David Pannett's History of Bicton part 151

Dealing with a 'Glacial' Landscape

Last year the reports of floods included may examples of recent housing suffering because they had been built on a floodplain, where they were supposed to be protected by expensive defences. Perhaps they should not have been built there, in spite of all that pressure to meet government targets.

In the Severn Valley, Melverley and Tewkesbury often appeared as illustrations of floods, but close inspection also revealed how the old parts of each were still dry, whatever was happening all around.

Here in Bicton we have eight miles of river frontage, half of which are floodplain, which are fortunately not at risk of development. The real problem in the parish is posed by the uneven 'glacial' landscape left by decaying ice some 20 thousand years ago, the details of which we have discussed several times over the years. Now, with new threats from development, including the NW Relief Road, it might perhaps be helpful to newcomers and neighbours if we repeat the main point again.

The river encounters the underlying sandstones in only two places in the parish, since the rest of the landscape is made up of boulder clay, sands and gravels, in places 30 metres deep. This is especially the case in two hidden channels, carved by meltwater under the ice which cross from Montford Bridge to Copthorne and also through the Isle towards Shrewsbury, where they converge.

The new A5 road bridge needed very long piles at one end, while any new bridge on the relief road would face the same problem. Incidentally, the fine sand filling the channel is a very useful aquifer beneath Shelton Waterworks.

As this glacial sediment filled in the channels when the ice sheet began to melt, some ice fell in too. Later, as this also melted, the surface collapsed into craters called 'kettle holes' (more jam kettles than tea kettles!). The result has been an uneven pitted surface, similar to the more famous Ellesmere district. Bicton can therefore boast of its smaller version of those 'Meres and Mosses'!

Such a surface obviously caused problems for early agriculture, so that much of it was left as 'Bicton Heath', while the ancient settlements of Bicton, Calcott and Onslow occupied the summit of a curving moraine. Although the soils here are also heavy boulder clay, at least the sloping sides provide better drainage.

In the Bicton and Shrewsbury area, the typical kettle holes appear to have gone through a similar sequence of further development as follows:

As collapse began in a dry 'tundra' landscape, the hollows became traps for wind-blown dust. This provided an impervious clay lining which allowed a pool to form fed from local rainfall.

With a warming climate forests grew, while pool margins were colonised by lush vegetation, which began to fill them with peat. Eventually the shallowest could be completely filled, leaving only the largest with open water, such as Oxon Pool.

Pollen grains trapped in the peat, incidentally, provided modern researchers with the evidence for such changes, which we have also discussed.

The 'wildwood' would have been home to game and Mesolithic hunters, who had little impact on the environment. The succeeding Neolithics and Bronze Age periods, however, saw the progressive degradation of the forest cover, which allowed disturbed soil to be washed or blown into the hollows and on to floodplains.

As this process continued, many peat deposits became buried and even dried out during the warmer Bronze Age. In these circumstances, one must wonder why so many pools still appeared on the eighteenth century maps of Bicton Heath!

The answer lies with medieval peat digging, which was certainly mentioned in the 13th century grants of Bicton to Buildwas Abbey. Pools at Preston Montford were once called 'moss pits', one of which cause problems for A5 road builders.

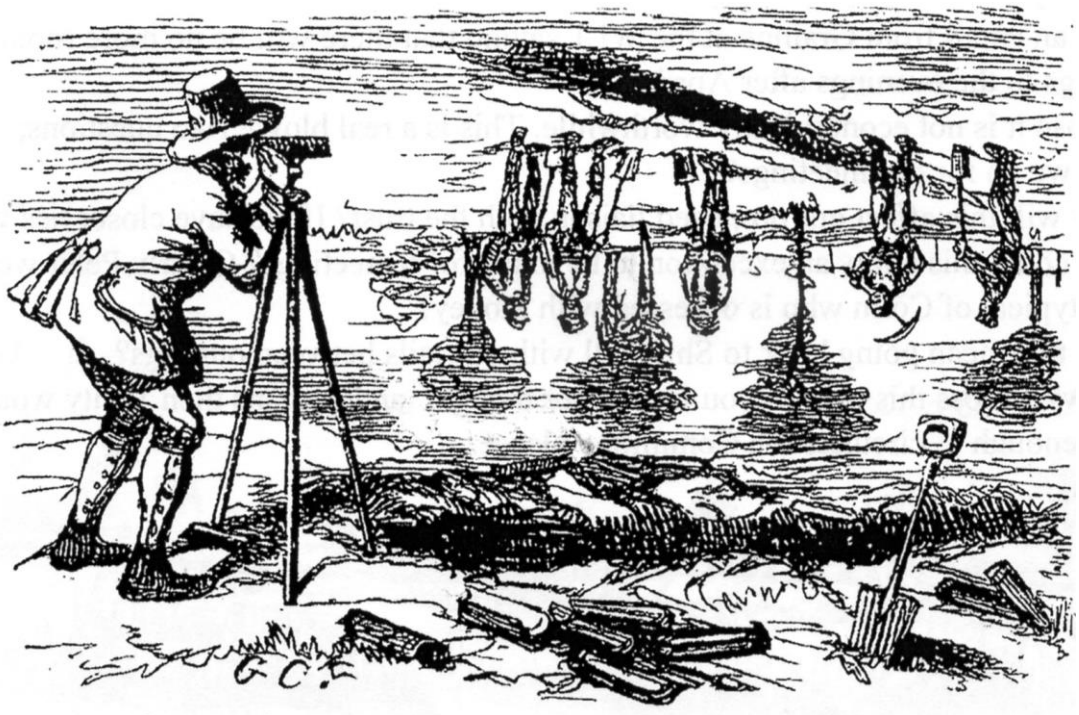
Peat was in such demand for fuel in the Middle Ages, since so much woodland had been cleared and few hedgerows crossed the land. Subsequent centuries reversed the situation to produce the landscape with which we are familiar today.

