

APPENDIX III - SOIL PROFILE DESCRIPTIONS

Abbreviated field descriptions of examples of the main soils in the study area are presented. Map references given are from the 1:100 000 topographic series unless otherwise specified. Munsell (1954) colour notations are for moist soil.

1. **Stony loam soil** — Ordovician fine sandstone; profile not sampled.

Albury 8225: map ref. 714622

A₁ 0-20 cm stony loam (5YR 4/4), apedal, slightly hard
A₂ 20-65 cm stony loam (5YR 4/6), apedal, slightly hard
R 65 cm bedrock

2. **Gravelly loam soil** — Alluvium-colluvium from Ordovician sedimentary rocks; profile 503.

Bogong 8324: map ref. 024350

A₁ 0-10 cm loam (10YR 3/2) weak fine subangular blocky, friable
A₂ 10-24 cm gravelly loam (10YR 3/3) weak fine subangular blocky, friable
A₃ 24-40 cm gravelly coarse sandy loam (10YR 4/3) apedal, firm
B₂ 40-130+ cm gravelly fine sandy loam (7.5YR 4/4) apedal, firm

3. **Coarse sand soil** — Granodiorite; profile 510.

Mansfield 8123: map ref. 528934

A₁ 0-10 cm coarse sandy loam (10YR 2/1) moderate fine granular, friable
A₂ 10-28 cm coarse sandy loam (10YR 3/3) weak fine to medium subangular blocky, friable
B 28-130+ cm coarse sandy loam (10YR 6/4) apedal, slightly hard

4. **Undifferentiated sand and loam soil** — Alluvium from Ordovician sedimentary rocks; profile not sampled.

Buffalo 8224: map ref. 763562

A₁ 0-8 cm fine sandy loam (10YR 3/2) apedal, friable
C 8-20 cm loamy sandy (10YR 5/4), apedal, friable
II C 20-25 cm loamy fine sand (10YR 4/4) apedal, friable
III C 25-30 cm coarse sand (10YR 4/3) apedal, loose
IV C 30-40 cm sand (10YR 4/6) apedal, loose

5. **Brown and grey loam soil** — Alluvium from Ordovician sedimentary rocks; profile 518.

Bogong 8324: map ref. 065247

A₁ 0-9 cm silty loam (10YR 3/2) strong fine granular, slightly hard
A₂ 9-25 cm silty loam (7.5YR 3/2) moderate fine subangular blocky, slightly hard
AB 25-70 cm silty loam (7.5YR 3/3) weak fine to medium subangular blocky, slightly hard
B₃ 70-125 cm fine sandy loam (5YR 3/4) apedal, slightly hard
C 125 + cm gravel

6. **Organic loam soil** — Granodiorite, profile 512.

Mansfield 8123: map ref. 488993

A₁ 0-10 cm organic loam (10YR 2/1) strong fine crumb, loose
A₁ 10-40 cm organic sandy loam (10YR 2/1) strong fine subangular blocky, friable
C 40 + cm abundant rock with soils as above

7. Dark clay soil — Basalt; profile not sampled.

Whitfield 8124: map ref. 391469

- A₁ 0-10 cm light clay (10YR 2/1) weak medium subangular blocky, firm
- A₂ 10-30 cm clay (10YR 2/2) moderate fine and medium subangular blocky, firm
- B₂ 30-100+ cm clay (2.5Y 2/2) moderate fine subangular blocky, firm

8. Reddish brown gradational soil on alluvium — Alluvium from mixed rock types; profile 552.

Buffalo 8224: map ref. 712488

- A₁ 0-16 cm silty loam (7.5YR 3/4) apedal, hard A₂ 16-22 cm clay loam (5YR 3/4) apedal, hard
- B 22-55 cm light clay (5YR 4/6) weak fine subangular blocky, hard
- C 55 + cm gravel

