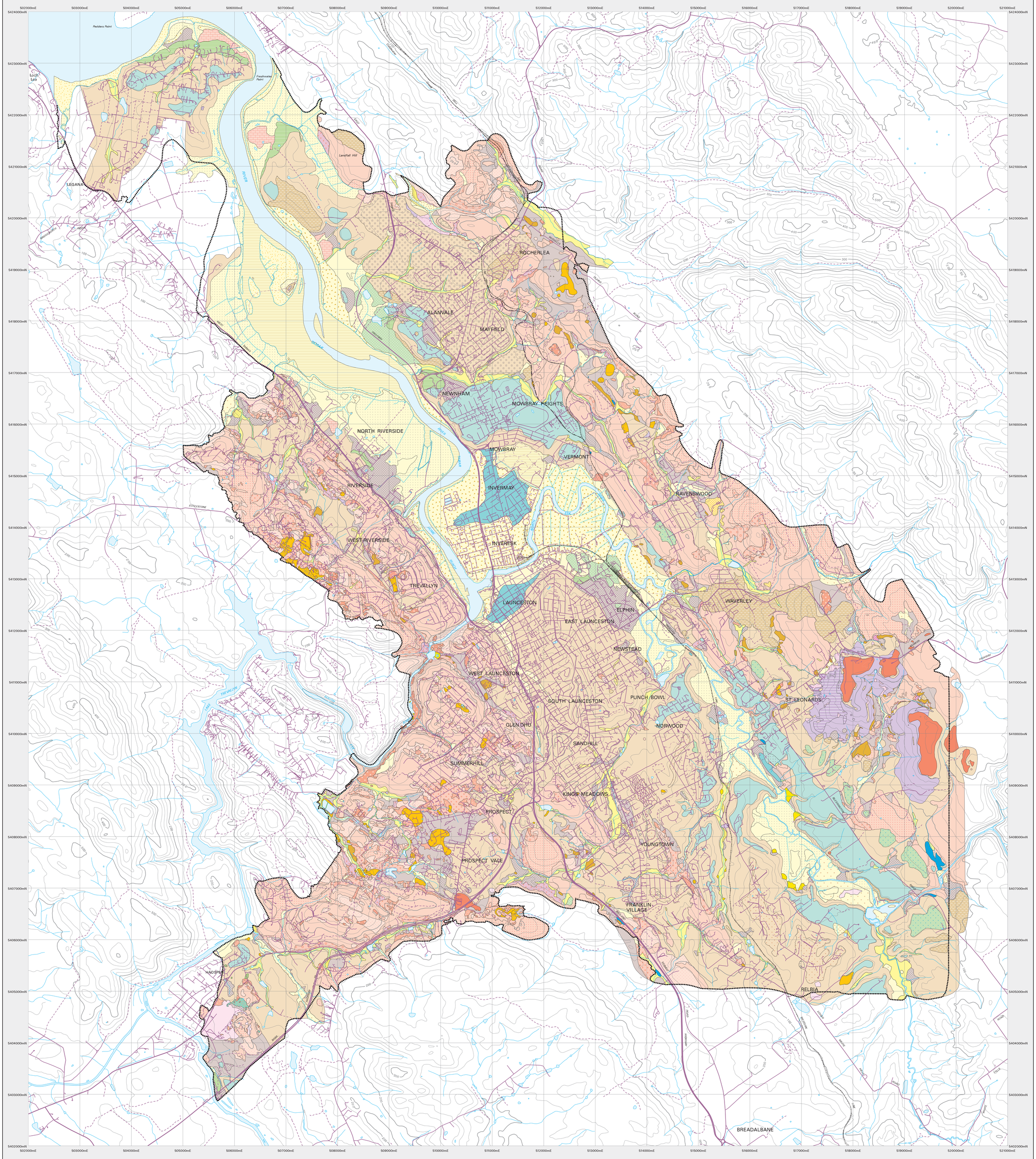
# LAUNCESTON - GEOLOGY

MINERAL RESOURCES TASMANIA
Tasmania
DEPARTMENT of INFRASTRUCTURE ENERGY and RESOURCES




Scale: 1:25 000

0 500 1000 1500 2000 2500m

HOLOCENE

Qa Undifferentiated alluvial, estuarine and associated deposits of silt, sand, gravel and mud.

