MINERAL RESOURCES TASMANIA
DIGITAL GEOLOGICAL ATLAS 1:25 000 SERIES
BAINS, SHEET 5228

BAINS

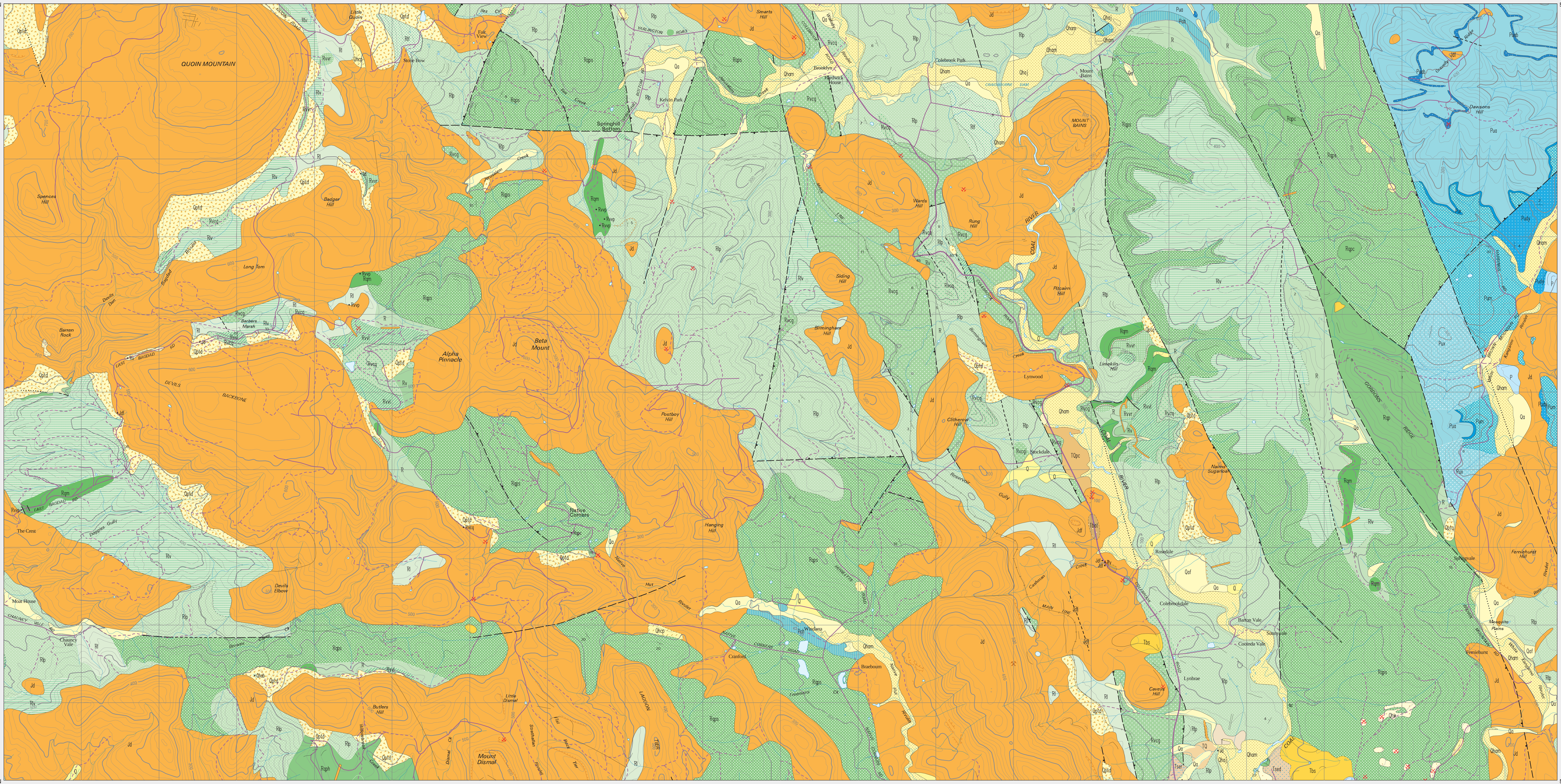
Scale: 1:25 000

0 500 1000 1500 2000 2500m

MINERAL RESOURCES TASMANIA

Tasmania

DEPARTMENT of INFRASTRUCTURE ENERGY and RESOURCES



IGNEOUS ROCKS

CAINOZOIC TERTIARY	Tbao	Alkali olivine basalt (Tbao); tholeiite (Tbs).
MESOZOIC JURASSIC	Jd	Dolerite (Jd), with orthopyroxene (Jdo), dolerite inferred beneath soil or Cainozoic deposits (Jdi). Dolerite of grainsize 0.7 – 1.5mm (Jdf); indicated.

CAINOZOIC – QUATERNARY / TERTIARY

Unit	Description
Qhw	Aeolian and locally derived sand (Qhw); Pleistocene aeolian deposits (Qpw).
Qhcp	Sandy colluvium, derived from Upper Parmeener rocks (Qhcp); clayey gravel derived from dolerite (Qhcd); colluvium derived predominantly from Lower Parmeener rocks (Qhcl).
Qhab	Swamp deposits (Qhab).
Qa / Qham	Alluvial gravel sand and clay (Qa), alluvial fans (Qaf). Holocene alluvium (Qhaj), alluvial and marsh deposits of modern flood plains, gravel, sand, silt and clay commonly with dark coloured top layer (Qham).
Qpao	Alluvial terrace deposits (Qpao).
Qptrr	Dolerite scree deposits (Qptrr).
