SH-sf SEDGEFIELD SOIL LANDSCAPE

GENERAL

This soil landscape covers undulating low hills north of Singleton. The soils are Yellow Soloths (Dy3.41) on the upper to midslopes with Yellow Solodic Soils (Dy3.42) on lower slopes and in drainage lines. Black Soloths (Dd2.31) may also occur in area of seepage on the slopes. Salting is evident in some of the drainage lines.

CLIMATIC ZONE: 3E

LANDFORM

Undulating low hills, with elevations from 60 – 170 m. Slopes are about 6% with slope lengths of 500 – 800 m. Local relief is low, from 40 – 60 m. Most drainage is to the south-east, but some is to the south-west. Drainage channels are at intervals of 500 – 2,000 m.

NATIVE VEGETATION

An ironbark community (narrow-leaved red ironbark, red ironbark and broad-leaved red ironbark) dominates the area with some grey box and rough-barked apple. There is swamp oak in the drainage channels.

GEOLOGY

Geological Unit: Branxton Formation, Muree Sandstone and Singleton Coal Measures.

Parent Rock: Mudstone, lithic sandstone, conglomerate, micacious siltstone, shale and coal seams.

Parent Material: *In situ* weathered parent rock and colluvium and alluvium derived from it.

SOIL EROSION

Severe gully and sheet erosion on many slopes and in drainage lines. The Soloths in particular have highly dispersible subsoils.

GENERAL SOIL DESCRIPTIONS:

Yellow Soloths (Dy3.41)

Topsoil: Brown fine sandy loam with weak structure; pH 6.0.
Clear change to bleached dull yellowish brown fine sandy loam; apedal; pH 6.5; depth to 15 cm.

Subsoil: Clear change to bright brown medium clay with strong structure; prominent orange mottling; pH 7.0.
Gradual change with depth into yellowish brown medium clay with brown mottling and decreasing ph.
On Muree sandstone.

Black Soloths (Dd2.31)

Topsoil: Brown silt loam with moderate structure; pH 6.0.
Clear change to sporadically bleached A_2 horizon; brown; loam fine sandy; apedal; pH 6.5; depth to 23 cm.

Subsoil: Clear change to brownish black silty clay with strong structure; pH 5.0.

Gradual change into greyish brown silty clay with prominent dark red mottles (to 40%); strongly structured rough-faced peds; pH 4.5.

Yellow Solodic Soils (Dy3.42)

Topsoil: Yellowish brown sandy loam colluvium; single-grained; pH 6.5; depth to 7 cm.
Overlies brown sandy loam; massive; pH 5.5; depth to 10 cm.
Sharp change to bleached brown sandy loam; massive; pH 7.0; depth to 20 cm.

Subsoil: Clear change to dull yellowish brown medium clay with strong structure; orange and grey mottling (to 30%); pH 6.5.
Gradual change with depth into a yellowish brown medium clay with orange mottling; strongly structured; pH 7.0.

	Yellow Soloths	Yellow Solodic Soils
Northcote code	Dy3.41	Dy3.42
Dominance	Common	Common
Landform element	Upper to midslope	Lower slope
Surface condition	Hardsetting	Gravelly and hardsetting
Drainage	Imperfectly drained	Imperfectly drained
Soil permeability	Slowly permeable	Slowly permeable
Watertable depth	+200 cm	+100 cm
Available water-holding capacity	Moderate	Low to moderate
Depth to bedrock	+100 cm	80 cm
Flood hazard	Nil	Low
pH (topsoil)	6.0	6.5
Fertility (chemical)	Low	Low
Known nutrient deficiencies	-	-
Soil salinity	High	High
Erodibility (topsoil)	Moderate	Moderate
Erodibility (subsoil)	High	High
Erosion hazard	High	High to extreme
Structural degradation hazard	High	High
Land capability classification	V	IV
USCS (subsoil)	CL	CL
Shrink-swell potential	Low	Low to moderate
Mass movement hazard	Nil	Nil

	Black Soloths
Northcote code	Dd2.31
Dominance	Minor
Landform element	Midslope
Surface condition	Hardsetting
Drainage	-
Soil permeability	Slowly permeable
Watertable depth	+50 cm
Available water-holding capacity	Moderate
Depth to bedrock	+60 cm
Flood hazard	Low
pH (topsoil)	6.0
Fertility (chemical)	Low
Known nutrient deficiencies	-
Soil salinity	High
Erodibility (topsoil)	Moderate
Erodibility (subsoil)	High
Erosion hazard	High
Structural degradation hazard	Moderate
Land capability classification	IV
USCS (subsoil)	-
Shrink-swell potential	Low
Mass movement hazard	Nil