

BSW Boatswain Land System

Area: 19.7 km²

Landscape: Plains near Boatswain Point on the seaward side of Woakwine Range. Mostly the land system consists of level to gently undulating plains with moderately-shallow to shallow, red sandy soils over calcarenite. Coastal alkaline peaty swamps occur in places. Previously included in Noolook land system by Blackburn, but is now given separate land system status because of the presence of swamps & higher exposure rating.

Annual rainfall: 660 – 670 mm average

Geology: Holocene Saint Kilda Formation including quartz-carbonate dune sand of the Semaphore Sand Member and un-named lagoonal sediments. Pleistocene Bridgewater Formation calcarenite forms part of the inland edge.

Main soils:

- B6** (41%) Shallow loam over red-brown clay on calcrete (Petrocalcic Red Chromosol-Kandosol)
- B3** (16%) Shallow sandy loam on calcrete (Petrocalcic Red Tenosol-Kandosol-Rudosol)
- H3** (12%) Bleached siliceous sand (sandy Bleached Tenosol)

Minor soils:

- N1** (8%) Peaty soil (Organosol)
- B8** (6%) Shallow bleached sand on calcrete (sandy Petrocalcic Rudosol-Tenosol)
- N3** (4%) Wet soil (non to moderately saline) (Sodosolic-Calcarosolic-Dermosolic Hydrosol)
- B2** (3%) Shallow calcareous loam on calcrete (Petrocalcic Calcarosol-Rudosol)

Summary: The soils are mostly well drained and are relatively shallow over calcrete. The coastal aspect of the land system gives a high, salt-laden wind exposure rating and hence difficulties with salt sensitive crops.

Soil Landscape Unit summary: Boatswain Land System (BSW)

SLU	% of area	Component	Main soils	Prop#	Notes
MBA	12.7	Plain	B3B8	D	<p>MBA Plain with shallow sand, often bleached, over calcrete. MBB Gently undulating rises with shallow sand, often over poorly structured brown clay, on calcreted calcarenite; 10-30% have shallow shelly sand.</p> <p>MBC Undulating rises with shallow sand, often over red clay, on calcreted calcarenite. 10-30% of rises have very shallow shelly sand bare calcrete. <10% swales with mostly shallow sandy loam over red clay on calcrete and other very shallow soils.</p> <p>MBP Gently undulating rises with shallow sand over red sandy clay, on calcreted calcarenite; 10-30% deep siliceous sand, 10-30% shallow sand on calcrete. <10% swampy swales with mostly wet, organic loamy soils on dark clay loam or shelly sediment, occasionally peaty or shallow on calcrete.</p> <p>Main soils: Rises: <u>Shallow sandy loam on calcrete - B3</u>, <u>Shallow sandy loam over red-brown clay on calcrete - B6</u> and <u>Sand over friable brown clay on calcrete - B7</u>. Plains: <u>Shallow sandy loam on calcrete - B3</u> and <u>Shallow sand on calcrete - B8</u>. Swales: <u>Shallow sandy loam over red-brown clay on calcrete - B6</u>. Swampy swales: <u>Wet clay loam - N3</u>; <u>Deep alluvial loam - M1</u>.</p>
MBB	0.4	Rise	B3B7	D	
MBC	0.3	Rise	B3B6	D	
		Swale	B6	M	
MBP	64.8	Low rise	B6	D	
		Swampy swale	N3M1	M	



MCA	2.9	Plain	B6B3 B8	D	Plains with shallow sandy loam, mostly over red clay, on calcreted calcarenite; but often shallow bleached sand on calcrete; 10-30% shallow sandy loam on poorly structured clay on calcrete or bare calcrete. Main soils: <u>Shallow sandy loam over red-brown clay on calcrete</u> - B6 , <u>Shallow sandy loam on calcrete</u> - B3 and <u>Shallow sand on calcrete</u> - B8 .
XHA	3.1	Swampy plain	B8B3	D	Swampy plains with shallow, commonly bleached, sands on calcrete. Main soils: <u>Shallow sand on calcrete</u> - B8 and <u>Shallow sandy loam on calcrete</u> - B3 .
XtC	2.6	Swamp	N1	D	XtC Peat swamps. Xtd Peat swamps; 20-30% sand rises with deep poorly to moderately drained siliceous sands; 10-30% well-drained sands. Main soils: Swamps: <u>Peaty soil</u> - N1 . Sandy rises: <u>Wet highly leached sand</u> - I2 .
Xtd	10.1	Swamp	N1	V	
		Sandy rise	I2	C	
XxC	3.2	Swamp	N1N3 WW	D	Swamps with deep acid peats, organic loam over clay, or water filled. Main soils: <u>Peaty soil</u> - N1 and <u>Wet clay loam</u> - N3 .

PROPORTION codes assigned to components within Soil Landscape Units (SLU):

D	Dominant in extent (>90% of SLU)	C	Common in extent (20–30% of SLU)
V	Very extensive in extent (60–90% of SLU)	L	Limited in extent (10–20% of SLU)
E	Extensive in extent (30–60% of SLU)	M	Minor in extent (<10% of SLU)

Detailed soil profile descriptions:

- B3** Shallow sandy loam on calcrete (Petrocalcic Rudosol)
Medium thickness non calcareous sandy loam, often having a slight clay increase with depth, over calcreted calcarenite shallower than 50 cm - rises.
- B6** Shallow sandy loam over red-brown clay on calcrete (Petrocalcic, Red Kandosol)
Medium thickness sandy loam with slight ironstone gravel overlying a weakly structured reddish brown sandy clay on calcarenite within 50 cm - rises.
- B7** Shallow sand over sandy clay on calcrete (Petrocalcic, Brown Chromosol)
Medium thickness sand overlying brown friable sandy clay to clay on limestone or calcreted sandy clay within 50 cm - flats.
- B8** Shallow sand on calcrete (Petrocalcic, Bleached-Leptic Tenosol)
Thick bleached sand over calcreted calcarenite within 50 cm - rises.
- I2** Wet highly leached sand (Fragic, Humic, Aquic Podosol)
Grey sand with a thick bleached A2 horizon, overlying a thin to thick layer of coffee rock, grading to pale brown sand sharply overlying a grey, brown and yellow mottled sandy clay loam to light clay.
- M1** Alluvial loam (Orthic Tenosol)
Very thick loam with variable gritty or more-clayey lenses, formed over recent alluvium.
- N1** Peat (Organosol) Peaty soil
- N3** Seasonally waterlogged, non to marginally saline equivalents of soils listed above, viz.:
N3c Wet **G3**
N3d Wet **B5**
N3e Wet **B7**
- WW** Water

Further information: [DEWNR Soil and Land Program](#)

