

## THE STREET WHERE YOU LIVE

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### FUNDAMENTAL BENCH MARKS [FUNDS]

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There are only 198 Funds in England, Wales and Scotland, and one is located in Great Linford. Remember quiz question 1 in the last issue of **news & views**?

*How many feet above datum is Great Linford according to the Ordnance Survey datum point near to St Andrew's Church? Clue. Look for the well- hidden green-railed enclosure on the left side of the path from the Manor Park to Church Lees?*

What on earth is a Fundamental Bench Mark or Fund you may ask and what does it do?

They were the basic building blocks of the mapping of the United Kingdom up until the 1980's. They are still in use and carefully maintained by the Ordnance Survey [OS]. A Fundamental Bench Mark [Fund] is a point which records height above mean sea level, the Newlyn Datum, to extreme accuracy. Funds are constructed directly on stable bedrock where it lies near the surface, thus they are immune to slip and movement that would render a bench mark inscribed on a wall potentially inaccurate. An underground chamber contains the guts of the Fund, but the only bit you will see is the smart granite pillar, the OS Bench Mark plaque, the mark itself on top of the pillar and sometimes a set of green painted railings. Since July 1999 Funds have been fitted with plaques by the OS which describe their function and importance.

The Great Linford Fund, one of only 198, was installed during the Second geodetic levelling, England & Wales 1912 to 1921, and was levelled with a height of 234.951 feet [71.613 metres] above Newlyn Datum. It was used on the Daventry to Great Linford, Great Linford to Cranford, Great Linford to Hemel Hempstead and Great Linford to Wallingford Main Lines, which form the base triangulation for map making and along which accurate levelling was undertaken.

At intervals of one mile on Main Lines, surveyors affixed Flush Brackets [FB's] to convenient walls, structures and parapets - often cementing over former bench marks. FBs were also affixed every three miles on secondary lines of survey. Funds, Main Lines and FBs are all used to establish vertical height above sea level.

Map makers also need to know their location on the horizontal plane. This was done by using Triangulation Pillars [TP's], concrete structures located in prominent locations across the country. The theory was that if map makers knew the exact location (grid reference) of three visible TP's and they measured their distance to each visible TP; they could calculate through trigonometric rules their exact current location. It's all done by satellites and global positioning systems now, but many of the sturdy concrete pillars still remain on hill tops across the country.

TP's are marked on OS Landranger (1:50,000) maps and so are relatively easy to track down. Funds are marked on detailed 1:1,250 scale maps, but are few and far between. Some people - Fund and FB hunters - "collect" Funds and FB's like train and plane spotters.

The nearest FB's to the Great Linford Fund are at Linford Wharf [563 metres east], Blackhorse Farm [322 metres northeast], Stantonbury Wharf, Stantonbury Park and Giffard Park. The nearest Fund is at Daventry 33.91 kilometres northwest. Try and find if they still survive intact, you might turn into a "Fund and FB hunter" yourself. To give you a start the Great Linford Fund is at Grid reference: SP 8501 4234, or for the modern hunter GPS network passive station: H1SP8542 – or just follow the quiz directions above.

Source acknowledgements - <http://www.oncloudseven.com/fayers/fbmlist.htm>

<http://www.bench-marks.org.uk/bm1073>