

# TOR Tothill Range Land System

Quartzite ridge extending from Burra to Tarnma

**Area:** 35.4 km<sup>2</sup>

**Annual rainfall:** 375 – 500 mm average

**Geology:** Gilbert Range Quartzites with interbedded quartzitic sandstones, shales and tillites of the Appila Formation.

**Topography:** The Tothill Range Land System is a single ridge extending for more than 50 km from Princess Town Hill (three km south east of Burra) to Tarnma. The ridge is continuous except for three narrow gaps. The height of the range varies from 40 m to 130 m and slopes from 15% to 100%. Rocky outcrops are variable, up to 20% in places. There is generally extensive surface stone, up to 50% in places.

**Elevation:** 680 m to 450 m

**Relief:** Maximum relief is 130 m

**Soils:** The soils are mainly shallow stony sandy loams, some with red clayey subsoils:

- L1** Shallow stony sandy loam
- D7** Stony sandy loam over dispersive red clay on rock
- D1** Stony loam over red clay on rock

**Main features:** This land is steep, stony, exposed and with mainly shallow soils. Most of the steeper land is still covered by natural vegetation. Agricultural use is restricted to rough grazing.

**Soil Landscape Unit summary:** 3 Soil Landscape Units (SLUs) mapped in the Tothill Range Land System

SLU	% of area	Main features #
AQC	24.6	Moderately steep to steep ridges with variable quartzite outcrop up to 20%, and up to 50% cover of surface quartzite, sandstone and shale.
AQD	4.7	
AQE	70.7	
		<b>AQC</b> Slopes of 15-30% and relief of 40-70 m. <b>AQD</b> Slopes of 20-30% and relief of 70-90 m. <b>AQE</b> Slopes of 30-100% and relief of 90-130 m. Main soils: <u>shallow stony sandy loam</u> - <b>L1</b> (E) and <u>stony sandy loam over dispersive red clay on rock</u> - <b>D7</b> (E), with <u>stony loam over red clay on rock</u> - <b>D1</b> (L). This land is steep, stony, exposed and with mainly shallow soils. Most of the steeper land is still covered by natural vegetation. Agricultural use is restricted to rough grazing.

# PROPORTION codes assigned to soils within Soil Landscape Units (SLU):

- |     |  |     |                                   |
|-----|--|-----|-----------------------------------|
| (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:**

- D1** Stony loam over red clay on rock (Calcic / Eutrophic, Red Chromosol)  
Medium to thick stony sandy loam to loam abruptly overlying a finely structured and friable red clay, often calcareous at depth. The soil is formed on weathering shale or tillite more than 100 cm deep.
- D7** Stony sandy loam over dispersive red clay on rock (Calcic / Eutrophic, Red Sodosol)  
Medium to thick stony sandy loam, often with a bleached A2 layer, abruptly overlying a coarsely structured and dispersive red clay, often calcareous with depth. The soil is formed on weathering quartzite or quartzitic shale, often more than 100 cm deep.
- L1** Shallow stony sandy loam (Lithic, Leptic Tenosol / Rudosol)  
Stony sandy loam to loam directly overlying hard rock within 50 cm.

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

