

ATH Atlantic Heath Land System

Area: 459.2 km²

Landscape: Poorly drained plains near Wattle Range with sand over clay soils mostly, occasionally with calcrete in the subsoils. Deep sands on the plains are often water logged. Low beach ridge remnants divide the plains in places.

Annual rainfall: 615 – 715 mm average

Geology: Mostly Pleistocene Padthaway Formation calcareous lacustrine clays, with occasional Pleistocene Bridgewater Formation calcreted calcarenite stranded beach ridge deposits.

Main soils:
G3 (45%) Thick sand over clay (sandy Brown-Red Chromosol-Sodosol)
B7 (12%) Shallow sand over clay on calcrete (sandy Petrocalcic Sodosol-Chromosol)
I2 (10%) Wet highly leached sand (Aquic or Semi-Aquic Podosol)

Minor soils:
G5 (5%) Sand over acidic clay (sandy Brown Kurosol)
F2 (5%) Sandy loam over poorly structured brown or dark clay (Brown-Dark Sodosol-Chromosol)
H3 (4%) Bleached siliceous sand (sandy Bleached Tenosol)
B5 (4%) Shallow dark clay loam on limestone (Petrocalcic Black-Grey Dermosol)
G4 (4%) Sand over poorly structured clay (sandy Brown-Red Sodosol-Chromosol)

Summary: Soils have waterlogging constraints, both in the sand over clay soils and deep sands. The deep sands are often underlain by clay or coffee rock. Soil acidity can be a problem on the highly leached sands which also have low inherent fertility.

Soil Landscape Unit summary: Atlantic Heath Land System (ATH)

SLU	% of area	Component	Main soils	Prop#	Notes
MAB	0.03	Rise	B3RR	D	<p>MAB Gently undulating calcreted former beach ridges with stony, very shallow red and brown loam, occasionally over red clay, on calcrete. >50% bare calcrete.</p> <p>MAC as above, undulating slopes.</p> <p>Main soils: <u>Shallow sandy loam on calcrete</u> - B3 and <u>Rock or exposed calcrete</u> - RR.</p>
MAC	0.03	Rise	B3RR	D	
MEC	0.1	Stony rise	B3	V	<p>Undulating stony rises with very shallow soils sand over calcrete soils. 10 - 20% dunes with water repellent, deep siliceous sands and shallow bleached siliceous sand on calcrete.</p> <p>Main soils: Stony rises: <u>Shallow sandy loam on calcrete</u> - B3. Dunes: <u>Highly leached sand</u> - I1, <u>Bleached siliceous sand</u> - H3 and <u>Shallow sand on calcrete</u> - B8.</p>
		Dune	I1H3B8	L	
MFB	0.1	Low rise	B6B3B8	D	<p>Gently sloping rises with shallow sand, often bleached, and often over reddish clay, on calcrete; 10 - 30% poorly structured brown clay subsoils in low positions.</p> <p>Main soils: <u>Shallow sandy loam over red-brown clay on calcrete</u> - B6, <u>Shallow sandy loam on calcrete</u> - B3 and</p>



