

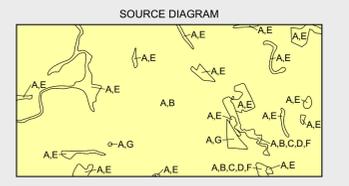
QUATERNARY	GENEOZIC	PALEOZOIC - NEOGENE
Qhw	Undifferentiated Cenozoic sediments (TQ)	Undifferentiated Palaeogene - Neogene (T) Alkali olivine basalt (Tba0); tholeiite (Tb). Basaltic volcanic agglomerates, tuff and associated rocks (Tbat). Dominantly plastic poorly-consolidated light grey, grey or tan coloured mudstone, siltstone and sandstone with some soft, friable sandstone (Tsed). 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.
Qhpc	Alluvial gravel sand and clay (Qa), alluvial fans (Qaf). Holocene alluvium (Qha), alluvial and marsh deposits of modern flood plains, gravel, sand, silt and clay commonly with dark coloured top layer (Qham).	
Qhpb	Sandy colluvium, derived from Upper Permian rocks (Qhpc); colluvium derived predominantly from Lower Permian rocks (Qhpc).	
Qhab	Swamp deposits (Qhab).	
Qhtr	Dolerite scree deposits (Qhtr).	
Qhpc	Talus and remobilized talus, predominantly of Upper Permian sandstone and sand (Qhpc), and talus dominantly of dolerite boulders and in places subordinate Permian rocks (Qhpc).	
Qhpc	Late Cenozoic alluvial terrace deposits of well rounded pebbles and cobbles preserved as isolated remnants of relatively high (12 to 20m) alluvial terraces (TQhab).	
Qhpc	Late Cenozoic pediments of sandy clay, soil profile with Pleistocene? sand infills - with basal gravel on slopes of 4-8 degrees, derived by gully sheet and rill erosion from predominantly Palaeogene - Neogene deposits, Carrington geomorphic unit (TQpc).	
Qhpc	Cenozoic or older strata inferred from close uniform bedding traces visible on aerial photographs (TQx).	
Qhpc	Undifferentiated Palaeogene - Neogene (T). Alkali olivine basalt (Tba0); tholeiite (Tb).	

MESOZOIC	TRASSIAN	UPPER PERMIAN SUPERGROUP	LOWER PERMIAN SUPERGROUP	REKUNIAN SERIES
Rv	Undifferentiated Upper Permian Supergroup rocks (R). Thick to thin-bedded volcanic lithic sandstone, siltstone, mudstone and calcareous fossiliferous sandstone (Newtown Coal Measures in part) (Rvcq), inferred from log of silicified wood, tuff and quartz sulphur clasts (Rvcq). Unconformably overlies Permian (Rv) and Rip (R).	Rv	Rv	Rv
Rv	Predominantly massive mudstone and some shales, occasional massive units of quartz sandstone, thin coal seams and thin felspathic sandstone (Rv). Dominantly medium and fine-grained quartz sandstone, minor mudstone, mica and graphite on bedding, contains 10 percent feldspar (Rv). Dominantly medium to coarse-grained sandstone, minor mudstone, mica and calciferous content, sandstone to mudstone ratio is < 2:1, contains clay pellet conglomerate (Rv).	Rv	Rv	Rv
Rv	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) (Rvca).	Rv	Rv	Rv
Rv	Interbedded yellow brown or grey carbonaceous siltstone, mudstone and thin to thick-bedded quartz-rich lithic, arkosic sandstone, some fossil plants, common siltstone paleosols (Rvvl).	Rv	Rv	Rv
Rv	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).	Rv	Rv	Rv
Rv	Predominantly brown, buff, grey carbonaceous and green siltstone and mudstone, interbedded with lithic sandstone, quartz sandstone and thin beds of siliceous sandstone, horizons of crowded vertical burrows, siltstone paleosols, and plant fossils at places (Rvvr).	Rv	Rv	Rv
Rv	Lenticular variable medium to coarse-grained sandstone, generally containing quartz granules or pebbles, less commonly cobbles and conglomerate, crowded vertical burrows at places (Rvvs).	Rv	Rv	Rv
Rv	Interbedded micaceous brown, red-purple, green and grey carbonaceous siltstone, shales, mudstone and planar bedded, ripple-laminated or cross-bedded sandstone (Rvgn).	Rv	Rv	Rv
Rv	Freshwater predominantly cross-bedded quartzose to felspathic sandstone commonly with overturned cross-bedding and subordinate micaceous siltstone with some red-purple beds, sparse plant and vertebrate fossils (Rvgn). (Knoxholme Formation) (Rvgn), intervals of thickly bedded medium-coarse-grained quartz sandstone and very minor usually black shale layers and sandstone to shale ratio normally > 10:1 (Rvgs).	Rv	Rv	Rv
Rv	Freshwater cross-bedded arkosic to quartzose sandstone and micaceous siltstone, generally siliceous, calcareous interbedded non-fossiliferous and fossiliferous concretions in some areas, thin beds of quartz pebble conglomerate near base in some areas, upper interval less fossiliferous (correlates in part of Cygnet Coal Measures) (Pch).	Rv	Rv	Rv
Rv	Undifferentiated Permian-Carboniferous sediments (P).	Rv	Rv	Rv
Rv	This marker horizon of granule sandstone indicated (probable correlate of Blackwood Conglomerate) (Pua).	Rv	Rv	Rv
Rv	Generally siliceous, calcareous interbedded non-fossiliferous and fossiliferous sandstone, common silurulation, limestones, uppermost beds of laminated and massive grey siltstone (Abels Bay Formation) (Pua).	Rv	Rv	Rv
Rv	Cill forming massive, subhorizontal to homogeneous, moderately well-sorted felspathic quartz sandstone with thin pebble- and cobble-rich layers (Riston Sandstone) (Pvr).	Rv	Rv	Rv
Rv	Generally poorly fossiliferous interbedded glauconitic fine to medium-grained sandstone and fossiliferous siltstone with common fine sandstone and pebble-rich patches, top beds richly fossiliferous (Malbone Formation) (Pum) and pebble-rich patches, top beds richly fossiliferous (Malbone Formation) (Pum).	Rv	Rv	Rv
Rv	Fossiliferous beds dominantly of mudstone and siltstone (Pudy).	Rv	Rv	Rv

