YOU Young Land System

Area: 296 km²

Landscape: The Young Land System is named after the Hundred of Young in County Grey. It consists of

a poorly drained sand plain lying between Forest Ridge Land System ridges and similar land west of Lake Leake. There are extensive swamps with peats or organic clays and sand over

clay soils on elevated parts of plain.

Annual rainfall: 700 - 875 mm average

Geology: Lacustrine/lagoonal deposits of the Pleistocene Padthaway Formation occur on the eastern

edge, with the calcreted calcarenite of the Bridgewater Formation in the western part. They are separated by Pleistocene-Holocene pale yellow sands of the Molineaux Sand, which

overlies them through the middle of the land system.

Main soils: I2 Wet highly leached sand (Aquic or Semi-Aquic Podosol) (29%)

G3 Thick sand over clay (sandy Brown-Red Chromosol-Sodosol) (24%)

Minor soils: N3 Wet soil (non to moderately saline) (Sodosolic-Calcarosolic-Dermosolic Hydrosol)

(11%)

II Highly leached sand (Aeric Podosol) (11%)

N1 Peaty soil (Organosol) (9%0

G5 Sand over acidic clay (sandy Brown Kurosol) (8%)

G2 Bleached sand over sandy clay (sandy Brown-Red Chromosol-Sodosol) (4%)

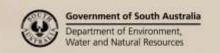
Summary: The main limiting factors for land use in this land system are poor drainage and low fertility

of the sands. The low landscape position of this land system makes external drainage difficult. Some areas have acid soils, which have low production and require amelioration

with lime.

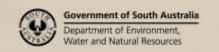
Soil Landscape Unit summary: Young Land System (YOU)

SLU	% of area	Component	Main soils	Prop#	Notes
МНВ	0.2	Rise Dune	B3B6 I2H3	V L	Gently sloping calcarenite ridge with shallow sand, often over red sandy clay over calcrete. 10-20% deep bleached siliceous sands on dunes. Main soils: Rises: Shallow sandy loam on calcrete - B3 and Shallow sandy loam
					over red-brown clay on calcrete - B6 . Dunes: Wet highly leached sand - I2 and Bleached siliceous sand - H3 .
MNC	0.0	Dune range	I1H3	D	Undulating rise with moderately deep yellow/bleached siliceous sand often over yellow clay. 10-30% shallow sandy loam on calcreted calcarenite.
					Main soils: <u>Wet highly leached sand</u> - I2 & <u>Bleached siliceous sand</u> - H3 .