					Shallow sand on calcrete - B8 .	
MHB	0.03	Dune	H3	E	<p>MHB Gently sloping calcarenite ridges with deep bleached siliceous sands on dunes, often over brown sandy clay. <10% shallow stony rises with shallow sandy loam, often on red clay, on calcrete; 10 - 30% with poorly structured brown clay on calcrete in swales and flats, or very shallow calcareous loam on calcrete.</p> <p>MHC Undulating slopes on calcarenite range as for MHB but with 10 - 30% of rise areas have rock outcrop or shallow sand on calcrete or deep siliceous sand, less well drained on lower slopes.</p> <p>Main soils: Dunes: <u>Bleached siliceous sand - H3</u>. Stony rises: <u>Shallow sandy loam on calcrete - B3</u> and <u>Rock or exposed calcrete - RR</u>. Dune ranges: <u>Bleached siliceous sand - H3</u>, <u>Highly leached sand - I1</u> and <u>Sand over friable brown clay on calcrete - B7</u>.</p>	
		Stony range	B3RR	E		
MHC	0.03	Dune range	H3I1B7	D		
MRB	0.2	Undulating plain	B6B7G3	D		<p>Gently undulating plains with shallow sand over red clay, or poorly structured brown clay in low parts, on calcrete; or deep sand over brown clay; 10 - 30% deep siliceous sandy rises.</p> <p>Main soils: <u>Shallow sandy loam over red-brown clay on calcrete - B6</u>, <u>Sand over friable brown clay on calcrete - B7</u> and <u>Thick sand over clay - G3</u>.</p>
NDG	0.3	Depression	G3B7	D		<p>NDG Depressions with sand or sandy loam over poorly structured brown clay, often on calcrete.</p> <p>NDN Stony plains with soils as above. Co-dominant stony rises with loam, mostly over red clay, on calcrete; but often thin loam on calcrete; 10 - 30% bare calcrete.</p> <p>NDO Plains with soils as for NDG. 20-30% sandy rises with deep bleached sands, with impeded drainage over coffee rock or brown clay. 10 - 20% stony rises with soils as in NDN.</p> <p>Main soils: Plains and depressions: <u>Thick sand over clay - G3</u>, <u>Sand over friable brown clay on calcrete - B7</u> and <u>Shallow dark clay loam on limestone - B5</u>. Sandy rises: <u>Wet highly leached sand - I2</u> and <u>Thick sand over clay - G3</u>. Stony rises: <u>Shallow sandy loam over red-brown clay on calcrete - B6</u> and <u>Shallow sandy loam on calcrete - B3</u>.</p>
NDN	0.3	Stony plain	G3B7	E		
		Stony rise	B6B3	E		
NDO	4.2	Plain	G3B7	V		
		Sandy rise	I2G3	C		
		Stony rise	B6B3	L		
NGA	1.4	Plain	G3	D	<p>Plains with mostly deep acid sand over, often poorly structured, brown clay; 10-30% thin sand over clay.</p> <p>Main soils: <u>Thick sand over clay - G3</u>.</p>	
NIP	3.4	Plain	G3B7	V	<p>Plains with sand over poorly structured brown clay, often on calcrete. 20-30% sandy rises with deep sand with impeded drainage on coffee rock or brown clay.</p> <p>Main soils: Plains: <u>Thick sand over clay - G3</u> and <u>Sand over friable brown clay on calcrete - B7</u>. Sandy rises: <u>Wet highly leached sand - I2</u> and <u>Thick sand over clay - G3</u>.</p>	
		Sandy rise	I2G3	C		
NjK	0.8	Plain	G3	V	<p>NjK Plains with deep acid sand over brown clay; 20 - 30% sandy rises with moderately drained deep acid sands with coffee rock or clay subsoils; <10% swamps</p>	
		Sandy rise	I2H3G3	C		
		Swamp	N3M4	M		



