MBU Mount Burr Land System

Area: 221.4 km²

Landscape: The Mount Burr highland is a high range with extensive sand spreads and calcarenite slopes.

There are some exposures of basaltic volcanic materials upon which the range has accreted.

Rainfall: 730 – 845 mm average

Geology: Calcreted aeolianite of the Pleistocene Bridgewater Formation barrier shoreline deposits are

dominant. Pleistocene basaltic volcanic materials are interspersed throughout the land

system, particularly on the higher ground. Basalt occurs in places.

Main soils: B3 Shallow sandy loam on calcrete (Petrocalcic Red Tenosol-Kandosol-Rudosol) (23%)

B6 Shallow loam over red-brown clay on calcrete (Petrocalcic Red Chromosol-Kandosol)

(23%)

Minor soils: I2 Wet highly leached sand (Aquic or Semi-Aquic Podosol) (17%)

H3 Bleached siliceous sand (sandy Bleached Tenosol) (9%)

II Highly leached sand (Aeric Podosol) (9%)

B7 Shallow sand over clay on calcrete (sandy Petrocalcic Sodosol-Chromosol) (7%)

O1 Volcanic soil (Andic Tenosol) (5%)

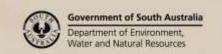
Summary: Constraints to land use are soil depth and water holding capacity on shallow soils, fertility and

wind erosion risk on sands, especially on upper part of the range. Waterlogging and wetness occurs at the base of the range in run-on situations. While half of the soils are shallow over

calcrete, ripping can increase effective soil depth. Deep soils are sands mostly.

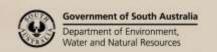
Soil Landscape Unit summary: Mount Burr Land System (MBU)

SLU	% of area	Component	Main soils	Prop#	Notes
MAB	0.4	Rise	B3RR	О	Gently undulating calcreted former beach ridge with stony, very shallow red and brown loamy over red clay soils. >50% bare calcrete. Main soils: Shallow sandy loam on calcrete - B3 and Rock or exposed calcrete - RR.
MECv MEE	0.9	Hillslope Depression	B7G3B6 B6H3	D D	Undulating calcreted calcarenite ridge with shallow sandy loam over red or poorly structured brown clay soils. Volcanic ash influence in surface. Main soils: Hillslopes: Sand over friable brown clay on calcrete - B7, Thick sand over clay - G3 and Shallow sandy loam over red-brown clay on calcrete - B6.
				_	Depressions: Shallow sandy loam over red-brown clay on calcrete - B6 and Bleached siliceous sand - H3.
MHA	0.3	Plain	B6H3	D	MHA Plain with shallow sand over red clay and deep yellow
МНВ	32.9	Rise Dune	B3B6 I2H3	V L	bleached sands. MHB Gently sloping calcarenite ridge with shallow sand, often



