

YLN Yalanda Land System

- Area:** 422.4 km²
- Landscape:** Undulating rises formed over basement schists, granitic gneisses and quartzites which outcrop sporadically. The rocks are largely covered by sandy Tertiary sediments which are mantled by thin deposits of highly calcareous aeolian silty sands of the Woorinen Formation. Draped across the main landscape are jumbled siliceous sandhills of Molineaux Sand.
- Annual rainfall:** 300 - 400 mm average
- Main soils:**
- Heggaton - G3 (Calcic, Brown Chromosol)
Thick sand to loamy sand with a bleached A2 layer, abruptly overlying a weakly structured brown sandy clay to clay, calcareous with depth, grading to Tertiary sediments.
- Lowan - H3 (Basic, Arenic, Bleached-Orthic Tenosol)
Thick bleached sand with a thin organically darkened surface layer, grading to a yellowish sand (often with darker lamellae), continuing below 150 cm.
- Minor soils:**
- Nobby - D3a (Calcic, Red Sodosol)
Medium thickness coarse sandy loam to sandy clay loam over a coarsely structured red clay, moderately calcareous with depth grading to alluvial sediments derived from eroded granitic rocks.
- Red brown earth - D2 (Hypercalcic, Red Chromosol / Dermosol)
Medium thickness friable loam to clay loam with a paler coloured A2 layer, over a well structured red clay, highly calcareous from about 30 cm grading to clayey alluvium.
- Skeletal soil - L1 (Lithic / Petroferric, Leptic Tenosol / Rudosol)
Variable gravelly loamy sand to sandy clay loam over basement rock or massive ironstone at depths usually less than 50 cm.
- Mangalo - D1 (Hypercalcic, Red Chromosol OR Calcareous, Inceptic, Red-Orthic Tenosol)
Thin to medium thickness coarse loamy sand to sandy loam over a red well structured clay forming in weathering basement rock with abundant fine carbonate in fissures.
- Kimba - D3b (Hypercalcic, Red Sodosol)
Medium thickness hard loamy sand to loam overlying a strongly subangular blocky red clay, highly calcareous (Class I carbonate) from about 30 cm, grading to Blanchetown Clay equivalent.
- Wiabuna - A5 (Regolithic, Hypercalcic Calcarosol)
Calcareous loam becoming more clayey and calcareous with depth, grading to a very highly calcareous clay (Class I carbonate) over Tertiary clay.
- Summary:** Sandy soils are very extensive, either as deep sands on sandhills, or thick sand over clay on flats, swales and gentle slopes. These are infertile and prone to wind erosion and water repellence. The higher sandhills are most susceptible. Associated with the sandy soils of flats and swales are relatively deep sandy loam over sandy clay soils with moderate fertility and low to moderate erodibility. These often have high levels of subsoil boron. There is a significant area of gentle slopes which are prone to water erosion. There is minor salinity as scattered seepages. The basement rock highs have relatively fertile soils, but rocky outcrops restrict cultivation.

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



Soil Landscape Unit summary: 17 Soil Landscape Units (SLUs) mapped in the Yalanda Land System

SLU	% of area	Component	Main soils	Prop#	Notes
A-g	2.2	Rocky outcrops	Skeletal	D	Shallow soil and rock - non arable.
ENB	3.2	Very gentle slopes	Mangalo	V	Slopes are potentially productive, sandhills are infertile and prone to wind erosion and water repellence.
		Low sandhills	Lowan	C	
ETC	4.6	Gentle slopes	Mangalo	E	Soils are productive between the outcrops - semi arable. Moderate water erosion potential.
		Rocky outcrops	Skeletal	E	
GCB	14.5	Very gentle slopes	Heggaton	V	Low to very low fertility, water repellent soils with moderate wind erosion potential. Slight water erosion potential on slopes.
		Low sandhills	Lowan	L	
GGB	9.3	Very gentle slopes	Heggaton	E	Mix of low fertility, wind erosion prone sandy soils, and fertile sandy loam soils on slopes. High boron in subsoils and slight water erosion potential. Highly erodible, water repellent and infertile soils on sandhills.
			Nobby / rbe	C	
		Low sandhills	Lowan	C	
GOB	1.7	Very gentle slopes:			Mixture of sandy and sandy loam soils. <u>Heggaton</u> : Low fertility, high wind erosion potential, water repellence. <u>Nobby / rbe</u> : Moderate fertility, low wind erosion potential.
		Sandy	Heggaton	E	
		Loamy	Nobby / rbe	E	
GOL	5.8	Very gentle slopes:			Slight water erosion potential throughout. Minor saline patches in GOL .
		Sandy	Heggaton	V	
		Loamy	Nobby / rbe	E	
		Saline patches		M	
GXC	22.6	Undulating sandy slopes	Heggaton	V	Low to very low fertility, moderate to high wind erosion potential, moderate water erosion potential, water repellence. Stony outcrops are semi arable.
		Low sandhills	Lowan	L	
		Stony outcrops	Skeletal	L	
HEE	0.5	Drainage depressions	Kimba / Wiabuna	D	Moderately fertile sandy loams with slight wind and water erosion potential. High subsoil boron.
OGI	7.0	Swales	Heggaton	E	Wind erosion potential is key feature of this land, with low fertility and susceptibility to water repellence.
		Moderate sandhills	Lowan	E	
OGK	13.1	Sand spreads	Lowan	E	<u>Heggaton</u> : low fertility, moderate erosion potential. <u>Lowan</u> : very low fertility, very high erosion potential
		Swales	Heggaton	E	
OGg	0.3	Sandspreads	Lowan	E	Moderate sandhills are semi arable, sand spreads are arable but at high risk. Slopes of OGg have slight water erosion potential.
		Very gentle sandy slopes	Heggaton	E	
OyE	5.3	High sandhills	Lowan	V	<u>Sandhills</u> : Very low fertility, moderate to very high wind erosion potential, water repellent. <u>Swales</u> : Sandy soils have low fertility, are water repellent and have moderate wind erosion potential. Sandy loam swales have moderate fertility, high subsoil boron, and low wind erosion potential.
		Swales	Nobby / rbe	L	
			Heggaton	L	
OyF	3.4	Moderate sandhills	Lowan	V	
		Swales	Nobby / rbe	L	
			Heggaton	L	
OyG	0.3	Low sandhills	Lowan	V	
		Swales	Nobby / rbe	L	
			Heggaton	L	
OyH	2.1	Swales	Nobby / rbe	E	
			Heggaton	C	
		High sandhills	Lowan	E	
OyI	4.1	Swales	Nobby / rbe	E	
			Heggaton	C	
		Moderate sandhills	Lowan	E	

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) |