NjQ	22.7	Plain	G3	V	with dark clay NjQ Plains and sandy rises as above, but no swamps. Main soils: Plains: <u>Thick sand over clay - G3.</u> Sandy rises: <u>Wet highly leached sand - I2, Bleached siliceous sand - H3</u> and <u>Thick sand over clay - G3.</u> Swamps: <u>Wet clay loam - N3</u> and <u>Deep hard gradational sandy loam - M4.</u>
		Sandy rise	I2H3G3	C	
NIA	0.1	Plain	E3E1	D	Plains with deep, dark grey or black cracking clay soils. Main soils: <u>Brown or grey cracking clay - E3</u> and <u>Black cracking clay - E1.</u>
NmA	1.8	Plain	G3I2	D	Plains with deep sand, mostly over brown clay, 10-30% acid sand over acid clay. Main soils: Plains: <u>Thick sand over clay - G3</u> and <u>Wet highly leached sand - I2.</u>
NmD	0.4	Plain	G3F2	D	Plains with mostly thick, but often thin, sandy loam to loam over brown clay. Main soils: Plains: <u>Thick sand over clay - G3</u> and <u>Sandy loam over poorly structured brown or dark clay - F2.</u> Sandy rises: <u>Highly leached sand - I1</u> and <u>Bleached siliceous sand - H3.</u>
		Sandy rise	I1H3	M	
NMD	8.6	Plain	F2G3	D	NMD Plains with mostly thin sandy loam on poorly structured brown clay, but often thick sand over brown clay. <10% deep, well drained sand mostly, but often over brown clay. NME Swampy plains with shallow sandy loam over poorly structured brown clay on calccrete, or dark clay loam over dark clay, on calccrete. 10 - 30% wet soils, or deep siliceous sand on rises, or shallow bleached sand on calccrete. NMG Broad depressions with shallow loam over poorly structured brown clay on calccrete. 10 - 30% dark clay loam over dark clay, on calccrete. NMP Plains with thick sand over brown clay; 10-30% slightly lower areas with thin sandy loam on poorly structured brown clay. 10 - 20% sandy rises with deep siliceous acid sand, often with clay or coffee rock at depth. Main soils: Plains: <u>Sandy loam over poorly structured brown or dark clay - F2</u> and <u>Thick sand over clay - G3</u> or <u>Sand over friable brown clay on calccrete - B7</u> and <u>Shallow dark clay loam on limestone - B5.</u> Sandy rises: <u>Highly leached sand - I1</u> , <u>Bleached siliceous sand - H3</u> and <u>Thick sand over clay - G3.</u>
		Sandy rise	I1H3G3	M	
NME	1.0	Plain	B7B5	D	NnA Plains with shallow sand over poorly structured brown clay on calccrete, or dark clay loam over dark clay on calccrete. NnC Plains as for NnA , but also <10% stony rises with very shallow, occasionally calcareous, loam on calccrete and <10% sandy rises with deep bleached acid sand, often over brown clay, such as on lower slopes. NnF Plains as for NnA , but also 20 - 30% swamps with, mostly wet, dark clay loam over dark clay on calccrete.
NMG	0.3	Broad depression	B7	D	
NMP	0.4	Plain	G3	V	
		Sandy rise	G3H3I2	L	
NnA	2.3	Plain	B7B5	D	NnA Plains with shallow sand over poorly structured brown clay on calccrete, or dark clay loam over dark clay on calccrete. NnC Plains as for NnA , but also <10% stony rises with very shallow, occasionally calcareous, loam on calccrete and <10% sandy rises with deep bleached acid sand, often over brown clay, such as on lower slopes. NnF Plains as for NnA , but also 20 - 30% swamps with, mostly wet, dark clay loam over dark clay on calccrete.
NnC	4.6	Plain	B7B5	D	
		Stony rise	B3	M	
		Sandy rise	I1H3G3	M	
NnF	0.4	Plain	B7B5	V	
		Swamp	N3B5	C	
NnG	0.1	Depression	B7B5	D	
NnO	0.3	Plain	A7E1M2	E	



		Sandy rise	G3	C	<p>NnG Depressions with soils as for NnA, occasionally very shallow loam on calcrete.</p> <p>NnO Plains with grey calcareous clay loam over calcareous clay on marl, or deep black cracking clay, clay loam over poorly structured dark brown clay. 20 - 30% sandy rises with deep sand over brown clay. 10 - 20% stony rises with calcareous clay loam grading to rubbly clay, or calcrete; or occasionally, dark clay, on calcrete. <10% swamps with wet, dark organic loam or peat soils.</p> <p>Main soils: Plains: <u>Sand over friable brown clay on calcrete - B7</u> and <u>Shallow dark clay loam on limestone - B5</u> or <u>Calcareous clay loam on marl - A7</u>, <u>Black cracking clay - E1</u> and <u>Deep friable gradational clay loam - M2</u>. Stony rises: <u>Shallow sandy loam on calcrete - B3</u>, <u>Rubbly calcareous loam on clay - A5</u> and <u>Shallow calcareous loam on calcrete - B2</u>. Swamps: <u>Wet clay loam - N3</u>, <u>Peaty soil - N1</u> and <u>Shallow dark clay loam on limestone - B5</u>. Sandy rises: <u>Highly leached sand - I1</u>, <u>Bleached siliceous sand - H3</u> and <u>Thick sand over clay - G3</u>.</p>
		Stony rise	A5B2	L	
		Swamp	N3N1	M	
NRD	10.1	Plain	G3G5	V	<p>Plains with deep, acid sand over often acid, brown clay. 10 - 20% sandy rises with deep, acid, bleached, siliceous sand, often over brown clay at depth.</p> <p>Main soils: Plains: <u>Thick sand over clay - G3</u> and <u>Sand over acidic clay - G5</u>. Sandy rises: <u>Wet highly leached sand - I2</u>, <u>Bleached siliceous sand - H3</u> and <u>Thick sand over clay - G3</u>.</p>
		Sandy rise	I2H3G3	L	
NSF	0.1	Undulating plain	G3M4	V	<p>NSF Plains with deep sand over brown clay, or clay loam over poorly structured dark brown clay soils. 10 - 20% swamps with mostly wet, clay loam or sand over dark brown clay or black cracking clay.</p>
		Swamp	N3G3E1	L	
NSG	0.4	Drainage depression	B7	D	<p>NSG Drainage depression with shallow loam over poorly structured brown clay on calcrete; 10 - 30% shallow clay loam on dark clay on calcrete or shallow loam over yellow grey clay on calcrete.</p>
NST	0.5	Plain	G3	V	<p>NST Plains with deep, bleached sand over brown clay, occasionally poorly structured. 10 - 20% sandy rises with deep well drained bleached acid sand. 10 - 20% swamps with mostly wet deep organic loam over brown clay.</p> <p>Main soils: Plains: <u>Thick sand over clay - G3</u> and <u>Deep hard gradational sandy loam - M4</u>. Swamps: <u>Wet clay loam - N3</u>, <u>Thick sand over clay - G3</u> and <u>Black cracking clay - E1</u>. Sandy rises: <u>Highly leached sand - I1</u> and <u>Bleached siliceous sand - H3</u>. Drainage depressions: <u>Sand over friable brown clay on calcrete - B7</u>.</p>
		Sandy rise	I1H3	L	
		Swamp	N3G3	L	
NTA	1.1	Plain	G3	D	<p>NTA Plains with mostly deep acid sands over acid yellow-brown clay.</p>
NTD	0.5	Plain	G3	D	<p>NTD Plains as for NTA; < 10% sandy rises with deep bleached acid sand.</p>
		Sandy rise	I1H3	M	
NTG	1.5	Drainage depression	I2G3	D	<p>NTG Drainage depressions with deep sand with impeded drainage, over brown clay or coffee rock.</p>



