

Label	Map Unit Name	Map Unit Description
<b>Qu</b>	<b>Quindalup South System</b>	<b>Coastal dunes, of the Swan Coastal Plain, with calcareous deep sands and yellow sands. Coastal scrub.</b>
Qf2	Quindalup South Qf2 Phase	Relict foredunes and gently undulating beach ridge plain with deep uniform calcareous sands.
Qp1	Quindalup South Qp1 Phase	Complex of nested low relief parabolic dunes with moderate to steep slopes and uniform calcareous sands showing variable depths of surface darkening.
<b>Sp</b>	<b>Spearwood System</b>	<b>Sand dunes and plains. Yellow deep sands, pale deep sands and yellow/brown shallow sands.</b>
S1a	Spearwood S1a Phase	Dune ridges with shallow to moderately deep siliceous yellow-brown sands, very common limestone outcrop and slopes up to 15%.
S1b	Spearwood S1b Phase	Dune ridges with deep siliceous yellow brown sands or pale sands with yellow-brown subsoil and slopes up to 15%.
S1c	Spearwood S1c Phase	Dune ridges with deep bleached grey sands with yellow-brown subsoils, and slopes up to 15%.
S1d	Spearwood S1d Phase	Dune ridges with moderately deep to very deep siliceous yellow-brown sands, rare limestone outcrop and slopes 3-20% occurring on the eastern slipface.
S2a	Spearwood S2a Phase	Lower slopes (1-5%) of dune ridge with moderately deep to deep siliceous yellow-brown sands or pale sands with yellow-brown subsoils and minor limestone outcrop.
S2b	Spearwood S2b Phase	Lower slopes (1-5%) of dune ridge with shallow to deep siliceous yellow-brown sands and common limestone outcrop.
S2c	Spearwood S2c Phase	Lower slopes (1-5%) of dune ridge with bleached or pale sands with a yellow-brown or pale brown subsoil (like S1c). Usually occurs on the eastern edge of the Spearwood Dunes.
S3	Spearwood S3 Phase	Inter-dunal swales and depressions with gently inclined side slopes and deep rapidly drained siliceous yellow-brown sands.
S4a	Spearwood S4a Phase	Flat to gently undulating sandplain with deep, pale and sometimes bleached, sands with yellow-brown subsoils.
S4b	Spearwood S4b Phase	Flat to gently undulating sandplain with shallow to moderately deep siliceous yellow-brown and grey-brown sands with minor limestone outcrop.
S4c	Spearwood S4c Phase	Flat to gently undulating sandplain with deep, yellow-brown or dark brown siliceous sands that are seasonally inundated.
S6	Spearwood S6 Phase	Flat stony plain with poorly drained shallow siliceous sands and large areas of bare limestone pavement.
<b>Va</b>	<b>Vasse System</b>	<b>Poorly drained estuarine flats, of the Swan Coastal Plain. Tidal flat soil, saline wet soil and pale deep sand. Samphire, sedges and paperbark woodland.</b>
V1	Vasse V1 Phase	Saline tidal flats composed of grey, black and brown foetid muds and humic sandy clays with locally common shell and limestone fragments.
V2	Vasse V2 Phase	Samphire covered sand and mud flats marginally higher than V1 and frequently inundated; with deep alkaline alluvial sands and clayey sands.
V3	Vasse V3 Phase	Sand flats marginally higher than V2. Frequently inundated; with deep alkaline alluvial sands and clayey sands, commonly supporting stands of

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		Melaleuca spp.
V4	Vasse V4 Phase	Low level storm beach ridges and terraces with shallow to moderately deep uniform alkaline black sandy loams to loams overlying unconsolidated shell beds or clayey marl.
V5	Vasse V5 Phase	Upper level sandy terrace and gently undulating beach ridges with shallow to moderately deep grey siliceous sands overlying soft shelly limestone or shell beds.
V6	Vasse V6 Phase	Upper level sandy terrace and gently undulating beach ridges with deep grey or bleached pale brown siliceous sands overlying soft shelly limestone.
V6a	Vasse V6a Phase	Gently undulating beach ridges similar to V6, but formed from reworked Pleistocene Bassendean sands. Deep bleached grey acidic siliceous sands with iron-organic hardpan.
V7	Vasse V7 Phase	Very broad shallow depression with deep, poorly drained, fine textured alkaline estuarine alluvium.
