This time last year we discussed the drainage network of the parish and problems caused by the Ice Age. This year the subject is even more topical although by now it is difficult to find much new to say about it.

As the year started rain gauges at Preston Montford Field Centre recorded 119mm (4.69") in January and another 85mm (3.4") during the first half of February. It is therefore no wonder that those old pools down Shepherds Lane are fuller than ever, returning to their original size as shown by the Bicton Heath Inclosure map of 1768. Improved drains then removed them for the next two centuries, but clearly recently the system has been breaking down. Nevertheless, proposed developments seem set to proceed regardless.

Experience in the western suburbs of Shrewsbury shows such sites are best left as open spaces. A few years ago one embarrassed developer in the Radbrook area had to remove one of his new houses rather quickly, when its foundation sank into a peaty hollow!

High density versions of geometric town plans, like some interwar council estates, may suit level gravel terraces as at Monkmoor, but can run into problems on uneven 'glacial' landscapes pitted with 'kettle holes'. Water may be drained away, but soft peat and sediment will remain!

Several times this year, the Severn has spilled on to its floodplain, where it has only caused problems to parts of the town built thereupon. As usual, that word 'FLOODPLAIN' is so rarely used in media reports, that some people do not realise they exist as clear physical features even when dry. If shapes are not obvious, an alluvial soil is a sure sign, well mapped by the Geological Survey many years ago.

Aerial photographs in the news show most <u>older</u> properties occupying higher ground, while newer developments have been less carefully sited on floodplains. Locally, Melverley illustrates this principle, while down river, Tewkesbury does so on a bigger scale.

This year authorities are also waking up to the importance of managing whole drainage basins, after perhaps two centuries of only encouraging improved drainage of farmland. For example, at great cost, the River Perry channel was lowered through Ruyton XI Towns in order to drain Baggy Moor after its peat surface had shrunk following earlier reclamation. The Somerset Levels were likewise a vast peat fen until reclaiming, after which they shrank even nearer to sea level and vulnerable to water descending upon them from well-drained towns and farmland upstream.

Locally, some Shrewsbury people still call for the Severn to be dredged, often alarmed at sediment building up at English Bridge. This is all a sad reflection on environmental education since good old-fashioned geography textbooks would explain how rivers do such things on the inside of bends. Dredging in any part of the channel would merely cause the water to slow down and thereby drop sediment until the status quo is restored.

Politicians, often poorly educated in Earth Sciences, are getting more involved and one is reminded of the story of King Canute. He is often mocked for attempting to halt the rising tide, but in reality he was a wise ruler who was demonstrating to his flattering court the limits to his powers over natural forces, which he claimed only lay with the Christian God. Indeed, in many ancient societies natural catastrophes were usually interpreted as divine punishment for the wickedness of mankind. Now in a more scientific and secular age the people are still being blamed for upsetting the climate.

In return, instead of blaming the priesthood for not protecting them from such wrath, people now direct their anger to relevant government agencies. Arguments and blame for building in unsuitable sites go back and forth, all of which is relevant to those plans down Shepherds Lane!

