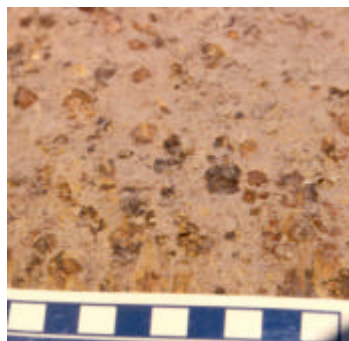


Site Code¹ **SFS6**



Location Learmonth Road: Cardigan
Landform Gently undulating plain
Geology Quaternary Volcanics: basalt
Element Plain
Slope <1%
Aspect South west

Buckshot in A2 and B21 (scale = 1 cm intervals)

Horizon	Depth (cm)	Description
Ap	0- 15	Brown (10YR4/3); fine sandy clay loam; weak surface seal (powdery); apedal; large (>10%) amount of coarse (5-20 mm) buckshot gravel on the ground surface, <10% magnetic; firm consistence; pH 5.7; clear boundary to:
A2c	15-40/45	Pale brown (10YR6/3 moist), conspicuously bleached (10YR7/3 dry); fine sandy loam, gravelly; apedal structure; abundant (50%), medium (5-25 mm) buckshot gravel with black manganiferous centres, becoming cemented at base of horizon; buckshot can be broken with some finger force; pH 5.4; clear boundary to:
B21c	45-60	Gravelly clay loam with abundant (80%) coarse to very coarse (10-40 mm) manganiferous buckshot/ironstone gravel; pH 6.7; abrupt boundary to:
B22tg	60-120+	Light yellowish brown (2.5Y6/4 moist); light medium clay; with prominent, small tending to linear, dark red (2.5YR4/8) mottles with brownish yellow (10YR6/8) fringes; 30-50%, fine (5-10 mm) polyhedral structure; pH 7.2.

Management considerations

The soil at this site is highly variable with strongly developed gilgai features. The topsoil is susceptible to waterlogging, wind and water erosion and compaction. The high gravel content limits water availability for plants and the sodic clay subsoil restricts drainage. Acidity should be raised for crop and pasture production. Organic carbon of the topsoil (1.3%) represents the lowest recorded from the south west cropping sites, this should be increased to improve structure and protect the soil from erosion.

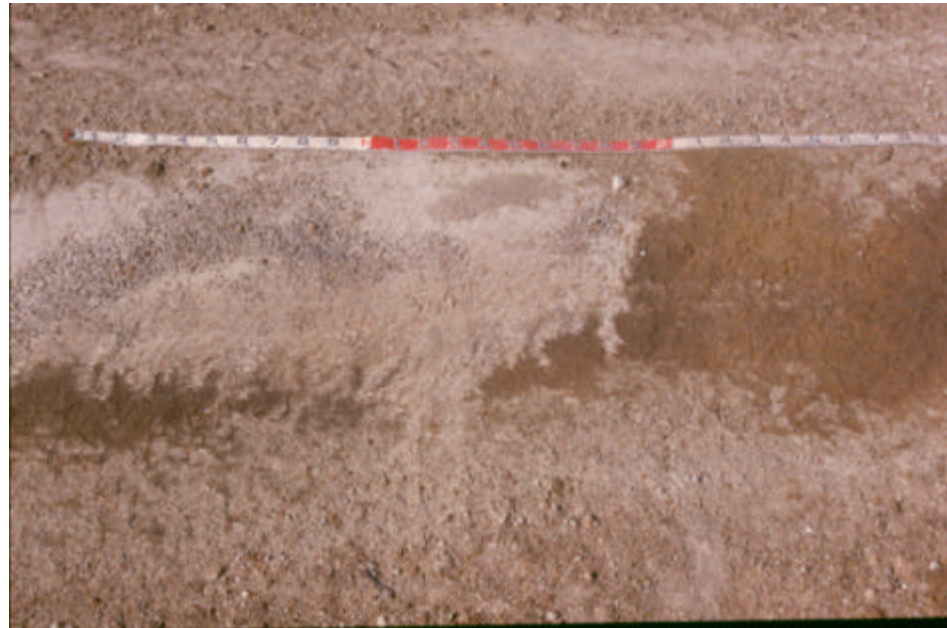


Manganic, Mottled-Mesonatric, Yellow Sodosol
(View in surface drain, depth 1.2 metre)
Learmonth road 'Avenue of Honour' on the horizon.

¹ Source: MacEwan R, Imhof M (in press) Soils at Raised Bed Cropping Sites in South West Victoria. DPI

Analytical data²

Site SFS6 Horizon	Sample depth cm	pH		EC dS/m	NaCl %	Ex Ca cmol/kg	Ex Mg cmol/kg	Ex K cmol/kg	Ex Na cmol/kg	Ex Al mg/kg	Ex Acidity cmol/kg	FC -10kPa %	PWP -1500kPa %	KS %	FS %	Z %	C %
		H ₂ O	CaCl ₂														
Ap	0-10	5.7	4.9	0.09	N/R	3.1	0.81	0.38	0.14	<10	6.9	29	7	4.4	45.8	24.5	19
A2	20-35	5.4	4.6	<0.05	N/R	1.9	0.51	0.17	0.08	18	6.5	27.9	18.5	7.8	46.1	25	15.5
B21c	45-60	6.7	5.7	0.05	N/R	2.1	2.6	0.17	0.51	N/R	6.3	27.3	9.9	11.4	38.9	20	27
B22tg	65-85	7.2	6.3	0.17	N/R	3.9	10	0.35	2.6	N/R	9.4	46	25.1	2.8	16.3	11.5	65.5



View of “hollow” and “puff” gilgai features in drain excavation
Depth to clay, presence of A2 and distribution of buckshot are all highly variable in this soil

² Source: Government of Victoria State Chemistry Laboratory.