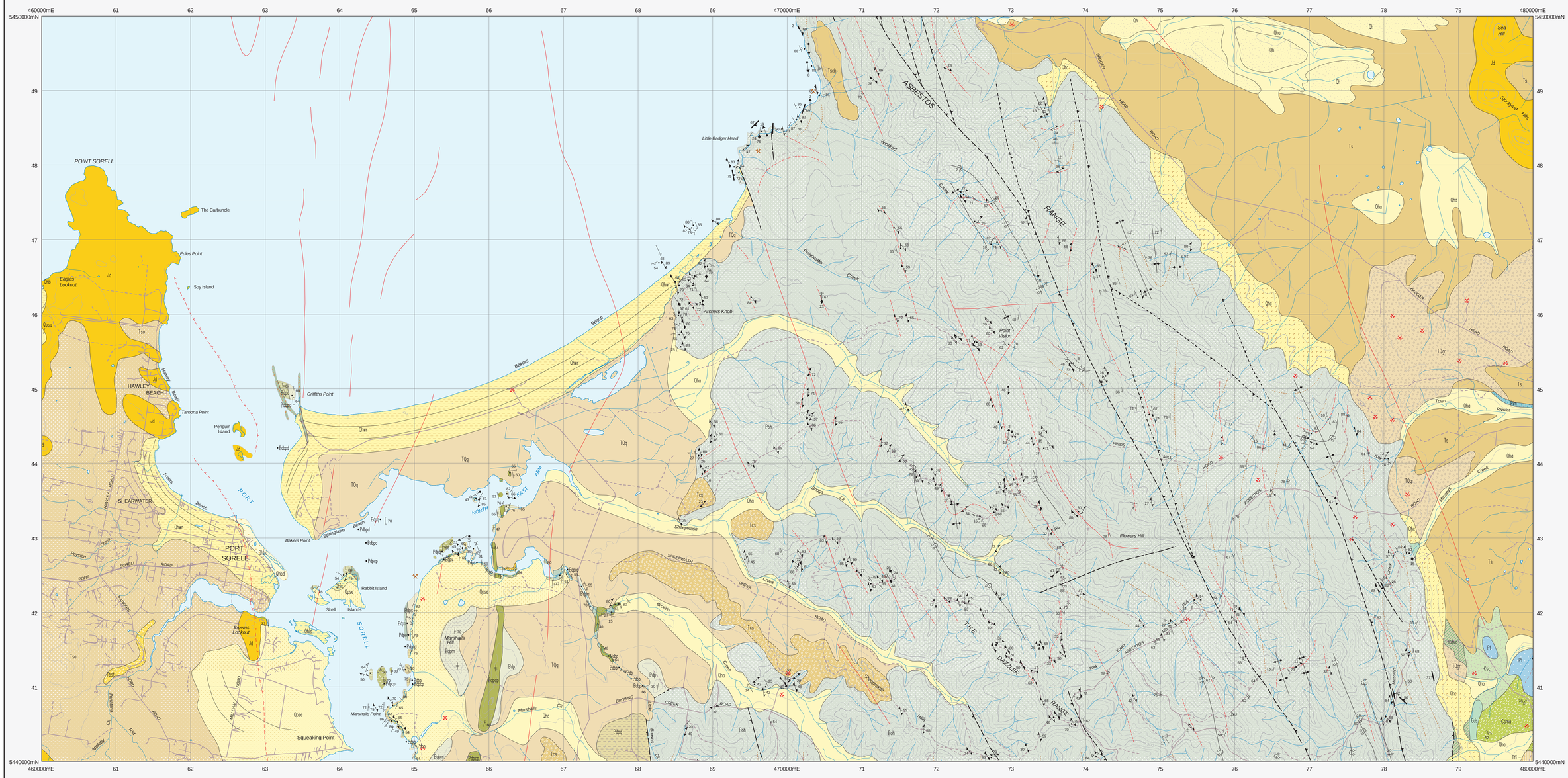
Department of Infrastructure Energy and Resources
MINERAL RESOURCES TASMANIA

