

# CHT Cape Hart Land System

Plateau surfaces, slopes and valleys mostly covered with calcreted sediments. The calcreted sediments are largely in the form of relict jumbled dune core topography with shallow soils.

**Area:** 118.3 km<sup>2</sup>

**Annual rainfall:** 510 – 615 mm average

**Geology:** This system is dominated by Pleistocene age Bridgewater Formation calcreted calcarenite. This Bridgewater Formation is the remnant of highly calcareous coastal sand deposits; of which only the hardened base or core remains. The calccrete can be overlain by non calcareous siliceous sediments, calcareous siliceous sediments, or younger highly calcareous carbonate sediments near the coast. In many lower lying areas the Bridgewater Formation has been eroded or 'dissolved' away and older underlying sediments are exposed. These sediments consist of Pliocene age (?) sodic clays, forming subsoils, which are overlain by sandy or loamy topsoils. Ironstone nodules can be found overlying these clays.

**Topography:** The system covers eastern and southern parts of the Dudley Plateau. This slightly dissected plateau area is largely overlain by relict jumbled dune core topography, mostly in the form of jumbled dunes or very gentle undulations. The only significant depression area is the flat-bottomed valley at Porky Flat, also overlain in part with relict jumbled dune core topography and rises. Included are part of the gully of the Willson River, and the slopes running down from the plateau area to the lower lying Pelican Lagoon area. Some coastal cliffs are also included. Slopes typically range between 0% and 10%, but reach 100% on the steepest gully slopes and over 100% on coastal cliffs.

**Elevation:** Elevations range from 0 to 140 m, but are typically in the 40 to 140 m range

**Relief:** Relief varies from 0 to 60 m, but is typically in the 10 to 30 m range

**Main soils:**

- B3** Shallow loamy sand to sandy loam on calccrete
- B2** Shallow calcareous loamy sand to sandy loam on calccrete
- G4-G3** Sand to light sandy loam over brown or red clay

**Minor soils:**

- B8** Very shallow loamy sand to sandy loam on calccrete
- B1** Shallow highly calcareous/shelly loamy sand to light sandy loam on calccrete
- A4** Rubbly calcareous loamy sand to sandy loam
- H1-A1** Shelly/highly calcareous loamy sand to sandy loam
- B7-B6** Shallow sand to sandy loam over red or brown clay on calccrete
- F2-D3** Loam and sandy loam over brown or red clay
- L1-A2** Shallow grey sandy loams on weathered rock

**Main features:** A large proportion of the system is covered by native scrub: nature conservation is the main priority in these areas. The majority of soils are shallow with sandy to sandy loam surface textures. Shallow soils have low water holding capacities. Surface soils are typically water repellent, especially when sandy and non calcareous. Sandy soils are inherently infertile. Where soils are arable, surface hard carbonate fragments interfere with many farming practices. Many arable areas have soils that are underlain by sodic clayey subsoils, which restrict drainage, leading to perched water tables and seasonal waterlogging. Many soils are calcareous: reduced nutrient availabilities occur in calcareous soils, the extent of which depends on the calcium



carbonate content. Phosphorus and zinc are typically the nutrient elements most affected. A few lower lying areas are affected by saline seepage.