Qha Alluvial, estuarine, deltaic and swamp deposits of silt, sand, mud or gravel situated on the flood plains of modern and recent streams.

Qha1 ?Submerged to emergent estuarine deposits of silt, mud, sand or gravel.

Qha2 Foreshore estuarine deposits of silt, mud, sand or gravel *.

Qha5 Estuarine and other deposits, of silt, mud, sand or gravel with land surface generally above high water mark.

Qha4 Estuarine deposits of silt, mud, sand or gravel, emerged as land between 1945 and 1976 *.

Qha6 Alluvium and associated deposits of silt, sand, gravel and mud.

Qha8 Alluvial deposits predominantly of cobbles, boulders, pebbles and sand.

Qha7 Alluvial fan deposits predominantly of silt, mud, sand with pebbles in places.

HOLOCENE-PLEISTOCENE

Qat Alluvial deposits including common boulders or cobbles of dolerite and located 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 a patchy development of dolerite cobbles, pebbles, and ferruginous pisoliths, on terraces distinctly higher than the modern flood plain.

t Low (< ~ 5m) terrace deposit of Tamar Estuary with gravel deposits above present sea level.

Qp Terrace deposit of major estuary or stream with siliceous gravel below present sea level, micaceous siliceous sand, silt and mud, and of probable Pleistocene age..

Qa9 Alluvial fan deposit predominantly of dolerite clasts.

Qs Aeolian sand and some slope deposits of sand.

Qt Talus of locally derived material (Qt).

Qt3 Slope deposits derived from Cainozoic strata and exhibiting landslip mound morphology.

Qt1 Talus with dolerite cobbles derived from Tertiary strata.

Qt2 Talus with siliceous clasts

Qt6 Talus and scree with predominantly ferricrete and/or bauxite clasts.

Qt5 Talus with predominantly basalt clasts.

Qt4 Talus and scree with predominantly clasts derived from Jurassic dolerite.

PLEISTOCENE-LATE TERTIARY

Clf Poorly cemented ferricrete.

Clt10 Terrace deposits ~ 10m above sea level, of clay, silt, sand, pebbles and cobbles, loose to poorly consolidated.

~ ~ ~ ~ Erosional surface ~ ~ ~ ~

Clt20 Terrace deposits ~ 20m above sea level and of upward fining clay, silt, sand, pebbles and cobbles, loose to poorly consolidated or cemented, clasts include dolerite, siliceous rocks and ferruginous pisoliths.

~ ~ ~ ~ Erosional surface ~ ~ ~ ~

Clt Terrace deposits ~ 25-40m and 50m above sea level or local base level and of upward fining clay, silt, sand, pebbles and cobbles, rarely boulders, loose to poorly consolidated or cemented, clasts include dolerite, siliceous rocks and ferruginous pisoliths.

~ ~ ~ ~ Erosional surface ~ ~ ~ ~

Clt70 Terrace deposits ~ 70m above sea level and of upward fining clay, silt, sand, pebbles and cobbles, rarely boulders, loose to poorly consolidated or cemented, clasts include dolerite, siliceous rocks and ferruginous pisoliths.

~ ~ ~ ~ Erosional surface ~ ~ ~ ~

TERTIARY

Tf Ferricrete, laterite and bauxite with cemented and soft layers.

Tfp Lower remnants of ferruginous lateritic profile grading down to very weathered rock, lacking silicastone and generally lacking substantial occurrences of ferricrete, commonly developed on dolerite.

Tbx Bauxite profile developed on pre-Tertiary rocks.

Ts Dominantly interbedded poorly consolidated mudstone and clayey labile sandstone, subordinate lignite, conglomerate with cemented layers, and siliceous sandstone; some ferruginous cemented layers and concretions, and some leaf fossils.

Tss Sequence of poorly consolidated slightly micaceous quartz-rich sandstone and conglomerate interbedded with siltstone and mudstone, commonly with some ferruginous and rarely siliceous cement.