DIGITAL GEOLOGICAL ATLAS 1:25 000 SCALE SERIES
PORT SORELL SOUTH, SHEET 4644

PORT SORELL SOUTH

Scale: 1:25 000

0 500 1000 1500 2000 2500m



COMPOSITE LEGEND FOR PORT SORELL NORTH AND PORT SORELL SOUTH

Era	Period	Unit	Description
CENOZOIC	QUATERNARY	Qhbd	Undifferentiated sand, gravel and clay of alluvial, lacustrine and littoral origin (Qh). Dune and beach sand and beach gravel (Qhbd). Beach sand (Qhb).
		Qhwr	Sand of stabilised longitudinal beach ridges (Qhwr).
		Qh / Qha	Stream alluvium, swamp and marsh deposits (Qha).
		Qhc	Colluvium (Qhc).
		Qhis	Paralic clay, silt, sand and minor gravel deposits of modern slat marsh and associated tidal flats (Qhis).
		Qpsa	Older stabilised aeolian sand of coastal plain, with underlying marine sands in places (Qpsa).
		Qpse	Coastal fine-grained sand and pebbly sand (Qpse).
		TQq	Undifferentiated sand and gravel deposits (TQq).
		TQgr	Rounded gravel, mainly vein quartz (TQgr).
	PALEOGENE – NEOGENE	Tcs	Semiconsolidated siliceous gravel and fine-grained sand (Tcs).
		Tcf	Siliceous conglomerate and course-grained sandstone, cemented with iron oxides in places (Tcf).
		Tfi	Pisolitic ironstone (Tfi).
		Ts / Tb	Dominantly non-marine sequences of gravel, sand, silt, clay and regolith (Ts). Basalt (Tb).
		Tscb	Quartz sandstone and siltstone with common plant matter (Tscb).
		Tso / Tbs1	Sand, quartzite gravel and clay, including interbasalt deposits (Wesley Vale Sand) of Oligocene age (Tso). Non-vesicular to highly vesicular and amygdaloidal, in places deeply-weathered, alkali-olivine basalt, with minor volcanic sandstone and breccia, dated at 38.1 +/- 0.6 Ma (Thirlstane Basalt) (Tbs1).
			Erosional surface.
PALEOZOIC	PERMIAN	Pfh / Plm / Pt	Quartz sandstone and shale, carbonaceous in some places, and minor conglomerate (Pfh). Mudstone, pebbly siltstone and sandstone (Plm). Tillite (Pt). (Plm, Pt : Massey Creek Group). — LOWER PARMEENER SUPERGROUP
			Angular unconformity.

Era	Period	Unit	Description	Group
PALEOZOIC	CAMBRIAN	Ꞓds	Slate with lesser sandstone. Possible correlate of Blyths Creek Formation (Ꞓds).	DUNDAS GROUP
		Ꞓdslc	Laminated, commonly brecciated chert (Ꞓdslc).	
NEOPROTEROZOIC		Pdp	Undifferentiated sequences of predominantly mudstone, shale, slate and phyllite, with sandstone, siltstone, chert, basalt, dolostone, conglomerate and cataclasite; strongly faulted in most areas (Port Sorell Formation) (Pdp).	PORT SORELL FORMATION
		Pdpc	Cataclasite and tectonic melange (Pdpc).	
		Pdp / Pdppp	Basalt (Pdpp); porphyritic basalt (Pdppp).	
		Pdpv	Mafic-volcaniclastic sandstone, siltstone and shale, with minor conglomerate (Pdpv).	
		Pdpo	Dolostone interbedded with chert and shale (Pdpo).	
		Pdpcp	Chert, thinly interbedded with shale in most areas (Pdpcp).	
		Pdpp	Laminated black to grey-green shale with minor siltstone, chert and dolostone; lacking sandstone (Pdpp).	
		Pdpm	Interbedded muscovitic quartz sandstone and shale (Pdpm).	
		Pdps	Dominantly black shale, with minor sandstone, siltstone, chert, dolostone and basalt (Pdps).	
		Pdpq	Laminated mudstone, slate and siltstone, with lesser interbedded quartzarenite (Pdpq).	
?NEO-PROTEROZOIC		Poh	Sandstone, slate and phyllite (Poh).	BASSETT HEAD GROUP

INTRUSIVE ROCKS

Era	Period	Unit	Description	Group
PALEOZOIC MESOZOIC	JURASSIC	Jd	Dolerite and related rocks (Jd).	
PALEOZOIC	CAMBRIAN	Ꞓsc	Norite to gabbronorite (Ꞓsc).	
		Ꞓsmo	Serpentinite with amphibole (Ꞓsmo).	
NEOPROTEROZOIC		Pdp / Pdppp	Basalt (Pdpp); porphyritic basalt (Pdppp).	PORT SORELL FORMATION
		Pdpd	Dolerite (Pdpd).	