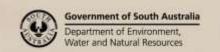


MID	4 7	D'	DCD271		2000 L. L. L. W.
MHBv	1.7	Rise	B6B3I1	D	over red sandy clay over calcrete. 10-20% deep bleached siliceous
MHC	10.7	Hill/Rise	B6B3I2	D	sands on dunes. MHBv As above, with volcanic ash in surface.
MHCv	15.4	Hill/Rise	B6B3I2	D	MHC Undulating slopes on calcarenite range as for MHB but
MHDv	0.7	Hill/Rise	B3B6	D	with 10-30% rock outcrop.
MHF	0.1	Hill/Rise	B3B6	D	MHCv As above with volcanic ash in surface.
MHZv	8.0	Broad Crest	B6B7H3	D	MHDv Rolling rises as for MHB, volcanic ash in surface.
					MHF Steep rises or low hills as above.
					MHZv Broad crest of range with moderately shallow sand over
					red or poorly structured brown clay on calcarenite. Deep sands on
					rises. Volcanic ash in surface.
					Main soils:
					Plains: Shallow sandy loam over red-brown clay on calcrete - B6
					and <u>Bleached siliceous sand</u> - H3 .
					Hills and rises: Shallow sandy loam over red-brown clay on
					<u>calcrete</u> - B6 and <u>Shallow sandy loam on calcrete</u> - B3 , <u>Highly</u>
					leached sand - I1, and Wet highly leached sand - I2.
					Dunes: Wet highly leached sand - I2 ; Bleached siliceous sand - H3
					Broad crests: Shallow sandy loam over red-brown clay on calcrete
					- B6 , <u>Sand over friable brown clay on calcrete</u> - B7 and <u>Bleached</u>
					siliceous sand - H3 .
MLEK	0.1	Karst	RRB3	D	Karst depression with mostly very shallow loam over, or bare
		depression			calcreted calcarenite.
					Main soils: Rock or exposed calcrete - RR and Shallow sandy loam
					on calcrete - B3.
MLEv	0.1	Swale	B3B6	D	Depression with shallow sandy loam over thin red clay on
		Dune	I2H3	М	calcarenite. 10-20% bare rock. <10% deep sand and sand over
					clay on dunes. Volcanic ash in surface.
					Main soils:
					Swales: Shallow sandy loam on calcrete - B3 and Shallow sandy
					loam over red-brown clay on calcrete - B6 .
					Dunes: Wet highly leached sand - I2; Bleached siliceous sand - H3
MMK	0.1	Plain	G3N3	٧	MMK Plain at base of The Bluff with sand over poorly structured
		Swamp	N3	С	brown clay, 20-30% non-swampy depressions with non-peaty wet
MMUv	4.2	Plain	I1I2	٧	soils. Few swamps are peaty.
		Swamp	N1N3	L	MMUv Gently sloping plain on lower slopes on east side of the
					Mt.Burr Range with mostly deep sands, often poorly drained.10-
					20% swampy depressions with mostly peaty soils. Volcanic ash in
					surface.
					Main soils:
					Plains: Thick sand over clay - G3 and Wet clay loam - N3 or
					Highly leached sand - I1 and Wet highly leached sand - I2.
				<u> </u>	Swamps: Peaty soil – N1 and Wet clay loam - N3.
MNBK	0.1	Rise	H3G3	D	MNBK Gently sloping rise with moderately deep yellow/
MNBv	0.2	Rise	H3G3	D	bleached siliceous sand often over yellow clay. 10-30% shallow
					sandy loam on calcreted calcarenite. Karst or sinkholes common. MNBv As above with volcanic ash in surface.
1.65				<u> </u>	Main soils: <u>Bleached siliceous sand</u> - H3 ; <u>Thick sand over clay</u> - G3
MOB	0.7	Rise	В6	D	Gently undulating rises with shallow sandy loam (sometimes
		Dune	I1H3	М	ironstone gravelly) grading to red-brown sandy clay loam or clay
					over calcreted calcarenite. <10% deep, leached sands.
					Main soils:
					Rises: Shallow sandy loam over red-brown clay on calcrete - B6 .
					Dunes: Highly leached sand - I1 and Bleached siliceous sand - H3.