V8	Vasse V8 Phase	Flat poorly drained plains forming the margins of the estuarine deposits which border and partially overlie the Pinjarra Plain with variable, moderately deep to deep saline soils. Commonly, these are mottled yellow duplex soils over calcar
V9	Vasse V9 Phase	Areas of former swamps which have been artificially drained, with uniform loamy or peaty sands.
<b>Bs</b>	<b>Bassendean System</b>	<b>Swan Coastal Plain from Busselton to Jurien. Sand dunes and sandplains with pale deep sand, semi-wet and wet soil. Banksia-paperbark woodlands and mixed heaths.</b>
B1	Bassendean B1 Phase	Extremely low to very low relief dunes, undulating sandplain and discrete sand rises with deep bleached grey sands sometimes with a pale yellow B horizon or a weak iron-organic hardpan at depths generally greater than 2 m; banksia dominant.
B1a	Bassendean B1a Phase	Extremely low to very low relief dunes, undulating sandplain and discrete sand rises with deep bleached grey sands with an intensely coloured yellow B horizon occurring within 1 m of the surface; marri and jarrah dominant.
B2	Bassendean B2 Phase	Flat to very gently undulating sandplain with well to moderately well drained deep bleached grey sands with a pale yellow B horizon or a weak iron-organic hardpan 1-2 m.
B2a	Bassendean B2a Phase	Flat to very gently undulating sandplain with well to moderately well drained deep bleached grey sands with an intensely coloured yellow B horizon usually well within 1 m of the surface.
B3	Bassendean B3 Phase	Closed depressions and poorly defined stream channels with moderately deep, poorly to very poorly drained bleached sands with an iron-organic pan, or clay subsoil. Surfaces are dark grey sand or sandy loam.
B4	Bassendean B4 Phase	Broad poorly drained sandplain with deep grey siliceous sands or bleached sands, underlain at depths generally greater than 1.5 m by clay or less frequently a strong iron-organic hardpan.
B5	Bassendean B5 Phase	Shallowly incised stream channels of minor creeks and rivers with deep grey siliceous sands or bleached sands, underlain at depths generally greater than 1.5 m by clay or less frequently a strong iron-organic

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		hardpan.
B6	Bassendean B6 Phase	Sandplain and broad extremely low rises with imperfectly drained deep or very deep grey siliceous sands.
<b>Fo</b>	<b>Forrestfield System</b>	<b>Undulating foot slopes of the Darling and Whicher Scarps. Duplex sandy gravels, pale deep sands and grey deep sandy duplexes. Woodland of E.marginata, calophylla and wandoo and some B.grandis.</b>
F1a	Forrestfield F1a Phase	1-15% lower slopes with well drained shallow to moderately deep, very gravelly acidic yellow duplex soils and common laterite.
F1b	Forrestfield F1b Phase	1-15% lower slopes with well drained moderately deep to deep, gravelly acidic yellow duplex soils and rare laterite.
F1c	Forrestfield F1c Phase	1-15% lower slopes with well drained deep uniform yellowish brown sands which are generally free of laterite or gravel.
F2a	Forrestfield F2a Phase	Low slopes and foot slopes up to 5-10% with well drained shallow to moderately deep, very gravelly acidic yellow duplex soils and common laterite.
F2b	Forrestfield F2b Phase	Low slopes and foot slopes up to 5-10% with well drained moderately deep to deep, gravelly acidic yellow duplex soils and rare laterite.
F2c	Forrestfield F2c Phase	Low slopes and foot slopes up to 5-10% slopes with well drained deep uniform yellowish brown sands which are generally free of laterite or gravel.
F3	Forrestfield F3 Phase	1-3% foot slopes with deep, imperfectly drained yellow and, less commonly, acidic gley duplex soils.
F4	Forrestfield F4 Phase	Incised stream channels within gentle slopes with deep acidic yellow duplex soils and sandy alluvial gradational brown earths.
F5	Forrestfield F5 Phase	Poorly defined stream channels on lowest slopes with deep acidic yellow duplex soils and sandy alluvial gradational brown earths.
Ff1	Forrestfield (D Range) F1 Phase	Foot and low slopes < 10% with deep rapidly drained siliceous yellow brown sands, and pale or bleached sands with yellow-brown subsoil. Shrubland of unidentified species.
