

# Stirling SERIES

## A. SOIL MAP UNIT DESCRIPTION

### SOIL CLASSIFICATION

SCOT: Noncalcareous  
gleys. (Gleyed warp  
soils on some maps)  
SSEW: Pelo-stagnogley  
soils

### SOIL ASSOCIATION

STIRLING

### PARENT MATERIAL

Estuarine low raised  
beach silts and clays.

### DRAINAGE CLASS

Poor

### PERMEABILITY CLASS

Slow or moderate

### REFERENCES

*soil maps* —  
1:63 360 sheets  
1/2/3/4 (Stranraer/  
Wigtown)  
39 (Stirling)  
48/49 (Perth/Arbroath)

*memoirs* —  
Soils round Stranraer and  
Wigtown  
Soils round Perth, Arbroath  
and Dundee

### LOCATION AND EXTENT

Carse of Stirling (170 sq km); Carse of Gowrie and Earn,  
Perthshire (23 sq km); Cree estuary, Wigtownshire  
(12 sq km). Total 205 sq km.

### LANDFORM

Estuarine low raised beach, generally level, at altitudes  
between 4 and 15 m.

### VEGETATION

Arable; permanent pastures.

### CLIMATE

*East Scotland*

*South-west Scotland*

*av. ann. rainfall, mm*  
*accum. temperature*  
*(day °C above 0°C Jan-Jun)*  
*maximum PSMD, mm*  
*growing season, days*  
*field capacity*

735

1190

60-90

220

late Oct to early  
Mar

1100

1260-1430

50-85

250

early Oct to mid-  
Mar

### SOIL DESCRIPTION

*topsoil*

*subsoil*

*colour*

dark greyish brown  
or grey

grey with ochreous  
mottling

*texture*

silty loam or silty  
clay loam

silty clay loam or  
silty clay

*structure*

moderate medium  
subangular blocky

moderate or strong,  
medium or coarse  
prismatic

*stone content*

stoneless

stoneless

*potential rooting depth*

30-35 cm. Rooting down structure cracks  
to 80 cm in dry summers, otherwise  
limited by compact subsoil or high water-  
table

COMMENT

Topsoils very susceptible to slaking due  
to structural instability. Structure cracks  
in the subsoil are open when the soil dries  
out, but closed when the soil is wet;  
permeability thus varies with seasonal  
wetting and drying cycles.

### SOIL CHEMISTRY

Soils are nutrient retentive. Subsoil often neutral due to  
presence of calcium carbonate in shell form.

### MAP UNIT VARIATION

Highest clay percentages in western parts of Carse of  
Earn, Gowrie and Stirling; some parts of Carse of Gowrie  
have higher silt and lower clay contents than usual for the  
series.