

PART II - KIMBARRA

(A) Area and Location

The area surveyed is about 10 hectares situated near Great Western, about 210 kilometres west north-west of Melbourne. It is the northern part of allotment 17 (section 4) in the Parish of Concongella South, Shire of Stawell, County of Borung.

(B) Climate

Rainfall records kept at “Kimbarra” by the owner since 1953 have been analysed and the long-term averages are listed below (Table K-1). The graphs in Figures K-1 (a) and K-1 (b) illustrate the monthly and seasonal distributions of the vineyards’ average annual rainfall.

Table K-1 - Average Rainfall at Kimbarra, Great Western*

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
mm	34	34	31	51	60	48	63	68	57	56	46	34	582

* 27 years

(C) Soils

(i) Soil Types and Miscellaneous Units

The main soils of Kimbarra vineyards belong to the three soil series recognised in the survey. Listed below (Table K-2) are the soils mapped in these vineyards.

Figure K-1: Distribution of the Annual Rainfall at Kimbarra

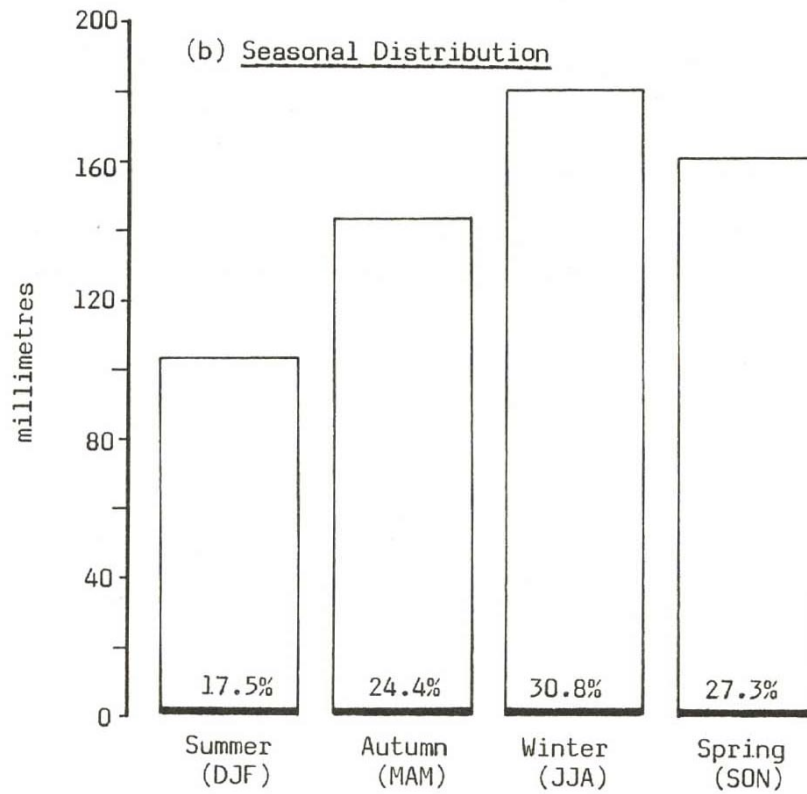
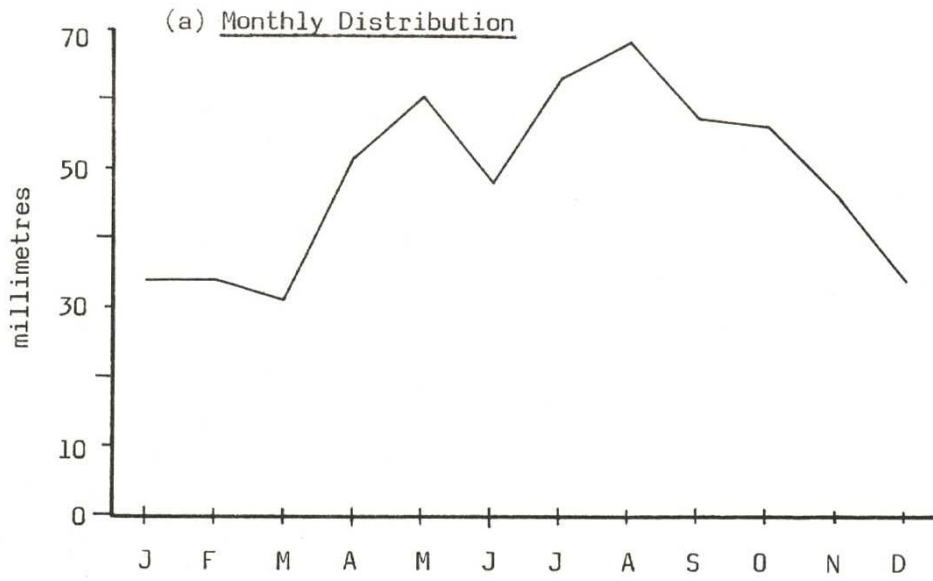


