

AMY AMYTON Land System

Area:	44.3 km ²
Landscape:	Broad rises on tillite and quartzites with calcareous loam over clay soils, often shallow over rock. Named from Amyton locality.
Annual rainfall:	300 – 345 mm average
Geology:	Appila Tillite, quartz veins, clay and calcareous alluvium
Topography:	Broad undulating to rolling rises and associated pediments and broad drainage lines
Elevation:	Up to 320 m asl on broad rises west of Amyton
Relief:	Relief is up to 40 m over 1.5 km, with slopes up to 10%, but usually 5 - 8%
Typical soils:	Thin friable loam over red friable clay grading to much soft carbonate over weathered tillite (red Chromosol) occurs on crests and slopes of broad rises. Soils are often gravelly. Calcareous sandy loam grading to highly calcareous clay loam or clay over quartzite or tillite. (Calcarosols or Tenosols) occurs on low rises and lower slopes abutting plains. Shallow calcareous loams with many calcareous rubble/concretions and coarse gravel over platy hard calcrete (Calcarosols) on ferruginised tillite/quartz occur on upper slopes and crests.
Main soils:	A2 (27%) Calcareous loam on rock (Paralithic Calcarosol) C1 (17%) Gradational sandy loam (Calcic-Hypercalcic Kandosol-Calcarosol) D3 (11%) Loam over poorly structured red clay (Calcic-Hypercalcic Red Sodosol-Chromosol)
Minor soils:	L1 (9%) Shallow soil on rock. Rocky (Rudosol-Tenosol) D7 (6%) Loam over poorly structured clay on rock (Shallow Calcic-Hypercalcic Red Chromosol) C3 (6%) Friable gradational clay loam (Calcic-Hypercalcic Red Dermosol-Calcarosol) A5 (5%) Rubbly calcareous loam on clay (Supracalcic-Lithocalcic Calcarosol) A3 (5%) Deep moderately calcareous loam (Calcic Calcarosol)
Summary:	The Amyton Land System consists of broad rises with gradational calcareous soils overlying hard rock such as pre-Cambrian tillite and quartzite. On pediments, gradational and texture contrast soils with calcareous subsoils are common.

Soil Landscape Unit summary: Amyton Land System (AMY)

SLU	% of area	Component	Main soils	Prop#	Notes
EAC	8.7	Undulating rises	A2C2D1	D	Undulating rises with gradational calcareous soils over hard rock with more than 20% red texture contrast and/or non-calcareous red gradational soils. Relief is 9-30 m, slopes are 3-10%. Main soils: <u>Calcareous loam on rock -A2</u> , <u>Gradational loam on rock -C2</u> and <u>Clay loam over pedaric red clay on rock -D1</u> .



EFB	19.1	Gently undulating rises	A2D7L1	D	Gently undulating rises with moderately shallow soils overlying hard calcareous rocks, typically Hawker Group siltstones and limestones. Minor scalding. Slopes are 1-3%, relief is less than 30m. Main soils: <u>Calcareous loam on rock - A2</u> , <u>Loam over poorly structured clay on rock - D7</u> and <u>Shallow stony soils on rock - L1</u> .
KCE	2.5	Creek line	C3A3M3	D	Plains and pediments of outwash sediments with gradational soils with sandy clay loam surface textures. Soils are mostly not calcareous throughout. KCE Creek line. KCG Gently undulating pediments, with 10-20% gullied and minor scalding, up to 5%. Main soils: <u>Friable gradational sandy clay loam - C3</u> and <u>Deep moderately calcareous sandy loam - A3</u> . Additionally, <u>Deep gravelly soil - M3</u> is found associated with creek flats.
KCG	11.1	Gently undulating pediments	C3A3	D	
KIB	14.5	Pediment	C1A2	V	Pediment-basement rock complex with mostly gradational soils. Soils which have carbonate free surfaces are dominant. Soils which are calcareous throughout are common but not dominant.
		Gently undulating rises	L1C1A2	L	
KIC	35.5	Pediment	C1A2D3	V	KIB Gently sloping pediment-with undulating basement rises. Pediment: Pediment slopes are 1-3%. Main soils: <u>Gradational sandy loam - C1</u> , <u>Calcareous loam on rock - A2</u> and <u>Clay Loam over red clay - D2</u> . Rises Gently undulating basement rises with shallow rocky soils. Relief is 9-30m, slopes are 1-3%. Main soils: <u>Shallow stony soils on rock - L1</u> , <u>Gradational sandy loam - C1</u> and <u>Calcareous loam on rock - A2</u> . KIC Pediment-basement rise complex as above. Pediment: Slope is 3-10%. Main soils on pediments: <u>Gradational sandy loam - C1</u> , <u>Calcareous loam on rock - A2</u> and <u>Loam over poorly structured red clay - D3</u> . Rises Gently undulating basement rises with shallow rocky, mostly calcareous soils. Relief is 9-30m, slope is 1-3%. Main soils: <u>Shallow stony soils on rock - L1</u> , <u>Calcareous loam on rock - A2</u> and <u>Loam over clay on rock - D1</u> .
		Undulating rises	L1A2D1	L	
KLB	8.5	Gently undulation pediment	A5	D	Gently undulating pediments and plains with clay-loamy calcareous soils. Slopes are 1-3%, relief is less than 9m. Main soils: <u>Rubbly calcareous clay loam on clay - A5</u> . Minor soils include: <u>Calcareous clay loam on rock - A2</u> , <u>Gradational red-brown clay loam over rock - C2</u> and <u>Shallow calcareous loam on calcrete - B2</u> .

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)
- A3** Deep moderately calcareous (sandy) loam (Calcic Calcarosol)
Calcareous (sandy) loam topsoil grading into loamy-clay loamy subsoil without a significant CO₃ buildup in the subsoil (<20% CO₃ in subsoil). Pediment type Calcarosols.
- A5** 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.
- C1** Gradational sandy loam (Calcic-Hypercalcic Kandosol-Calcarosol)
Friable sandy to loamy topsoil grading into massive red-brown alkaline loamy to clay loamy subsoil.
- C2** 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.
- C3** Gradational clay loam (Calcic / Hypercalcic Red Dermosol)
Loam to clay loam grading to a friable red clay with soft Class I carbonate within 50 cm, grading to alluvium 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.
- D3** Hard clay loam over dispersive red clay (Calcic, Red Sodosol / Sodic, Calcic, Red Chromosol)
Medium thickness hard clay loam with up to 50% quartzite stones over a coarsely prismatic dispersive red clay, calcareous with depth over stony and clayey alluvium.
- D7** Loam over red clay on rock (Hypercalcic / Calcic, Red Chromosol / Sodosol)
Medium thickness hard gravelly loam over a red clay, friable and finely structured (D1), to hard, coarsely structured and dispersive (D7), calcareous with depth, grading to weathering basement rock within 100 cm.
- L1** Shallow stony loam (Paralithic, Leptic Tenosol)
Shallow stony loam, often calcareous throughout or with depth, overlying weathering rock shallower than 50 cm.
- M3** Deep gravelly soil Gravelly Kandosol-Tenosol
Deep uniform loamy alluvial soils with at least 50% gravel in the major part of the profile.

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

