

CMS Cummins Land System

Area:	149.6 km ²
Landscape:	Extensive plains formed on alluvial sediments overlying Tertiary sediments
Annual rainfall:	430 – 465 mm average
Main soils:	<p><u>Red brown earth (clayey) - D2 (Hypercalcic, Red Chromosol / Dermosol)</u> Medium thickness friable clay loam with a paler coloured A2 layer, over a well structured red clay, highly calcareous from about 30 cm grading to clayey alluvium or Tertiary material.</p> <p><u>Grey clay - E3/M2 (Epipedal, Grey Vertosol / Vertic, Calcic, Grey Dermosol)</u> Thin to medium thickness coarsely structured dark grey clay loam to light clay (seasonally cracking), grading to a light grey moderately calcareous heavy clay with coarse blocky or prismatic structure, over Tertiary clay.</p> <p><u>Butler / Pedlar - F2 (Hypercalcic, Brown Sodosol)</u> Thin to medium thickness hard loamy sand to sandy loam over a brown mottled clay with strong columnar structure, highly calcareous from about 20 cm, grading to alluvial or Tertiary clay.</p> <p><u>Wharminda - G4 (Hypercalcic, Brown Sodosol)</u> Medium to thick sand with a bleached A2 layer abruptly overlying a hard columnar structured dispersive brown mottled clay, highly calcareous with depth, grading to alluvial or Tertiary sediments.</p> <p><u>Pedlar - F1 (Sodic, Calcic / Lithocalcic, Brown Chromosol)</u> Medium thickness hard sandy loam with a massive light sandy loam A2 layer, over a strongly prismatic brown clay, calcareous with depth, grading to Tertiary sediments.</p>
Summary:	Flats with deep, generally fertile soils. Minor limitations due to waterlogging, poor soil structure, sporadic salinity and subsoil boron toxicity. Red brown earths (most common soil) are naturally fertile and better drained than the others. Grey clays are prone to waterlogging and access problems when wet. Sandy loam and sand over clay soils suffer from impeded drainage and root growth caused by dispersive subsoil clays. Sandy types are also infertile, and prone to water repellence and acidification.



Soil Landscape Unit summary: 1 Soil Landscape Unit (SLU) mapped in the Cummins Land System:

SLU	% of area	Component	Main soils	Prop#	Notes
HDA	100	Sandy clay loam flats	Red brown earth (clayey)	E	<p>Flats with deep, generally fertile soils. Minor limitations due to waterlogging, poor soil structure, sporadic salinity and subsoil boron toxicity.</p> <p>Soils:</p> <p><u>RBE (clayey)</u>: Sandy clay loam over clay – fertile, moderately well drained, poor surface structure. High productive potential.</p> <p><u>Grey clay</u>: Cracking clay - fertile but prone to waterlogging, and workability problems. Difficult to access when wet.</p> <p><u>Butler</u>: Sandy loam over poorly structured clay – moderately fertile but subject to waterlogging and poor root growth (dispersive subsoil).</p> <p><u>Wharminda</u>: Low fertility sandy soil with poorly structured subsoil (waterlogging, poor root growth), moderate wind erosion potential. Prone to water repellence and acidification.</p> <p><u>Pedlar</u>: As for clayey RBE but less fertile and less well structured</p>
		Cracking clay flats	Grey clay	C	
		Sandy loam flats	Butler	L	
		Sandy flats	Wharminda	L	
		Sandy loam flats	Pedlar	L	

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)

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

