

PVI Port Victoria Land System

Stony rises, slopes and plains.

Area: 27.4 km²

Landscape: Rises, slopes and plains.

On the Point Pearce peninsula, coastal exposures show shallow soil underlain by approximately 30cm of Bakara Calcrete, and this in turn is underlain by greater than two metres of very hard conglomerate Ripon Calcrete. At approximately five metres depth is consolidated rock, which forms rocky reefs. There may be a relatively thin layer of Hindmarsh Clay between the Ripon Calcrete and the consolidated rock.

On other parts of the system, shallow soil is underlain by 50 to 100cm of Bakara Calcrete, which is underlain by clayey sediments (Hindmarsh Clay). Where Bakara Calcrete is absent, soils are formed in deep to moderate depth deposits of calcareous loess (Woorinen Formation).

Annual rainfall: 370 – 405 mm average

Main soils: **A4-A5** *(rubbly) calcareous loam*
B2 *shallow calcareous loam on calcrete*

Main features: The dominant soils are shallow calcareous loams on calcrete, and deep to moderate depth calcareous loams. Most areas are arable. Soil profiles which are shallow and/or contain hard carbonate rubble have limited moisture holding capacity and hence limited production potential. Surface stone also interferes with many farming practices. Fine carbonate in soils limits the availability of certain nutrients.

Subsoil accumulations of boron and sodium occur, especially where clay loamy to light clayey subsoils occur, or soils are underlain by a clayey substrate. These accumulations occur largely because of the proximity of this area to the coast and salt-bearing winds, and clayey substrates and low and light rainfall diminishing the potential for leaching. Saline seepage associated with saline watertables is common, usually resulting in raised subsoil salinity levels. Seepage flow seems to derive from the east and northeast. Water erosion can be a risk on sloping land, and numerous drainage lines are evident. Wind erosion is also possible: calcareous surface soils can become powdery after excessive cultivation or trampling by stock.



Soil Landscape Unit summary: Port Victoria Land System (PVI)

SLU	% of area	Main features
QAK QALg QAQ	10.6 0.9 0.3	Land dominated by calcreted soils and soils formed in calcareous loess. Main soils: <i>shallow calcareous loam on calcrete</i> B2 and extensive areas of <i>calcareous loam</i> A4-A5 . QAK – low rise (slopes 0-2%). QALg – slopes with a drainage line (slopes 0.5-2%). QAQ – concave slightly sloping area with a drainage line and marginal salinity (slopes 0-1%).
QBBg QBCc QBCg QBK QBKg QBL	18.8 1.0 3.2 15.0 1.7 25.8	Land dominated by calcreted soils and soils formed in rubbly calcareous loess. Main soils: <i>shallow calcareous loam on calcrete</i> B2 and extensive areas of <i>rubbly calcareous loam</i> A4-A5 . QBBg – rise (slopes 0.5-3.5%). QBCc – upper slopes with drainage line and contour banks (slopes 2-7%). QBCg – upper slopes with drainage lines (slopes 2-6%). QBK – low rises to rises (slopes 0-3.5%). QBKg – slight slopes with some drainage lines (slopes 0.5-1.5%). QBL – low rises and slopes (slopes 0-2.5%).
QHL QHMg QHP	9.5 5.1 6.6	Land dominated by calcreted soils. Main soils: <i>shallow calcareous loam on calcrete</i> B2 . Some soils are overlain by carbonate sand spreads: B2 soils grading to <i>shallow carbonate sand</i> or <i>highly calcareous loamy sand to sandy loam</i> B1 . QHL – low rise (slopes 0-2.5%). QHMg – slopes with some drainage lines (slopes 0.5-3.5%) QHP – low lying gently undulating plains with marginal salinity and areas of carbonate sand spread (slopes 0-1.5%).
WКУ3	1.6	Flats dominated by soils formed in carbonate sand. Main soils: <i>carbonate sand</i> H1 and <i>shallow carbonate sand on calcrete</i> B1 . WКУ3 – flats with some low coastal dunes and sandy rises: approx. 20% arable (slopes 0-1%).

Detailed soil profile descriptions:**Main soils:**

- A4-A5** (*rubbly calcareous loams* [Regolithic Hypercalcic-Lithocalcic Calcarosol])
Grey brown calcareous loams and clay loams grading to clay loamy or light clayey subsoil, often with abundant fine carbonate. Some soils are underlain by clayey sediments (Hindmarsh Clay) within 120 cm of the surface (soil **A5**).
- B2** (*shallow calcareous loam on calcrete* [Petrocalcic Calcarosol])
Grey brown calcareous loams overlying calcrete at shallow depth. Subsoil texture can be a heavy as clay loam. Profiles often contain significant amount of hard carbonate rubble.

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