Table K-2 - The Main Soils of Kimbarra Vineyards

Soils	Mapping Symbols
<u>Concongella Series</u>	
Concongella loam (stony profile)	Cl (s)
“ “ (deep surface & stony profile)	Cl (d & s)
Concongella sandy clay loam	C scl
<u>Great Western Series</u>	
Great Western sandy clay loam	GW scl
“ “ “ “ (deep surface)	GW scl (d)
<u>Stawell Series</u>	
Stawell sandy clay loam (deep surface)	S scl (d)
“ “ “ “ (stony profile)	S scl (s)
Stawell clay loam	S cl
<u>Minor Soil Types</u>	
Minor soil type 2	M.T.2

The occurrence of each soil in the survey area has been mapped separately except for the gully floors and the slight depressions. Soils of these areas recurred over short distances and were mapped, therefore, as complexes. The complex units and their dominant soils are as follows:

- Complex I : Varied gully soils with mottled brown and yellow sandy clay (to clay) subsoils; including S scl (d) and S cl.
- Complex II : Varied gully soils with reddish brown to red sandy clay (to clay) subsoils; including M.T.2.

The areal distribution of these soils in the survey is shown on the soil map (Figure K-2) and the approximate area of each mapping unit (% of the total area surveyed) is listed in Table K-3.

Table K-3 - Distribution of the Mapping Units on Kimbarra Vineyards

Mapping Units	Area % (approx.)	
<u>Concongella Series</u>		
Cl (s) and Cl (d & s)	44	26
C scl		18
<u>Great Western Series</u>		
GW scl and GW scl (d)	28	28
<u>Stawell Series</u>		
S scl (s)	18	18
<u>Soil Complexes</u>		
Complex I		5
Complex II		5
	100	100

(ii) Representative Soil Profiles

Average soil profiles were selected to represent the mapping units. These profiles have been numbered and located on the accompanying soil map (Figure K-2). The morphological features of these profiles are given below and their analytical data are listed in Appendix K. It should be appreciated, however, that within each mapping unit, soil profiles at individual situations usually will differ in some features from the described and analysed profiles.

CONGELLA LOAM
(one representative profile)

Profile K-1

Profile Reference: WM 15/18
Topography: Upper-gentle slope in a strongly undulating plain.
Soil Classification: Dr 2.12/l_t SCL (15 cm).

Soil Description:

Surface Soil

0 – 15 cm; dark brown (7.5YR3/4m) light sandy clay loam; weakly pedal, hard setting; hard (dry), friable (moist), non-plastic and slightly sticky (wet); light amounts of quartz, ferruginous concretions and shale fragments; clear boundary to:

Subsoil

15 – 45 cm; red (2.5YR4/6m) heavy clay; strong medium angular blocky structure; smooth-ped fabric; hard (dry), friable (moist), plastic and sticky (wet); slight amounts of shale fragments; gradual boundary to:

45 – 70 cm; as above but; mottled red (2.5YR4/6m) and brownish yellow (10YR6/6m), the amounts of shale fragments increase to light; bedrock at 70 cm.

CONGELLA LOAM (Deep Surface & Stony Profile)
(one representative profile)

Profile K-2

Profile Reference: WM 15/21
Topography: Upper-moderate slope in a strongly undulating plain.
Soil Classification: Dr 2.22/l_t SCL (30 cm).

