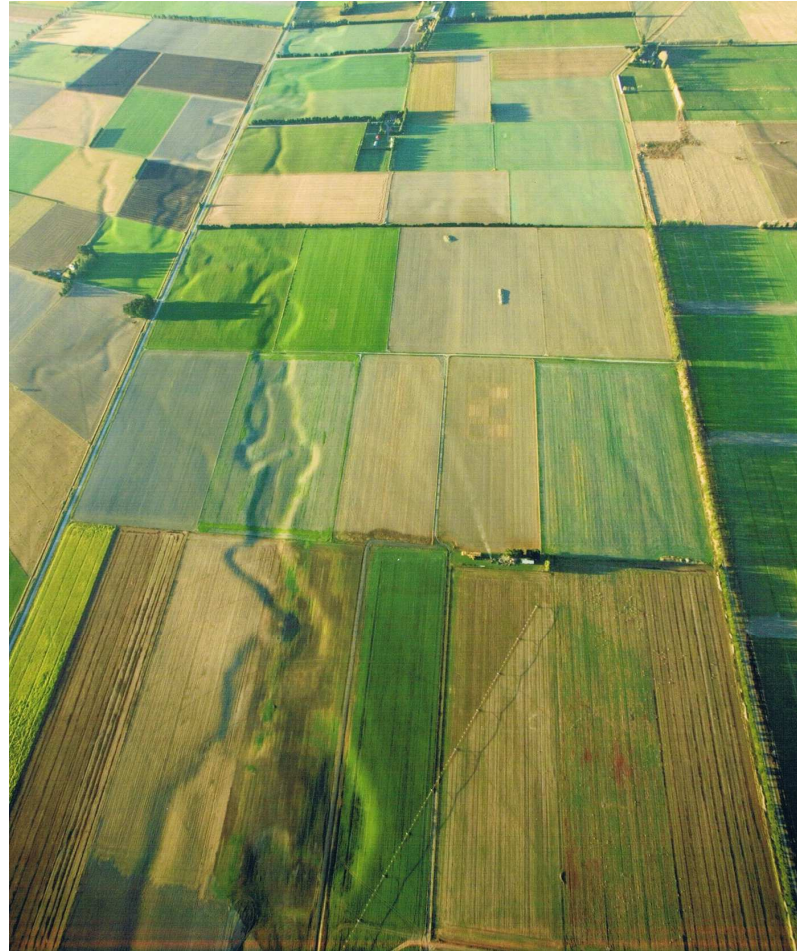


# Measures of variability



# Montana site

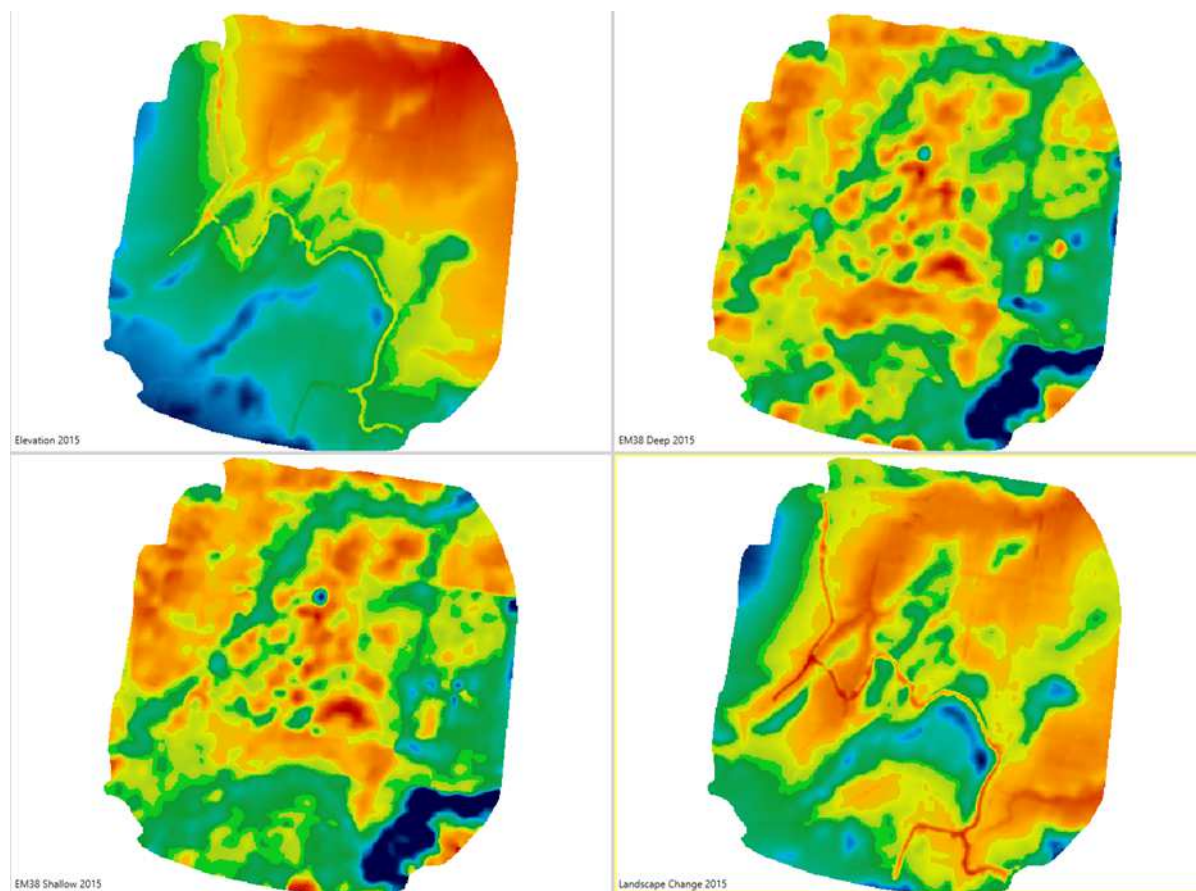


# Centre Pivot details

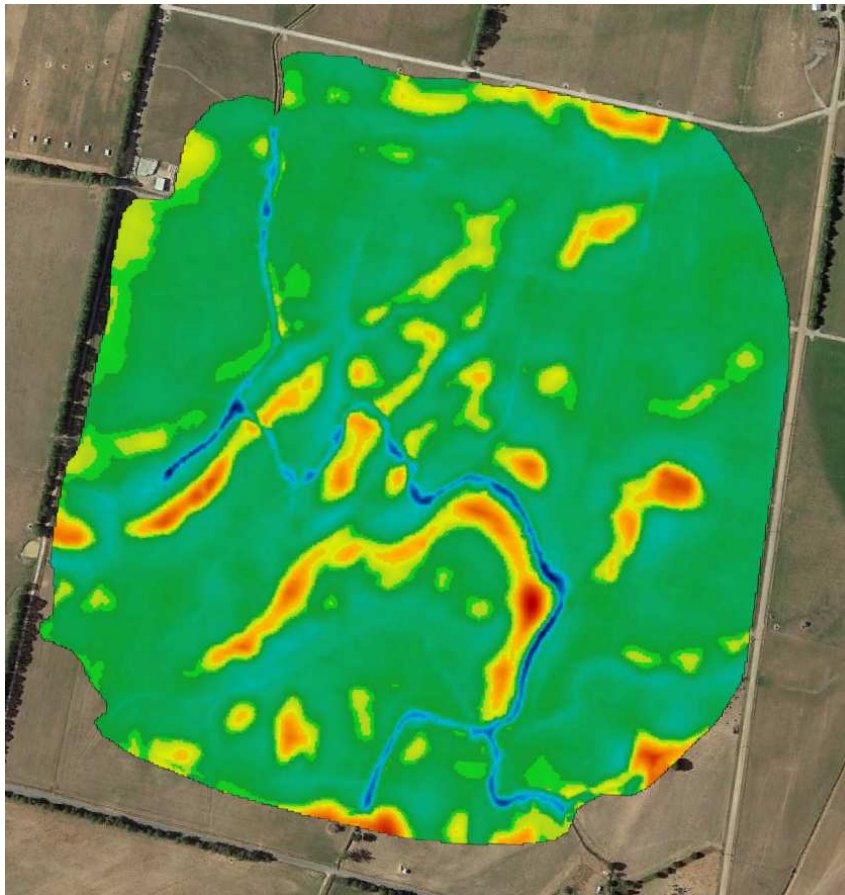
- 7 span machine with an SR100 end gun
- Irrigates 47.34 hectares
- 390.75m of sprinklers 32.82m of End Gun (53ha total)
- 37KW motor coupled with a Davey ISO pump
- Vacon VFD motor control
- Irrigation channel as the primary water source



