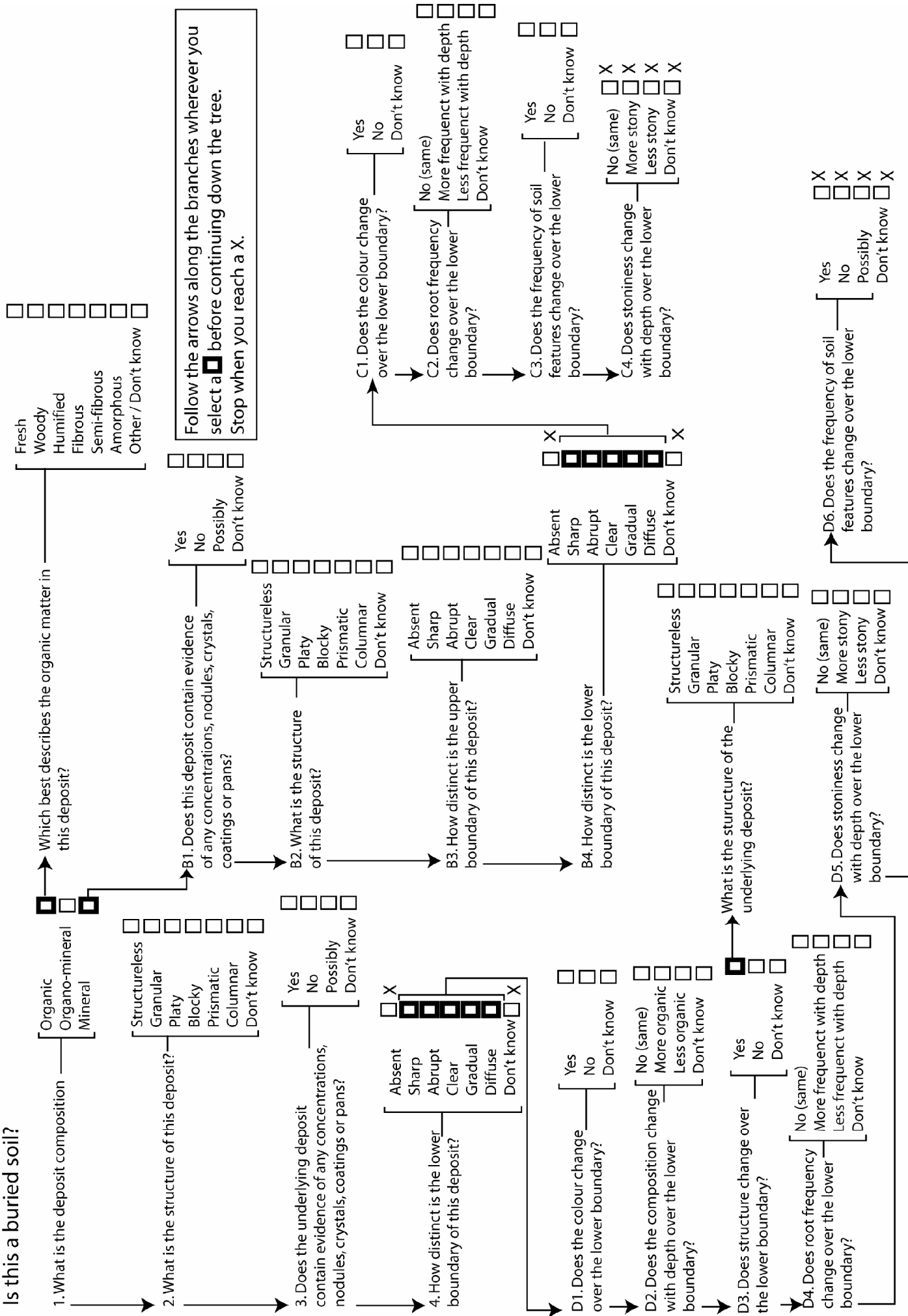


# Is this a buried soil?



### Soil composition

Organic	More than 30% organic matter
Organo-mineral	2-30% organic matter, often thoroughly mixed with mineral matter
Mineral	Less than 2% organic matter




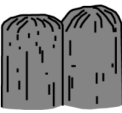
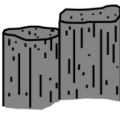

### Organic Matter types

- **Fresh/unaltered non woody** clearly identifiable structures larger than 2 cm.
- **Woody** lignified structures larger than 2 cm.
- **Humified** Degraded no identifiable structure. Organic component mixed with the fine mineral fraction.

In peaty soils or sediments where there is no appreciable mineral content, following terms can also be used to describe the organic matter.

- **Fibrous peat** Contains large amounts of well preserved readily identifiable plant remains less than 2 cm.
- **Semi-fibrous peat** Partly decomposed peat in which plant structures are visible, but break down when rubbed between the fingers.
- **Amorphous peat** Contains virtually no identifiable plant structures.

### Soil structure

Granular 	Blocky 	Platy 
Columnar 	Prismatic 	Structureless 

Structure refers to the shape and nature of the aggregates formed when soil particles clump together.

- Granular structures are small (usually no more than a centimeter across) crumbs of soil. If a soil contains a lot of coarse inclusions it may appear granular as the soil particles coat the coarse inclusions.
- Blocky structures tend to be about 1 and 5 cm across and its sides are roughly equal in size. They are often pictured as being cubes of soil but in practice tend to be more irregularly shaped.
- Platy structures are thin (usually less than a centimeter thick) plate like aggregates that have their longest axis in a horizontal direction.
- Columnar and prismatic peds can be 10 or more centimeters across and may be considerably longer vertically.
- Structureless soils show no observable aggregation.

### Boundary distinctness

Boundary distinctness is a measure of how sharp the transition between one context and the next is. Distinctness is determined by estimating the thickness of this transitional zone through which one horizon grades into another.

Boundary class	Criteria
Sharp	0 – 0.5 cm
Abrupt	0.5 – 2 cm
Clear	2 – 5 cm
Gradual	5 – 15 cm
Diffuse	Greater than 15 cm

### Crystals

The commonest crystals found are calcite, gypsum, halite, and vivianite, though there are many more, particularly in cave environments. Crystals can occur randomly or clustered throughout the soil matrix, lining or infilling pores, on ped surfaces, or associated with organic matter.

### Soft concentrations

Soft concentrations are areas of material contrasting with the deposit matrix in colour or composition but which cannot be readily separated from the matrix.

### Nodules

Discrete bodies, easy to separate from the deposit matrix, with sharp boundaries, they are usually cemented in some way.

### Pans

These are bands of material cemented by organic matter and/or iron and manganese.

### Coatings

Coatings can occur on ped faces, lining pores, and coating sand grains, stones and nodules:

- Textural coatings (clay, sand, and silt) - Can be difficult to spot but clay coatings can give pore surfaces a slightly metallic sheen. Can be confused with stress coatings.
- Organic coatings - Are usually dark coloured and may be mixed with clay.
- Stress oriented coatings - Are formed in-situ by pressure usually in clay soils. They can be difficult to distinguish from clay coatings but may contain grooves. Also sometimes called slickensides.