Soil Description:

Surface Soil

0 – 10 cm; dark brown (7.5YR3/4m) light sandy clay loam; weakly pedal, hard setting; hard (dry), friable (moist), non-plastic and slightly sticky (wet); light to moderate amounts of quartz and some ferruginous concretions; clear boundary to:

10 – 30 cm; as above but; yellowish red (5YR5/6m, 7.5YR6/4d) sandy clay loam (heavy); clear boundary to:

Subsoil

- 30 – 50 cm; red (2.5YR4/6m) heavy clay; strong fine and medium angular blocky structure; smooth-ped fabric; hard (dry), friable (moist), plastic and sticky (wet); slight amounts of shale fragments; clear boundary to:
- 50 – 60 cm; as above but; mottled red (2.5YR4/6m) and yellowish brown (10YR5/6m) heavy clay (gritty); the amounts of shale fragments increase to light to moderate; bedrock at 60 cm.

CONGELLA SANDY CLAY LOAM (one representative profile)

Profile K-3

- Profile Reference:** WM 15/15
Topography: Mid-gentle slope in a strongly undulating plain.
Soil Classification: Dr 2.42/SCL (20 cm).

Soil Description:

Surface Soil

- 0 – 10 cm; dark reddish brown (5YR3/4m) sandy clay loam (gritty); weakly pedal, hard setting; hard (dry), friable (moist), non-plastic and slightly sticky (wet); slight amounts of quartz and ferruginous concretions; clear boundary to:
- 10 – 20 cm; yellowish red (5YR5/6m) conspicuously bleached light brown (7.5YR6/4d) loam (gritty); weak medium sub-angular blocky structure; rough-ped fabric; very hard (dry), slightly friable (moist), slightly plastic and slightly sticky (wet); slight amounts of quartz and ferruginous concretions; sharp boundary to:

Subsoil

- 20 – 50 cm; red (2.5YR4/6m) heavy clay; strong fine and medium angular blocky structure; smooth-ped fabric; hard (dry); slightly friable (moist), plastic and sticky (wet); trace amounts of quartz and ferruginous concretions; clear boundary to:
- 50 – 70 cm; as above but; mottled yellowish brown (10YR5/4m) and dark red (2.5YR3/6m) medium clay (gritty); slight amounts of weathered shale fragments; bedrock at 70 cm.

GREAT WESTERN SANDY CLAY LOAM (one representative profile)

Profile K-4

- Profile Reference:** WM 15/12
Topography: Mid-moderate slope in a strongly undulating plain.
Soil Classification: Dr 3.32/SCL (20 cm).

Soil Description:

Surface Soil

- 0 – 10 cm; dark brown (10YR4/4m) sandy clay loam; weakly pedal, hard setting; very hard (dry), friable (moist), non-plastic and slightly sticky (wet); trace amounts of quartz and ferruginous concretions; clear boundary to:
- 10 – 20 cm; as above but; light brown (7.5YR6/4m) sporadically bleached very pale brown (10YR8/3d); the amounts of stones increase to slight; sharp boundary to:

Subsoil

- 20 – 60 cm; mottled red (2.5YR4/6m) and yellowish-brown (10YR5/4m) heavy clay; strong fine and medium angular blocky structure, smooth-ped fabric; hard (dry), friable (moist), plastic and sticky (wet); trace amounts of quartz and some ferruginous concretions; clear boundary to:
- 60 – 90 cm; as above but; mottled yellowish brown (10YR5/4m) and strong brown (7.5YR5/6m); the amounts of stones increase to light; weathered bedrock at 90 cm.

GREAT WESTERN SANDY CLAY LOAM (Deep Surface)
(two representative profiles)

(A) Profile K-5

- Profile Reference:** WM 15/19
Topography: Upper-slope in a strongly undulating plain.
Soil Classification: Dr 3.32/SCL (30 cm)

Soil Description:

Surface Soil

- 0 – 10 cm; dark brown (7.5YR3/4m) sandy clay loam; weakly pedal, hard setting; hard (dry) friable (moist) non plastic and slightly sticky (wet); slight amounts of quartz, ferruginous concretions and shale fragments; clear boundary to:
- 10 – 30 cm; as above but; strong brown (7.5YR5/6m) sporadically bleached pink (7.5YR7/4d) clay loam; the amounts of stones decrease to trace; clear boundary to:

Subsoil

- 30 – 60 cm; mottled red (2.5YR4/6m), brown (7.5YR5/4m) and yellowish brown (10YR5/6m) heavy clay; strong fine and medium angular blocky structure; smooth-ped fabric; hard (dry), friable (moist), plastic and sticky (wet); slight amounts of shale fragments with some quartz and ferruginous concretions; gradual boundary to
- 60 – 90 cm; as above but; mottled reddish brown (5YR4/4m) and yellowish brown (10YR5/4m) heavy clay (gritty); the amounts of stones (mostly shale fragments) increase to light; gradual boundary to:

90 – 100 cm; as above but; mottled strong brown (7.5YR5/8m), light brownish grey (2.5Y6/2m) and black (2.5Y2/0m); the amounts of stones (mostly shale fragments) increase to moderate.