**Soil Landscape Unit summary:** Cape Hart Land System (CHT)

SLU	% of area	Main features #
EDJ	0.3	<p>Creek gully. Main soils: mostly shallow grey sandy loams on grey weathered rock with carbonate accumulations in rock crevices and upon the rock <b>L1-A2</b> (<i>shallow stony Tenosol-Calcarosol</i>): some soils may be calcareous throughout.</p> <p><b>EDJ</b> – creek gully: with creek line and flats in upper drainage area (slopes 3-30%, 5e, 5*g, 2-1s°, 3w, 1y).</p> <p>Summary: mostly too steep to be arable.</p>
HZO	0.5	<p>Upper drainage depression: creek flats and creek lines. Main soils: loams and sandy loams over clay <b>F2</b> (<i>Brown Sodosol</i>) occur on creek flats. With minor to limited shallow sandy loam, often with sandy clay loam subsoil, on calcrete <b>B3</b> (<i>Petrocalcic Tenosol-Sodosol</i>) also on creek flats.</p> <p><b>HZO</b> – creek flats and creek lines (slopes 0-5%, 3-2e, 2g, 3-4w, 3-2s, 1y)</p> <p>Summary: mostly arable creek flats and non arable creek lines.</p>
KVO	0.2	<p>Creek flat. Main soils: moderate depth to deep, dark grey brown, dispersive calcareous silty clay loam to silty light clay with polyhedral structure <b>A3</b> (<i>Pedal Calcarosol</i>): at the profile site a sandy lens occurs between 100 and 110cm depth. A deposit of shell sand <b>H1</b> (<i>Shelly Calcarosol</i>) occurs as a moderate height dune at the southern end of this land unit.</p> <p><b>KVO</b> – creek flat and creek line with some saline seepage on the Willson River (slopes mostly &lt;1%, 3-2s°, 3-4w, 1e, 1y).</p> <p>Summary: a mostly arable valley flat.</p>
MaB MaC MaD MaYA MaYB MaYg MaE MaEn MaEr MaEx	0.05 0.5 0.05 0.7 0.4 0.7 0.7 0.2 0.2 0.3	<p>Calcreted areas with mostly shallow highly calcareous to shelly soils.</p> <p>Main soils: shallow highly calcareous/shelly loamy sand to light sandy loam <b>B1</b> (<i>Petrocalcic Supravесcent-Shelly Calcarosol-Rudosol</i>); and calcareous loamy sands to sandy loams on calcrete <b>B2</b> (<i>Petrocalcic Calcarosol-Rudosol</i>): some very shallow soils may occur. And some deeper shell sands/highly calcareous sandy loams <b>H1-A1</b> (<i>Shelly-Supravесcent Calcarosol</i>) can occur.</p> <p>Slopes: <b>MaB</b> – slopes (slopes 1-3.5%, 2-1e, 3-2y) <b>MaC</b> – slopes (slopes 3-8%, 3-2e, 3-2y) <b>MaD</b> – exposed coastal slopes with drainage lines (slopes 5-20%, 4-3e, 1w, 3y)</p> <p><i>Jumbled dune topography:</i> <b>MaYA</b> – plateau surface low jumbled dune core topography (dunes cores mostly &lt;5m, slopes 0-3.5%, 1-2e, 2y ) <b>MaYB</b> – plateau surface jumbled dune core topography (dunes cores mostly 5-15m, slopes 1-5%, 2-1e, 2y) <b>MaYg</b> – exposed hilltop low jumbled dune core topography (dunes cores mostly &lt;5m, slopes 0-3%, 2-1e, 3y)</p> <p><i>Depressions/drainage areas:</i> <b>MaE</b> – depression (slopes 0-1%, 2w, 2-1s, 1y) <b>MaEn</b> – semi-arable depressions/flats (slopes 0-1.5%, 1w, 1e, 2-1y) <b>MaEr</b> – sloping drainage depressions (slopes 1-3%, 3-2w, 2-1s, 2-1e, 1-2y) <b>MaEx</b> – exposed coastal depression (slopes 0-1%, 2w, 2-1s, 2y)</p> <p>Summary: mostly non arable areas adjacent to shell sand dune areas, which have had significant deposition of fine carbonate grains. High calcium carbonate contents reduce availabilities of certain nutrients, especially phosphorus. Shallow rubbly soils with low</p>



