

HWK Hawks Nest Land System

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| Area: | 23.2 km ² |
| Landscape: | Pediments and rises north of Wilmington, which form a gently undulating landscape between steep hills to the west and low undulating rises to the east. Named from Hawks Nest Creek, a watercourse draining part of the land system. |
| Annual rainfall: | 360 – 405 mm average |
| Geology: | Quaternary fan and pediment deposits and upper Willochra Formation sandstones and siltstones |
| Topography: | Gently undulating to undulating pediments and rises which face east mostly. |
| Elevation: | Rising from 300 m asl on the lower or eastern end of pediments slopes to 450 m asl on the upper slopes and rises in the west and north. |
| Relief: | Vertical relief ranges up to 40 m over a distance of 1.5 km, but is usually of the order of 20 m per km. |
| Soils: | <p>Friable loam to clay loam, often gravelly, over friable, structured red clay soils with soft carbonate at depth (Chromosols) grading into stony clay or weathered siltstone or sandstone. These soils are widespread on slopes throughout the land system.</p> <p>Well-structured dark grey clay soils with soft carbonate at depth (Dermosols/Vertosols) occur on some upper slopes of pediments. They may exhibit gilgai or "crabhole" surface features.</p> |
| Main soils: | <p>D2 (30%) Loam over red clay (Calcic-Hypercalcic Red Chromosol-Sodosol)</p> <p>D1 (22%) Loam over clay on rock (Shallow Calcic-Hypercalcic Red Chromosol)</p> <p>D4 (18%) Loam over pederic red clay (Pederic Red Sodosol-Dermosol)</p> <p>E2 (11%) Red cracking clay (Red Vertosol)</p> <p>C3 (11%) Friable gradational clay loam (Calcic-Hypercalcic Red Dermosol-Calcarosol)</p> |
| Minor soils: | A6 (3%) Gradational calcareous clay loam (Pedal Hypercalcic-Lithocalcic Calcarosol on clayey subsoil) |
| Summary: | The Hawks Nest Land System consists of Quaternary pediments and fan deposits which form a gently undulating landscape between steep hills to the west and low undulating rises to the east. Friable, red texture contrast soils are dominant, often shallow over siltstone. Red or grey clayey soils are also common. Surfaces are often gravelly. |

Soil Landscape Unit summary: Hawks Nest Land System (HWK)

| SLU | % of area | Component | Main soils | Prop# | Notes |
|-----|-----------|-------------------------|------------|-------|---|
| DHB | 6.8 | Gently undulating rises | D1 | D | Rises with shallow red texture contrast soils over Cambrian limestone. DHB Gently undulating rises. Slopes are 1-3%, relief is 9-30m. |
| DHC | 1.4 | Undulating rises | D1 | D | DHC Undulating rises. Relief is 9-30m, slopes are 10-30%. Main soils: <u>Loam over clay on rock - D1</u> , with associated <u>Shallow stony soils on rock - L1</u> and <u>Gradational loam on rock - C2</u> . |
| JAH | 37.9 | Undulating | D4E2 | D | Undulating pediments and outwash plains with clay loam |



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| | | pediments | C3 | | surface textures on texture contrast and gradational soils. Red clays are also common. Slopes are 3-10%. Gullying affects 5-10% of land. Main soils: <u>Loam over pedaric red clay - D4</u> , <u>Red cracking clay - E2</u> and <u>Friable gradational clay loam - C3</u> . D4 and C3 soils have surfaces which are highly susceptible to water erosion |
| JMG | 8.6 | Gently sloping plain | D2D4 A6 | D | Gently sloping pediment plain with stony, pedaric, red, texture contrast soils with quartz gravel on the surface. Gullying affects 10-20% of the land. Slopes are 1-3%, relief is less than 9m. Main soils: quartz gravelly variants of <u>Loam over red clay - D2</u> , with subdominant (10-30%) <u>Loam over pedaric red clay - D4</u> and <u>Gradational calcareous clay - A6</u> . |
| JXB | 45.4 | Gently undulating pediments | D2 | V | Gently undulating pediments in complex with rocky rises. Most soils have clay loam surfaces. Slopes are 1-3%. Main soils on pediments: <u>Loam over red clay - D2</u> , <u>Loam over clay on rock - D1</u> soils are associated with rocky rises. |
| | | Rocky rises | D1 | C | |

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:

- A6** Gradational calcareous clay loam (Pedal Hypercalcic-Lithocalcic Calcarosol on clayey subsoil)
Calcareous loams to clay loams grading into brown-red clay. Often rubbly.
- 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.
- D2** Hard loam over red clay (Calcic / Hypercalcic, Red Chromosol)
Hard setting sandy loam to clay loam (with variable quartzite stones) abruptly overlying a well structured red clay with soft Class I carbonate at depth.
- 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.
- E2** Red cracking clay (Epicalcareous, Epipedal, Red Vertosol)
Dark strongly structured clay grading to a well structured red calcareous medium to heavy clay continuing below 100 cm. Often containing gypsum segregations in subsoil.
- L1** Shallow stony loam (Paralithic, Leptic Tenosol)
Shallow stony loam, often calcareous throughout or with depth, overlying weathering rock shallower than 50 cm.

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