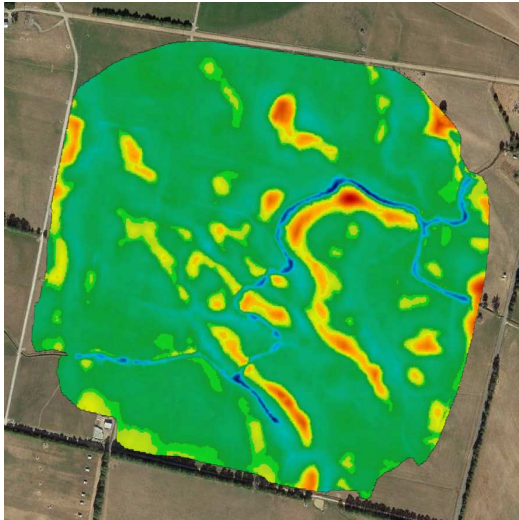
# Variability Maps



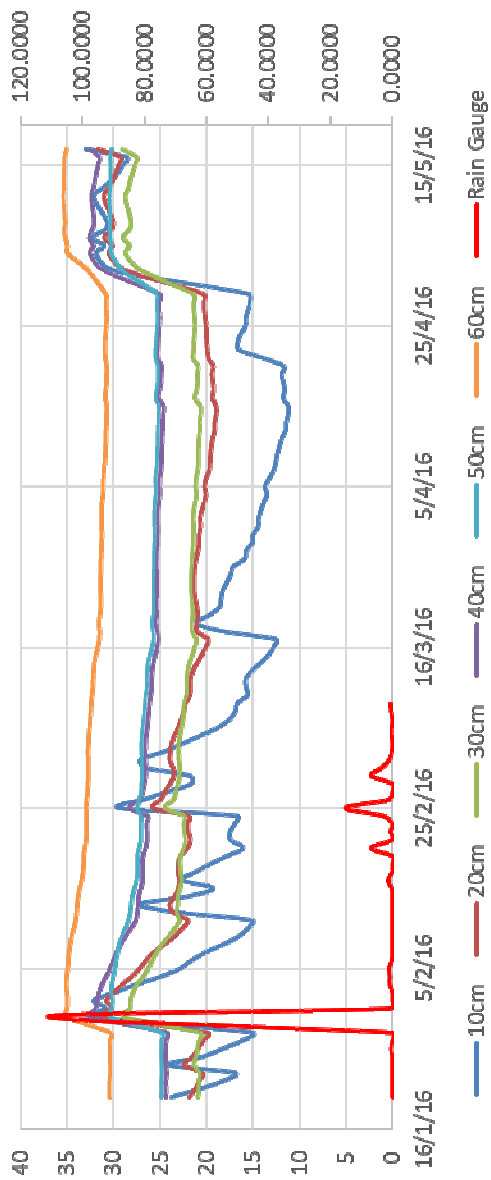
# Landscape change - PCT VisionAg



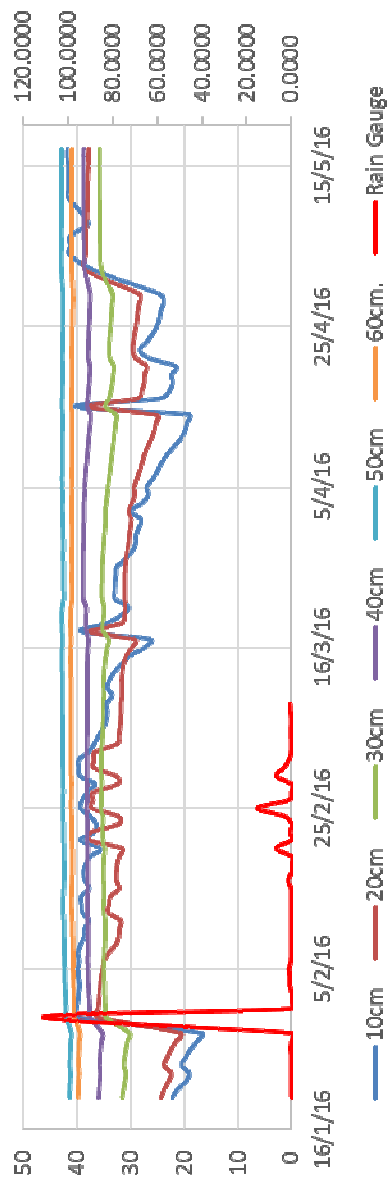
- This map shows how much higher or lower any point is than the surrounding landscape, and by bringing in the radius that defines “surrounding” we can produce something that identifies the wet boundaries