(B) Profile K-6

Profile Reference: WM 15/14
Topography: Mid-gentle slope in a strongly undulating plain.
Soil Classification: Dr 3.32/SCL (30 cm).

Soil Description:

Surface Soil

0 – 10 cm; brown (7.5YR4/4m) sandy clay loam; weakly pedal, hard (dry), friable (moist), non-plastic and non-sticky (wet); light amounts of quartz and ferruginous concretions; clear boundary to:

Subsoil

30 – 60 cm; mottled red (2.5YR4/8m) and strong brown (7.5YR5/6m) medium clay; strong fine and medium angular blocky structure; smooth-ped fabric; hard (dry), friable (moist), plastic and sticky (wet); trace amounts of quartz and ferruginous concretions; gradual boundary to:

60 – 90 cm; as above but; mottled strong brown (7.5YR5/6m), greyish brown (2.5Y5/2m) and red (2.5YR4/6m) medium to heavy clay; clear boundary to:

90 – 105 cm; as above but; mottled greyish brown (2.5Y5/2m), strong brown (7.5YR5/6m) and reddish brown (5YR4/4m) medium clay (very smooth); slight amounts of weathered shale fragments.

STAWELL SANDY CLAY LOAM (Deep Surface)
(one representative profile)

Profile K-7

Profile Reference: WM 15/16
Topography: Slight gully in a strongly undulating plain.
Soil Classification: Dy 3.43/SCL (35 cm).

Soil Description:

Surface Soil

0 – 20 cm; dark reddish brown (5YR3/4m) sandy clay loam (gritty); weakly pedal, hard setting; hard (dry), friable (moist) non-plastic and slightly sticky (wet); slight amounts of quartz and ferruginous concretions; clear boundary to:

20 – 35 cm; as above but; brown (7.5YR5/4m), conspicuously bleached pink (7.5YR7/4d); clear boundary to:

Subsoil

35 – 65 cm; mottled yellowish brown (10YR5/4m) and yellowish red (5YR4/6m) medium clay (gritty); moderate fine and medium angular blocky structure; smooth-ped fabric; hard (dry), friable (moist), plastic and sticky (wet); slight amounts of shale fragments; bedrock at 65 cm.

STAWELL SANDY CLAY LOAM (Stony Profile)
(two representative profiles)

(A) Profile K-8

Profile Reference: WM 15/11
Topography: Upper-moderate slope in a strongly undulating plain.
Soil Classification: Dy 3.43/SCL “gr” (25 cm).

Soil Description:

Surface Soil

0 – 10 cm; dark brown (7.5YR4/2m) sandy clay loam (gritty); weakly pedal, hard setting; very hard (dry), friable (moist), non-plastic and slightly sticky (wet); light amounts of quartz and ferruginous concretions; clear boundary to:
10 – 25 cm; as above but; light yellowish brown (10YR6/4m), conspicuously bleached very pale brown (10YR7/3d); the amounts of stones increase to moderate; sharp boundary to:

Subsoil

25 – 75 cm; mottled yellowish brown (10YR5/4m) and strong brown (7.5YR5/8m) heavy clay; strong fine and medium angular blocky structure; smooth-ped fabric; very hard (dry), friable (moist), plastic and sticky (wet); slight amounts of quartz and some ferruginous concretions; clear boundary to
75 – 105 cm; as above but; the amounts of stones increase to light.