Qptq	Talus and remobilised talus, predominantly of Upper Parmeener sandstone and sand (Qptq), and talus dominantly of dolerite boulders and in places subordinate Parmeener rocks (Qptd).
TQhab	Late Cainozoic alluvial terrace deposits of well rounded pebbles and cobbles preserved as isolated remnants of relatively high (12 to 20m) alluvial terraces (TQhab).
TQpc	Late Cainozoic pedisediments of sandy clay, soil profile with Pleistocene? sand infills – with basal gravel on slopes of 4–6 degrees, derived by gully sheet and rill erosion from predominantly Tertiary deposits, Carrington geomorphic unit (TQpc).
Tbao	Alkali olivine basalt (Tbao); tholeiite (Tbs).
Tbat	Basaltic volcanic agglomerate, tuff and associated rocks (Tbat).
Tsed	Dominantly plastic poorly-consolidated light cream, grey or tan coloured mudstone, siltstone and sandstone with some soft, friable sandstone (Tsed).
Tser	Dominantly plastic poorly-consolidated light grey, green or brown mudstone, siltstone and sandstone with some friable sandstone, may include beds with granules and pebbles, common ferruginous cemented beds and laminae (Tser).
	Erosional surface.

MESOZOIC – TRIASSIC (UPPER PARMEENER SUPERGROUP); PALAEOZOIC – PERMIAN (LOWER PARMEENER SUPERGROUP)