NTP	11.5	Plain	G3	V	<p>NTP Plains with soils as for NTA; 10 - 20% sandy rises with deep bleached acid sand.</p> <p>Main soils: Plains: <u>Thick sand over clay - G3.</u> Sandy rises: <u>Highly leached sand - I1</u> and <u>Bleached siliceous sand - H3.</u> Drainage depressions: <u>Wet highly leached sand - I2</u> and <u>Thick sand over clay - G3.</u></p>
		Sandy rise	I1H3	L	
NUA	4.3	Plain	G3	D	<p>NUA Plains with deep usually acid, sand over brown clay.</p> <p>NUG Swales with deep usually acid, sand over brown clay; 10 - 30% dark clay loam over calcareous clay, often wet.</p> <p>NUP Plains with deep usually acid, sand over brown clay, often shallow on calcrete; 10 - 29% sandy rises with deep well drained bleached acid sand; <10% swamps with mostly wet, clay loam over poorly structured brown clay, occasional sandy rise with sand over brown clay.</p> <p>Main soils: Plains: <u>Thick sand over clay - G3</u> and <u>Sand over friable brown clay on calcrete - B7.</u> Sandy rises: <u>Bleached siliceous sand - H3</u> and <u>Highly leached sand - I1.</u> Swamps: <u>Wet clay loam - N3</u> and <u>Deep hard gradational sandy loam - M4.</u></p>
NUG	0.0	Swale	G3	D	
NUP	1.2	Plain	G3B7	V	
		Sandy rise	H3I1	L	
		Swamp	N3M4	M	
NuF	0.9	Plain	M4F2	V	<p>NuF Plains with clay loam over dark brown or grey clay soils, often poorly structured, 10 - 30% on calcareous rubble or marl substrate. 20 - 30% swamps with mostly wet, cracking clay soils.</p> <p>NuG Drainage depressions with clay loam over poorly structured dark brown clay, occasionally on marl. Also 10 - 30 sand over brown clay.</p> <p>Main soils: Plains: <u>Deep hard gradational sandy loam - M4</u> and <u>Sandy loam over poorly structured brown or dark clay - F2.</u> Swamps: <u>Wet clay loam - N3.</u></p>
		Swamp	N3	C	
NuG	0.3	Drainage depression	M4F2	D	
NvA	0.3	Plain	G4	D	<p>NvA Plains with thin sand, or occasionally loam, over poorly structured brown clay.</p> <p>NvF Plains as for NvA, 10 - 20% swamps with often wet, dark grey clay loam over clay soils.</p> <p>Main soils: Plains: <u>Sand over yellow and brown clay - G4</u> or <u>Thick sand over clay - G3,</u> <u>Bleached sand over sandy clay loam - G2</u> and <u>Sand over acidic clay - G5.</u> Swamps: <u>Wet clay loam - N3,</u> <u>Deep friable gradational clay loam - M2</u> and <u>Deep hard gradational sandy loam - M4.</u></p>
NvF	4.8	Swamp	N3M2M4	L	
NZD	3.8	Plain	G4	V	<p>Plains with acid sand over poorly structured, occasionally acid, brown clay. <10% sandy rises with deep acid sand, mostly over acid brown clay. <10% swamps with wet, dark organic loam over clay.</p> <p>Main soils: Plains: <u>Sand over yellow and brown clay - G4.</u> Sandy rises: <u>Sand over acidic clay - G5</u> and <u>Wet highly leached sand - I2.</u> Swamps: <u>Wet clay loam - N3.</u></p>
		Sandy rise	G5I2	M	
		Swamp	N3	M	