(B) Profile K-9

Profile Reference: WM 15/13
Topography: Mid-gentle slope in a strongly undulating plain.
Soil Classification: Dy 3.42/SCL “gr” (25 cm)

Soil Description:

Surface Soil

0 – 10 cm; brown (10YR4/3m) sandy clay loam (gritty); weakly pedal, hard setting, very hard (dry), friable (moist), non-plastic and non-sticky (wet); light amounts of quartz and ferruginous concretions; clear boundary to:

10 – 25 cm; as above but; brownish yellow (10YR6/6m), conspicuously bleached white (10YR8/2d); the amounts of stones increase to moderate; sharp boundary to:

Subsoil

25 – 55 cm; mottled yellowish red (5YR5/6m) and brownish yellow (10YR6/6m) heavy clay; strong fine and medium angular blocky structure; smooth-ped fabric; very hard (dry), friable (moist), plastic and sticky (wet); slight amounts of quartz and ferruginous concretions; clear boundary to:

55 – 65 cm; as above but; mottled brownish yellow (10YR6/6m) and strong brown (7.5YR5/6m); the amounts of stones increase to moderate and include many shale fragments; bedrock at 65 cm.

STAWELL CLAY LOAM
(one representative profile)

Profile K-10

Profile Reference: WM 15/17
Topography: Slight gully in a strongly undulating plain.
Soil Classification: Dy 3.12/CL (40 cm).

Soil Description:

Surface Soil

0 – 40 cm; dark brown (7.5YR3/4m) clay loam, gradually becoming more clayey (to light clay) with depth; weakly pedal, hard setting; hard (dry), friable (moist) slightly plastic and moderately sticky (wet); slight amounts of shale fragments; gradual boundary to:

Subsoil

40 – 60 cm; mottled yellowish brown (10YR5/6m) and red (2.5YR4/6m) medium to heavy clay; strong fine and medium angular blocky structure; smooth-ped fabric; hard (dry), friable (moist), plastic and sticky (wet); slight amounts of shale fragments; bedrock at 60 cm.

MINOR SOIL TYPE 2
(one representative profile)

Profile K-11

Profile Reference: WM 15/20
Topography: Gully-floor in a strongly undulating plain.
Soil Classification: Gn 3.12/FSCL (h).

Soil Description:

Surface Soil

0 – 10 cm; dark reddish brown (5YR3/4m) fine sandy clay loam (heavy); moderate fine and medium crumb to sub-angular blocky structure; rough-ped fabric, slightly hard (dry), friable (moist), slightly plastic

and slightly sticky (wet); trace amounts of quartz and shale fragments; clear boundary to:

Subsoil

- 10 – 30 cm; reddish brown (5YR4/4m) light clay (sandy), clay contents gradually increase with depth; strong fine and medium angular blocky structure; smooth-ped fabric; hard (dry), friable (moist), slightly plastic and moderately sticky (wet); trace amounts of quartz and shale fragments; clear boundary to:
- 30 – 45 cm; as above but; light clay; gradual boundary to:
- 45 – 60 cm; as above but; yellowish red (5YR4/6m) light clay (gritty); the amounts of stones increase to light; gradual boundary to:
- 60 – 75 cm; as above but; mottled yellowish red (5YR4/6m) and black (7.5YR2/0m) sandy clay (gritty); the amounts of shale fragments increase to moderate; bedrock (shale) at 75 cm.

(D) Irrigation Water

Near the surveyed vineyards there are two different sized dams neither of which is currently used for irrigation. Although in the future, when planting is completed and vine establishment advanced, water from both dams especially the larger one will be utilised for irrigation.