Probe 1



Probe 2





# Cressy site

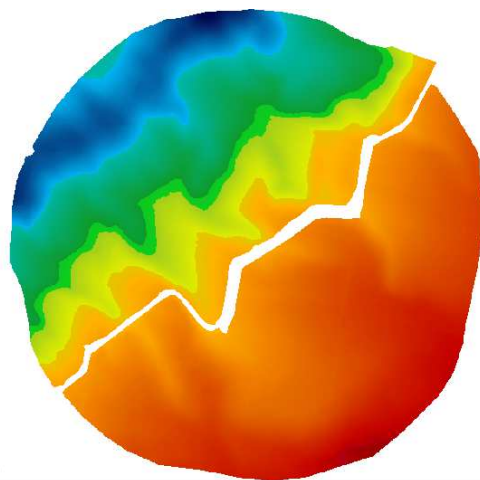


# Pivot details

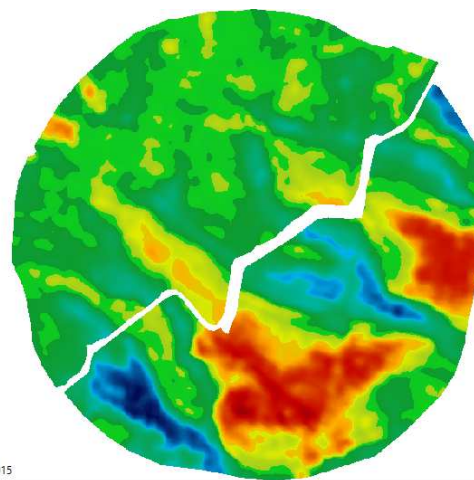
- Valley centre pivot irrigator
- 11 span machine with an SRT-100T end gun
- 569.2m in length and irrigates 113.34 hectares
- Water source is from an irrigation channel
- A 75KW motor coupled with southern cross pump