OFC	0.2	Dune	I1	D	<p>OFC Dunes with deep moderately to highly leached, acid siliceous sand. 10 - 30% deep sand with drainage impeded by coffee rock or acid clay.</p> <p>OFD Low dunes as above; 10 - 30% bleached sand over poorly structured brown clay often on calcrete.</p> <p>OFG Low dunes as for OFD; 10 - 20% swales with deep sand over brown clay, or occasionally, coffee rock.</p> <p>OFq Low dunes as for OFD; 10 - 20% swales with often wet, sand over brown clay.</p> <p>Main soils: Dunes: <u>Highly leached sand - I1</u>. Swales: <u>Thick sand over clay - G3</u>, <u>Bleached sand over sandy clay loam - G2</u> and <u>Wet clay loam - N3</u>.</p>
OFD	1.1	Low dune	I1	D	
OFG	0.2	Low dune	I1	V	
		Swale	G3	L	
OFq	0.1	Low dune	I1	V	
		Swale	G2N3	L	
OHD	0.1	Dune	I1H3	D	
		Stony rise	B3	M	
OHG	0.1	Low dune	I1H3	V	
		Swale	G3	L	
					<p>OHD Low dunes with deep, strongly water repellent, acid, bleached, siliceous sands; 10-30% shallow sand over red clay on calcrete. <10% stony rises with very shallow sand over calccreted calcarenite with shallow sand over calcarenite rises; 10 - 30% shallow sand over red clay on calcrete or bare calcrete.</p> <p>OHG Low dunes as above, with mainly deep sand as above. 10 - 20% swales with, occasionally wet, deep sand over brown clay, sometimes on calcrete.</p> <p>Main soils: Dunes: <u>Highly leached sand - I1</u> and <u>Bleached siliceous sand - H3</u>. Swales: <u>Thick sand over clay - G3</u>. Stony rises: <u>Shallow sandy loam on calcrete - B3</u>.</p>
OKC	0.1	Dune	I2	D	
OKD	0.2	Low dune	I2G3	D	
					<p>OKC Dunes with deep acid siliceous, bleached sand, with impeded drainage on coffee rock or occasionally, brown clay.</p> <p>OKD Low dunes, moderately well drained, with deep siliceous acid sand, over coffee rock or brown clay.</p> <p>Main soils: <u>Wet highly leached sand - I2</u> and <u>Thick sand over clay - G3</u>.</p>
ONB	0.3	High dune	H3	D	
ONG	0.2	Low dune	H3I2	V	
		Swale	B7G3	L	
					<p>ONB High dunes with deep bleached siliceous sand.</p> <p>ONG Low dunes, with soils as above. 10 - 20% swales with shallow sand over poorly structured brown clay, often on calcrete.</p> <p>Main soils: High dunes: <u>Bleached siliceous sand - H3</u>. Low dunes: <u>Bleached siliceous sand - H3</u> and <u>Wet highly leached sand - I2</u>. Swales: <u>Sand over friable brown clay on calcrete - B7</u> and <u>Thick sand over clay - G3</u>.</p>
PEi	0.9	Plain	I2H3	V	
		Swamp	N3I2	L	
					<p>Poorly drained sand plains with deep siliceous acid sands with coffee rock or slowly permeable clays in the subsoils. 10 - 20% swamps with mostly wet, deep sand over coffee rock or clay.</p> <p>Main soils: Plains: <u>Wet highly leached sand - I2</u> and <u>Bleached siliceous sand - H3</u>. Swamps: <u>Wet clay loam - N3</u> and <u>Wet highly leached sand - I2</u>.</p>
XRC	0.2	Swamp	N3	D	
XRF	0.2	Swamp	N3	V	
		Stony rise	B5B2	L	
					<p>XRC Swamps with dark grey clay soils, often cracking.</p> <p>XRF Swamps with dark, mostly wet, cracking clay soils. 10 - 20% stony rises with shallow dark grey clay loam, often on dark clay, over calcrete, sometimes calcareous throughout.</p>



