Department of Infrastructure Energy and Resources
MINERAL RESOURCES TASMANIA

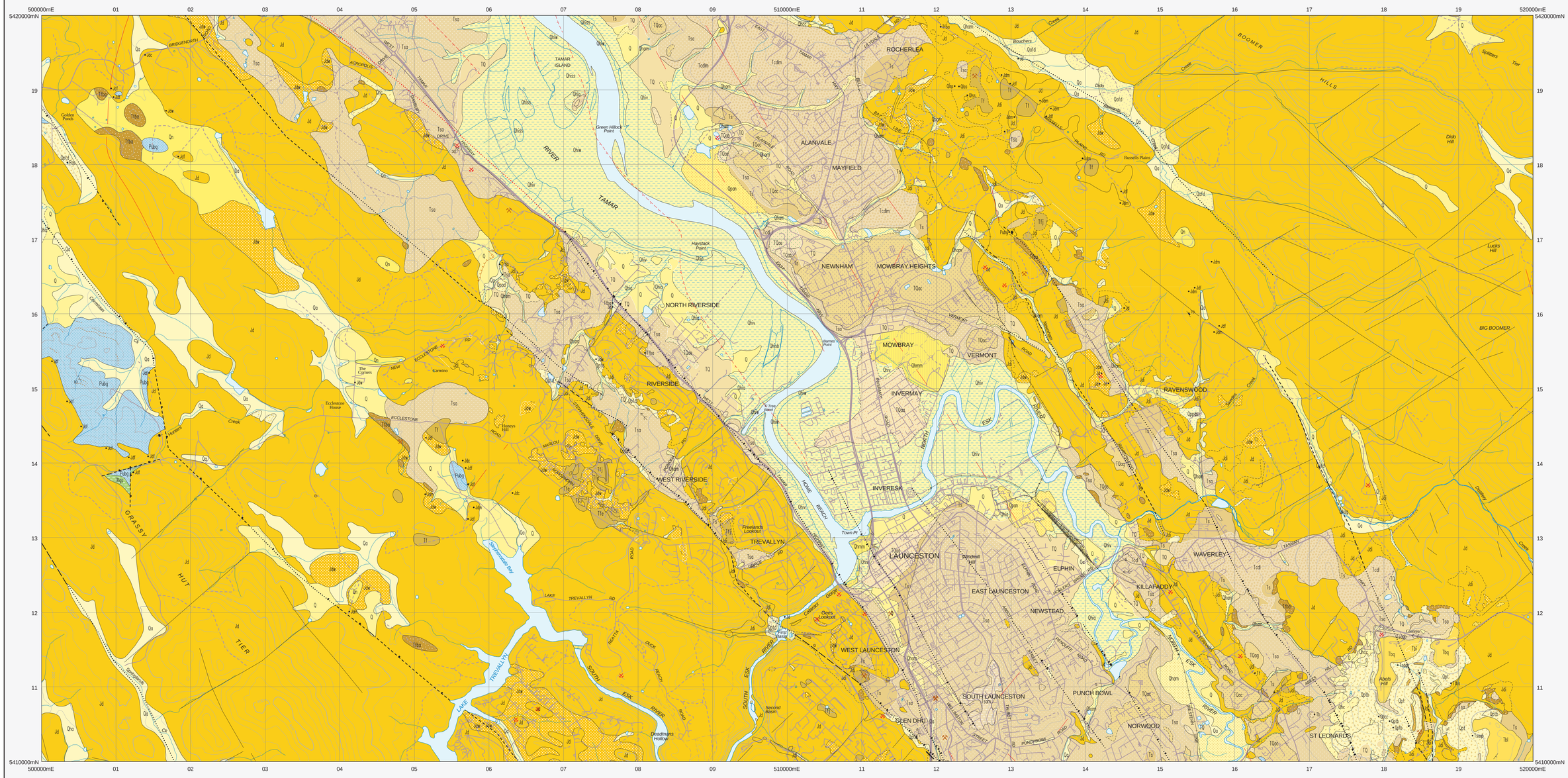
DIGITAL GEOLOGICAL ATLAS 1:25 000 SCALE SERIES
LAUNCESTON, SHEET 5041

LAUNCESTON

Scale: 1:25 000

0 500 1000 1500 2000 2500m

Tasmania
Explore the possibilities



CENOZOIC

QUATERNARY – HOLOCENE

Symbol	Description
Qhmm	Man-made deposits (Qhmm).
Qhls	Landslip and debris flow deposits (Qhls).
Qha	Stream alluvium, swamp and marsh deposits (Qha).
Qham	Alluvial, and swamp deposits of gravel, sand, silt and clay, commonly with organic-rich top layer (Qham). Alluvial gravel deposits (Qhag).
Qhiw	Estuarine deposits of clayey silt, silt, sand and mostly buried gravel: in generalised tidal to shallow water sub-tidal undifferentiated environments (Qhiw), in upper tidal to low supra-tidal, inferred generally saline marsh environments (Qhisz); in low supra-tidal, commonly seaward advancing, inferred brackish marsh environments (Qhisb); estuarine and other deposits including supra-estuarine swamp and lateral alluvial deposits, unmapped man-made land and silt deposits from river dredging at places; in environments inferred to lie above common tidal influence (Qhiv). Undifferentiated estuarine deposits of clayey silt, silt sand and subordinate gravel, grading upstream into alluvium with less clay and silt (Qhis).
Qhc	Colluvial deposits of gravel, sand and clay (Qhc); clayey gravel derived from dolerite (Qhcd); with dolerite clasts derived from Tertiary dolerite conglomerate (Qhcc); with siliceous clasts derived from Cainozoic deposits (Qhcs).
Qa	Alluvial gravel, sand and clay (Qa).
Qafd	Alluvial fan deposits predominantly of dolerite clasts (Qafd).
Qn	Pisolitic ironstone gravel, cemented in places, of lag, alluvial and colluvial origin (Qn).
Qlss	Lag deposit of quartz sandstone and pebbly sandstone, possibly derived from Tertiary sandstone (Qlss).

PLEISTOCENE

Symbol	Description
Qpad	Alluvial terrace deposits predominantly composed of dolerite cobbles (Qpad).
Qpan	Terrace deposit of major estuary or stream with siliceous clast gravel below present sea level, micaceous sand, silt and mud, and of probable Pleistocene age (Qpan).
Qppds	Probable Pleistocene low-gradient alluvial fan and/or alluvial terrace, clasts dominantly dolerite and siliceous rock, situated about 5–10m above neighbouring stream valleys cut in bedrock (Qppds).
Qpt	Talus (Qpt); talus composed predominantly of Jurassic dolerite (Qptd); of Tertiary basalt (Qptb); of ferricrete fragments (Qptx).

CENOZOIC – PLEISTOCENE?

Symbol	Description