MESOZOIC	PALEOZOIC - NEOGENE
Tba0	Alkali olivine basalt (Tba0); tholeiite (Tb).
Jd	Dolerite (Jd), with orthopyroxene (Jdp), dolerite inferred beneath soil or Cenozoic deposits (Jdp). Dolerite of grain size 0.7 - 1.5mm (Jdp), indicated.

CONTACTS	FAULTS	LINEARS
Geological contact.	Geological contact - inferred.	Scarp.
Limit of mapping of sub-unit within undifferentiated rock unit.	Fault - inferred.	Slope break.
	Fault - concealed.	Lineament - visible on aerial photographs.
	Normal fault (downtown side indicated).	Lithological trend line, including bedding trace interpreted from aerial photographs.

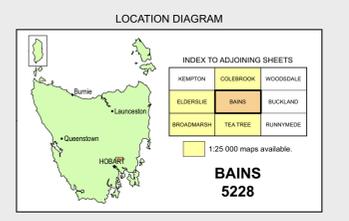
Strike and dip of bedding, right way up.
 Notable small outcrop or float/lag occurrence with rock unit indicated.
 Construction material/industrial mineral/gemstone location.



Compiled by S.M. Forsyth, B.Sc (Hons), 2002 from the following sources (see source diagram):
 A. LEAMAN, D.E. & LEGG, P.J. 1975. Geological Atlas 1:50 000 Series. Sheet 75 (B3124). Brighton, Tasmania: Department of Mines.
 B. S.M. Forsyth. Road-side geological observations and aerial photo interpretation - 2000.
 C. HOLZ, G.K. 1987. Soils of part of the Lower Coal River Valley Tasmania. Department of Agriculture Tasmania.
 D. HOLZ, G.K. 1993. Principles of Soil occurrence in the Lower Coal Valley, Southeast Tasmania. Ph.D. thesis, University of Tasmania.
 E. S.M. Forsyth. New 1:25 000 geological mapping - 2000.
 F. J.L. EVERARD. Personal communication - 2000.
 G. SUTHERLAND, F.L. Carbonaceous volcanic rocks. In LEAMAN, D.E. 1977. Geological Atlas 1:50 000 Series Expl. Rep. Sheet 75 (B3124). Brighton, Tasmania: Department of Mines.

REFERENCE THIS MAP AS:
 FORTSYTH, S.M. (compiler) 2006. Digital Geological Atlas 1:25 000 Scale Series. Sheet 5228 Bains. Mineral Resources Tasmania.

Base data from the LIST, Copyright State of Tasmania.
 Map produced by Spatial Information Services, Mineral Resources Tasmania.
 Website: www.mrt.tas.gov.au
 GDSM - MGA Zone 55. Contour Interval: 20 metres.



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