					Main soils: Swamps: <u>Wet clay loam - N3.</u> Stony rises: <u>Shallow dark clay loam on limestone - B5</u> and <u>Shallow calcareous loam on calcrete - B2.</u>
XuC	0.4	Swamp	N3	D	XuC Swamps with mostly non-peaty wet soils, but peats occur in up to 30% of areas.
XuD	0.3	Swamp	N3	V	
		Sandy rise	G3I2	L	Xud Non-peaty clay loamy swamps with 20 - 30% sandy rises with deep sand over brown clay soils.
XuF	0.2	Swamp	N3	V	
		Stony rise	B2B3B5	C	XuF Swamps as for XuC above, occasionally water filled, with stony rises and/or very shallow over calcrete. Main soils: Swamps: <u>Wet clay loam - N3.</u> Stony rises: <u>Shallow calcareous loam on calcrete - B2,</u> <u>Shallow sandy loam on calcrete - B3</u> and <u>Shallow dark clay loam on limestone - B5.</u> Sandy rise: <u>Thick sand over clay - G3</u> and <u>Wet highly leached sand - I2.</u>
XwC	0.03	Swamp	N3N2	D	
					Swamps with wet, often moderately saline sandy loam over dark brown clay, 10-30% water filled. 2-10% high salinity patches. Main soils: <u>Wet clay loam - N3</u> and <u>Wet saline clay loam - N2c.</u>

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

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:

- A5** Rubby calcareous loam on clay (Supracalcic-Lithocalcic Calcarosol on clay)
Calcareous sandy-clay loamy topsoil grading into loamy-clay loamy subsoil on a clayey substrate. Usually (always?) rubby. Clayey substrate (Blanchetown Clay equivalent: Imc or heavier) occurs at >60 cm(?) and <120 cm.
- A7** Calcareous clay loam on marl (Marly Calcarosol)
Dark calcareous clay with a marly subsoil (often saline in Upper SE). Often with shells and a peaty surface.
- B2** Shallow calcareous sandy loam on calcrete (Petrocalcic Calcarosol)
Up to 40 cm calcareous loamy sand to sandy loam with variable calcrete rubble overlying calcreted calcarenite - rises.
- 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.
- B5** Shallow dark clay loam on limestone (Petrocalcic, Black Dermosol)
Black clay loam to light clay over calcreted limestone at shallow depth, grading to highly calcareous clay - flats.
- 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.
- B7** Shallow sand over sandy clay on calcrete (Petrocalcic, Brown Chromosol)
Medium thickness sand overlying brown friable sandy clay to clay on limestone or calcreted sandy clay within 50 cm - flats.



- B8** Shallow sand on calcrete (Petrocalcic, Bleached-Leptic Tenosol)
Thick bleached sand over calcreted calcarenite within 50 cm - rises.
- E1** Black cracking clay (Black Vertosol)
- E3** Brown or grey cracking clay (Brown-Grey Vertosol)
- 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.
- G2** Bleached sand over sandy clay loam (sandy Brown-Red Chromosol)
Sandy texture contrast soil with a bleached A2 and a friable brown-red sandy clay loam to sandy loam subsoil.
- 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.
- G4** Sand over poorly structured clay (Sandy Brown-Red Sodosol-Chromosol)
Topsoil <30 cm over a poorly structured subsoil. Thin sandy texture contrast soil with a sodic /dispersive /poorly structured brown or red clayey subsoil. Can have some ironstone.
- 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, Aeris 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.
- M4** Deep hard gradational sandy loam (Hard Brown-Dark Kandosol- Dermosol)
Deep dark brown loamy to clay loamy soil grading to clay at depth. Hardsetting surface often with prismatic structures in the subsoil.
- N1** Peat (Organosol)
Peaty soil
- N2c** Wet saline clay loam (Dermosolic, Salic Hydrosol)
Medium thickness dark grey to black clay loam to clay grading to well-structured dark grey clay with minor carbonates and a water table within 100 cm.
- N3** Seasonally waterlogged, non to marginally saline equivalents of soils listed above, viz.:
N3c Wet **G3**
N3d Wet **B5**
N3e Wet **B7**
- RR** Bare rock

Further information: [DEWNR Soil and Land Program](#)