TQpe	Late Cainozoic terrace deposits of uncertain composition, generally <5m, extending to approximately 15m above sea or river level, with gravel layers above present sea level (TQpe).
TQpa	Late Cainozoic terrace deposits of siliceous pebble gravel and sand cemented by iron oxides in places, 5–10m above sea level, loose to poorly consolidated, clast composition poorly known, dominantly siliceous in some areas of probable Pleistocene age (TQpa).
TQpb	Late Cainozoic terrace deposits of siliceous pebble gravel and sand cemented by iron oxides in places, ~20m above sea level or local base level, of probable Pleistocene age (TQpb).
TQpc	Late Cainozoic terrace deposits of siliceous pebble gravel and sand with rare boulder-sized clasts, cemented by iron oxides in places, 25–40m and ~50m above sea level or local base level (TQpc).
TQpg	Late Cainozoic terrace deposits of siliceous pebble gravel and sand with rare boulder-sized clasts cemented by iron oxides in places, ~70m above sea level (TQpg).
Tf	Ferricrete, laterite and bauxite with cemented and soft layers (Tf). Lateritic profile, bauxite or other ferricrete inferred from limited outcrop or loose ferricrete fragments (Tf). Lower remnants of lateritic profile grading down to very weathered rock, lacks silicastone and generally lacks substantial occurrences of ferricrete; commonly developed over dolerite (Tfe).
Tb	Basalt (Tb); inferred basalt beneath soil or Cainozoic deposits (Tbi); quartz tholeiite (Tbq), limburgite (Tbl).

CENOZOIC – TERTIARY

Symbol	Description
Ts	Undifferentiated Tertiary sediments; non-marine sequences of gravel, sand, silt, clay and regolith (Ts).
Tcdm	Moderately consolidated, dominantly cobble grade with lesser pebble and boulder grade dolerite conglomerate, some sandstone and rare siltstone; common zeolite and calcite cements (Tcd); with rare horizons of mid-Tertiary leaf fossils (Tcdm).
Tsaqg, Tsaqb	Partly consolidated clay, silt, and clayey labile sand with rare gravel and lignite; some iron oxide-cemented layers and concretions; some leaf fossils (Tsa); poorly consolidated quartz-rich micaceous sandstone and conglomerate interbedded with siltstone and mudstone, commonly with some ferruginous and rarely siliceous cement (Tsaqa); underlying Tertiary basalt at Abels Hill (Tsagb).
Tsa	Tcdl unit dominantly of pebble and cobble conglomerate and sandstone forming marker unit at Abels Hill, of Eocene age and overlain by beds containing Nothofagidites asperus Zone palynoflora (Tcdle).
Tcdl, Tcdle	Brown-grey plastic clay, minor silt, clayey sand and ironstone at South Launceston (Tsam).
Tsam	
Tfbo	Bauxite profile developed on pre-Tertiary rocks and overlain by Tertiary rocks (Tfbo).

