SCB Sceale Bay Land System

Area: 100.3 km²

Landscape: Peninsula formed on Ripon / Bakara Calcretes and overlain in turn by Bridgewater

Calcarenites, highly calcareous silty sands of the Woorinen Formation and highly calcareous Lowan Sands. Along the coastline are moderate to high dunes of calcareous/siliceous

Semaphore Sand, with backswamps. The landscape is gently undulating.

Annual rainfall: 325 - 350 mm average

Main soils: Semaphore - H1a/H3 (Shelly Rudosol)

Very thick sand comprising mixed shell and quartz grains.

<u>Calcrete soil</u> - **B2** (<u>Petrocalcic</u>, <u>Lithocalcic</u> <u>Calcarosol</u>)

Thin calcareous sandy loam to clay loam over hard calcreted Bridgewater Formation calcarenite (**B2a**), or older Ripon / Bakara Calcrete (**B2b**), associated with abundant surface

calcrete stone and sheet rock.

<u>Russell</u> - **B1a** (Supravescent, Petrocalcic, Lithocalcic Calcarosol)

Medium thickness highly calcareous loamy sand to sandy loam containing increasing

amounts of rubble with depth, over sheet calcrete at less than 50 cm.

<u>Haslam</u> - **H1b** (Supravescent, Hypercalcic Calcarosol / Shelly Calcarosol)

Thick highly calcareous sand, becoming more calcareous with depth and continuing below

100 cm. These soils may consist of up to 90% fine shell fragments.

<u>Wookata</u> - **A1** <u>(Supravescent, Hypercalcic / Lithocalcic Calcarosol)</u>

Very highly calcareous (more than 40% CaCO₃) soft loamy sand to sandy loam grading to

very highly calcareous sandy loam with variable rubble content.

Minor soils: Yamba - N2b (Hypersalic Hydrosol)

Variable highly saline sand and clay of coastal flats and swamps.

<u>Chintumba</u> - **B1b** (<u>Hypervescent, Petrocalcic, Lithocalcic Calcarosol</u>)

Medium thickness highly calcareous sandy loam to sandy clay loam containing increasing

amounts of rubble with depth, over sheet calcrete at less than 50 cm.

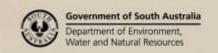
Saline soil - **N2a** (Salic / Hypersalic Hydrosol)

Miscellaneous wet saline soil influenced by rising saline groundwater tables.

Summary: Gently undulating flats and rises with mixed stony, sandy and sandy loam soils. The stony

areas include inland calcrete flats and coastal calcarenite outcrops. The soils are shallow, rocky and non arable. They represent almost 40% of the area. Coastal sands (highly infertile and extremely susceptible to wind erosion) occupy about 25% of the area. Highly calcareous sandy loams and sands (about 30% of the area) are arable, although of marginal fertility and moderately to highly susceptible to wind erosion. The rest of the land is non productive salt

flats and salt lakes.





Soil Landscape Unit summary: 16 Soil Landscape Units (SLUs) mapped in the Sceale Bay Land System

SLU	% of area	Component	Main soils	Prop#	Notes
M-A	11.3	Very stony flats	Calcrete	D	Flats formed on Bridgewater Calcarenites with
MaA	3.0	Stony flats	Chintumba	D	mainly shallow stony soils (non arable), and limited
MeA	3.1	Moderate sandhills	Semaphore	E	deep sands. These are infertile and highly
		Stony flats	Chintumba	E	susceptible to wind erosion
QFK	7.7	Stony flats with saline	Calcrete	V	Flats formed on Ripon / Bakara Calcrete. Most of the
		patches			land is non arable (shallow, stony and salty), and the
		Sandspreads	Haslam	L	sand spreads are marginally arable - they are highly infertile and prone to wind erosion.
WFC	6.1	High coastal sandhills	Semaphore	D	Coastal landscapes of modern dunes, Bridgewater
WFD	5.0	Moderate coastal dunes	Semaphore	D	Formation calcarenites and saline back swamps.
WFc	2.3	High bare coastal dunes	Semaphore	D	None of this land has any agricultural value due to
WFd	1.5	Moderate bare coastal	Semaphore	D	either wind erosion potential, low fertility, low
		dunes			waterholding capacity, rock outcrop or salinity /
WO-	4.8	Saline back swamp	Yamba	D	waterlogging.
WX-	19.5	Frontal slopes:			
		Sandy	Semaphore	E	
		Stony	Russell	E	
WY-	6.9	'			
		Rocky	Russell	V	
		Sandy	Semaphore	L	
WYA	1.4	Rocky frontal slopes	Russell	D	
YAI	0.6	Sandy loam flats	Wookata	V	Flats and rises formed on highly calcareous
		Sand spreads	Haslam	С	Woorinen Formation deposits with highly calcareous
YAm	7.5	Sandy loam rises	Wookata	V	sandy loams and sands. The land is fully arable,
		Sand spreads	Haslam	С	although low fertility and moderate to high wind
YEI	18.0	Sand spreads	Haslam	V	erosion potential restrict productivity. Main soils are:
		Sandy loam flats	Wookata	С	Wookata: Highly calcareous sandy loam with slightly
					limited water holding capacity, low fertility,
					subsoil boron and salt, and slight to
					moderate wind erosion potential.
					Haslam: Highly calcareous sand with very low
70	4.0	Calulata	C-1: '1	<u> </u>	fertility and high wind erosion potential.
ZD-	1.3	Salt lakes	Saline soil	D	-

PROPORTION codes assigned to Soil Landscape Unit (SLU) components:

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

Further information: <u>DEWNR Soil and Land Program</u>