		water holding capacities.
MdA	0.8	Calcreted areas with mostly shallow calcareous soils.
MdAw	1.6	Main soils: shallow calcareous loamy sands to sandy loams, some with sandy clay loam subsoils, on calcrete <b>B2</b> ( <i>Petrocalcic Calcarosol-Rudosol</i> ). With shallow loamy sands to sandy loams, some with sandy clay loam subsoils, on calcrete <b>B3-B8</b> ( <i>Petrocalcic Tenosol-Rudosol</i> ). Some highly calcareous/shelly loamy sand to light sandy loam <b>B1</b> ( <i>Petrocalcic Supravescant-Shelly Calcarosol</i> ) may occur, especially in areas directly adjacent to the shell sand dunes of the 'Black Point' land system. Minor areas of deeper soils may occur, especially on valley floor units: in particular sand over clay <b>G4-G3</b> ( <i>Brown-Red Sodosol</i> ).
MdBj	0.5	
MdAy	0.6	
MdBy	0.4	
MdCy	0.7	
MdDy	0.8	
MdB	0.5	
MdBx	0.6	Or minor areas of deeper calcareous loams <b>A4</b> ( <i>Lithocalcic-Hypercalcic Calcarosol</i> ) can occur.
MdC	3.4	
MdD	0.3	
MdDx	0.4	<i>Plains and valley floors:</i>
MdE	0.8	<b>MdA</b> – mid level to low level undulating plains on valley floor (slopes 0-1.5%, 1-2e, 1y, 1-2w)
MdEr	1.5	
Mdq	0.4	<b>MdAw</b> – low level flat valley floors (slopes <1%, 2w, 1y)
MdCg	0.1	<b>MdBj</b> – lower slopes and drainage areas adjacent to valley floor (slopes 0-3%, 2-1e, 1-2w, 1y)
MdF	0.8	
MdYA	1.2	<i>Low hills, rises or dune topography on valley floor area:</i>
MdYB	2.4	<b>MdAy</b> – low rises/low jumbled dune topography on valley floor (slopes 0-2%, 1e, 1-2w, 1y)
MdYg	2.0	<b>MdBy</b> – rises/dune topography on valley floor (slopes 1-4%, 2-1e, 1w, 1y)
MdYh	9.3	<b>MdCy</b> – rises/dune topography on valley floor (slopes 3-12%, 3-2e, 1w, 1-2y)
MdYi	0.2	<b>MdDy</b> – low hills to rises or high dune topography on valley floor (slopes 5-20%, 4-3e, 1w, 2-1y)
MdZ	0.1	<i>Slopes:</i> <b>MdB</b> – slopes (slopes 1-3%, 2-1e, 2-1y) <b>MdBx</b> – exposed slopes (slopes 1-4%, 2-1e, 3-2y) <b>MdC</b> – slopes: typically with drainage lines (slopes 3-20%, typically 3-12%, 3-4e, 2-1y) <b>MdD</b> – slopes (slopes 10-20%, 4e, 1w, 2-1y) <b>MdDx</b> – exposed coastal slopes with drainage lines (slopes 8-20%, 4-3e, 1w, 3y) <i>Depressions:</i> <b>MdE</b> – depressions (slopes 0-1%, 2-3w, 1e, 2-1s, 1y) <b>MdEr</b> – sloping drainage depression/drainage basin with drainage lines (slopes 0-4%, 2-3w, 2-1s, 2-1e) <b>Mdq</b> – depression with some saline patches (slopes 0-1%, 3w, 3s <sup>+</sup> , 1y) <i>Gully slopes:</i> <b>MdCg</b> – sloping drainage area with drainage lines and gully slope (slopes 5-20%, mostly 5-12%, 3-4e, 2w, 2s, 2g, 1y). Grey weathered sandstone is incorporated into some of these soils: weathered rock is not far below the surface. <b>MdF</b> – steep slopes and gullies: gully slopes adjacent to the Willson River (slopes 20-100%, 4-3g, 6e, 1-2y). Grey weathered sandstone is incorporated in some of these soils: weathered rock is not far below the surface. <i>Jumbled dune topography:</i> <b>MdYA</b> – plateau surface low jumbled dune core topography (dune cores <5m, slopes 0-3%, 2-1e, 2-1y) <b>MdYB</b> – plateau surface jumbled dune core topography (dune cores mostly 5-15m, slopes mostly 2-6%, 2e, 2-1y) <b>MdYg</b> – exposed hilltop low jumbled dune core topography (dune cores mostly <5m, slopes 1-5%, 2-1e, 3y) <b>MdYh</b> – exposed hilltop jumbled dune core topography (dune cores mostly 5-15m, slopes 2-8%, 2-3e, 3y) <b>MdYi</b> – exposed hilltop high jumbled dune core topography (dune cores mostly >15m, slopes 2-10%, 3-4e, 3y) <i>Summit surfaces:</i> <b>MdZ</b> – summit surface (slopes 0-1.5%, 2y, 1e)  Summary: mostly non arable areas adjacent to shell sand dune areas, which have been affected by accessions of fine carbonate dust. Relatively deeper soils with sandy clay loam subsoils typically occur in slight depression areas. Shallow rubbly soils with low water holding capacities.
MeA	0.4	Calcreted areas with mostly shallow calcareous soils and some deeper soils.



