



TASMANIAN ACID DRAINAGE RECONNAISSANCE

DISTRIBUTION OF ACID SULPHATE SOILS IN TASMANIA

SCALE 1:500000



Acid Sulphate Soils

Acid sulphate soils (ASS) are sediments containing sulphide minerals (dominantly pyrite) formed in reducing environments that contained rich sources of sulphate, iron and organic matter. Many coastal floodplains, backswamps and remnant saltwater lagoons and lakes commonly contain sedimentary layers mineralised with pyrite. Acid drainage (AD) is produced when the pyrite in the sediments is exposed to oxidising conditions as a result of disturbance from landuse practices. The AD can mobilise toxic levels of dissolved metals which can seriously impact water quality and aquatic life in the drainage system.

Field assessments and the total oxidisable sulphur (TOS) of the soil samples are used to categorise ASS at some selected sites investigated in this survey. The ASS screening criteria used to confirm actual acid sulphate soils (AASS), potential acid sulphate soils (PASS) and non-acid sulphate soils (NASS) are tabulated below.

ASS screening criteria

TOS (%)	Drain Water pH (if present)	Field Soil pH pH(F)	Field Peroxide pH pH(FOX)	ASS Types
> 0.10	< 5.0	< 4.0	< 4.0	AASS
> 0.10	> 5.0	> 4.0	< 4.0	PASS
> 0.10	> 5.0	> 4.0	> 4.0	NASS

The map shows the distribution of ASS in coastal sediments sampled in this survey. Coastal sediments with potential to host ASS are shown as a background layer.

ASS Distribution

- Actual acid sulphate soils (AASS)
- Potential acid sulphate soils (PASS)
- Non-acid sulphate soils (NASS)
- Distribution of coastal sediments with potential to host ASS.

This map is one of a series of four AD maps compiled from the 1999 - 2000 Tasmanian Acid Drainage Reconnaissance (INRC 13187).

Refer to this map as:
Gearing, S. 2001. Tasmanian Acid Drainage Reconnaissance. Map 4. Distribution of Acid Sulphate Soils in Tasmania. Mineral Resources Tasmania.

Map accompanies report titled:
Gearing, S. 2001. Tasmanian Acid Drainage Reconnaissance. II. Distribution of Acid Sulphate Soils in Tasmania. Tasmanian Geological Survey Report 2001/6.

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

Map produced by the Data Management Group of Mineral Resources Tasmania using G.I.S. software. Grid: Australian Map Grid, Zone 55.

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