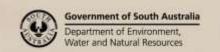


MRBv	0.2	Plain	В6	D	MRB Low, gently undulating calcreted former beach ridge with
MRC	0.1	Rise	B6B3	D	very shallow red and brown loam/red clay soils, < 10% deep
MRCv	0.1	Rise	B6B3	D	leached sand or sand/clay rises. Volcanic ash in surface.
MIKCV	0.1	Nise	БОБЗ		MRC As above undulating rises.
					MRCv As above with volcanic ash in surface.
					Main soils:
					Plains: Shallow sandy loam over red-brown clay on calcrete - B6 .
					Rises: Shallow sandy loam over red-brown clay on calcrete - B6
1.600				_	and <u>Shallow sandy loam on calcrete</u> - B3 .
MSBv	0.4	Rise	B6G3H3	D	MSBv Gently_sloping dune range with deep siliceous neutral to
MSCv	0.3	Rise	B6H3	D	acid sands and sand over brown poorly structured clay soils. 30-
					60% swales with shallow sandy loam, often on red clay, over
					calcrete. Volcanic ash occurs in the surface horizons.
					MSCv As above, undulating rises.
					Main soils: Shallow sandy loam over red-brown clay on calcrete -
					B6 , Thick sand over clay - G3 and Bleached siliceous sand - H3 .
MVB	2.0	Rise	B4B6B3	V	Gently sloping former beach ridge with shallow clay loam to sandy
		Swamp	N1N3	L	loam over structured red clay on calcreted calcarenite. 10-30%
					bare rock. 20-30% swamps.
					Main soils:
					Rises: Shallow red loam on limestone - B4 , Shallow sandy loam
					over red-brown clay on calcrete- B6 and Shallow sandy loam on
					calcrete - B3 .
					Swamps: Peaty soil – N1 and Wet clay loam - N3.
OFb	1.8	Dune	I1H3	D	OFb 60-90% dunes on gently sloping calcarenite range with deep
OFCv	0.3	Dune	I1	D	siliceous sands. 10-30% shallow sandy loam on red clay on
OFD	0.1	Low dune	I1	D	calcarenite.
OFDv	1.3	Low dune	I1I2	D	OFCv Dunes with deep siliceous sand with volcanic ash in the
012		2011 00110			surface.
					OFD Low siliceous dunes.
					OFDv As above with volcanic ash in the surface.
					Main soils: <u>Highly leached sand</u> - I1 , <u>Wet highly leached sand</u> - I2
					and <u>Bleached siliceous sand</u> - H3 .
OHA	0.0	Dune	I1H3	E	OHA Very high dune with deep siliceous sands co-dominant with
	0.0	Stony rise	B3	E	shallow sands over calcarenite rises.
OHB	1.0	Dune	I1H3	D	OHB High dunes as above, with <10% shallow sands over
0112		Stony rise	B3	М	calcarenite rises.
OHbv	0.5	Dune	I1H3	V	OHbv 60-90% dunes with deep siliceous sands, 20-30% shallow
01101	0.5	Rise	B6	C	sand over red sandy clay on gently sloping calcarenite slopes.
OHD	0.3	Dune	I1H3	E	Volcanic ash in the surface.
	0.0	Stony rise	B3	E	OHD Low dunes, as above, 30-60% stony rises.
OHfv	0.1	Dune	I1I2	V	OHfv 30-60% low dunes on gently sloping calcarenite range with
J.11. (J. <u>+</u>	Plain	I2G3	C	20-30% plains with mixed deep, poorly drained sand or sand over
OHJ	0.5	Plain	B6B7	E	brown clay.
0110	0.5	Dune	I2I1	E	OHJ 30-60% low sand dunes, co-dominant with plains with
		Danc	1211	-	shallow sandy loam over red clay or poorly structured brown clay
					on calcarenite.
					Main soils:
					Dunes: Highly leached sand - I1 and Bleached siliceous sand - H3 .
					Stony rises: Shallow sandy loam on calcrete - B3.
					Plains: Wet highly leached sand - I2 and Thick sand over clay -
					G3 or Shallow sandy loam over red-brown clay on calcrete - B6
					and Sand over friable brown clay on calcrete - B7 .
					Rises: Shallow sandy loam over red-brown clay on calcrete - B6.