MeB MeE	0.8 0.6	<p>Main soils: shallow calcareous sandy loams, often only slightly calcareous in surface soil, and often with reddish sandy clay loam subsoils, on calcrete <b>B2</b> (<i>Petrocalcic Calcarosol-Chromosol-Sodosol</i>). With limited to extensive areas of shallow sandy loams, often with sandy clay loam subsoils, on calcrete <b>B3</b> (<i>Petrocalcic Tenosol-Chromosol-Sodosol</i>). Limited to common areas of deeper calcareous loams <b>A4</b> (<i>Lithocalcic-Hypercalcic Calcarosol</i>) can occur; and/or sand over clay <b>G4-G3</b> (<i>Brown-Red Sodosol</i>).</p> <p><i>Slopes and depressions/drainage areas:</i>  <b>MeA</b> – gently undulating low lying plains (slopes 0-2%, 1e, 2w, 1-2s)  <b>MeB</b> – lower slopes/drainage areas (slopes 1-3.5%, 2-3w, 2-3e, 1y). Some overland water flow could occur from steeper slopes above.  <b>MeE</b> – depressions (slopes 0-1%, 3-2w, 2s, 1-2y)</p> <p>Summary: mostly semi-arable shallow rubbly soils with low water holding capacities.</p>
MgA MgB MgBx MgCg MgCx Mgo MgEr MgE Mge Mgq Mgw MgZ MgZw	1.4 0.6 0.4 0.4 0.3 0.1 0.3 1.8 0.1 0.3 0.2 0.5 1.0	<p>Calcreted areas with mostly shallow non calcareous soils.</p> <p>Main soils: shallow sandy loams, often with sandy clay loam subsoils, on calcrete <b>B3</b> (<i>Petrocalcic Tenosol-Chromosol-Sodosol</i>). With some shallow calcareous loamy sands to sandy loams, often with sandy clay loam subsoils, on calcrete <b>B2</b> (<i>Petrocalcic Calcarosol-Chromosol-Sodosol</i>). Shallow sand to sandy loam over sandy clay on calcrete <b>B7-B6</b> (<i>Petrocalcic Red-Brown Sodosol</i>) can occur. Minor to common areas of deeper soils can occur, especially sand over clay <b>G4-G3</b> (<i>Brown-Red Sodosol</i>). Minor areas of calcareous loam <b>A4</b> (<i>Lithocalcic Calcarosol</i>) may occur on near coastal land units.</p> <p><i>Plains:</i>  <b>MgA</b> – low level plains/valley floors/slight rises (slopes 0-1.5%, 2-3w, 1-2e, 1y)</p> <p><i>Slopes:</i>  <b>MgB</b> – slopes: often concave (slopes 1-3.5%, 2-1e, 1-2w, 1-2y)  <b>MgBx</b> – exposed slopes (slopes 1-3%, 2-1e, 2-3y)  <b>MgCg</b> – exposed slopes with numerous gullies (slopes 5-12%, 3-4e, 1-2w, 3-2g, 3y)  <b>MgCx</b> – exposed slopes (slopes 3-10%, 3-2e, 2-3y)  <b>Mgo</b> – concave lower slopes with &lt;10% highly saline land (slopes 3-8%, 3-2e, 2w, 3s+, 2-1y)</p> <p><i>Depressions:</i>  <b>MgEr</b> – sloping depression areas (slopes 0-4%, 2e, 3-2w, 2-1y, 2-1s)  <b>MgE</b> – depression areas (slopes &lt;1%, 1e, 3-2w, 1y, 2-1s)  <b>Mge</b> – sloping drainage channel (slopes 2-5%, 3e, 1-2g, 2-3s, 2-3w, 2-1y)  <b>Mgq</b> – drainage depressions/lower slopes with &lt;10% highly saline land (slopes 1-3%, 2-1e, 3s+, 3w, 1-2y)  <b>Mgw</b> – drainage depressions/lower slopes with &gt;10% highly saline land (slopes 1-3%, 2e, 3-4s*, 3w, 1-2y)</p> <p><i>Plateau surfaces:</i>  <b>MgZ</b> – plateau surface areas (slopes 0-1.5%, 1e, 1-2w, 2-1y)  <b>MgZw</b> – low lying plateau surface areas/depressions (slopes 0-1%, 2-1w, 1e, 2-1y, 2-1s?)</p> <p>Summary: mostly semi-arable areas with shallow rubbly soils with low water holding capacities.</p>
MhA MhB MhC MhCx MhD Mhb MhAy MhBy MhYA MhYB MhYg MhYh MhZw MhZx	1.0 2.1 2.3 3.0 0.3 0.5 1.1 0.6 4.4 6.4 4.4 2.7 14.6 0.3	<p>Calcreted areas with mostly shallow to very shallow non calcareous soils.</p> <p>Main soils: shallow to very shallow loamy sands to sandy loams, sometimes with sandy clay loam subsoils, on calcrete <b>B3-B8</b> (<i>Petrocalcic Tenosol</i>). With some shallow to very shallow calcareous loamy sands to sandy loams, sometimes with sandy clay loam subsoils, on calcrete or occasionally rubbly carbonate <b>B2-A4</b> (<i>Petrocalcic-Lithocalcic Calcarosol-Rudosol</i>). With minor to limited deeper soils in slight depressions especially on plateau surfaces, in particular sand to light sandy loam over clay <b>G4-G3</b> (<i>Brown-Red Sodosol</i>).</p> <p><i>Plains:</i>  <b>MhA</b> – mid level plain (slopes 0-2%, 1-2e, 2-1w, 1-2y)</p> <p><i>Slopes:</i>  <b>MhB</b> – low jumbled dune core topography overlying sloping land (slopes 1-4.5%, 2-3e, 1s, 1-2y)  <b>MhC</b> – slopes: some with sloping drainage areas or drainage lines (slopes 3-8%, 3-2e, 1-2w, 1-2y)</p>



