

The Database of British and Irish Hills

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2020 has been given various unflattering names, but for the DoBIH it was the year of JNSA. The acronym stands for Joe Nuttall Summit Analysis, a dataset of 30,000 hills sent to us in late March to give us something to do during the lockdown. Joe created a digital elevation model for the whole of Britain using LIDAR datasets where available and OS Terrain 50 Contour (effectively the 10m contours on OS Maps) elsewhere. He then ran a surface analysis program to find summits with a minimum drop of 20m, reduced to 10m for anything over 600m. The methodology is similar to that used by Andrew Kirmse and Jonathan de Ferranti in their analysis of the much less accurate SRTM World dataset, whose British data we looked at in 2017.

Four of us (GG, DM, JBI & CC) have worked intensively on the project for the past 10 months, identifying potential reclassifications and relocations from the JNSA output and investigating them in detail. For hills with LIDAR data, issues may arise from the summit or col being on ineligible man-made ground, e.g. over 100 of the summits we investigated are on covered reservoirs. Other errors stem from the DTM algorithm removing steep or rocky ground, dodgy data in trees, and loss of height due to JNSA downsampling the data to 2m. The LIDAR data itself is also susceptible to errors. Hence we carry out our own analysis using the highest resolution data available, augmented by contextual information from maps, satellite imagery, summit photographs, GPS submissions and Hill Bagging logs. To date we have completed over 1000 LIDAR analyses. The hills lacking LIDAR data suffer from the limitations of the OS Terrain 50 product but have produced some new Tumps.

90% of changes to hill lists concern the Tumps, most of them below 500m. We have created over 200 new Tumps and deleted a similar number. A further 24 were replaced by a neighbouring hill, and 180 relocated without a change in hill number. There have been 10 changes to the Humps, 23 to the Subhumps, and 25 new P20s. Other lists were much less affected, probably because many of the borderline hills have been surveyed, but they include two changes to the Marilyns – a deletion and a new twin – and three Nuttall deletions.

Further changes are inevitable as LIDAR coverage of Britain continues to improve. Joe has already re-run his analysis to incorporate some new data in England and southern Scotland that emerged in December. All being well, we anticipate Bluesky LIDAR for the whole of Wales to become available in 2023, replacing the patchwork of data that currently exists. Meanwhile the National LIDAR Programme 1m, which will cover the whole of England, is expected to complete in a year or so. That will leave the Scottish Highlands as the only region substantially uncovered, though many of the hills above 600m have been surveyed.

Other changes to the DoBIH are less significant. We added the SIBs of the Isle of Man and the Channel Islands. The Dodds were extended to the Isle of Man, and then to Ireland after overhauling the data. The last addition means all the constituents of RHSoc's family of British metric lists now have an Irish counterpart.

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