

Soil Alert

Podzols with a humus pan

On the National Soil Map of England and Wales, podzols with humus pans are dominant or common in the following associations:

6.31 Humo-ferric podzols – a) [Anglezarke](#), b) [Delamere](#), c) [Shirrell Heath 1](#),
d) [Shirrell Heath 2](#), e) [Goldstone](#), f) [Crannymoor](#)

6.41 Typical gley podzols - a) [Sollom 1](#), b) [Sollom 2](#), c) [Holme Moor](#)

6.43 Stagnogley-podzols – a) [Holidays Hill](#), b) [Poundgate](#), c) [Bolderwood](#), d) [Felthorpe](#)

Between sea level and 400 m, podzols with a humus “pan” (Bh horizon) are more common than ironpan podzols, occurring in acid, coarse textured parent materials. The characteristic semi-natural vegetation is heathland or woodland, but extensive areas have been brought into cultivation. Cultivation destroys the typical podzol profile by mixing the whitish eluvial horizon, but the give-away to their origin is the presence of numerous bleached sand grains in the agricultural topsoil.



A heathland podzol. The black central layer is a well-expressed humus pan (Bh horizon)

In their semi-natural state, these podzols are increasingly the focus of heathland regeneration, or even translocation where they are in the path of infrastructure projects. In undertaking these works it is essential that the humus pan is not mistaken for topsoil, despite its dark colour. This subsoil horizon contains humus, iron and aluminium that have been moved in combination down the soil profile by the podzolization process. It lacks the micro-fauna and fauna of the topsoil and the high levels of aluminium can be phyto-toxic, so it is not a satisfactory growing medium. In excavating these soils, where the topsoil seems to imperceptibly merge with the humus pan, a good rule of thumb is that undisturbed topsoils under semi-natural vegetation are rarely thicker than 20 cm to 25 cm, so proceed with caution below that depth and look carefully for the horizon change. Very often the humus pan is noticeably dense as the humus particles have blocked the soil pores. As always, the message is to dig soil pits before disturbing these soils.

Soil Alert

Individual soil series affected by this soil alert:

[6.31 Anglezarke](#)

[6.31 Crannymoor](#)

[6.31 Cucurrian](#)

[6.31 Delamere](#)

[6.31 Goldstone](#)

[6.31 Lazonby](#)

[6.31 Redlodge](#)

[6.31 Rora](#)

[6.31 Rushlye](#)

[6.31 Santon](#)

[6.31 Shirrell Heath](#)

[6.31 Willingstone](#)

[6.41 Holme Moor](#)

[6.41 Sollom](#)

[6.43 Bolderwood](#)

[6.43 Dunsmore](#)

[6.43 Felthorpe](#)

[6.43 Haldon](#)

[6.43 Holidays Hill](#)

[6.43 Howe](#)

[6.43 Noddle](#)

[6.43 Ormskirk](#)

[6.43 Poundgate](#)

[6.43 Rapley](#)

[6.43 Rothbury](#)

[6.43 Sarisbury](#)

[6.43 Thrunton](#)