

# BGR Bangor Land System

Series of parallel ridges on mainly calcareous rocks in the Bangor area, Southern Flinders Ranges

- Area:** 26.2 km<sup>2</sup>
- Annual rainfall:** 450 – 575 mm average
- Geology:** Interbedded dolomites, siltstones, tillites and quartzites of the Skillogalee, Tapley Hill, Brighton, Appila and Undalya Formations. The characteristic feature of this land system is the extensive occurrence of calcareous rocks.
- Topography:** Series of parallel ridges adjacent to the north eastern edge of the quartzite ranges of the Telowie Gorge Land System. The ridges are moderately steep to steep with slopes ranging from 10% to 50%. Watercourses are well defined and have an overall north westerly flow. Two main drainage systems are separated by a prominent ridge. The more northern system is the headwaters of Stony Creek, flowing into Baroota Creek. The southern system flows through the Port Germein Gorge (Back Creek).
- Elevation:** 280 m where Back Creek leaves the system, to 490 m at the highest point in the Wirrabara Forest.
- Relief:** Between 40 m and 100 m
- Soils:** Shallow to moderately deep loamy soils are predominant. These are often calcareous, or at least formed on calcareous rock. Deeper texture contrast and gradational soils occur on lower slopes.
- Main soils
- A2** Calcareous loam - extensive on slopes  
**C2/B4** Gradational loam - extensive on slopes  
**L1** Shallow stony loam - common on steeper slopes
- Minor soils
- M2** Deep gradational loam - lower slopes  
**F2/F1** Hard sandy loam over dispersive clay - lower slopes
- Main features:** The Bangor Land System is predominantly moderately steep hill country characterized by soils which are either calcareous or are formed on calcareous rocks. They are well structured and moderately fertile although generally shallow. The combination of high rainfall and favourable soils indicates good productive potential for perennial crops and pastures, the main limitations being low waterholding capacity and erosion potential. Limited areas of arable land have few limitations to agricultural use, apart from the need to control erosion.



**Soil Landscape Unit summary:** 5 Soil Landscape Units (SLUs) mapped in the Bangor Land System:

SLU	% of area	Main features #
ADC ADD	38.9 11.5	Non arable hills formed on predominantly calcareous rocks. <b>ADC</b> Hills with slopes of 15-30% and up to 10% rocky outcrop. <b>ADD</b> Steep ridges with slopes of 30-50% and up to 20% rocky outcrop. Main soils: <u>calcareous loam</u> - <b>A2</b> (E) and <u>shallow stony loam</u> - <b>L1</b> (E), with <u>gradational loam</u> - <b>C2/B4</b> (C). The hills are too steep for cropping, but the soils are inherently fertile although often very shallow, thereby limiting the capacity of the soil to store moisture for any length of time. The soils are generally well structured due to the strong influence of calcium from parent rocks. There is a significant potential for water erosion during pasture renovation and dry periods when cover is low.
ELC ELD	8.9 38.5	Semi arable low hills formed on predominantly calcareous rocks. <b>ELC</b> Slopes of 5-12% <b>ELD</b> Slopes of 12-20% Main soils: <u>gradational loam</u> - <b>C2/B4</b> (E) and <u>calcareous loam</u> - <b>A2</b> (C), with <u>deep gradational loam</u> - <b>M2</b> (L) and <u>shallow stony loam</u> - <b>L1</b> (L). This land is marginal for cropping due to the potential for erosion, and the shallowness and stoniness of the soils. However, the soils are well structured and fertile and have the potential to support productive pastures.
JQE	2.2	Lower slopes and flats with slopes of 0-4%, formed on fine grained alluvium. Main soils: <u>hard sandy loam over dispersive clay</u> - <b>F2/F1</b> (V) with <u>deep gradational loam</u> - <b>M2</b> (L). The creek flats are limited in area and are subject to waterlogging, structural problems and accessibility when wet. Fertility is good. Stream bank erosion is a threat in the watercourse.

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

- (D) Dominant in extent (>90% of SLU)
- (V) Very extensive in extent (60–90% of SLU)
- (E) Extensive in extent (30–60% of SLU)
- (C) Common in extent (20–30% of SLU)
- (L) Limited in extent (10–20% of SLU)
- (M) Minor in extent (<10% of SLU)

### Detailed soil profile descriptions:

- A2** Calcareous loam (Paralithic, Calcic / Hypercalcic Calcarosol)  
Calcareous grey brown loam grading to a highly calcareous grey silty loam to clay loam with variable rock fragments and carbonate nodules, merging with weathering basement rock within 100 cm, and commonly within 50 cm.
- C2/B4** Gradational loam (Hypercalcic / Petrocalcic, Red Dermosol)  
Medium thickness loam grading to a well structured red clay loam to clay with soft or rubbly carbonate at shallow depth, overlying weathering basement rock within 100 cm.
- F2/F1** Hard sandy loam over dispersive clay (Eutrophic, Brown Sodosol / Chromosol)  
Thick hard setting sandy loam to clay loam with a bleached subsurface layer abruptly overlying a mottled brown clayey subsoil, grading to alluvium.
- L1** Shallow stony loam (Calcareous, Paralithic, Leptic Tenosol)  
Shallow stony loam directly overlying calcareous rock.
- M2** Deep gradational loam (Eutrophic, Red Dermosol)  
Medium thickness loam grading to a well structured red clay over alluvium.

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