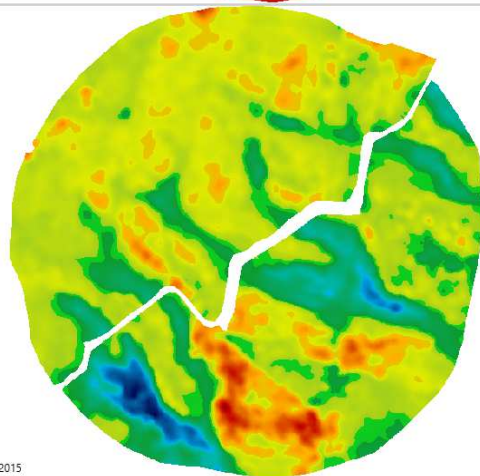
# Variability maps



Elevation 2015



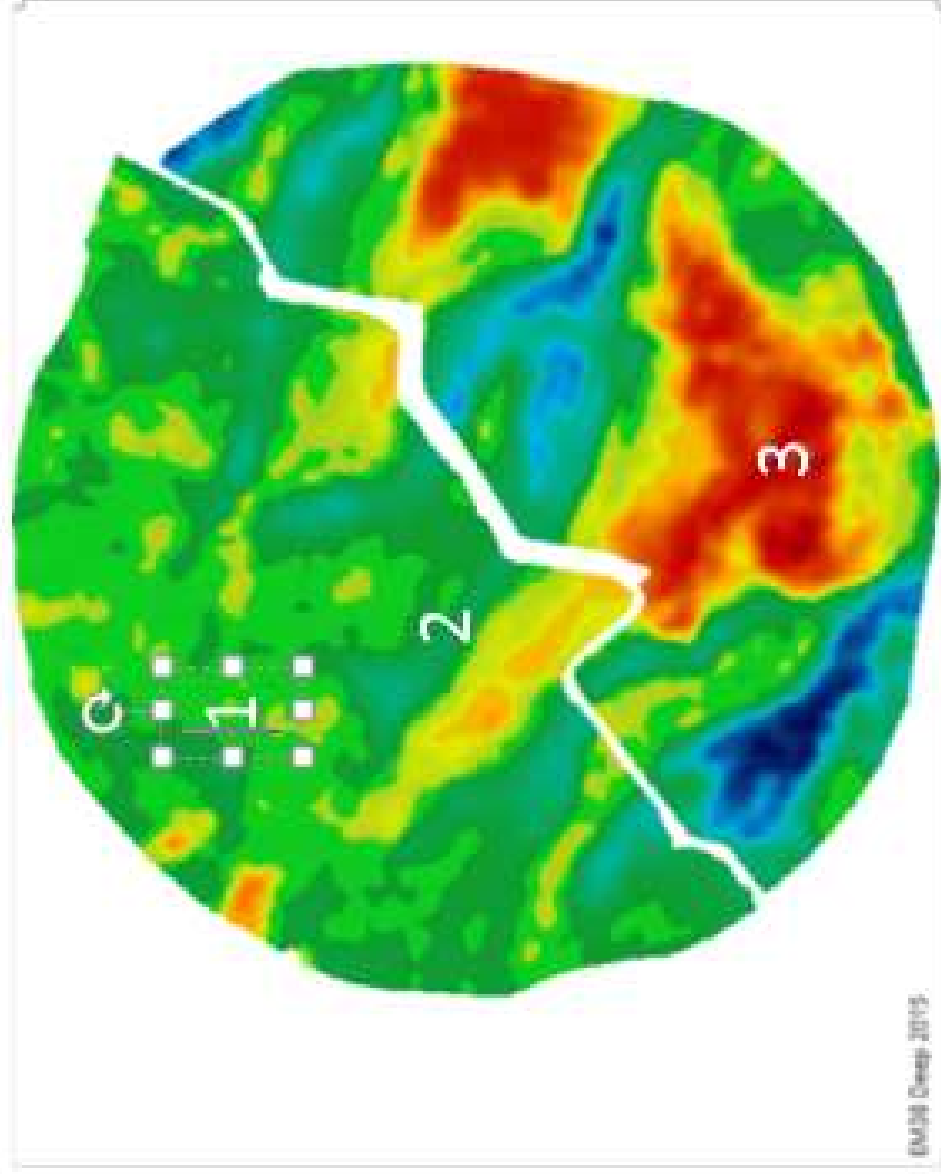
EM38 Deep 2015



EM38 Shallow 2015



Hillslope Wetness Index 2015



# Site 1 - Dry elevated



A1	0-20 cm	Very dark brown (10YR2/2); clay loam; strongly developed fine subangular blocky structure; moderately weak consistence (moist); abundant very fine roots; many earthworms; abrupt smooth boundary.
B1	20-31 cm	Dark brown (7.5YR3/2); light clay; strongly developed very fine subangular blocky structure; moderately weak consistence (moist); few coarse ferruginous laminae; many very fine roots; abrupt wavy boundary.
B21	31-42 cm	Strong brown (7.5YR4/6); medium heavy clay; weakly developed medium angular blocky structure; moderately firm consistence (moist); common coarse distinct yellowish brown mottles; common very fine roots; abrupt wavy boundary.
Bc	42-64 cm	A1
C1	64-102 cm	Dark brown (7.5YR4/4); medium heavy clay; moderately developed medium prismatic structure; moderately firm consistence (moist); common medium faint strong brown and few medium distinct yellowish brown mottles; few faint slicken-sides; few very fine roots; gradual smooth boundary.
C2	102-120+ cm	Light brownish grey (10YR6/2); heavy clay; massive; moderately strong (moist); common medium prominent brownish yellow mottles.



