

- MORAINES**  
Includes ice-marginal accumulations of sediment with a topographic expression defining a distinct landform (including some glacialial assemblages)
- MORAINAL RIDGE**  
as above, but more restricted in size.
- ESKER**
- DRUMLIN**  
In some cases the line represents the orientation and length of individual drumlins, but for others they are schematic, summarising the pattern.
- LATERAL MELT-WATER CHANNEL**  
subglacial channels interpreted to have formed along ice margins.
- MELT-WATER CHANNEL**  
other meltwater channels, predominantly of subglacial origin but some of which might belong to above category.
- TUNNEL VALLEY**  
central axis of valley marked
- SHELF-EDGE FAN**
- TRIMLINE**  
Line dividing mountain summits with frost-weathered detritus, from lower elevations with extensive ice-scouring. Commonly inferred to mark the upper limit of the ice sheet and thus to define palaeo-estimates.
- LIMIT OF GLACIENIC DEPOSITS**  
(drift limits) indicating key outer limit of deposits, primarily glacial diamict, which have been used to infer ice sheet extent.
- GLACIOLACUSTRINE DEPOSITS**  
includes clay, silt, sand and gravels interpreted as being deposited in ice-dammed lakes.
- ICE DAMMED LAKES**  
where sufficient information exists, inferred palaeo-lake extents are marked. Some are produced on the basis of published lake extents, but for glacial lakes Hunter, Fletting, Pickering, Ten and West, are extrapolated from published lake levels using a digital elevation model.
- ICE DAMMED LAKE AT ITS LOWER STAND**  
for lake Hunter and Pickering, the lake extent at its lower stand is marked, extrapolated from published lake levels using a digital elevation model.
- ICE MARGINAL DAM**  
schematic only, indicating approximate position of ice marginal dam required to impound the lake.
- INDICATOR ERRATIC SOURCE AREA**
- LITHOLOGICAL LIMIT RELEVANT TO ERRATIC DISPERSAL**
- INFERRED ERRATIC PATH**  
note that erratic occurrence exists at arrowheads, and pathway is merely inferred on the basis of occurrence with localised glacial streamlines and/or erratics.
- ERRATIC LIMIT**  
the distal limit to which erratics are found.
- LOCH LOMOND READVANCE ICE LIMIT**  
only the limit of the West Highland glacial complex is presented. Landforms relating to this stadial are excluded. Inferred limits shown as dashed line.
- UNGLACIATED DURING THE DEVENSAN**

Information included is restricted to landforms and selected deposits that help constrain the extent, recession and dynamics of the last (Devensian) ice sheet.

All data compiled from published academic literature and British Geological Survey mapping.

Citation: Clark, C.J., Evans, D.J.A., Khawaja, A., Bradwell, T., Jordan, C.J., Marsh, S.H., Mitchell, W.A., and Bateman, M.D., 2004. Map and GIS database of glacial landforms and features related to the last British ice sheet. *Basin* 33 (4)

## GLACIAL MAP OF BRITAIN SOUTH SHEET

1: 625 000      1<sup>st</sup> Edition, 2004

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0 10 20 30 40 50 km

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**EXPLANATORY NOTES**

This map was compiled from a review of the published academic literature and British Geological Survey mapping. Field checking has not been performed, and we merely report what has been published. Given that information included has not been collected by a systematic survey of the country but by piecemeal effort by numerous researchers over 150 years, our main concern is that of data consistency and reliability. Data were digitised and entered into a geographic information system (GIS) and were then generalised and reduced to enable completion of this map. If greater detail is required the GIS should be consulted. It contains over 20,000 features and has accompanying attribute tables which permit the source reference for features to be identified. Copies of the GIS data layers are available at no cost and can be downloaded in 'ArcView' shapefiles from [http://www.shef.ac.uk/geography/staff/clark\\_chris.html](http://www.shef.ac.uk/geography/staff/clark_chris.html) or via the BGS web pages.

The GIS will be periodically updated to include newly published information, and for revisions where found necessary. We therefore appeal for extra information, criticisms or suggested amendments. Please direct these to Chris Clark ([c.j.clark@sheffield.ac.uk](mailto:c.j.clark@sheffield.ac.uk)) who will ensure that they are considered for the next update. It should be noted that data is restricted to published information (including PhD theses) which provides a crude quality control, and importantly, so that all data can be traced back to more detailed descriptions and observations.

The locational accuracy of features is variable, and this should be borne in mind if trying to locate features in the field. Errors are mostly due to inadequate geographic referencing on source maps. Most features are well positioned, with an accuracy of around 10-20 m, but errors of hundreds of metres are possible for some features.

Further details about this data set, and importantly caveats with regard to data quality and locational accuracy are described in:  
Clark, C.J., Evans, D.J.A., Khawaja, A., Bradwell, T., Jordan, C.J., Marsh, S.H., Mitchell, W.A., and Bateman, M.D., 2004. Map and GIS database of glacial landforms and features related to the last British ice sheet. *Basin* 33 (4)

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