

# Geological field surveying

## Intended audience

Geoscientists needing to gain a practical understanding of the principles of geological feature mapping in the field.

## Course objectives

The course develops skills in highly detailed and accurate mapping of sedimentary bedrock successions based on recording and interpreting landform features. The course also includes elements of landslide recognition and mapping, and mapping of man-made deposits in urban areas. On completion of the course, trainees will be able to:

- Understand subtle relationships between surface landforms and the three-dimensional stratigraphy and structure of mildly deformed sedimentary bedrock formations.
- Reconcile accurately logged surface exposures with adjacent feature-mapped geology.
- Use the widely accepted BGS symbols and standards for data recording and field map preparation.
- Understand the strengths and limitations of geological feature mapping and how these impact on the reliability and accuracy of BGS geological maps, especially in urban areas.
- Appreciate how modern, digital methods of data recording, interpretation and map production can enhance and broaden the application and value of geological maps.

## Course description

Feature mapping is a geological surveying technique that uses topographical and geomorphological landforms to construct a geological map in areas where there is no exposure—be they grassy fields or urban areas. The technique is fundamental to geological mapping in most sedimentary geological terrains where the rocks are not highly deformed, and can also be used, with limitations, to map superficial (Quaternary) deposits.

Feature mapping is the primary technique used by the BGS to survey its large-scale (1:10 000) geological maps of Great Britain. The course gives a thorough introduction to feature mapping and associated data recording methods. Practical fieldwork exercises make up the majority of the training, and each participant will be expected to produce a completed geological field map and associated notebook records at the end of the course. The course is suitable for both students and professionals in the applied geological sciences that need to make, use or understand geological maps.

The first day of the course is based at BGS Keyworth, involving a health and safety review with trainees, an equipment check and an introduction to feature mapping concepts. Day 2 at Baslow and days 3–6 at Graves Park, Sheffield, involve demonstration of feature mapping techniques in the field, including mapping exercises. The final day will return to BGS Keyworth for a review of the latest developments in the use of information technology for preparing, managing and delivering geological map data.

## *Course duration*

7 days

## *Delivery mode*

Field-based course

## *Course fee*

Fee variable dependent on season and course numbers. Includes field accommodation and meals

## *Date(s)*

Spring and Autumn

## *Location*

The course utilises field localities in the Chesterfield and Sheffield areas (northern England), including rural and urban terrain