

8. Supporting our Geodiversity

8.1 The sandstone rock underlying the Mid Cheshire Ridge has been tilted in the upheaval of the earth's crust to form a series of scarp features. The locally characteristic rocks, Helsby Sandstone and Tarporley Siltstone, were formed in Triassic times. It was in this period, some 200 million years ago, that the stretching, faulting and subsidence probably occurred.



8.2 The mapped geology today shows the significance of these faults, particularly the Peckforton fault, which trends the base of the Longley ridge and gives rise to the exposures of the west facing scarps. Then the NE/SW parallel faults are key to the subsequent weathering of Boothsdales and the Kelsall valley. Sandstones are water holding rocks and it is this feature which ensured the availability of water through springs (and later wells and boreholes) across the parish.

8.3 Glacial erosion and later freeze thaw has emphasised existing lines of weakness in the underlying rocks helping to scour the distinctive Kelsall valley and the promontory of Kelsborrow. The surface left by the retreating ice and subsequent weathering is a mix of exposed rock and sandy soils at the higher levels, sandy loams on the valley sides and much heavier (and wetter) clay soils in the lower valley and plain of the River Gowy.



8.4 The importance of sandstone features across the parish has resulted in a review of our geodiversity. This includes natural exposures, road cuttings, quarry faces, buildings, and the extensive use of sandstone to provide boundary features around major buildings and property. These sandstone walls are an outstanding feature of the village which have been surveyed in detail as part of this project. Poorer quality stone has been used extensively to form roadside and field banks topped with hedgerows. *(Local Plan GE7, ENV2, Planning Policy Statement 9).*

8.5 Old quarries and exposures of local strata, as seen on Quarry Lane, on Chester Road between the lower end of Old Coach Road and Upper Church Street and in Grub Lane, make an important contribution to local distinctiveness and geodiversity. These outcrops have been noted by the Local Geodiversity Action Plan group.

8.6 The site of earlier springs, wells and pumps deserve to be preserved. Water pumps and troughs should be retained in their original location. Existing sandstone buildings and significant embankments deserve to be protected and conserved. Sandstone features should be encouraged in any new development/redevelopment. Remaining sandstone walls should be retained and repaired where necessary especially where they abut the highway or footway.

8.7 Reference should be made to SPD **recommendation 6** which states: **Sandstone features which are locally distinctive to Kelsall Parish including quarries, wells, walls and banks should be protected and / or enhanced.**
(Local Plan policy GE7 & PPS9)



Map 6: Geological features including faults, exposures, quarries, walls and buildings