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MOB	0.0	Rise	B6B3	D	Gently undulating rises with shallow sandy loam (sometimes ironstone gravelly) grading to red-brown sandy clay loam or clay over calcreted calcarenite. <10% deep, leached sands.
					Main soils: <u>Shallow sandy loam over red-brown clay on calcrete</u> - B6 and <u>Shallow sandy loam on calcrete</u> - B3 .
MRB	0.3	Rise	G3B6	D	Low, gently undulating calcreted former beach ridge with very shallow
					red and brown loam/red clay soils, < 10% deep leached sand or
					sand/clay rises.
					Main soils: Thick sand over clay - G3 and Shallow sandy loam over red-
					brown clay on calcrete - B6 .
OFB	0.1	Dune	I1I2	D	OFB Deep moderately to highly leached siliceous sands on high
OFC	1.8	Dune	I1	D	dunes, 10-20% acid sand over red-brown sandy clay loam/clay.
OFD	1.0	Low dune	I2G5	D	OFC As above, dunes, highly leached siliceous sands
					OFD As above, low dunes.
					Main soils:
					Dunes: Highly leached sand - I1 and Wet highly leached sand - I2 .
					Low dunes: Wet highly leached sand - I2 and Sand over acidic clay -
					G5.
PBB	0.3	Rise	I1	D	Gently undulating sand plain with well-drained, deep, leached siliceous
					sands and 20-30% poorly-drained, deep sands which are underlain by
					impervious clays or coffee rock.
					Main soils: <u>Highly leached sand</u> - I1 .
PEA	0.3	Flat	I2I1	D	PEA Poorly drained plain with deep siliceous acid sands with coffee
PEB	3.2	Plain	I2G5	V	rock or slowly permeable clays in the subsoils. <10% swamps.
		Swamp	N1N3	L	PEB Gently undulating as above, 10-20% swamps, peaty & non-peaty.
PEi	11.7	Plains	G5I2	V	Some loam over poorly structured clay in some flats.
		Swamp	N1N3	С	PEE Depression with poorly drained acid siliceous sand soils as above.
PEj	3.2	Plains/Rise	G5I2	V	PEi As for PEA above, with 20-30% swamps.
		Swamp	N1N3	С	PEj As for PEB but with 20-30% swamps.
					Main soils:
					Flats and plains: Wet highly leached sand - I2, Highly leached sand -
					I1 and Sand over acidic clay - G5.
					Swamps: Peaty soil – N1 and Wet clay loam - N3.
PLB	0.6	Rise	G5I2	D	Gently sloping rises with deep acid sands, mostly over acid
					yellow/brown clay. <10% swampy plains with acid peats and non-
					peaty sandy loam wet soils.
					Main soils: Sand over acidic clay - G5 and Wet highly leached sand -
					I2.
PPB	26.4	Swampy	N1N3	М	PPB Gently undulating sand plain with deep bleached wet sand over
		plain			clay or coffee rock, with well-drained siliceous sand on rises. Very wet
		Rise	I1I2	D	swales.
PPBv	0.6	Plain	H3I1	٧	PPBv As above with volcanic ash in the surface.
		Rise	В3	L	PPi Plain as for PPB , no volcanic ash, 20-30% swamps.
PPi	15.8	Plain	G3I2	٧	PPiE Depression as for PPi (wetter situation)
		Swamp	N3	С	PPj As for PPB, with 10-20% swamps.
PPiE	0.5	Plain	G3I2	٧	Main soils:
			N3		Plains: Bleached siliceous sand - H3 and Highly leached sand - I1 or
		Swamp	N3	С	Thick sand over clay - G3, Wet highly leached sand - I2 and Wet clay
PPj	1.1	Rise	G3I2	٧	<u>loam</u> - N3 .
		Swamp	N3	L	Swampy plains: Peaty soil – N1 and Wet clay loam - N3.
					Rises: Highly leached sand - I1, Thick sand over clay - G3 and Wet
					<u>highly leached sand</u> - I2 or <u>Shallow sandy loam on calcrete</u> - B3 .
					Swamps: Wet clay loam - N3.





