The Haldon Formation comprises a sequence of Palaeogene gravels and clays occurring on the summit of the Haldon Hills in South Devon. The Tower Wood Gravel Member is a residual gravel derived from the solution of the Chalk Group in place, comprising large flints, frost-shattered but not fluvially abraded, in a matrix of sandy clay. This member is dominated by well-ordered kaolinite and this must have been introduced by a river or rivers flowing from the Dartmoor area. The formation of the member occurred between the very latest Cretaceous, at the earliest, and the Late Paleocene. The Buller's Hill Gravel Member is a fluvial gravel with abraded flints in a matrix of clayey sand. The clay mineralogy is a mixture of well-ordered and disordered kaolinites. The gravels correlate with the Poole Formation of the Hampshire Basin, and possibly also with the Reading Formation. The Haldon Clay Deposit exists only as a series of clay bodies within the Buller's Hill Gravel Member. These bodies are believed to have been incorporated by processes of cryoturbation and solifluction. The clay mineralogy of the Haldon Clay Deposit comprises disordered kaolinite and illite, which will have come from supergene weathering of sediments, probably from the Carboniferous and Devonian strata to the north or north-west of Haldon. It is considered most likely that the unit is lacustrine in origin, having formed as a sheet of clay overlying the Buller's Hill Gravel Member, but it may possibly be fluvial.