		<p><b>MhCx</b> – exposed slopes: larger areas with drainage lines (slopes 3-10%, 3-2e, 1-2g, 1s, 2-3y)  <b>MhD</b> – slopes (slopes 8-20%, 4-3e, 1w, 1y)  <b>Mhb</b> – lower slopes with some saline seepage (slopes 1-4%, 2-1e, 3-2s, 2-1y)  <i>Jumbled dune topography on valley floor area:</i>  <b>MhAy</b> – low jumbled dune core topography on valley floor (dune cores mostly &lt;5m, 1y, slopes 0-2%, 1e, 1w)  <b>MhBy</b> – jumbled dune core topography on valley floor (dune cores mostly 5-15m, 1y, slopes 0-3.5%, 2-1e, 1w)  <i>Jumbled dune topography:</i>  <b>MhYA</b> – plateau surface low jumbled dune core topography (dune cores mostly &lt;5m, 2-1y, slopes 0-2%, 1e)  <b>MhYB</b> – plateau surface jumbled dune core topography (dune cores mostly 5-15m, with some low dunes at &lt;5m, 2-1y, slopes 1-4%, 2-1e)  <b>MhYg</b> – exposed hilltop low jumbled dune core topography (dune cores mostly &lt;5m, 3-2y, slopes 0-2%, 1e)  <b>MhYh</b> – exposed hilltop jumbled dune core topography (dune cores mostly 5-15m high, with some low dunes at &lt;5m high, 3y, slopes 1-4%, 2-1e)  <i>Plateau surfaces:</i>  <b>MhZw</b> – low lying plain on a plateau surface with very low undulations and slight depressions/drainage channels (slopes 0-2%, 1e, 2-1w, 1-2y). Deeper soils typically found in slight depressions.  <b>MhZx</b> – exposed summit surfaces (slopes 0-2%, 1-2e, 3-2y)</p> <p>Summary: mostly non arable areas with very shallow to shallow rubbly soils with very low waterholding capacities. Relatively deeper soils with sandy clay loam subsoils typically occur in slight depression areas. A significant proportion of these areas are non arable due to very shallow soils: very shallow soils typically occur on slight rises and old dune topography.</p>
PfE PfZs PfB PfE PfO PfZ	2.0 0.05 0.5 2.0 0.3	<p>Deeper sandy texture contrast soils and shallow soils on calcrete.  Main soils: sand to light sandy loam over clay, often with some ironstone <b>G4-G3</b> (<i>Brown-Red Sodosol</i>). And shallow sand to sandy loam over sandy clay on calcrete <b>B7-B6</b> (<i>Petrocalcic Red-Brown Sodosol</i>). With shallow calcareous loamy sands to sandy loams, often with sandy clay loam subsoils, on calcrete <b>B2</b> (<i>Petrocalcic Calcarosol-Chromosol-Sodosol</i>); and possibly some shallow sandy loams, often with sandy clay loam subsoils, on calcrete <b>B3</b> (<i>Petrocalcic Tenosol-Chromosol-Sodosol</i>).</p> <p><b>PfE</b> – slight depression/drainage area on valley floor, including some lower slopes; and basin floor areas (slopes 0-2%, 1-2e, 3w, 2s, 1y)  <b>PfZs</b> – slight depressions on plateau surfaces with &lt;10% highly saline land (slopes &lt;1%, 3w, 3s+, 2-1y)</p> <p>Summary: mostly arable depressions or concave slopes.</p>
PmB PmBx PmE	1.3 1.2 0.1	<p>Deeper sandy loam texture contrast soils and shallow soils on calcrete.  Main soils: light sandy loam to sandy loam over clay, often with some ironstone <b>F2-D3</b> (<i>Brown-Red Sodosol</i>): some possibly formed with weathered rock within a metre. And shallow sandy loams, often with sandy clay loam subsoils, on calcrete <b>B3</b> (<i>Petrocalcic Tenosol-Chromosol-Sodosol</i>). Possibly with some shallow calcareous loamy sands to sandy loams, often with sandy clay loam subsoils, on calcrete <b>B2</b> (<i>Petrocalcic Calcarosol-Chromosol-Sodosol</i>).</p> <p><b>PmB</b> – concave slopes or sloping drainage areas (slopes 0-4%, 2-3e, 3-2w, 2-1s, 1-2y)  <b>PmBx</b> – exposed concave slopes/drainage areas (slopes 0-4%, 2-3e, 3-2w, 2-1s, 3y)  <b>PmE</b> – low lying flats (slopes &lt;1%, 1e, 3-2w, 2-1s, 1y)</p> <p>Summary: mostly arable concave slopes and low lying areas.</p>
ShB ShE	0.1 0.2	<p>Flats, depressions and slopes with deeper calcareous soils.  Main soils: highly calcareous to calcareous sandy loams to sands <b>A1-A4</b> (<i>Supracalcic-Lithocalcic Calcarosol</i>); with shallow calcareous to highly calcareous sandy to loamy soil on calcrete <b>B2-B1</b> (<i>Petrocalcic Calcarosol</i>).</p> <p><b>ShB</b> – slopes (2-6%, 1w, 2-1e, 3-2y)</p>