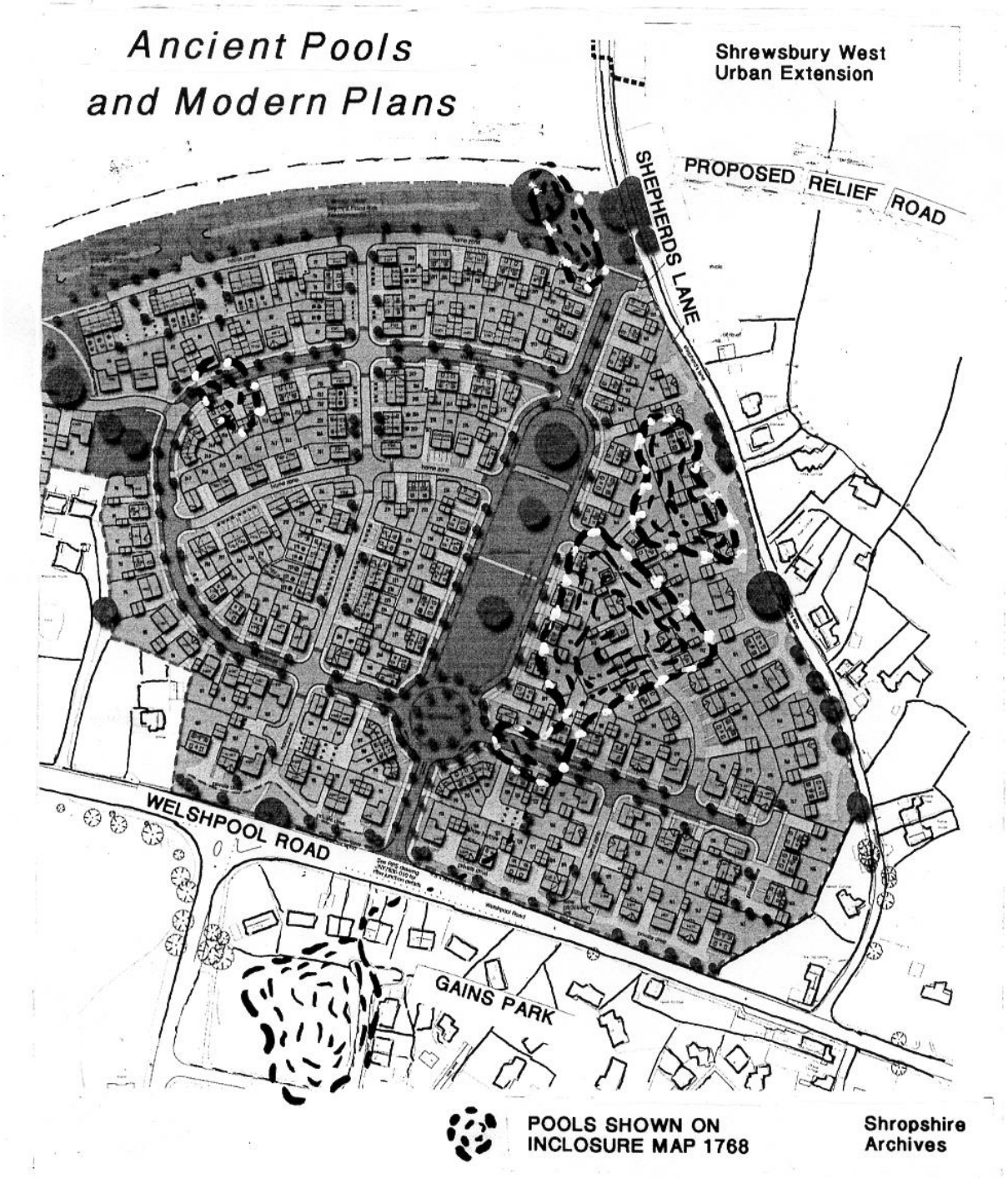
Water courses, floodplains and pools apart, the main problem facing Bicton farmers over the centuries has been the glacial boulder clay, which covers so much of the parish. Exposures reveal a generally silty clay made up of a mixture of ground-up Welsh mudstone and soft red sand scraped up from the valley beneath Melverley. Pebbles and small boulders of harder lumps of Welsh volcanic rocks lie within it like a 'Christmas Pudding'. Surface layers disturbed by cultivation and worm action are usually brown in colour from well oxidised iron minerals, but the subsoil is often pale yellow where these minerals have been 'reduced' by the lack of oxygen during seasonal waterlogging. Finer clay particles washed down from above tend to impede the movement of water here so it will only soak away slowly.

With these characteristics it is easy to understand why so much medieval cultivation was raised up on ridges, between which furrows took the water down the slope (see aerial photograph). In later centuries, when machinery demanded more level surfaces, 'underdraining' through bundles of brushwood and then clay pipes became necessary. From time to time, early nineteenth century 'horse shoe' drain tiles turn up in excavations. Many bear a 'DRAIN' stamp, in order to avoid being mistaken for roof ridge tiles, which were then subject to tax, while drain tiles were exempt.

Very broad, but shot ridges survive by some old villages, including Bicton (near Red House), which were probably used for more 'garden' type cultivation, such as hemp for fibre (and medicine), hence the term 'Hemp buts' in some field names. In modern vegetable patches, raised beds of some sort could be very useful in years such as this!

Meanwhile, soft wet soil and high winds have taken their toll on some of our trees...but that is another story.

Aerial photograph showing agricultural ridges and furrows



Plan of proposed Shrewsbury West development showing sites of historic natural pools