

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%)
I1 Highly leached sand (Aeric Podosol) (11%)
N1 Peaty soil (Organosol) (9%)
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
MHB	0.2	Rise	B3B6	V	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: <u>Shallow sandy loam on calcrete</u> - B3 and <u>Shallow sandy loam over red-brown clay on calcrete</u> - B6 . Dunes: <u>Wet highly leached sand</u> - I2 and <u>Bleached siliceous sand</u> - H3 .
		Dune	I2H3	L	
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 .



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: <u>Thick sand over clay</u> - G3 and <u>Shallow sandy loam over red-brown clay on calcrete</u> - B6 .
OFB	0.1	Dune	I1I2	D	OFB Deep moderately to highly leached siliceous sands on high dunes, 10-20% acid sand over red-brown sandy clay loam/clay. OFC As above, dunes, highly leached siliceous sands OFD As above, low dunes. Main soils: Dunes: <u>Highly leached sand</u> - I1 and <u>Wet highly leached sand</u> - I2 . Low dunes: <u>Wet highly leached sand</u> - I2 and <u>Sand over acidic clay</u> - G5 .
OFC	1.8	Dune	I1	D	
OFD	1.0	Low dune	I2G5	D	
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 rock or slowly permeable clays in the subsoils. <10% swamps. PEB Gently undulating as above, 10-20% swamps, peaty & non-peaty. Some loam over poorly structured clay in some flats. PEE Depression with poorly drained acid siliceous sand soils as above. PEi As for PEA above, with 20-30% swamps. PEj As for PEB but with 20-30% swamps. Main soils: Flats and plains: <u>Wet highly leached sand</u> - I2 , <u>Highly leached sand</u> - I1 and <u>Sand over acidic clay</u> - G5 . Swamps: <u>Peaty soil</u> - N1 and <u>Wet clay loam</u> - N3 .
PEB	3.2	Plain	I2G5	V	
		Swamp	N1N3	L	
PEi	11.7	Plains	G5I2	V	
		Swamp	N1N3	C	
PEj	3.2	Plains/Rise	G5I2	V	
		Swamp	N1N3	C	
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 plain	N1N3	M	PPB Gently undulating sand plain with deep bleached wet sand over clay or coffee rock, with well-drained siliceous sand on rises. Very wet swales.
		Rise	I1I2	D	
PPBv	0.6	Plain	H3I1	V	PPBv As above with volcanic ash in the surface.
		Rise	B3	L	PPi Plain as for PPB , no volcanic ash, 20-30% swamps.
PPi	15.8	Plain	G3I2	V	PPiE Depression as for PPi (wetter situation)
		Swamp	N3	C	PPj As for PPB , with 10-20% swamps.
PPiE	0.5	Plain	G3I2	V	Main soils: Plains: <u>Bleached siliceous sand</u> - H3 and <u>Highly leached sand</u> - I1 or <u>Thick sand over clay</u> - G3 , <u>Wet highly leached sand</u> - I2 and <u>Wet clay loam</u> - N3 .
		Swamp	N3	C	
PPj	1.1	Rise	G3I2	V	Swampy plains: <u>Peaty soil</u> - N1 and <u>Wet clay loam</u> - N3 . Rises: <u>Highly leached sand</u> - I1 , <u>Thick sand over clay</u> - G3 and <u>Wet highly leached sand</u> - I2 or <u>Shallow sandy loam on calcrete</u> - B3 . Swamps: <u>Wet clay loam</u> - N3 .
		Swamp	N3	L	



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

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

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|--|-------------------------------------|
| D Dominant in extent (>90% of SLU) | C Common in extent (20–30% of SLU) |
| V Very extensive in extent (60–90% of SLU) | L Limited in extent (10–20% of SLU) |
| E Extensive in extent (30–60% 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.
- E3** Brown or grey cracking clay (Brown-Grey Vertosol)
- F1** Loam over brown or dark clay (Brown-Dark Chromosol-Sodosol)
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.
- I2** Wet highly leached sand (Fragic, Humic, Aquic 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](#)