MESOZOIC – PALEOZOIC

PERMIAN TRIASSIC – PARMENER SUPERGROUP

Symbol	Description
Rqs	Cross-bedded quartz sandstone, feldspathic sandstone and shale (Rqs).
Pct	Carbonaceous sandstone and shale (Clog Tom Sandstone) (Pct).
Pubg	Unfossiliferous pebbly siltstone, siltstone and sandstone (Bogan Gap Group) (Pubg).

INTRUSIVE ROCKS

MESOZOIC – JURASSIC

Symbol	Description
Jd	Dolerite (Jd). Dolerite of grainsize 0.7–1.5mm (Jdf); 1.5–3mm (Jdm); 3–6mm (Jdc); inferred dolerite beneath soil or Cainozoic deposits (Jdi).
Jdw	Predominantly deeply-weathered dolerite (Jdw).

- Geological boundary – position accurate or approximate.
- Geological boundary – position inferred.
- Fault – position accurate or approximate.
- Fault – position inferred.
- Fault – concealed.
- Fault – normal – position accurate or approximate.
- Fault – normal – inferred.
- Fault – normal – concealed.
- Fault – concealed, inferred from airborne magnetic data.
- Slope break.
- Lithological trend line.
- Lineament visible on aerial photographs.
- Magnetic gradient or lineament (direction towards lower values indicated).
- Lineament visible in airborne magnetic data.
- (white line) Limit of mapping of sub-unit within undifferentiated rock unit ("Colour boundary")

- Strike and dip of bedding – right way up.
- Trend and plunge of lineation of unspecified type.
- Generalised palaeocurrent direction, showing sense of movement.
- Stike and dip of dominant joint set – dipping; vertical.
- Trend of dyke or vein, rock type or mineral specified by RCODE in Point Attribute Table.
- Notable small outcrop with rock unit indicated.
- Mineral deposit location – hardrock
- Construction materials location

Data derived from Mineral Resources Tasmania DEPOSITS data base. Data point position has not been verified in every case.

Complied by S.M. Forsyth, B.Sc, and C.R. Calver, B.Sc.(Hons), Ph.D., 2005 from the following sources (see responsibility diagram)

A C.R. Calver, 1:25 000 mapping 2001–2003

B FORSYTH, S.M. 1996, Geology map, Launceston area, Urban Engineering Geology Series, Tasmanian Geological Survey (recompiled 2005).

C W.R. Moore, 1989. Slope stability and engineering geology of the Blackstone Heights area. Compilation report. Department of Mines unpublished report 1989/06.

D LONGMAN, M.J.; MATTHEWS, W.L.; ROWE, S.M.; 1963 Launceston 1:63 360 Geological Map; minor revision by C.R. Calver.

E GULLINE, A.B., BRAVO, A.P. and NAQVI, I.H. 1973. Geological Atlas 1:63 360 Series. Sheet 38 (8215S), Frankford. Tasmania Department of Mines.

F M. Vicary, 2004. Air photograph and WTRMP geophysical data interpretation.

REFERENCE THIS MAP AS:

FORSYTH, S.M. and CALVER, C.R. (compilers) 2005. Digital Geological Atlas 1:25 000 Scale Series. Sheet 5041. Launceston. Mineral Resources Tasmania.

Base data from the LIST, Copyright State of Tasmania.

Map produced by the Geoscience Information Branch of Mineral Resources Tasmania using G.I.S. software.

GDA94 – MGA Zone 55. Contour Interval: 20 metres.

GDA

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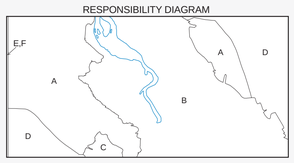
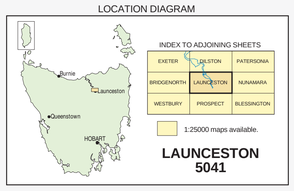
RESPONSIBILITY DIAGRAM



LOCATION DIAGRAM



Plotfile for this map generated from digital data as at: 05-OCT-2010

WARNING: INKS ARE LIGHT SENSITIVE