- Geological boundary – position accurate or approximate.
- Geological boundary – inferred.
- Fault – position accurate or approx.
- Fault – inferred.
- Fault – concealed.
- Normal fault (downthrown side indicated) position accurate or approx.
- Thrust fault (teeth on upper plate) – position accurate or approx.
- Thrust fault (teeth on upper plate) – inferred.
- Lithological trend line.
- Trend line – S2 cleavage in Proterozoic sedimentary rocks.
- Aeromagnetic lineament.
- Airphoto lineament.
- Magnetic gradient or lineament.
- Axial surface trace of major later fold – Antiform.
- Axial surface trace of major later fold – Synform.
- Axial surface trace of major early fold – Overturned antiform.
- Axial surface trace of major early fold – Overturned synform.
- Limit of mapping.

- Strike and dip of bedding – right way up, overturned, facing unknown, vertical, horizontal.
- Strike and dip of compositional layering.
- Strike and dip of cleavage of unspecified type and relative age.
- Strike and dip of cleavage, relative local age S1; S2; S2 vertical; S3; S4; S4 vertical; S5.
- Strike and dip of crenulation cleavage.
- Strike of outcrop-scale fault; with dip indicated; thrust fault.
- Strike and dip of outcrop-scale fault, relative local age D2, type unspecified.
- Strike and dip of cataclastic foliation, vertical.
- Trend and plunge of minor fold hinge line, unspecified relative age.
- Trend and plunge of minor fold hinge line, relative local age F1; F1 dextral vergence; F1 sinistral vergence; F2; F2 dextral vergence; F2 sinistral vergence; F3; F4; F4 dextral vergence; F4 sinistral vergence; F5. Where present, tick denotes dip direction of axial surface.
- Trend and plunge of hinge line of downward-facing minor fold; unspecified relative age, symmetrical; relative local age F4, vergence sinistral; relative local age F2; relative local age F4, vergence sinistral.
- Trend and plunge of lineation of unspecified type.
- Trend and plunge of bedding/primary cleavage intersection lineation (L1); trend and plunge of lineation L2 formed by intersection of cleavages or foliations of relative local ages S1 and S2.
- Trend and plunge of mineral elongation lineation.
- Strike and dip of dominant joint set.
- Notable small outcrop with rock unit indicated
- Field station for adjacent readings on the map.
- Mineral deposit location – hardrock
- Mineral deposit location – alluvial/tailings
- Construction material/industrial mineral/gemstone location

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

Compiled by A.R. Reed, B.Sc.(Hons), Ph.D, and C.R.Calver, B.Sc.(Hons), Ph.D, 2002 from the following sources. (see responsibility diagram)

A Gee and Legge 1971 (Beaconsfield 1:63 360).

B A.R. Reed,1998–2000, new mapping.

C C.R.Calver, 1998–2000, new mapping
A.R. Reed, 1998–2000, new mapping.

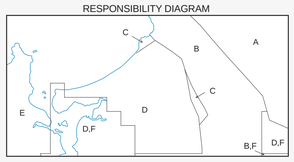
D C.R.Calver, 1998–2000, new mapping.
Gee and Legge 1971 (Beaconsfield 1:63 360).

E Gee and Legge 1971 (Beaconsfield 1:63 360).
Cromer 1993 (Geological Survey Bulletin 67).

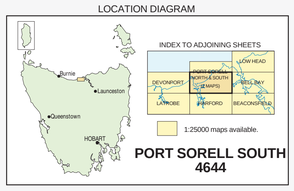
Updated by:

F M. Vicary 2004, as part of the Western Tasmanian Regional Minerals Program, with additional data from Calver, C. and Reed, A.R., Chapter 7, Port Sorell Formation, in Reed, A.R. (2001). Structure and setting of Proterozoic and Palezoic rocks in the Tamar Region, Northern Tasmania. Geol. Soc. Aust. Specialist Group in Tectonics and Structural Geology Field Guide No 9.

RESPONSIBILITY DIAGRAM



LOCATION DIAGRAM



PORT SORELL SOUTH
4644

REFERENCE THIS MAP AS:

REED, A.R. and CALVER, C.R. (compilers) 2002. Digital Geological Atlas 1:25 000 Scale Series. Sheet 4644. Port Sorell. Mineral Resources Tasmania.

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

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

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