Great Soil Groups and their suitability to forestry

- Acid brown earth
- Brown earth (high base)
- Brown podzolic
- Grey brown podzolic
- Podzol
- Peaty podzol
- Gley
- Peaty gley
- Rendzina
- Lithosol
- Peat

Toddy Radford
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Acid brown earth

- Well drained mineral soil
- Good soil physical properties
- Very productive soil
- Formed from various acidic parent materials
- Highly suitable to broadleaf and conifer production

Fairly uniform soil profile throughout with little leaching of minerals
Brown earth (high base)

- Well drained mineral soil
- Possess desirable soil physical characteristics
- Formed from lime-rich, calcareous parent materials
- Little leaching or translocation of elements in the soil profile
- High pH may limit use range for certain tree species
Brown podzolic

- Well drained, acid mineral soil
- Derived from sandstone / shale / granite parent material
- Rolling lowland
- Highly suitable for broadleaves and conifers

Reddish / brown colour indicates accumulation of leached iron
Grey brown podzolic

- Well drained, deep fertile soil
- Parent material mainly limestone
- Desirable soil physical properties
- Highly suitable to broadleaf and conifer

Has a soil horizon of clay accumulation
Podzol

- Well drained acid mineral soil
- Subject to intense leaching of minerals
- Have a distinct leached soil horizon
- Located mainly on hill-land areas
- Mainly suitable to conifer species
Peaty podzol

- Very acid soil, located on hill and mountain areas
- Ironpan restricts drainage and root growth
- Generally suitable to conifer species when pan is broken
- Unsuitable to broadleaf species

Iron pan
(intense accumulation of leached iron)
Gley

- Poorly drained mineral soil
- Poor soil physical properties
- Very suitable to spruce species
- Limited suitability to some broadleaf species

Oxidation/reduction cycle of minerals gives the mottled effect typical of Gleys
Peaty gley

- Poorly drained soil with peaty topsoil
- Poor soil physical properties
- Suitable mainly to spruce species
- Unsuitable to broadleaf species
Rendzina

- Well drained, shallow (<50cm), mineral soils
- Very dark soils with high lime content
- Derived from limestone bedrock or limestone sands and gravels
- Often limited in their use range by shallow depth and high pH

Shallow topsoil directly above parent material
Lithosol

- Skeletal stony mineral soils (often organic in nature)
- Normally overlying solid or shattered bedrock
- Located mainly in areas of high elevation
- Bare rock outcrops at frequent intervals
- Conifer species may be suitable in places
- Often located in important aesthetic and amenity areas
Peat

- Characterised by a high level of organic matter
- Very high moisture content
- Two main types: Basin and Blanket
- Cutover and drained Basin peat suitable to conifer and some broadleaf species