BHI BARRA HILL Land System

Area: 90.3 km²

Landscape: Range of low rocky hills trending north-south to the north of Peterborough.

Annual rainfall: 265 – 375 mm average

Geology: Appila Tillite, Burra Group siltstones, dolomites, and quartzites.

Topography: Low, round hills, trending north-north-east, south-south-west, mostly rolling with

much rock outcrop. Some pediments and valley floor deposits are included.

Elevation: Up to 670 m asl at Barra Hill, but mostly 520 – 600 m asl

Relief: 40 – 60 m relief commonly

Soils: Shallow calcareous clay-loam to loam over hard rock (Tenosols/Calcarosols)

Calcareous loam-clay loam grading to highly calcareous clay loam-clay

(Calcarosols) occur on lower slopes and valley floors.

Main soils: L1 (35%) Shallow soil on rock. Rocky (Rudosol-Tenosol)

A2 (30%) Calcareous loam on rock (Paralithic Calcarosol)

RR (22%) Bare rock

Minor soils: D1 (4%) Loam over clay on rock (Shallow Calcic-Hypercalcic Red Chromosol)

D4 (3%) Loam over pedaric red clay (Pedaric Red Sodosol-Dermosol)

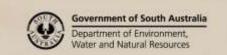
Summary: The Barra Hill land system is a range of rocky hills with shallow, mostly calcareous

soils formed over tillite and calc-siltstones, dolomites and quartzites. Red duplex

soils also occur on rock, pediments and valley floor deposits.

Soil Landscape Unit summary: Barra Hill Land System (BHI)

SLU	% of area	Component	Main soils	Prop#	Notes
APB	7.6	Rolling rises	LIDI	D	Rolling rises on coarse-grained basement rocks particularly Appilla Tillite Formation. Relief is 9-30m, slopes are 10-30%. Main soils: Shallow stony soils on rock - L1 and Loam over pedaric red clay on rock - D1.
AQD	9.0	Steep how hills	L1	D	Steep low hills formed on quartzite (mostly on the Minburra Quartzite Member of the Saddleworth Formation) with shallow rocky soils. Much rock outcrop. Relief is 30-90m, slopes are 30-60%. Main soils: Shallow stony soils on rock - L1. Minor soils include Red clayey pedaric Dermosols - C2. Suitable for limited grazing land use only, scenic value is high.
AYB	67.3	Rolling rises	A2L1RR	D	Hills and rises on fine-grained rocks, especially siltstones
AYD	1.3	Steep low hills	A2L1RR	D	of the Tapley Hill Formation. More than 20% of soils contain secondary carbonate. AYB Rolling rises. Relief: less than 30m, slopes: 10-30%. AYD Steep low hills.

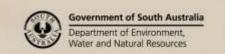




					Relief is 30-90m; slopes are 30-50%.
					Main soils: <u>Calcareous loam on rock</u> – A2 and <u>Shallow</u> stony soils on rock - L1 and <u>Bare rock</u> – RR .
ECB	0.8	Gently undulating rises	L1C2	D	Rises formed on Tapley Hill Formation siltstones with shallow gradational soils containing carbonate-
ECC	2.1	Undulating rises	L1C2	D	enriched subsoils. Subsoils are also moderately saline. ECB Gently undulating rises. Slopes are 1-3%, relief is less than 30m. ECC Undulating rises. Relief: less than 30m, slopes: 3-10%.
					Main soils: calcareous loamy, <u>Shallow stony soils on rock</u> - L1 and <u>Gradational loam on rock</u> - C2 .
EHm	4.9	Undulating pediments	A2	٧	Undulating pediments on calcareous shales, siltstones and limestones such as those of the Tapley Hill
		Rocky outcrops	RR	L	Formation. Rocky rises occur in places. Main soils: <u>Calcareous loam on rock</u> – A2 and <u>Bare rock</u> – RR .
ESC	0.8	Undulating rises	A2A5	V	Undulating rises with rocky outcrops and shallow loamy
JLH	2.8	Rocky outcrops Undulating pediments Creek flat	D4 D4D1	D D	surface soils on calcareous shales and limestone rocks of the Wonoka Formation. Up to 5% of land is affected by gullying. Slopes are 3-10%, relief is 9-30m. Undulating rises: More than 20% of land within this component is gullied. Slopes are 3-10%, relief is 9-30m. Rocky outcrops: The rocky outcrops have no gullying. Main soils: Calcareous loam on rock – A2, Rubbly calcareous loam on clay - A5 and Bare rock – RR. Plains and pediments with more than 20% pedaric, texture contrast (loam over crumbly red clay) soils, but less than 20% calcareous gradational soils. JLH Undulating pediments. Moderately gullied.
ККВ	1.4	Gently undulating pediments	A6A5	D	Slopes are 3-10%, relief is less than 9m. JLJ Creek flat. Moderately gullied. Main soils: Clay loam over pedaric red clay - D4 and Loam over pedaric red clay on rock - D1, with minor occurrences of Deep moderately calcareous loam - A3. Pediments formed on outwash sediments with mostly gradational calcareous soils (Calcarosols) and more than 10% of associated soils have clayey surfaces.
KKG	1.0	Gently undulating pediments	A6A5	D	KKB Gently undulating pediment. Slopes are 1-3%, relief is less than 9m. KKG Gently undulating pediments with 10-20% gullied land and 0-5% scalded. Subsoils are moderately saline. Slopes are1-3%, relief is less than 9m. Main soils: Gradational calcareous clay - A6 and Rubbly calcareous loam on clay - A5.

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

- 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/L1 Shallow calcareous loam (Paralithic, Hypercalcic / Lithocalcic Calcarosol) (A2) OR Shallow stony loam (Calcareous, Paralithic, Leptic Tenosol) (L1)
- Rubbly calcareous loamy sand on clay (Supracalcic-Lithocalcic Calcarosol on clay)
 Calcareous loamy sand topsoil grading into loamy-clay loamy subsoil on a clayey substrate.
 Usually rubbly. Clayey substrate occurs at >60 cm and <120 cm.
- A6 <u>Gradational calcareous clay loam (Pedal Hypercalcic-Lithocalcic Calcarosol</u> on clayey subsoil)
 Calcareous loams to clay loams grading into brown-red clay. Often rubbly.
- Gradational loam on rock (Calcic / Hypercalcic Red Dermosol)
 Loam to clay loam grading to a friable red clay with soft Class I carbonate within 50 cm, grading to weathering rock within 100 cm.
- D1 Loam over red clay on rock (Hypercalcic / Calcic, Red Chromosol / Sodosol)

 Medium thickness hard gravelly loam over red clay, friable and finely structured, calcareous with depth, grading to weathering basement rock within 100 cm.
- D4 Loam over red friable clay (Calcic, Pedaric, Red Sodosol)
 Thin to medium thickness fine sandy loam to loam over a finely structured friable red clay, calcareous from about 50 cm, grading to fine or medium grained alluvium.
- Shallow stony loam (Paralithic, Leptic Tenosol)
 Shallow stony loam, often calcareous throughout or with depth, overlying weathering rock shallower than 50 cm.
- **RR** Bare rock

Further information: DEWNR Soil and Land Program