		<b>ShE</b> – valley floor/depression areas (slopes 0-1%, 1-2w, 1e, 1-2y)  Summary: mostly arable land.
WAB	1.1	Coastal cliffs: mostly formed from calcarenite, with some rocky cliffs. <b>WAB</b> – calcarenite cliffs; and reefs (cliff slopes mostly >100%, and up to 80m high)
WGE WGD WGQ WGQr WGQw	1.1 1.3 1.0 0.1 0.1	Coastal areas with shell sand deposits. Main soils: shell sand <b>H1</b> ( <i>Shelly Rudosol-Calcarosol</i> ), grading to highly calcareous sandy loams to sands on flats <b>A1</b> ( <i>Supracalcic-Lithocalcic Calcarosol</i> ). Shallow soils can occur <b>B1</b> ( <i>Petrocalcic Shelly Calcarosol</i> ), especially on sand spread areas and flats.  <i>Jumbled dunes and sand spreads:</i> <b>WGE</b> – coastal low jumbled dunes/ sand spreads (on slopes from 0-10%, low dunes <5m high, 5-7a, 3-2y) <b>WGD</b> – cliff-top jumbled dunes (dunes mostly 5-15m high, with some <5m high, 7-5a, 3y) <i>Flats, depressions and slopes:</i> <b>WGQ</b> – semi arable to arable coastal flats/ valley floors (slopes 0-1%, 1e, 1w, 3-2y) <b>WGQr</b> – coastal slopes/depressions with drainage lines (slopes 2-5%, 2-1e, 1w, 3-2y) <b>WGQw</b> – depressions (slopes 0-1%, 1e, 2-1w, 2-1y)  Summary: non arable jumbled dunes to semi-arable flats with fragile and infertile sandy soils.
WT-	0.1	Reefs. <b>WT-</b> – reefs at the base of coastal cliffs.