Unit	Description
Rvcg / Rl / Rlv / Rlf / Rlp	Thick– to thin–bedded volcanic lithic sandstone, siltstone, mudstone and coal seams, fossil plants on some horizons (Newtown Coal Measures in part) (Rvcg), inferred from lag of silicified wood, tuff and quartz porphyry clasts (Rvcgi). Undifferentiated Upper Parmeener below unit Rvcg (Rl). Predominantly massive mudstone and some shale, occasional massive units of quartz sandstone, thin coal seams and rare feldspathic sandstone (Rlv). Dominantly medium and fine–grained quartz sandstone, minor mudstone much mica and graphite on bedding, contains 10 percent feldspar (Rlf). Dominantly medium– coarse–grained sandstone, minor mudstone, minor mica and feldspar content, sandstone to mudstone ratio is <= 3:1, contains clay pellet conglomerate (Rlp).
Rvcq	Interbedded cross–bedded white quartzose sandstone, quartz–rich lithic sandstone, siltstone and mudstone; upper interval with much dark grey carbonaceous mudstone, thin lenticular coal seams and fossil plants in places (Newtown Coal Measures in part) (Rvcq).
Rvvl	Interbedded yellow brown or grey carbonaceous siltstone, mudstone and thin– to thick–bedded quartz–rich lithic, arkosic sandstone, some fossil plants, common siltstone palaeosols (Rvvl).
Rvvs	Predominantly fine–grained quartz sandstone, commonly partly silicified, uncommon horizons with quartz granules and very rarely pebbles; interbedded with mudstone and lithic sandstone at places (Rvvs).
Rvvr	Predominantly brown, buff, grey carbonaceous and green siltstone and mudstone, interbedded with lithic sandstone, quartz sandstone and thin beds of silicified sandstone, horizons of crowded vertical burrows, siltstone palaeosols, and plant fossils at places (Rvvr).
Rvvp	Lenticular variable medium–to coarse–grained sandstone, generally containing quartz granules or pebbles, less commonly cobbles and conglomerate, crowded vertical burrows at places (Rvvp). Rv = Rvcg + Rvcq + Rvvl +Rvvs + Rvvr + Rvvp.
Rqm	Interbedded micaceous brown, red–purple, green and grey carbonaceous siltstone, shale, mudstone and planar bedded, ripple–laminated or cross–bedded sandstone (Rqm).
Rqp / Rqps	Freshwater predominantly cross–bedded quartzose to feldspathic sandstone commonly with overturned cross–bedding and subordinate micaceous siltstone with some red–purple beds, sparse plant and vertebrate fossils (Rqp), Knocklofty Formation) (Rqph) Rqph contact metamorphosed by Jurassic dolerite (Rqphm), intervals predominantly of siltstone, shale, mudstone and sandstone indicated (Rqpc), intervals of thickly bedded medium–coarse–grained quartz sandstone and very minor usually black shale layers and sandstone to shale ratio normally > 10:1 (Rqps).
Pch	Freshwater cross–bedded arkosic to quartzose sandstone and micaceous siltstone, lower interval with some graphitic or carbonaceous sandstone, large calcareous concretions in some areas, thin beds of quartz pebble conglomerate near base in many areas; upper interval less feldspathic (correlate in part of Cygnet Coal Measures) (Pch).
Puab	Thin marker horizon of granule sandstone indicated (Puab). (Probable correlate of Blackwood Conglomerate).
Pua / Pux	Generally unfossiliferous, glaciomarine interbedded non–fissile and fissile siltstone and silty sandstone, common bioturbation, lonestones; uppermost beds of laminated to massive grey siltstone (Pua). (Abels Bay Formation).
Pur	Cliff forming massive, bioturbated to homogeneous, moderately well–sorted feldspathic quartz sandstone with thin pebble–and cobble–rich layers (Risdon Sandstone) (Pur).
Pum	Generally poorly fossiliferous interbedded glaciomarine fine–to medium–grained sandstone and fissile to non–fissile siltstone with common lone stones and pebble–rich patches, top beds richly fossiliferous (Malbina Formation) (Pum).
Pudy	Fossiliferous beds dominantly of mudstone and siltstone (Pudy).

LOWER PARMEENER SUPERGROUP — Lymingtonian Stage — REKUNIAN SERIES

Geological boundary – position accurate or approximate.
Geological boundary – inferred.
Slope break.
Scarp.
Photo lineament.
(white line) Limit of mapping of sub–unit within undifferentiated rock unit.
Fault – position accurate or approximate.
Fault – inferred.
Fault – concealed.
Fault – position accurate or approximate, downthrown side indicated.
Small outcrop or lag occurence.

Strike and dip of bedding, right way up.

Mineral deposit location – hardrock
Mineral deposit location – alluvial
Data derived from Mineral Resources Tasmania DEPOSITS data base. Data point position has not been verified in every case.