Such policies of 'improvement' also demanded better drainage in order to bring more land into cultivation. 'Underdraining' through clay tiles helped wet clay soils, while deeper culverts could remove excess water from wet hollows, so only the deeper pools survived. Nevertheless, Oxon Pool was also lowered by a culvert under Shepherd's Lane. Calcott Moss was also exposed when this pool was lowered.

Some peat had remained hidden, however, and only encountered by modern developers of road and houses. For instance, the old Shrewsbury By-Pass near the 'Oak' is laid on brushwood like George Stevenson's railway across Chat Moss near Manchester. Nearby at least one 1930s house has needed underpinning.

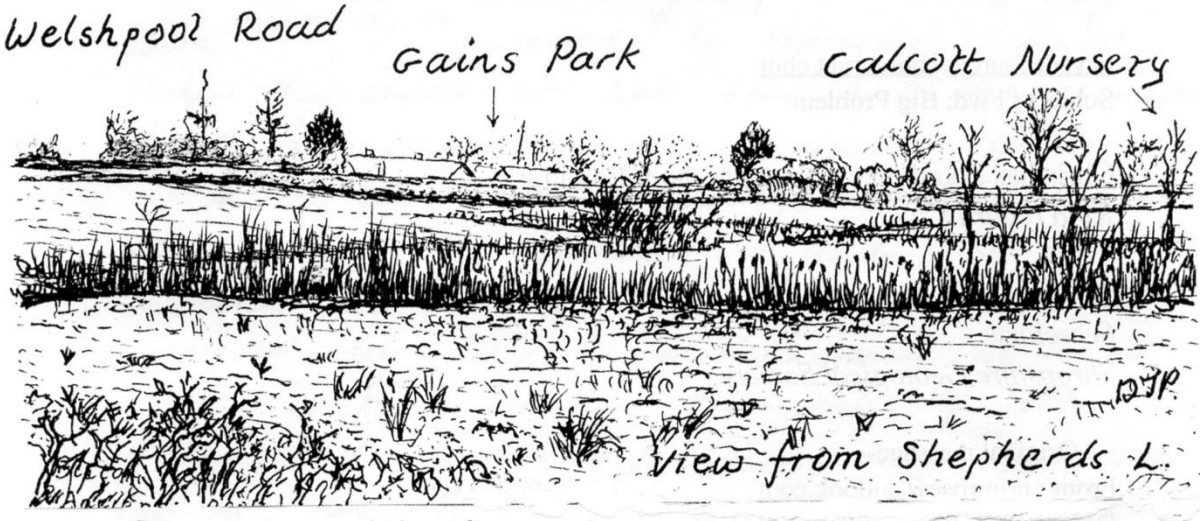
Elsewhere in this part of Shrewsbury, damp hollows and pools have been left as landscape features within the housing estates. One developer who built a house too close to soft ground had to remove it quietly when foundations failed.

It can be seen how development and road plans have been adapted to accommodate such difficult ground. Will planners designing the 'Shrewsbury West Sustainable Urban Extension' learn such lessons? In the meantime nature is successfully taking over down Shepherd's Lane, where deep 19th century drains are no longer working, allowing 18th century pools to come back to life.



cartoon by George Cruikshank, 1852.

Laying field drains in the 19th. century: farmer confused by inverted image through a new surveyor's level.



Site of planned development