Ff1	Forrestfield (D Range) F10 Phase	Alluvial fans on lower slopes
Ff2	Forrestfield (D Range) F2 Phase	Foot and low slopes < 10%. Well drained gravelly yellow or brown duplex soils with sandy topsoil. Woodland of E.marginata, E. calophylla and some B.grandis.
Ff3	Forrestfield (D Range) F3 Phase	Foot and low slopes
Ff7	Forrestfield (D Range) F7 Phase	Alluvial fans on slopes
Ff9	Forrestfield (D Range) F9 Phase	Seepage areas and non-incised drainage channels on foot slopes
<b>Pj</b>	<b>Pinjarra System</b>	<b>Swan Coastal Plain from Perth to Capel. Poorly drained coastal plain with variable alluvial and aeolian soils. Variable vegetation includes Jarrah, marri, wandoo, paperbark sheoaks and rudis.</b>
B1	Pinjarra, B1 Phase	Extremely low to very low relief dunes, undulating sandplain and discrete sand rises with deep bleached grey sands sometimes with a pale yellow B horizon or a weak iron-organic hardpan at depths generally greater than

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		2 m; banksia dominant.
B1a	Pinjarra, B1a Phase	Extremely low to very low relief dunes, undulating sandplain and discrete sand rises with deep bleached grey sands with an intensely coloured yellow B horizon occurring within 1 m of the surface; marri and jarrah dominant.
B2	Pinjarra, B2 Phase	Flat to very gently undulating sandplain with well to moderately well drained deep bleached grey sands with a pale yellow B horizon or a weak iron-organic hardpan 1-2 m.
B2a	Pinjarra, B2a Phase	Flat to very gently undulating sandplain with well to moderately well drained deep bleached grey sands with an intensely coloured yellow B horizon usually well within 1 m of the surface.
B3	Pinjarra, B3 Phase	Closed depressions and poorly defined stream channels with moderately deep, poorly to very poorly drained bleached sands with an iron-organic pan, or clay subsoil. Surfaces are dark grey sand or sandy loam.
B4	Pinjarra, B4 Phase	Broad poorly drained sandplain with deep grey siliceous sands or bleached sands, underlain at depths generally greater than 1.5 m by clay or less frequently a strong iron-organic hardpan.
B6	Pinjarra, B6 Phase	Sandplain and broad extremely low rises with imperfectly drained deep or very deep grey siliceous sands.
P11	Pinjarra P11 Phase	Shallow brown loamy soils or less commonly, very shallow sands over ironstone pavement which is a clear barrier to drainage.
P11	Pinjarra P11a Phase	Shallow sand to sandy loam over lateritic material; imperfect to moderately well drained.
P1a	Pinjarra P1a Phase	Flat to very gently undulating plain with deep acidic mottled yellow duplex (or ¿effective duplex¿) soils. Shallow pale sand to sandy loam over clay; imperfect to poorly drained and generally not susceptible to salinity.
P1b	Pinjarra P1b Phase	Flat to very gently undulating plain with deep acidic mottled yellow duplex (or ¿effective duplex¿) soils. Moderately deep pale sand to loamy sand over clay; imperfectly drained and moderately susceptible to salinity in limited areas.
P1c	Pinjarra P1c Phase	Flat to very gently undulating plain with deep acidic mottled yellow duplex (or ¿effective duplex¿) soils. Deep pale brown to yellowish sand to sandy loam over clay; imperfectly drained and moderately susceptible to salinity in limited are
P1d	Pinjarra P1d Phase	Flat to very gently undulating plain with deep acidic mottled yellow duplex (or ¿effective duplex¿) soils. Shallow pale sand to sandy loam over clay; imperfect to poorly drained and moderately susceptible to salinity.
P1e	Pinjarra P1e Phase	Flat to very gently undulating plain with deep acidic mottled yellow duplex (or ¿effective duplex¿) soils. Shallow pale sand to sandy loam over very gravelly clay; moderately well drained.
P2	Pinjarra P2 Phase	Flat to very gently undulating plain with deep alkaline mottled yellow duplex soils which generally consist of shallow pale sand to sandy loam over clay.
P2a	Pinjarra P2a Phase	Flat to very gently undulating plain with deep alkaline mottled yellow duplex soils which generally consist of shallow pale sand to sandy loam

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		with a silcrete hardpan at 50-100 cm depth generally on top of an olive-grey clay.