OMb	2.7	Dune	I1	V	OMb 60-90% low dunes on gently sloping calcarenite range with
ONIO	2.7	Slope	B7G3B6	C	deep siliceous sands on dunes and sandy loam to sand over
OMw	0.5	Dune	I1I2	V	poorly drained brown clay on calcarenite. Minor occurrences of
OWW	0.5	Rise	B7G3B6	C	red clay subsoils.
		Swale	B7G3B0	М	OMw As above, dunes on undulating calcarenite slopes.
		Sware	D/ G3	141	Main soils:
					Dunes: Highly leached sand - I1 ; Wet highly leached sand - I2 .
					Slopes and rises: Sand over friable brown clay on calcrete - B7,
					Thick sand over clay - G3 and Shallow sandy loam over red-brown
					clay on calcrete - B6 .
					Swales: Sand over friable brown clay on calcrete - B7 and Thick
					sand over clay - G3 .
OObv	0.5	Dune	I1	V	OObv 60-90% dunes on gently undulating calcarenite slopes with
		Slope	C2L1	С	mostly deep sands overlying basalt and ash in the Mt. McIntyre
OOfv	0.5	Dune	I1I2	V	area. Volcanic ash in the surface.
		Slope	C2L1	С	OOfv 30-60%low dunes as above.
					Main soils:
					Dunes: Highly leached sand - I1; Wet highly leached sand - I2.
					Slopes: Gradational red clay-loam over clay (Red clayey pedaric
					Dermosols) - C2 and <u>Shallow stony soils on rock</u> - L1 .
PBAv	0.5	Plain	I2	D	PBAv Sand plain with well-drained, deep, leached siliceous sands.
PBBv	1.8	Plain	I2	D	Volcanic ash in the surface.
		Dune	I1	М	PBBv As above, but with 20-30% poorly drained, deep sands
					which are underlain by impervious clays or coffee rock. Volcanic
					ash in the surface.
					Main soils:
					Plains: Wet highly leached sand - I2.
DE .					Dunes: Highly leached sand - I1.
PEav	0.6	Plain	I2	V	PEav Poorly drained plain with deep siliceous acid sands with
DEI	0.2	Dune	I1	C	coffee rock or slowly permeable clays in the subsoils. 10-20% non-
PEbv	0.3	Plain	I2I1	V	peaty swamps. 20-30% low dunes with well-drained siliceous sands.
PEEv	0.1	Dune	I1	C	PEbv As above, gently undulating.
PEEV	0.1	Depression	I2N3	L	PEEv As above, gently undulating. PEEv As above depression with 10-20% low dunes. Volcanic ash
PEi	0.4	Dune Plain	I1I2 I2	D	in surface.
FEI	0.4	Swamp	N3I2	М	PEi As above with 10-50% swamps.
		Swarrip	11312	IVI	Main soils:
					Plains: Wet highly leached sand - I2 and Highly leached sand - I1.
					Dunes: Highly leached sand - II.
					Swamps and depressions: Wet clay loam - N3 and Wet highly
					leached sand - I2.
PPAv	0.7	Plain	G3	D	PPAv Plain with acid sand over acid yellow-brown clay soils and
PPBv	1.5	Plain	H3I1	V	deep acid poorly drained sands with coffee rock on subsoils.
		Rise	В3	L	Volcanic ash in surface.
					PPBv Gently undulating, as above with 10-20% rises with shallow
					sand over calcreted calcarenite. Volcanic ash in surface.
					Main soils:
					Plains: Thick sand over clay - G3, Bleached siliceous sand - H3
					and <u>Highly leached sand</u> - I1 .
					Rises: Shallow sandy loam on calcrete - B3.
vAB	0.8	Plain	01	D	vAB Gently sloping rises with brown or black volcanic clay loam
vAD	0.4	Hill/Rise	01	D	over dark brown clay on basalt or ash.
vAZ	0.1	Crest	01	D	vAD Rolling rises as above.
					vAZ Summit surface as above.
			1	1	Main soils: Volcanic ash soil - 01 .





G :			T	Ι_	T ~
vCA	0.2	Plain	01	D	vCA Plain with pinkish sand over clayey sand to sandy clay
vCB	0.5	Rise	01	D	derived from sandy ash
		Plain	01	М	vCB As above with 20-30% rises with deep siliceous sand, with volcanic ash in the surface.
					Main soils: Volcanic ash soil - O1 .
vDC	2.3	Hill/Rise	G2O1	D	Undulating hill with deep loamy sand over red/yellow clay and dark organic loam over brown clay in low parts of the landscape.
					Main soils: <u>Bleached sand over sandy clay loam</u> - G2 and <u>Volcanic</u> <u>ash soil</u> - O1 .
vEB	2.9	Rise	B6O1	V	Gently undulating rises with sandy loam over red clay on
		Dune	I1O1H3	L	calcarenite and 10-20% dunes with deep siliceous sandy soils overlain with dark loamy volcanic ash.
					Main soils:
					Rises: Shallow sandy loam over red-brown clay on calcrete - B6
					and Volcanic ash soil - 01 .
					Dunes: Highly leached sand - I1, Volcanic ash soil - O1 and
					Bleached siliceous sand - H3.
vKF	0.3	Hill/Rise	O1RR	D	Very steep slopes on The Bluff with moderately deep, well-
					structured dark clay loam over volcanic ash/basalt.
					Main soils: Volcanic ash soil - O1; Rock or exposed calcrete - RR.
vQB	0.2	Rise	O1C3	D	Deep, dark, sandy loam over red clay developed in older,
vQC	1.0	Hill/Rise	O1L1	D	Pleistocene volcanic ash with occasional sandy rise or shallow
vQD	1.8	Hill/Rise	O1L1	D	loam on calcrete.
vQE	0.2	Depression	C3O1	D	vQB Gently undulating rises
					vQC Undulating rises, as above with shallow soils on basalt codominant.
					vQD Rolling rises , as above with shallow soils on basalt co-
					dominant.
					Main soils:
					Rises: Volcanic ash soil - O1, Friable gradational clay loam - C3
					and <u>Shallow stony soils on rock</u> - L1 .
Xl-	0.0	Lake	WW	D	Water.
XuC	0.5	Swamp	N3	D	XuC Swamp with non-peaty wet soils
Xud	0.2	Swamp	N3	D	Xud Non-peaty swamp with 20-30% sandy rises.
					Main soils: <u>Wet clay loam</u> - N3 .