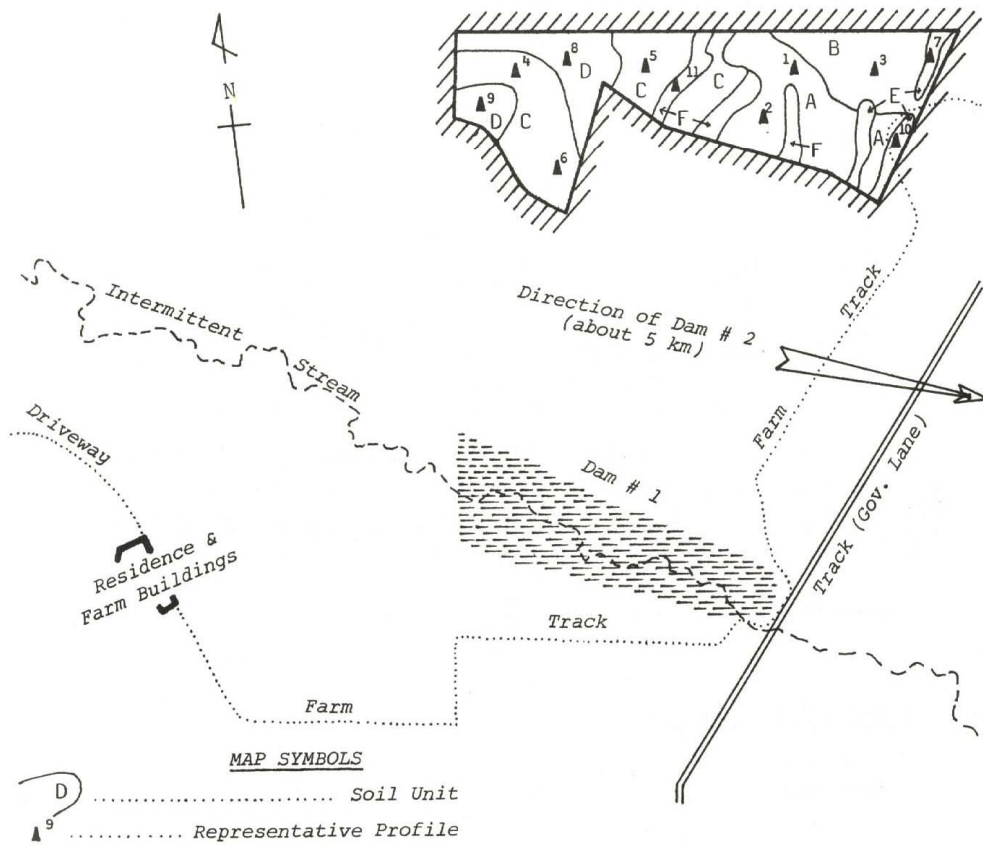
The locations of the two dams are shown on the soil map (Figure K-2) and the analytical data obtained for their water samples are listed in Table K-4, below.

Table K-4 - Analytical Data for Dam Water Samples from Kimbarra Vineyards

Dam No.	EC *	TSS **	Cl ***	Soluble Cations			SAR $\phi\phi$
				Ca ⁺⁺	Mg ⁺⁺	Na ⁺	
	$\mu\text{S/cm}$	ppm	ppm	m.e/l	m.e/l	m.e/l	% ϕ
1	1670	1084	467	0.67	3.39	3.15	43.7
2	124	109	8	0.14	0.21	0.76	68.5

- * Electrical Conductivity at 20°C.
- ** Total Soluble Salts
- *** Chlorides as sodium chloride (common salt)
- ϕ Sodium Percentage = $100 \text{ (Na}^+) / \text{Ca}^{++} + \text{Mg}^{++} + \text{Na}^+$
- $\phi\phi$ Sodium – Adsorption – Ratio = $\text{Na}^+ / \sqrt{(\text{Ca} + \text{Mg}^{++})/2}$

**Figure K-2: Soil Map of Kimbarra Vineyards
Great Western, County of Borung, Victoria**



LEGEND

(i) MAPPING UNITS

Unit	Soils
A	- Cl (s) [<i>Concongella loam (stony profile)</i>] - Cl (d & s) [<i>Concongella loam (deep surface & stony profile)</i>]
B	- C scl [<i>Concongella sandy clay loam</i>]
C	- GW scl [<i>Great Western sandy clay loam</i>] - GW scl (d) [<i>Great Western sandy clay loam (deep surface)</i>]
D	- S scl (s) [<i>Stawell sandy clay loam (stony profile)</i>]
E	- Soil Complex I : Varied soils in gullies and depressions with mottled brown and yellow sandy clay (to clay subsoils); including: • S scl (d) [<i>Stawell sandy clay loam (deep surface)</i>] • Scl [<i>Stawell clay loam</i>]
F	- Soil Complex II : Varied soils in gullies and depressions with reddish brown to red sandy clay (to clay) subsoils; including: • M.T.2 [<i>Minor soil type 2</i>]

(ii) REPRESENTATIVE PROFILES

Map Reference	Report Reference	Soil Classification	
		PPF (Northcote '79)	Soil Type
Δ 1	K- 1	Dr 2.12/ltscl (15 cm)	Cl (s)
Δ 2	K- 2	Dr 2.22/ltscl (30 cm)	Cl (d & s)
Δ 3	K- 3	Dr 2.42/SCL (20 cm)	C scl
Δ 4	K- 4	Dr 3.32/SCL (20 cm)	GW scl
Δ 5	K- 5	Dr 3.32/SCL (30 cm)	GW scl (d)
Δ 6	K- 6	Dr 3.32/SCL (30 cm)	“
Δ 7	K- 7	Dy 3.43/SCL (35 cm)	S scl (d)
Δ 8	K- 8	Dy 3.43/SCL “gr” (25 cm)	S scl (s)
Δ 9	K- 9	Dy 3.42/SCL “gr” (25 cm)	“
Δ 10	K-10	Dy 3.12/CL (40 cm)	Scl
Δ 11	K-11	Gn 3.12/FSCL (h)	M.T.2

