GRADATIONAL CLAY LOAM

General Description: *Loam to clay loam grading to a well structured red clay, calcareous with depth*

Landform: Undulating rises and gently inclined fans

Substrate: Deeply weathered fine grained rock, or fine grained alluvium.

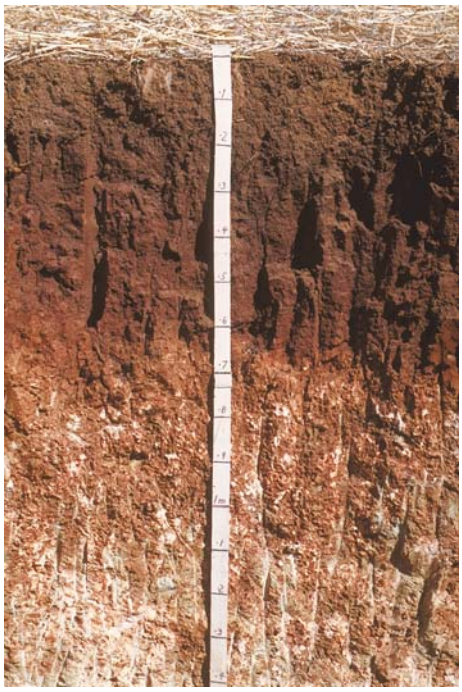
Vegetation:

Type Site: Site No.: CM907

1:50,000 sheet:	6630-3 (Clare)	Hundred:	Upper Wakefield
Annual rainfall:	625 mm	Sampling date:	March 1990
Landform:	Mid slope of undulating rise, 4% slope		
Surface:	Firm with no stones		

Soil Description:

Depth (cm)	*Description*
0-18	Brown firm massive fine sandy clay loam. Clear to:
18-40	Dark reddish brown firm light clay with strong medium prismatic structure. Gradual to:
40-60	Dark reddish brown firm slightly calcareous light clay with strong medium prismatic structure. Gradual to:
60-80	Reddish brown firm highly calcareous medium clay with moderate medium prismatic structure. Gradual to:
80-100	Red firm very highly calcareous weakly structured light clay with more than 50% fine carbonate segregations.



Classification: Sodic, Hypercalcic, Red Dermosol; medium, non-gravelly, clay loamy / clayey, deep

Summary of Properties

Drainage: Moderately well drained. The soil may remain wet for up to a week following heavy or prolonged rainfall.

Fertility: Inherent fertility is high, due to high surface clay content and organic carbon concentration. However, increasing acidity will reduce nutrient retention capacity.

pH: Acidic at the surface, alkaline with depth.

Rooting depth: 60 cm in pit.

Barriers to root growth:

Physical: The coarsely structured subsoil clay restricts root growth to some extent.

Chemical: There are no apparent chemical barriers, although root growth is generally poor in very highly calcareous clay (as for 80-100 cm).

Water holding capacity: Approximately 100 mm in the potential root zone.

Seedling emergence: Satisfactory, although surface soil may set hard, reducing establishment percentages.

Workability: Fair to good, depending on condition of surface.

Erosion Potential

Water: Moderately low to moderate.

Wind: Low.

Laboratory Data

Depth cm	pH H_2O	pH $CaC1_2$	CO_3 %	EC 1:5 dS/m	ECe dS/m	Org.C %	Avail. P mg/kg	Boron mg/kg
0-18	5.2	4.8	0	0.10	-	2.27	28	1.5
18-40	5.7	5.1	0	0.05	-	0.95	7	1.4
40-60	6.5	5.8	3	0.05	-	0.57	2	2.1
60-80	7.5	7.1	6	0.18	-	0.61	3	1.5
80-100	8.3	7.7	42	0.13	-	0.42	2	1.5