P3	Pinjarra P3 Phase	Flat to very gently undulating plain with deep, imperfect to poorly drained acidic gradational yellow or grey-brown earths and mottled yellow duplex soils, with loam to clay loam surface horizons.
P4	Pinjarra P4 Phase	Poorly drained flats, sometimes with gilgai microrelief and with moderately deep to deep black, olive grey and some yellowish brown cracking clays and less commonly non-cracking friable clays with generally acidic subsoils.
P4a	Pinjarra P4a Phase	Poorly drained flats. Cracking clays similar to P4 with a thin veneer of grey sand.
P5	Pinjarra P5 Phase	Poorly drained flats, commonly with gilgai microrelief and with deep black-grey to olive-brown cracking clays with subsoils becoming alkaline.
P5a	Pinjarra P5a Phase	Poorly drained flats. Cracking clays similar to P5 with a thin veneer of grey sand.
P7	Pinjarra P7 Phase	Seasonally inundated swamps and depressions with very poorly drained variable acidic mottled yellow and gley sandy duplex and effective duplex soils.
P7a	Pinjarra P7a Phase	Seasonally inundated swamps and depressions with very poorly drained variable acidic mottled yellow and gley duplex soils becoming alkaline with depth.
P7b	Pinjarra P7b Phase	Seasonally inundated swamps and depressions or seepage areas near the base of the foothills with very poorly drained deep bleached siliceous sands.
P8	Pinjarra P8 Phase	Broad poorly drained flats and poorly defined stream channels with moderately deep to deep sands over mottled clays; acidic or less commonly alkaline gley and yellow duplex soils to uniform bleached or pale brown sands over clay.
P9	Pinjarra P9 Phase	Shallowly incised stream channels of minor creeks and rivers with deep acidic mottled yellow duplex soils.
P9a	Pinjarra P9a Phase	Generally shallow incised stream channels of minor creeks and rivers with poorly drained deep mottled yellow duplex soils, becoming alkaline with depth.
Sw2	Pinjarra, Phase SWSw2	Low level, occasionally flooded, alluvial terraces with imperfectly drained variable alluvial soils with loamy surfaces.
P10	Pinjarra P10 Phase	Gently undulating to flat terraces adjacent to major rivers, but below the general level of the plain, with deep well drained uniform brownish sands or loams subject to periodic flooding.
P10	Pinjarra P10a Phase	Flat terraces adjacent to major rivers with deep black cracking clays with alkaline subsoils; soils similar to P5.
P6a	Pinjarra P6a Phase	Very gently undulating alluvial terraces and low rises contiguous with the plain, with deep moderately well to well drained soils associated with major current river systems and larger streams. Acidic red and yellow duplex soils, less common
P6b	Pinjarra P6b Phase	Very gently undulating alluvial terraces and low rises contiguous with the plain, with deep moderately well to well drained soils associated with

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		prior stream deposits. Soils are uniform brownish sands.
P6c	Pinjarra P6c Phase	Very gently undulating alluvial terraces and fans. Moderate to moderately well drained uniform friable brown loams, or well structured gradational brown earths.
Claypan	Pinjarra wet, claypan Phase	Claypan
Lake	Pinjarra wet, lake Phase	Lake
River	Pinjarra wet, river Phase	River
Swamp	Pinjarra wet, swamp Phase	Swamp.
Mine	Pinjarra disturbed land, mine Phase	Mine. Disturbed land.
<b>Mv</b>	<b>Murray Valleys System</b>	<b>Western Darling Range from the Avon Valley to Harvey. Deeply incised valleys with Red loamy earths, shallow duplexes and rock outcrop and Jarrah-marri-wandoo forest and woodland with mixed shrubland.</b>
DR1	Murray Valleys DR1 Phase	Gentle to moderate slopes of scarp face (5-25%) with red and yellow gradational earths and duplex soils with variable depth and common rock outcrop.
DR2	Murray Valleys DR2 Phase	Gentle to moderately inclined slopes (3-20%) with red and yellow gradational earths and duplex soils with variable depth and common rock outcrop.
DR3	Murray Valleys DR3 Phase	Deeply incised tributary valleys with slopes (
DS1	Darling Scarp 1 Phase	Gentle to moderate upper slopes (5-30%). Variable moderately well to well drained duplex and gradational soils. Common rock outcrop.