9. Yellowish brown gradational soil on alluvium — Alluvium from Ordovician sedimentary rocks; profile 501.

Buffalo 8224: map ref. 825476

- A₁ 0-16 cm loam (10YR 3/3) weak medium subangular blocky, hard
- B₁ 16-25 cm clay loam (7.5YR 4/4) weak coarse blocky, very hard
- B₂ 25-75 cm clay loam (7.5YR 4/6) moderate medium subangular blocky, very hard
- B₃ 75-110 cm sandy loam (7.5YR 5/6) apedal, slightly hard
- C 110+ cm gravel

10. Weakly bleached reddish brown gradational soil — Carboniferous sandstone; profile not sampled.

Whitfield 8124: map ref. 406480

- A₁ 0-8 cm sandy loam (7.5YR 3/2) apedal, slightly hard
- A₂ 8-20 cm sandy loam (5YR 5/4) apedal, slightly hard
- B₁ 20-35 cm sandy clay loam (5YR 4/6) apedal, slightly hard
- B₂ 35-65 + cm sandy light clay (2.5YR 3/8) apedal, hard

11. Weakly bleached yellowish brown gradational soil — Granite; profile 524.

Albury 8225: map ref. 882666

- A₁ 0-10 cm coarse sandy loam (10YR 4/2) weak fine to medium subangular blocky, slightly hard
- A₂ 10-25 cm coarse sandy loam (10YR 6/3), apedal, slightly hard
- A₃ 25-40 cm coarse sandy loam (10YR 5/6), apedal, hard
- B₁ 40-75 cm coarse sandy clay loam (10YR 5/6, grey mottled) weak, fine prismatic, hard
- B₂ 75-100 cm coarse sandy light clay (2.5Y 7/4, yellowish red mottled), strong coarse blocky, very hard

12. Friable brown gradational soil — Ordovician mudstone and shale; profile 506.

Bogong 8324: map ref. 053152

- A₁ 0-3 cm loam (10YR 2/2) weak fine crumb, slightly firm
- AB 3-10 cm clay loam (7.5YR 3/4) weak fine subangular blocky, friable
- B₂ 10-32 cm clay loam to light clay (7.5YR 4/4) moderate, fine subangular blocky, friable B₂ 32-60 cm gravelly clay loam (7.5YR 4/4) weak fine subangular blocky, friable
- B₃ 60-90 cm gravelly clay loam (7.5YR 5/6) apedal, friable
- C 90 + cm bedrock — well fractured with soil as for B₃ in fissures

13. Reddish brown gradational soil with rough ped fabric — Ordovician mudstone and shale; profile 522.

Albury 8225: map ref. 758697

- A₁ 0-4 cm loam (10YR 3/2) moderate fine granular, friable
- AB 4-10 cm clay loam (5YR 3/6) moderate fine to medium subangular blocky, slightly firm
- B₂ 10-30 cm light clay (2.5YR 3/6) moderate fine to medium subangular blocky, firm
- B₃ 30-60 cm light clay (3.7YR 3/6) weak fine and medium subangular blocky, firm
- C 60-100+ cm soils as for B₃, but very stony

14. Reddish brown gradational soil with smooth ped fabric — Rhyodacite; profile 559.

Whitfield 8124: map ref. 270220

- A₁ 0-15 cm clay loam (7.5YR 2/2) strong fine to medium subangular blocky, firm
- B₁ 15-28 cm light clay (5YR 3/3) strong fine subangular blocky, slightly firm
- B₂ 28-100+ cm light clay (2.5YR 3/6) moderate to weak fine to medium subangular blocky, firm

15. Red gradational soil on basalt — Basalt; profile 513.

Whitfield 8124: map ref. 399202

- A₁ 0-12 cm silty loam (8.7YR 3/2) moderate fine subangular blocky, firm
- B₁ 12-30 cm light clay (7.5YR 3/4) moderate fine subangular blocky, firm
- B₂ 30-70 cm light clay (5YR 3/4) strong fine to medium subangular blocky, firm
- B₂ 70-120 cm light clay (2.5YR 3/6) strong fine subangular blocky, firm
- B₃ 120-140+ cm light clay (5YR 4/8) strong fine subangular blocky, firm

