
8 Llandanwg

Although there is abundant evidence of the erosional effects of glaciation in this part of Wales, the deposits from the glaciers are not particularly well exposed. Boulder clay is the most widespread, filling the valley floors and exposed along the river banks. Fluvioglacial sediments deposited from melt-water are not particularly common. However, on a short walk along the coast at Llandanwg both can be seen, together with several other interesting glacial and more modern features.

Trains stop at Llandanwg Halt (Figure 25), but for road users there is a car park at the end of the road adjacent to the beach. From there one can see the effects of contemporary geological processes, where the small church of St Tanwg's is partially buried by blown sand forming the dunes and has to be dug out at regular intervals. To the south the channel of Afon Artro is steadily silting up so that, without dredging, it would leave the Pensarn yacht club high and dry. Northwards along the coast, the boulder clay cliff is protected to some extent from the erosive influence of the sea by the railway embankment. However fluvioglacial gravels along the back of the beach at Llandanwg, though normally covered by vegetation and fallen debris, are commonly exposed in recent landslip scars.

Northwards along the beach from the car park, the sand dunes wedge out abruptly against the gravels and boulder clay. Recent slip scars show bedded gravel resting on boulder clay. In this area the boulder clay is unusually sandy, containing unsorted boulders and cobbles in a pebbly sandy matrix with little clay. Boulders are mainly locally-derived Cambrian greywacke and shale with a few exotic quartzite and microgranite. The matrix may have a ferruginous or manganiferous cement.

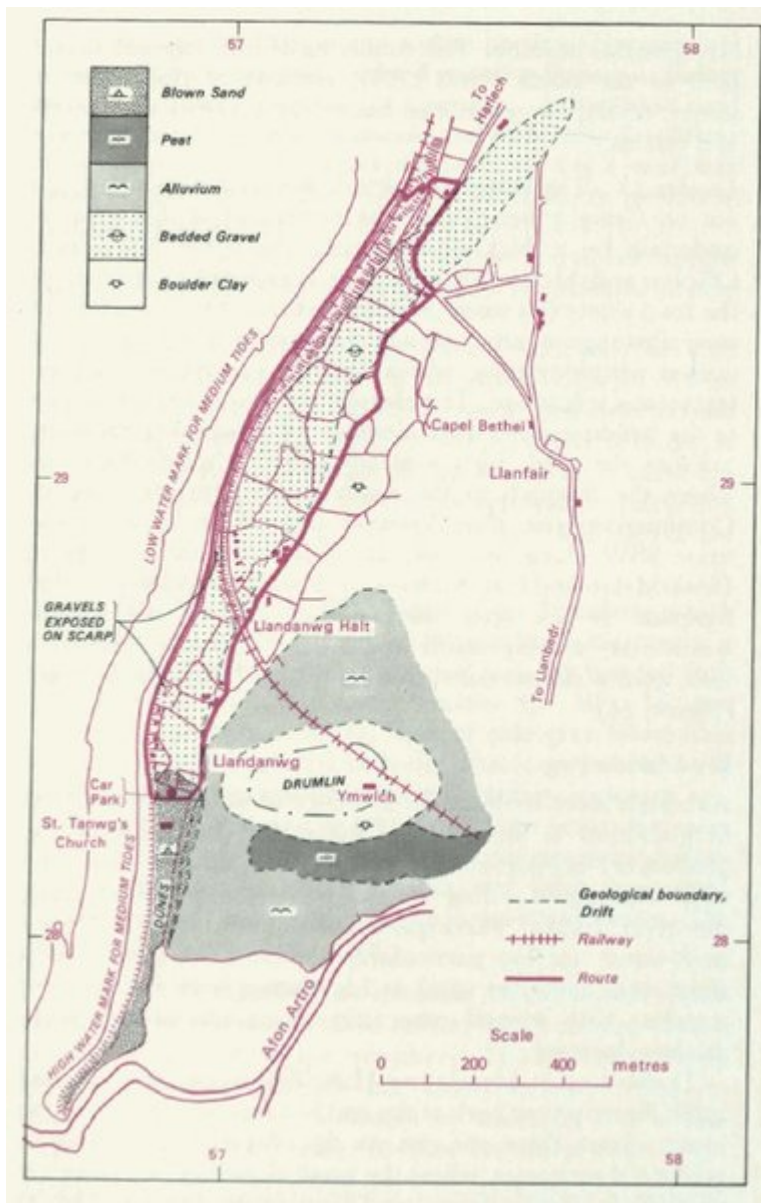
The overlying gravels are bedded and locally cross-stratified, showing that the sediments have been sorted and reworked by water. The gravels are coarse and variable in composition, generally with boulders, cobbles and pebbles in a sandy matrix, with interleaved lenses and thin beds of clean dark brown sand.

From the north end of the beach section [SH 5697 2888] it is possible to walk along the retaining wall west of the railway (there is, however, a fine of 40/- (sic) for trespassing on the railway itself) to see this succession of gravel on boulder clay repeated in the cutting to the east.

In plan the gravels form a linear deposit extending uphill to the north-east into a small valley that served to drain away melt-water from the glacier which occupied the Dwyryd valley. The gravels are the outwash delta-like deposit from this temporary stream.

A footpath crosses the railway [SH 5738 2963] leading uphill through National Trust property to the road. From here the dunes fronting the sands of Morfa Harlech can be seen, with Snowdonia to the north and the Lleyn Peninsula across Tremadoc Bay to the west.

[References](#)



(Figure 25) Geology and excursion route No. 8 around Llandanwg.