# Site 2 - Wet Gully

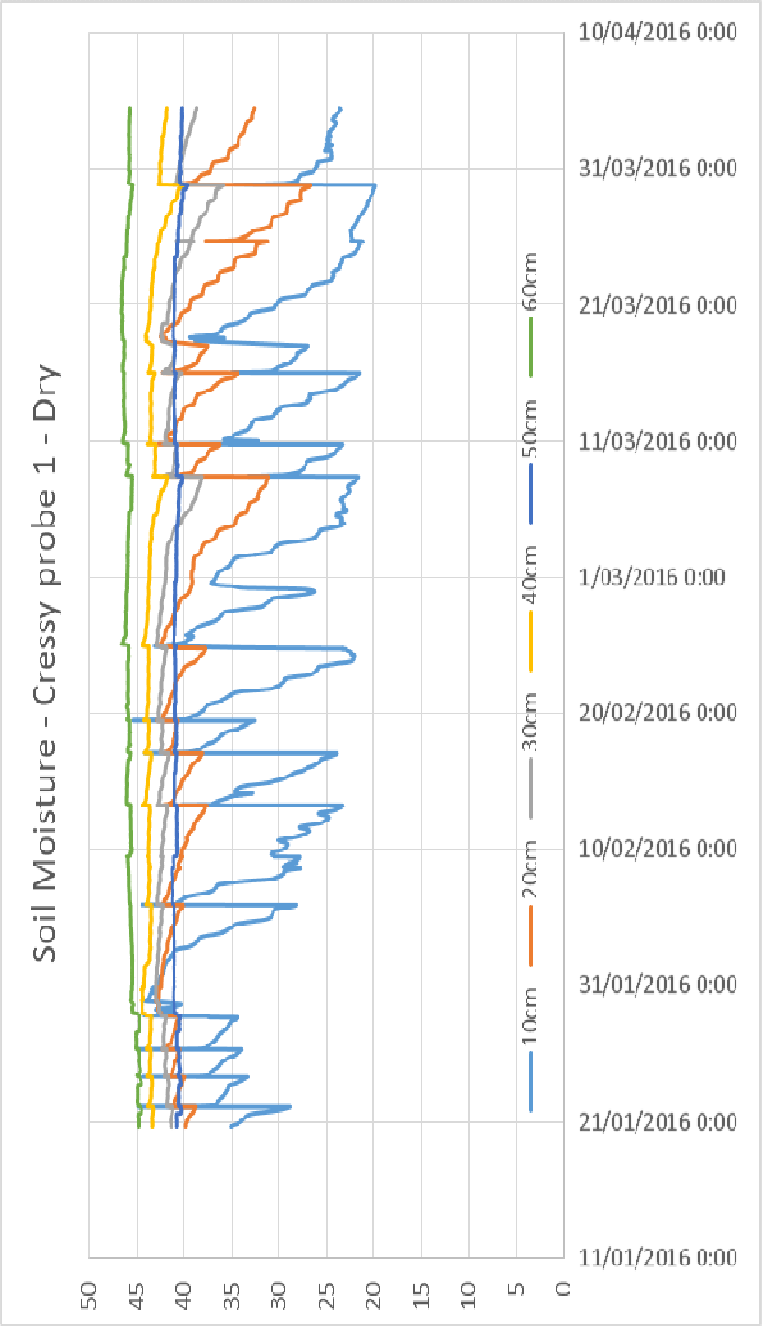


A1	0-20 cm	Black (10YR2/1); clay loam; strongly developed fine subangular blocky structure; moderately weak consistence (moist); many very fine roots; abrupt smooth boundary.
A2c	20-30 cm	Brown (10YR5/3); light clay; weakly developed medium angular blocky structure; moderately firm consistence (moist); many coarse ferruginous concretions; few very fine roots; abrupt smooth boundary.
B21	30-62 cm	Yellowish brown (10YR5/4); heavy clay; massive parting to weakly developed coarse prismatic structure; very firm consistence (moist); common medium distinct brownish yellow mottles; very few medium ferruginous concretions; few very fine roots; gradual smooth boundary.
B22	62-100+ cm	Brownish grey (10YR5/1); heavy clay; massive; very firm consistence (moist); many medium prominent yellowish brown mottles; few very fine roots; water table at 100 cm.

# Site 3 - Dry Terrace flat



Ac	0-17 cm	Very dark greyish brown (10YR3/2); gritty clay loam; strongly developed fine subangular blocky structure; moderately weak consistence (slightly moist); few medium ferruginous concretions; abundant very fine roots; abrupt smooth boundary.
B21c	17-33 cm	Dark brown (7.5YR3/4); gritty heavy clay loam; strongly developed fine subangular blocky structure; moderately strong consistence (slightly moist); common medium iron/manganese concretions; few very fine roots; clear smooth boundary.
B22c	33-50 cm	Dark brown (7.5YR3/4); light clay; moderately developed medium polyhedral structure; moderately strong consistence (moist); many medium iron/manganese concretions; few very fine roots; sharp wavy boundary.
B23c	50-110+ cm	Yellowish brown (10YR4/6); heavy clay; massive; very firm consistence (moist); common coarse prominent red and brownish grey mottles; very few very fine roots.







Soil Moisture - Cressy probe 3 - intermediate