Tsc Sequence of poorly consolidated slightly micaceous quartz-rich sandstone and conglomerate interbedded with siltstone and mudstone, underlies Tertiary basalt at Abels Hill.

Tsd Moderately consolidated, dominantly cobble grade with lesser pebble and boulder grade dolerite conglomerate, some sandstone and rare siltstone, zeolite and calcite cements occur frequently (Tsd).

Tsd3 Dominantly cobble grade with lesser pebble to boulder grade dolerite conglomerate; some sandstone and rare siltstone, zeolite and calcite cements occur frequently; mid-Tertiary leaf fossils occur rarely.

Tsd1 Dominantly cobble to pebble grade dolerite conglomerate and sandstone forming distinctive marker beds at Abels Hill. Overlying beds contain N. asperus Zone microflora. Eocene age.

Tsd2 Dominantly dolerite cobble conglomerate, sandstone, lignite and carbonaceous beds. Contains L. balmei Zone microflora of Palaeocene age.

~ ~ ~ ~ Erosional surface ~ ~ ~ ~

TRIASSIC

TRa Moderately lithified, interbedded freshwater quartz sandstone and micaceous shally siltstone.

PERMIAN

P Moderately lithified, medium bedded, glaciomarine sandy clayey siltstone with lonestones on some horizons. Correlate of Bogan Gap Group.

UNDIFFERENTIATED

Qu Undifferentiated Holocene and Pleistocene deposits.

Q-T Undifferentiated Cainozoic deposits and rocks.

CJ Undifferentiated sedimentary deposits and rocks or Jurassic dolerite .

Qur5 Undifferentiated deposits located within the Tamar Estuary ~ 5m above sea level.

IGNEOUS ROCKS

TERTIARY

Tb Basalt, slightly to extremely weathered.

JURASSIC

J0 Dolerite; fresh to extremely weathered. Indicated from previous mapping Longman et al. 1966, Blake 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 enclosing dolerite boulders.

J5n Dolerite; sub-surface zone of extremely weathered dolerite or in situ derived material, may include dolerite kernels grading down to rock.

J6 Dolerite; few or no in situ boulders or rock at land surface - probable thick soil or extremely weathered rock.

J7 Dolerite; surface indication of remnant fossil soil.

J8 Dolerite; some transported and/or in situ boulders at surface, depth to rock uncertain.

J9 Dolerite; surface expression - broken dolerite fragments in red brown soil.

J10 Dolerite; surface expression - rock benches partly buried by talus.

FOOTNOTES

Addition of "?" indicates derived from aerial photo interpretation (1:10 000 scale only).

* Partly as indicated by Lands Department mapping based on 1976 aerial photography.

LOCATION DIAGRAM

Limit of Launceston Urban Mapping Project - 1:10 000 scale maps available.

**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, Meander 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.

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

AGD66 - AMG Zone 55. Contour Interval: 20 metres.

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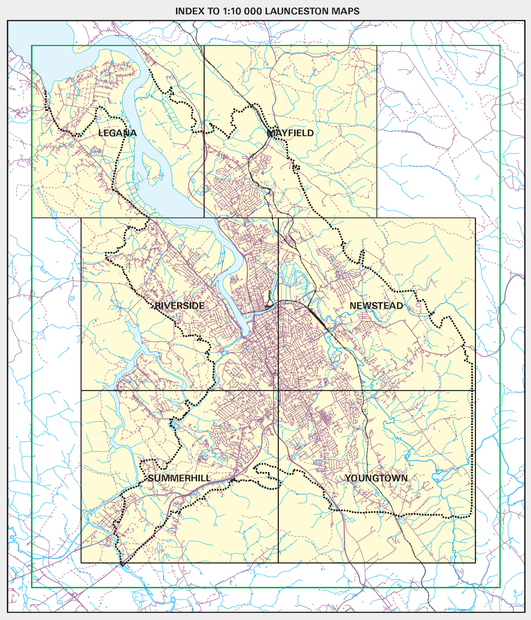
INDEX TO 1:10 000 LAUNCESTON MAPS




WARNING: INKS ARE LIGHT SENSITIVE

Data correct & plotfile generated: 24-MAY-2007
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