

# Modelling with ZOOM

## Intended audience

Hydrogeologists and modellers wishing to gain an understanding of groundwater systems through the application of the ZOOM suite of object-oriented modelling software.

## Course objectives

- To provide an introduction to the benefits of adopting an object-oriented approach to the modelling of groundwater systems.
- To provide a practical hands-on introduction to the use of the ZOOM suite of numerical groundwater models.

## Course description

An introduction to object-oriented groundwater modelling and the ZOOM suite of models: ZETUP—set up code, ZOOMQ3D—groundwater flow model, ZOOPT—particle tracking code and ZOODRM—recharge model. The course enables the user to become familiar with the software and set up and run recharge, groundwater flow and particle tracking models.

## Background to ZOOM software

The BGS is developing groundwater models that more closely represent the structure of hydrogeological systems, producing flexible models which can both conform to aquifer geometry and simulate processes at different scales.

In collaboration with the University of Birmingham and the Environment Agency, the BGS has developed the ZOOM group of numerical groundwater models. This group consists of the saturated groundwater flow model ZOOMQ3D, the advective transport particle-tracking code ZOOPT and the distributed recharge model, ZOODRM. Each of these models has been developed using object-oriented techniques, a programming approach commonly applied in commercial software development but only relatively recently adopted in numerical modelling for scientific analysis.

## *Course duration*

Determined by level of tuition required

## *Delivery mode*

Classroom-based course

## *Course fee*

Fee variable determined by level of tuition required

## *Date(s)*

As required

## *Location*

The course is available at BGS's Nottingham (Keyworth) or Edinburgh training centres, or at customer premises worldwide by arrangement (and subject to the availability of appropriately licenced software)