Appendix K - Analytical Data for representative profiles from Kimbarra Vineyards

Depth (cm)	Field Texture	pH	T.S.S. (%)	Chloride "as NaCl" (%)	Total N (%)	Org. C (%)	Exchangeable Cations "milliequivalents per 100 g soils"					Aggregate Stability		Moisture (%)	
							Ca	Mg	K	Na	H	Class	Index	@ -15 Bar	@ -1/3 Bar
(1)			(2)	(3)							(4)	(5)	(6)	(7)	
PROFILE K-1; CONCONGELLA LOAM (Stony Profile); Dr 2.12/lt SCL (15 cm)															
0 – 15	SCL (lt)	6.0	0.021	-							3	7	9.3	25.5	
15 – 45	HC	6.8	0.014	-							3	6	15.9	31.4	
45 – 70	HC	7.0	0.019	-							5	0	14.2	29.6	
PROFILE K-2; CONCONGELLA LOAM (Deep Surface & Stony Profile); Dr 2.22/lt SCL (30 cm)															
0 – 10	SCL (lt)	6.8	0.022	-	0.281	3.4	3.2	1.2	0.8	0.1	10.0	3	5	10.1	26.2
10 – 30	SCL (h)	6.6	0.013	-			2.2	0.8	0.3	0.1	6.7	3	3	8.7	20.4
30 – 50	HC	6.8	0.014	-			2.1	2.7	0.4	0.1	7.2	3	2	17.3	26.4
50 – 60	HC (gr)	7.1	0.017	-			1.4	3.7	0.5	0.1	6.5	5	1	16.2	25.7
PROFILE K-3; CONCONGELLA SANDY CLAY LOAM; Dr 2.42/SCL (20 cm)															
0 – 10	SCL (gr)	7.0	0.017	-								2	10	9.3	27.2
10 – 20	L (gr)	7.4	0.009	-								2	11	5.9	19.7
20 – 50	HC	7.7	0.044	-								1	14	19.5	33.8
50 – 70	MC (gr)	8.5	0.064	0.027								1	14	14.6	30.9
PROFILE K-4; GREAT WESTERN SANDY CLAY LOAM; Dr 3.32/SCL (20 cm)															
0 – 10	SCL	6.0	0.008	-	0.185	2.3	0.6	0.4	0.2	0.2	9.7	3	6	7.3	21.2
10 – 22	SCL	6.0	0.006	-			0.6	0.3	0.2	0.2	7.1	2	10	5.9	18.4
22 – 60	HC	6.6	0.026	-			0.4	3.0	0.7	1.4	6.7	1	16	18.7	28.9
60 – 90	HC	7.5	0.047	-			0.1	6.4	0.9	2.9	3.9	1	16	22.8	35.3
PROFILE K-5; GREAT WESTERN SANDY CLAY LOAM (Deep Surface); Dr 3.32/SCL (30 cm)															
0 – 10	SCL	6.1	0.016	-	0.262	3.4	1.5	0.7	0.4	0.1	12.0	3	5	8.6	24.6
10 – 30	CL	6.5	0.011	-			1.6	1.6	0.5	0.1	5.6	2	10	11.2	22.0
30 – 60	HC	7.4	0.014	-			1.7	3.6	0.7	0.3	4.7	2	12	14.9	25.1
60 – 90	HC (gr)	7.7	0.024	-			0.7	5.7	0.8	0.7	3.5	1	14	13.8	24.6
90 – 110	HC (gr)	7.9	0.029	-			0.5	7.5	0.8	1.0	3.3	1	16	11.6	24.7

