MINERAL RESOURCES TASMANIA
DIGITAL GEOLOGICAL ATLAS 1:25 000 SERIES
PORT SORELL SOUTH, SHEET 4644

PORT SORELL SOUTH

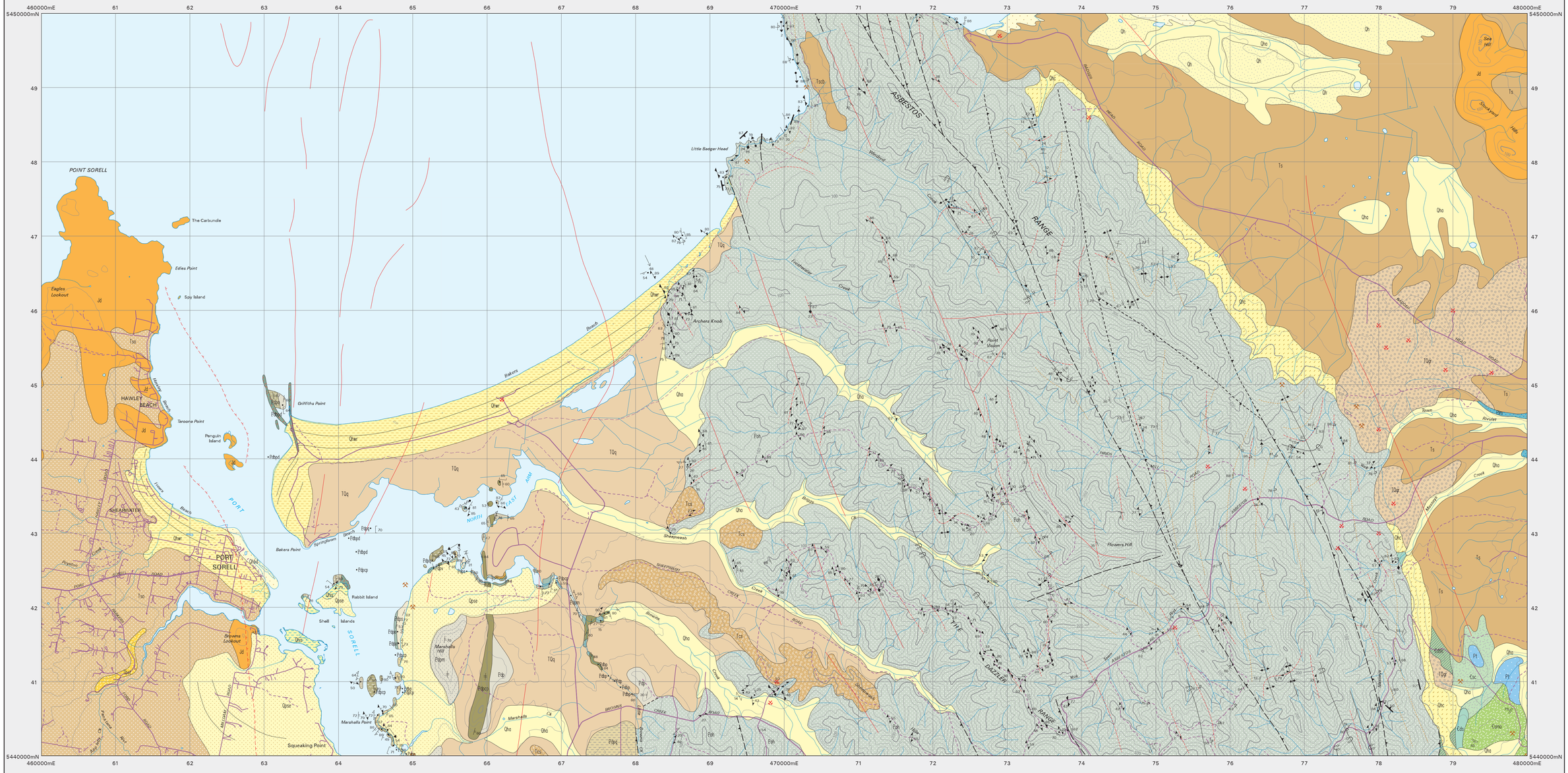
Scale: 1:25 000

0 500 1000 1500 2000 2500m

MINERAL RESOURCES TASMANIA

Tasmania

DEPARTMENT of INFRASTRUCTURE ENERGY and RESOURCES



CAINOZOIC

QUATERNARY

- **Qhbd** — *Undifferentiated sand, gravel and clay of alluvial, lacustrine and littoral origin (Qh). Dune and beach sand and beach gravel (Qhbd).*
- **Qhwr** — *Sand of stabilised longitudinal beach ridges (Qhwr).*
- **Qha** — *Stream alluvium, swamp and marsh deposits (Qha).*
- **Qhc** — *Colluvium (Qhc).*
- **Qhts** — *Paralic clay, silt, sand and minor gravel deposits of modern slat marsh and associated tidal flats (Qhts).*
- **Qpse** — *Coastal fine–grained sand and pebbly sand (Qpse).*
- **TQq** — *Undifferentiated sand and gravel deposits (TQq).*
- **TQgr** — *Rounded gravel, mainly vein quartz (TQgr).*