# Classes in the 'Soil Landscape Unit summary' table (eg. 2-1e, 3w, 2y, etc) describe the predominant soil and land conditions, and their range, found in Soil Landscape Units. The number '1' reflects minimal limitation, while increasing numbers reflect increasing limitation. Letters correspond to the type of attribute:

a - wind erosion                      e - water erosion                      f - flooding                                  g - gullyng  
r - surface rockiness                  s - salinity                                  w - waterlogging                          y - exposure

**Detailed soil profile descriptions:**

**Main soils:**

- B3** Shallow loamy sand to sandy loam on calcrete (*Petrocalcic Tenosol-Sodosol-Chromosol*). Shallow brown soil over calcrete, often with a sandy clay loam subsoil which is typically dispersive. Surface soils are typically water repellent. Found on jumbled dune core topography, very gently undulating land, and slopes.
- B2** Shallow calcareous loamy sand to sandy loam on calcrete (*Petrocalcic Calcarosol-Sodosol-Chromosol-Rudosol*). Shallow brown to grey brown calcareous soil, dominantly composed of siliceous material, and often with a sandy clay loam subsoil which is typically dispersive. Surface soils are commonly water repellent. Found on jumbled dune core topography, very gently undulating land, and slopes.
- G4-G3** Sand to light sandy loam over brown or red clay (*Brown-Red Sodosol*). Moderate depth to deep soils with medium thickness sandy to light sandy loam topsoils overlying olive brown to red clayey subsoil which is typically dispersive. Bleached subsurface layers commonly occur. Ironstone nodules are commonly found in the topsoil. Agriculturally productive areas typically occur on this soil type. Found in depressions.

**Minor soils:**

- B8** Very shallow loamy sand to sandy loam on calcrete (*Petrocalcic Rudosol*). Very shallow soil, often associated with bare calcrete outcrops. Typically found on upper slopes and crests of dune core topography.



- B1** Shallow highly calcareous/shelly loamy sand to light sandy loam on calcrete (*Petrocalcic Supravесcent-Shelly Calcarosol-Rudosol*). The soil has a high proportion of fine carbonate material, and is often dominantly composed of this. Found on jumbled dune core topography, slopes and depressions adjacent to shell sand dune areas.
- A4** Rubbly calcareous loamy sand to sandy loam (*Lithocalcic-Supracalcic-Hypercalcic Calcarosol*). Moderate depth to deep calcareous soils, dominantly composed of siliceous materials, and typically containing significant amounts of hard carbonate rubble. Topsoils are dark brown with textures ranging from loamy sand to sandy loam; while subsoils are highly calcareous, brown to pale grey brown, with textures ranging from sandy loam to sandy clay loam. Typically found in lower lying near coastal areas where previously occurring calcrete layers have been broken up and partially removed, and accessions of fine carbonate material have been common.
- H1-A1** Shelly/highly calcareous loamy sand to sandy loam (*Shelly-Supravесcent Calcarosol*). Moderate depth to deep soil with a high proportion of fine carbonate material: the soil is often dominantly composed of fine shelly material. Found on jumbled coastal sand dunes and some slopes and depressions.
- B7-B6** Shallow sand to sandy loam over red or brown clay on calcrete (*Red-Brown Sodosol*). Medium thickness sand, light sandy loam or sandy loam, overlying red to brownish yellow dispersive sandy clay, with calcrete or calcrete rubble at shallow depth. Bleached subsurface layers are common, especially in soils with sandy topsoils and brown subsoils. Found in depressions.
- F2-D3** Loam and sandy loam over brown or red clay (*Brown-Red Sodosol*). Dark brown topsoil overlying brown to olive brown dispersive clay. Mostly found on creek flats in the north west of the system.
- L1-A2** Shallow grey sandy loams on weathered rock (*Leptic Tenosol to Paralithic Calcarosol*). Shallow grey soils on weathered dirty metasandstone. Accumulations of fine carbonate occur upon the weathered rock and in rock cervices. Some soils may be calcareous throughout. Found on gully slopes in the north west of the system.

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