16. Red duplex soil with smooth ped fabric — Alluvium from Ordovician sedimentary rocks; profile 521.

Albury 8225: map ref. 635635

- A₁ 0-9 cm fine sandy loam (7.5YR 3/2) apedal, slightly hard
- A₂ 9-30 cm fine sandy loam (8.7YR 5/3) apedal, slightly hard
- AB 30-38 cm fine sandy clay loam (7.5YR 4/6) weak fine blocky, very hard
- B₂ 38-75 cm clay (5YR 4/8) strong fine sub-angular blocky, very hard
- B₃ 75-130+ cm fine sandy clay loam (5YR 4/6) moderate fine subangular blocky, very hard

17. Red duplex soil with rough ped fabric — Colluvium from Ordovician sedimentary rocks; profile 558.

Buffalo 8224: map ref. 706368

- A₁ 0-12 cm loam (7.5YR 3/2) weak fine to medium subangular blocky, hard
- A₂ 12-25 cm loam (5YR 4/4) weak fine to medium subangular blocky, hard
- B₂ 25-70 cm clay (2.5YR 4/6) moderate to weak fine to medium subangular blocky, very hard
- B₃ 70-90 cm light clay (5YR 4/6) weak fine to moderate subangular blocky, hard
- B₃ 90-140 cm light clay (5YR 4/8, yellowish brown mottled), weak fine to medium subangular blocky, firm

18. Yellowish brown duplex soil — Alluvium-colluvium from Ordovician sedimentary rocks; profile 519.

Albury 8225: map ref. 638618

- A₁ 0-9 cm loam (10YR 3/3) apedal, slightly hard
- A₂ 9-29 cm fine sandy loam (10YR 6/3) apedal, slightly hard
- B₁ 29-50 cm clay (10YR 5/6) strong fine to medium subangular blocky, hard
- B₂ 50-85 cm clay (10YR 6/3 yellowish brown mottled), strong fine to medium blocky, hard
- B₃ 85-140 cm clay loam (7.5YR 4/4) weak medium blocky, very hard
- C 140 + cm variably bedded clay and fine gravel

19. Wet peat soil — Sphagnum moss peat; profile 535.

Buffalo 8224: map ref. 815356

- 0₁ 0-18 cm peaty loam (10YR 2/1) fibrous plant material
- 0₂ 18-70+ cm peaty loam (2.5YR 2/0) apedal, sticky

20. Dry peat soil — Granite and plant remains; profile 537.

Buffalo 8224: map ref. 842373

- 0₁ 0-1 cm dry decomposing plant remains
- 0₂ 1-27 cm organic sandy loam (2.5Y 2/0) strong fine crumb, soft
- R 27 + cm rock

21. Humified peat soil — Peat and alluvium from granite; profile 370.

Buffalo 8224: map ref. 823356

- 0₂ 0-75 cm organic loam (2.5Y 2/0) strong fine crumb tending to subangular blocky at depth, friable
- C 75 + cm coarse sand



Yellowish brown gradational soil on alluvium Profile 501



Reddish brown gradational soil on alluvium – Profile 552



Organic loam on sedimentary rock – Profile 504



Weakly bleached yellowish brown gradational soil – Profile 524



Friable brown gradational soil – Profile 506



Friable reddish brown gradational soil – Profile 531



Red duplex soil with smooth ped fabric on sedimentary rock – Profile 520



Red duplex soil with smooth ped fabric on alluvium – Profile 521



Red duplex soil with rough ped fabric on sedimentary rock – (not sampled)



Red (yellow) duplex soil on Carboniferous sedimentary rocks – Profile 507



Yellowish brown duplex soil on alluvium – Profile 519



Yellowish brown duplex soil on granite – Profile 523