

YEL Yeldulknie Land System

(Equivalent to Weedhanna Land System of Rangelands)

Area: 393.2 km²

Landscape: Undulating to steep hills formed on schists and granitic gneisses in the south, and Warrow Quartzite in the Buckleboo area, commonly mantled by calcareous silty sands of the Woorinen Formation. On lower slopes are deposits of locally derived alluvium. In places, particularly on gentler slopes, the Woorinen materials are more than a metre thick.

Annual rainfall: 325 - 400 mm average

Main soils: Mangalo - D1 (Hypercalcic, Red Chromosol / 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.
Skeletal soil - L1 (Lithic, Leptic Tenosol / Rudosol)
Variable gravelly loamy sand to sandy clay loam over basement rock at depths usually less than 50 cm.

Minor soils: Cleve - D3 (Hypercalcic, Red Sodosol)
Thin to medium thickness hard loamy sand to sandy clay loam over a red clay with coarse prismatic structure, highly calcareous from about 25 cm, grading to alluvial clay.
Wiabuna - A4 (Regolithic, Lithocalcic / Supracalcic Calcarosol)
Calcareous sandy loam to sandy clay loam grading to carbonate rubble.
Alluvial soil - M4 (Eutrophic, Red Kandosol)
Medium to thick sandy loam grading to a red sandy clay loam to clay, becoming sandier with depth.
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.

Summary: More than 80% of the land is non arable, due to steep and / or rocky terrain. Almost 50% is too steep for access by standard farm implements. As the soils between the rocky outcrops are moderately fertile sandy loams, the land is well suited to rough grazing. The arable slopes are characterized by deep moderately fertile sandy loams with slight to moderate potential for water erosion.

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



Soil Landscape Unit summary: 20 Soil Landscape Units (SLUs) mapped in the Yeldulknie Land System

SLU	% of area	Component	Main soils	Prop#	Notes
A-g	8.4	Isolated rocky outcrops	Skeletal	D	Shallow stony soils amongst outcropping rock.
AKB	0.7	Gentle rocky slopes	Skeletal Mangalo	V E	Shallow stony soils - semi to non arable.
AKC	27.1	Moderate rocky slopes	Skeletal Mangalo	V E	Shallow stony soils and moderately steep slopes - non arable.
AKD	47.7	Steep rocky slopes	Skeletal Mangalo	V E	Shallow stony soils and steep slopes - non traversable. Rough grazing land only.
ALC	0.6	Moderately steep slopes	Skeletal Mangalo	E E	Less rocky than AKC , but too steep for cultivation.
DWB	0.1	Very gentle slopes	Mangalo Heggaton	E E	Mix of moderately fertile sandy loams and infertile sands. Slight water erosion potential.
EDB	0.1	Very gently sloping rises	Mangalo Skeletal	V L	Moderately fertile, but erosion prone sandy loam soils with limited rocky reefs.
EDC	4.3	Gentle slopes	Skeletal Mangalo	V L	
ETB	0.7	Very gentle stony slopes	Skeletal Mangalo	V E	Slopes with shallow stony or texture contrast soils. Extensive rocky outcrop reduces arable area.
ETC	0.7	Gentle stony slopes	Mangalo Skeletal	E E	ETB Slight erosion potential. ETC Moderate erosion potential.
ETD	0.1	Moderate stony slopes	Mangalo Skeletal	E E	ETC Moderately high erosion potential (semi arable) ETI As for ETD with eroded watercourses and minor salinity.
ETI	0.8	Moderate stony slopes (eroded)	Mangalo Skeletal	E E	
JJH	0.9	Gently sloping outwash fans	Cleve / Wiabuna	D	Deep moderately fertile non calcareous and calcareous sandy loams with moderate water erosion potential and severe watercourse erosion.
JKB	3.6	Very gently sloping outwash fans	Cleve	D	Deep moderately fertile sandy loams, with moderately low to moderate water erosion potential.
JKC	1.2	Gently sloping outwash fans	Cleve	D	JKB 1-3% slope JKC 3-5% slope
JUH	0.2	Gently sloping outwash fans	Cleve Alluvial	V L	Deep fertile sandy loams with moderate water erosion potential and eroded watercourses.
KQC	0.4	Gently sloping outwash fans	Wiabuna	D	Deep moderately fertile calcareous sandy loams with moderate water erosion potential.
KQI	1.0	Moderately steep slopes Rocky outcrops	Wiabuna Skeletal	V E	Low eroded escarpment. Semi arable due to slope, gullies and shallow stony soils.
KZB	0.7	Very gently sloping outwash fans Rocky outcrops	Wiabuna Mangalo /Skeletal	V L	Deep moderately fertile calcareous sandy loams, and 10-20% shallow stony sandy loams with rocky outcrops. KZB Slight water erosion potential. KZH Moderate water erosion potential and eroded watercourses.
KZH	0.7	Gently sloping outwash fans Rocky outcrops	Wiabuna Mangalo /Skeletal	V L	

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) |