PQi	13.1	Rise	G3	V	PQi Sand plain with mostly deep moderately well drained sand over
1 4.	13.1	Swamp	N3I2	L	brown clay on low rises which also have 10-30% deep siliceous sand.
PQiE	0.5	Plain	G3N3	D	10-20% swamps with wet sandy soils and occasionally dark clay soils.
PQj	0.9	Plain/Rise	G3	V	PQiE As above, depression
)		Swamp	N3I2	L	PQj As for PQi, but more undulating.
		·			Main soils:
					Plains: Thick sand over clay - G3, and Wet clay loam - N3.
					Rises: Thick sand over clay - G3.
					Swamps: Wet clay loam - N3 and Wet highly leached sand - I2.
Xd-	0.2	Lunette	F1E3	D	Lunette adjacent to swamp with loam over brown clay, grey clay soils.
			M2		Main soils: Loam over brown or dark clay - F1 , Brown or grey cracking
					<u>clay</u> – E3 and <u>Deep friable gradational clay loam</u> - M2 .
Xe-	0.1	Lunette	F2F1	D	Lunette with loam over brown/dark clay soils.
					Main soils:
					Sandy loam over poorly structured brown or dark clay - F2 and Loam
					over brown or dark clay - F1 .
Xqa	0.0	Swamp	N3M2	V	Xqa Seasonal swamps with non-peaty dark clay soils and 20-30%
1			G3		sandy rises with deep sand over brown clay soils.
		Sandy rise	G3N3	С	XqC Swamps as above.
XqC	0.9	Swamp	N3M2	D	Main soils:
			G3		Swamps: Wet clay loam - N3, Deep friable gradational clay loam - M2
					and Thick sand over clay - G3 .
					Sandy rises: Thick sand over clay - G3 and Wet clay loam - N3.
XuC	0.6	Swamp	N3	D	XuC Swamp with non-peaty wet soils
Xud	3.4	Swamp	N3N1	V	Xud Non-peaty swamp with 20-30% sandy rises with deep sand over
		Sandy rise	G3N3	С	brown clay soils.
			I2		XuU Drainage depression with mixed non peaty & peat soils. 20-30%
XuU	0.7	Drainage	N3N1	V	wet swamps.
		Depression	NIONIA		Main soils:
		Swamp	N3N1	С	Swamps and drainage depressions: Wet clay loam - N3 and Peaty
					<u>soil</u> – N1 .
					Sandy rises: Thick sand over clay - G3, Wet clay loam - N3 and Wet
W	10.4	C	NIINIO	.,	highly leached sand - 12.
Xxa	10.4		N1N3	V	Xxa Peat swamps with 20-30% sandy rises with mostly deep sand over
		Sandy rise	G3N3 I2	C	brown clay soils. Xx C Peat swamps.
XxC	2.1	Swamp	N1N3	D	¬ '
IIAC	2.1	Swamp	141143		Main soils:
					Swamps: Peaty soil – N1 and Wet clay loam - N3.
					Sandy rises: Thick sand over clay - G3, Wet clay loam - N3 and Wet highly leached sand - I2.
	<u> </u>				nigniy leached Sand - 12.

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

D Dominant in extent (>90% of SLU)

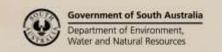
V Very extensive in extent (60–90% of SLU)

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)





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.
- Brown or grey cracking clay (Brown-Grey Vertosol)
- **F1** <u>Loam over brown or dark clay (Brown-Dark Chromosol-Sodosol)</u>

Topsoil >30 cm over a poorly structured subsoil, or else, subsoil structure is good. Loamy to clay loamy texture contrast soil with brown clayey subsoil. Loamy, reasonable depth A, and OK structured clay subsoil.

- F2 Sandy loam over poorly structured brown or dark clay (Brown-Dark Sodosol-Chromosol)
 - Topsoil <30 cm over a poorly structured subsoil. Loamy, often sandy loam, to clay loamy texture contrast soil with a sodic/dispersive/poorly structured brown clayey subsoil. Often sandy loam, usually with a bleached horizon, and thin topsoil over a poorly structured B.
- G3 Thick sand over clay (Hypercalcic, Brown Sodosol/ Chromosol)

Thick bleached sand with an organically darkened surface abruptly overlying a massive to coarsely structured brown to reddish yellow sandy clay to clay, calcareous with depth - rises.

- **G5** Sand over acidic clay (Sandy Brown Kurosol)
 - Sandy texture contrast soil with a friable brown strongly acidic clayey to clay loamy subsoil. Very acidic soil; incipient Bh horizons; moderate depth topsoils. Some with ironstone.
- H3 Deep bleached sand (Basic, Arenic, Bleached-Orthic Tenosol)

Grey sand over a very thick bleached sand grading to yellow sand continuing below 100 cm.

- I1 Highly leached sand (Fragic, Pipey, Aeric Podosol)
 - Grey sand with a very thick bleached A2 layer, over dark brown and yellow massive soft to semi-hard clayey sand (coffee rock), grading to softer yellow and brown sand to sandy clay loam from about 80 cm.
- Wet highly leached sand (Fragic, Humic, Aguic 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.

M2 Deep friable gradational clay loam (Red-Brown-Grey- Black Dermosol)

Deep well structured red clay loamy soil.

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

Further information: DEWNR Soil and Land Program

