

SITE: PVI 11

Land unit: Basalt Alluvium

Geo. Ref: 594199E 5814204N

Aust. Soil Class.: Mottled, Epipedal, Black VERTOSOL (very gravelly surface)

General Land Unit Description:

This land unit consists of the smaller swamps and depression which occur on the basalt plains. Grey Vertosols tend to dominate the smaller swamps and depressions on the plains. On the other hand, Black Vertosols are commonly found in the swamps and depressions associated with the stony rise landscapes and the larger alluvial plains. Both soil types are typically sodic at depth and imperfectly drained. There are minor occurrences of Sodosols. In some areas of the basalt plain, this land unit would have been incorporated into the basalt land units.

Site Description:

Geology: Recent alluvial over Quaternary Basalt

Landform pattern: Plain

Position in landscape: Drainage depression

Internal drainage: Imperfectly drained



Soil Profile Morphology:

Topsoil

A11 0-10 cm Very dark greyish brown (10YR3/2); *gravelly clay*; weak consistence (dry); many (40%) ferruginous nodules (2-5 mm); rusty root channel; pH 5.7; clear change to:

A12 10-20 cm Very dark brown (10YR2/2); *gravelly clay*; moderate strong blocky structure; weak consistence (dry); very many (60%) ferruginous nodules (2-5 mm); pH 6.5; rusty root channel mottling; abrupt change to:

Subsoil

B21 20-90 cm Very dark grey (2.5Y 3/0) with few (10%) faint brownish yellow (10YR6/6) mottles; *heavy clay*; moderate very coarse prismatic, parting to strong coarse blocky structure; slickensides; strong cracking; very strong consistence (dry); pH 7.1; gradual change to:

B22 90-120 cm Dark grey (10YR4/1) with faint brownish yellow (10YR6/6) mottles; *heavy clay*; strong medium to coarse lenticular structure; very firm consistence (moist); pH 5.9; gradual change to:

B23 120+ cm Grey (10YR5/1) with faint brownish yellow (10YR6/6) mottles; *heavy clay*; strong medium to coarse lenticular structure; slickensides; very firm consistence (moist); pH 6.0.



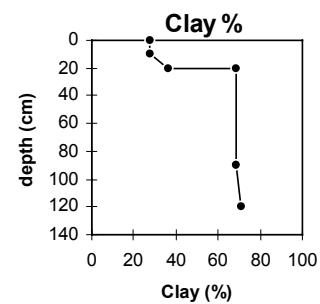
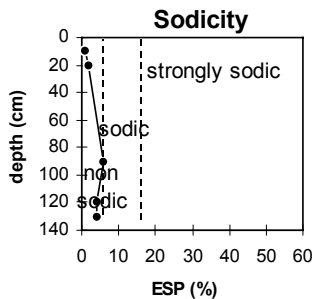
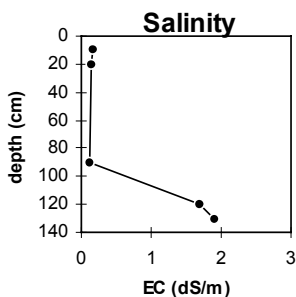
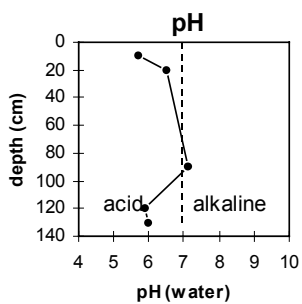
Key Profile Features:

- Large amount of ferruginous nodules in surface (A) horizons.
- Clay texture throughout soil profile.
- Significant cracking when profile is dry.
- Prominent slickensides in subsoil.

Soil Profile Characteristics:

	pH	Salinity Rating	Sodicity	Dispersion
Surface soil (A1 horizon)	Moderately Acid	Low	Non-Sodic	None
Upper subsoil (20 - 90 cm)	Near Neutral	Low	Marginally Sodic	Moderate ¹
Deeper subsoil (at 120+ cm)	Moderately Acid	High- Very High	Non-Sodic	None

¹strong dispersion after remoulding



Horizon	Horizon Depth	pH (water)	pH CaCl ₂	EC dS/m	NaCl %	Exchangeable Cations				Ex Al mg/kg	Ex Ac meq/100g	Field pF2.5	Wilting Point pF4.2	Coarse Sand (0.02-0.2mm)	Fine Sand (0.02-0.2mm)	Silt (0.02-0.02MM)	Clay (<0.002mm)
						Ca	Mg	K	Na								
A11	0-10	5.7	5.2	0.17		14	11	1.1	0.50	12		33.0	26.4	35.4	7.8	12.5	27.5
A12	10-20	6.5	5.9	0.15		12	14	1.1	0.73			34.5	21.4	36.6	8.4	10.5	36.5
B21	20-90	7.1	6.4	0.13		14	25	1.3	2.4			60.4	32.6	0.8	8.3	14.5	68.5
B22	90-120	5.9	5.6	1.7	0.32	13	20	0.4	1.7	11	12	63.3	33.1	0.3	8.6	17.0	71.0
B23	120+	6.0	5.8	1.9	0.31	12	20	0.5	1.6	11							