TERTIARY

- **Tcs** — *Semiconsolidated siliceous gravel and fine–grained sand (Tcs).*
- **Tcf** — *Siliceous conglomerate and course–grained sandstone, cemented with iron oxides in places (Tcf).*
- **Ts** — *Dominantly non–marine sequences of gravel, sand, silt, clay and regolith (Ts).*
- **Tscb** — *Quartz sandstone and siltstone with common plant matter (Tscb).*
- **Tso** — *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) (Tbst).*
- **Tbst**

Erosional surface.

PALAEOZOIC

PERMIAN (LONGFORD–PARMENER SUPERGROUP)

- **Pth** — *Quartz sandstone and shale, carbonaceous in some places, and minor conglomerate (Pth).*
- **Pm / Pt** — *Mudstone, pebbly siltstone and sandstone (Pm). Tillite (Pt). (Pm, Pt : Massey Creek Group).*

Angular unconformity.

PROTEROZOIC

PALAEOZOIC — CAMBRIAN (DUNDAS GROUP)

- **Ꞓds** — *Slate with lesser sandstone. Possible correlate of Blyths Creek Formation (Ꞓds).*
- **Ꞓdslc** — *Laminated, commonly brecciated chert (Ꞓdslc).*

NEOPROTEROZOIC (PORT SORELL FORMATION)

- **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).*
- **Pdpc** — *Cataclasite and tectonic melange (Pdpc).*
- **Pdpp / 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).*

TNEO–PROTEROZOIC (BADGER HEAD GROUP)

- **Poh** — *Sandstone, slate and phyllite (Poh).*

INTRUSIVE ROCKS

MESOZOIC — JURASSIC

- **Jd** — *Dolerite and related rocks (Jd).*

PALAEOZOIC — EARLY CAMBRIAN

- **Ꞓsc** — *Norite to gabbronorite (Ꞓsc).*
- **Ꞓsma** — *Serpentinite with amphibole (Ꞓsma).*

PROTEROZOIC — NEOPROTEROZOIC (PORT SORELL FORMATION)

- **Pdbp / Pdppp** — *Basalt (Pdbp); porphyritic basalt (Pdppp).*
- **Pdbpd** — *Dolerite (Pdbpd).*

Geological boundary – position accurate or approximate.
Geological boundary – inferred.
Fault – position accurate or approx.
Fault – inferred.
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.

Strike and dip of bedding – right way up, overturned, vertical, horizontal.
Strike and dip of bedding, facing unknown.
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 of unspecified type and relative age.
Strike and dip of outcrop–scale fault of unspecified relative age, type unspecified.
Strike and dip of outcrop–scale thrust fault of unspecified relative age.
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 F1, 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.
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.

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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, B.Sc.(Hons), Ph.D. - new mapping 1998–2000.
C C.R.Calver, B.Sc.(Hons), Ph.D. - new mapping 1998–2000.
A.R. Reed, B.Sc.(Hons), Ph.D. - new mapping 1998–2000.

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

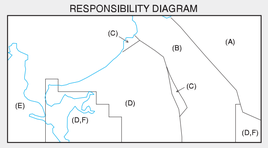
E Gee and Legge 1971 (Beaconsfield 1:63,360).
Cromer 1993 (Geological Survey Bulletin 67).

F Updated as part of WTRMP by M. Vicary 2004, 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 Palaeozoic rocks in the Tamar Region, Northern Tasmania. Geol. Soc. Aust. Specialist Group in Tectonics and Structural Geology Field Guide No 9.

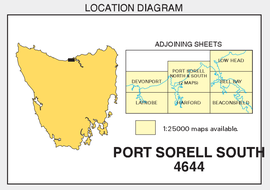
Digital base information from Information and Land Services Division, Department of Primary Industries, Water and Environment.

Map produced by the Data Management Branch of Mineral Resources Tasmania using G.I.S. software. AGD66 - AMG Zone 55. Contour Interval: 20 metres.

RESPONSIBILITY DIAGRAM



LOCATION DIAGRAM



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Data correct & plotfile generated: 28-APR-2005

WARNING: INKS ARE LIGHT SENSITIVE