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

Compiled by S.M. Forsyth, 2002 from the following sources (see responsibility diagram):

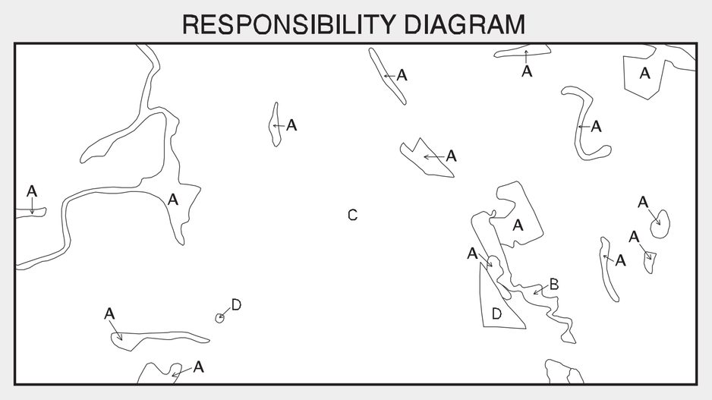
A LEAMAN, D.E. & LEGGE, P.J. 1975. Geological atlas 1:50000 series. Sheet 75 (8312N) Brighton; FORSYTH, S.M. 2000. New 1:25,000 geological mapping.

B LEAMAN, D.E. & LEGGE, P.J. 1975. Geological atlas 1:50000 series. Sheet 75 (8312N) Brighton; HOLZ, G.K. 1987. Soils of part of the Lower Coal River Valley Tasmania. Department of Agriculture Tasmania; HOLZ, G.K. 1993. Principles of Soil occurrence in the Lower Coal Valley, Southeast Tasmania. PhD. thesis, Uni. of Tas. (unpubl); FORSYTH, S.M. 2000. Aerial photo interpretation; EVERARD, J.L. pers comm. 2000.

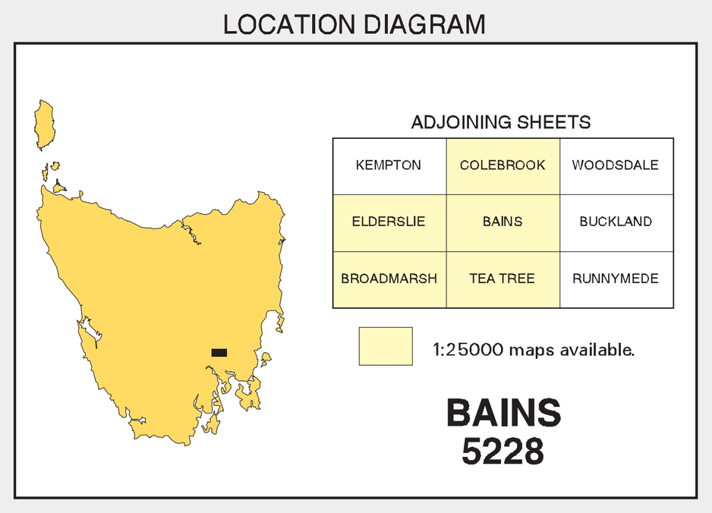
C LEAMAN, D.E. & LEGGE, P.J. 1975. Geological atlas 1:50000 series. Sheet 75 (8312N). Brighton; FORSYTH, S.M. Road-side geological observations and aerial photo interpretation 2000.

D LEAMAN, D.E. & LEGGE, P.J. 1975. Geological atlas 1:50000 series. Sheet 75 (8312N). Brighton; SUTHERLAND, F.L. Cainozoic volcanic rocks. In LEAMAN, D.E. 1977. Geological atlas 1:50000 series Expl. Rep. Sheet 75 (8312N). Brighton.

RESPONSIBILITY DIAGRAM



LOCATION DIAGRAM



REFERENCE THIS MAP AS:
FORSYTH, S.M. (compiler) 2006. Digital Geological Atlas 1:25000 Series, sheet 5228 Bains. Mineral Resources Tasmania.

Base data from the LIST, Copyright State of Tasmania.

Map produced by the Data Management Branch of Mineral Resources Tasmania using G.I.S. software.

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

Plotfile for this map generated from digital data as at: 26-JUN-2008

WARNING: INKS ARE LIGHT SENSITIVE