PROPORTION codes assigned to soils within Soil Landscape Units (SLU):

(D) Dominant in extent (>90% of SLU)
 (C) Common in extent (20–30% of SLU)
 (V) Very extensive in extent (60–90% of SLU)
 (E) Extensive in extent (30–60% of SLU)
 (M) Minor in extent (<10% of SLU)

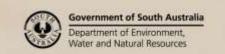
Detailed soil profile descriptions:

B3 Shallow sandy loam on calcrete (Petrocalcic Rudosol)

Medium thickness non calcareous sandy loam, often having a slight clay increase with depth, over calcreted calcarenite shallower than 50 cm - rises.

B4 Red sandy loam over calcrete (Petrocalcic, Red Dermosol)

Medium thickness red sandy loam grading to friable red clay loam over calcreted calcarenite within 50 cm - rises.





B6 Shallow sandy loam over red-brown clay on calcrete (Petrocalcic, Red Kandosol)

Medium thickness sandy loam with slight ironstone gravel overlying a weakly structured reddish brown sandy clay on calcarenite within 50 cm - rises.

B7 <u>Shallow sand over sandy clay on calcrete (Petrocalcic, Brown Chromosol)</u>

Medium thickness sand overlying brown friable sandy clay to clay on limestone or calcreted sandy clay within 50 cm - flats.

C2 Gradational loam on rock (Calcic / Hypercalcic Red Dermosol)

Loam to clay loam grading to friable red clay with soft Class I carbonate within 50 cm, grading to weathering rock within 100 cm.

Gradational clay loam (Calcic / Hypercalcic Red Dermosol)

Loam to clay loam grading to friable red clay with soft Class I carbonate within 50 cm, grading to alluvium within 100 cm.

G2 <u>Bleached sand over sandy clay loam (sandy Brown-Red Chromosol)</u>

Sandy texture-contrast soil with a bleached A2 horizon and a friable brown-red sandy clay loam to sandy loam subsoil.

G3 Thick sand over clay (Hypercalcic, Brown Sodosol/ Chromosol)

Thick bleached sand with an organically darkened surface abruptly overlying a massive to coarsely structured brown to reddish yellow sandy clay to clay, calcareous with depth - rises.

H3 Deep bleached sand (Basic, Arenic, Bleached-Orthic Tenosol)

Grey sand over a very thick bleached sand grading to yellow sand continuing below 100 cm.

II Highly leached sand (Fragic, Pipey, Aeric Podosol)

Grey sand with a very thick bleached A2 layer, over dark brown and yellow massive soft to semi-hard clayey sand (coffee rock), grading to softer yellow and brown sand to sandy clay loam from about 80 cm.

I2 Wet highly leached sand (Fragic, Humic, Aquic Podosol)

Grey sand with a thick bleached A2 horizon, overlying a thin to thick layer of coffee rock, grading to pale brown sand sharply overlying a grey, brown and yellow mottled sandy clay loam to light clay.

L1 Shallow stony loam (Paralithic, Leptic Tenosol)

Shallow stony loam, often calcareous throughout or with depth, overlying weathering rock shallower than 50 cm.

N1 Peat (Organosol)

Peaty soil.

N3 Seasonally waterlogged, non to marginally saline equivalents of soils listed above, viz.:

N3c Wet G3

N3d Wet B5

N3e Wet B7

Volcanic ash soil (Mostly Podosols and Tenosols)

Deep volcanic ash soils and soils overlain with volcanic ash.

RR Bare rock.

Further information: DEWNR Soil and Land Program