Depth (cm)	Field Texture	pH	T.S.S. (%)	Chloride "as NaCl" (%)	Total N (%)	Org. C (%)	Exchangeable Cations "milliequivalents per 100 g soils"					Aggregate Stability		Moisture (%)	
							Ca	Mg	K	Na	H	Class	Index	@ -15 Bar	@ -1/3 Bar
(1)			(2)	(3)							(4)	(5)	(6)	(7)	
<u>PROFILE K-6; GREAT WESTERN SANDY CLAY LOAM (Deep Surface); Dr 3.32/SCL (30 cm)</u>															
0 – 10	SCL	6.2	0.015	-							2	10	6.2	28.3	
10 – 30	SCL	6.4	0.006	-							2	12	8.9	25.5	
30 – 60	MC	6.9	0.017	-							3	3	17.8	37.6	
60 – 90	M-HC	7.2	0.022	-							2	10	14.7	33.3	
90 – 105	MC	7.3	0.024	-							1	14	8.4	27.8	
<u>PROFILE K-7; STAWELL SANDY CLAY LOAM (Deep Surface); Dy 3.43/SCL (35 cm)</u>															
0 – 20	SCL (gr)	7.1	0.011	-	0.092	1.1	1.0	1.2	0.5	0.3	6.2	2	12	7.2	18.6
20 – 35	SCL (gr)	7.5	0.015	-			0.5	1.8	0.4	0.6	4.8	1	14	7.4	17.8
35 – 65	MC (gr)	8.5	0.038	-			0.3	4.0	0.4	2.9	2.3	1	16	11.5	23.4
<u>PROFILE K-8; STAWELL SANDY CLAY LOAM (Stony Profile); Dy 3.43/SCL "gr" (25 cm)</u>															
0 – 10	SCL (gr)	6.3	0.024	-	0.263	1.2	1.0	0.9	0.7	0.3	10.0	2	10	8.1	23.4
10 – 25	SCL (gr)	6.6	0.016	-			0.6	1.4	0.4	0.3	4.9	2	10	7.6	17.4
25 – 75	HC	8.3	0.066	0.029			0.1	7.6	0.6	3.6	1.6	1	16	20.9	32.3
75 – 105	HC	8.4	0.069	0.034			0.1	8.4	0.5	4.3	2.3	1	16	20.6	33.2
<u>PROFILE K-9; STAWELL SANDY CLAY LOAM (Stony Profile); Dy 3.42/SCL "gr" (25 cm)</u>															
0 – 10	SCL (gr)	6.1	0.010	-								2	10	7.6	30.2
10 – 25	SCL (gr)	6.3	0.006	-								3	6	5.5	24.3
25 – 55	HC	7.2	0.047	-								1	16	20.0	37.8
55 – 65	HC	7.9	0.060	0.026								1	16	12.3	36.4
<u>PROFILE K-10; STAWELL CLAY LOAM; Dy 3.12/CL (40 cm)</u>															
0 – 30	CL	7.1	0.011	-								2	10	10.1	31.0
30 – 60	MC-HC	7.4	0.010	-								2	10	11.8	28.7
<u>PROFILE K-11; MINOR SOIL TYPE 2; Gn 3.12/FSCL (h)</u>															
0 – 10	FSCL (h)	6.9	0.012	-	0.148	1.6	3.8	1.6	0.8	0.1	8.7	3	4	10.6	25.4
10 – 30	LC (s)	7.2	0.010	-			3.9	1.7	0.6	0.1	6.2	3	3	10.4	22.1
30 – 45	LC	7.2	0.015	-			3.5	2.1	0.6	0.1	5.2	3	2	11.2	20.2
45 – 60	LC (gr)	7.4	0.009	-			2.4	2.4	0.4	0.2	4.7	3	3	11.6	21.8
60 – 75	SC (gr)	7.5	0.011	-			1.9	2.8	0.4	0.2	4.3	5	0	10.4	19.2

- (1) Field Texture; see Appendix G for definitions and symbols used.
- (2) Total Soluble Salts (%) = Electrical Conductivity ($\mu\text{S}/\text{cm}$) $\times 3.3 \times 10^{-4}$.
- (3) The dashes recorded in this column indicate negligible amounts of sodium chloride.

- (4) Aggregate stability Class (Emerson 1967).
- (5) Aggregate Dispersion Index (Loveday 1974).
- (6) Moisture (%) at -15 Bar; approximately "Wilting Point", see Appendix G.
- (7) Moisture (%) at $-1/3$ Bar; approximately "Field Capacity", see Appendix G.