

Wolfson Laboratories

The Wolfson Laboratories provide both laboratory facilities for a range of physical geography and ecology research, and the base for **field research** ([/schools/gees/facilities/facilities-wolfson.aspx#field](http://schools/gees/facilities/facilities-wolfson.aspx#field)) with a variety of survey and experimental equipment.

Laboratory Facilities

Sedimentological analysis

The laboratories provide a range of facilities for processing and analysis of soils and fluvial sediments, including Gallenkamp drying ovens (230oC), sieves and sieve shakers for wet and dry sieving (63µm – 63cm) and a variety of balances (including Mettler Toledo 0-510g/0.001g). Fine sediment analysis is available through Malvern laser particle sizers:

- Malvern Mastersizer Micro
- Malvern Mastersizer 2000



Microscopy

Macroinvertebrate identification and other low- to medium-power microscopic research is accommodated through:

- High quality Zeiss Stemi-2000 stereo-microscopes (6 – 50x)
- Nikon Optiphot-2 microscope (100-1000x).



Cold-storage

A walk-in cold room, plus standard refrigeration and freezer storage spaces, accommodate items from large sediment cores to water samples.

(http://www.gees.bham.ac.uk/research/facilities_wolfson.shtml#top)

Field Research

The Wolfson Laboratories provide the base for GEES field research in ecology, sedimentology, palaeoecology, meteorology and climatology. Equipment is available for field investigations ranging from basic undergraduate projects to advanced research campaigns.

Palaeoecology

Coring equipment for lake bed sediments, peat and soil deposits:

- Dutch augers
- Russian corers
- Glew corer

Surveying

Land surveys, river bed profiles and other mapping is supported by:

- Leica EDM

- Leica Theodolite
- Sokkisha surveying levels

Hydrometrics

We have a range of flow meters from simple undergraduate propeller-type meters to Aquatic Data Services 'SENSA' electromagnetic meters.



Water sampling and filtration

Automatic water sampling devices, and filtration equipment for sediment analysis and water sample processing:

- ISCO pump samplers
- manual, portable electric, and bench vacuum pumps and filtration equipment



Water chemistry

Field investigation of water quality parameters is facilitated through a range of meters and field test kits:

- Dissolved Oxygen – YSI dissolved oxygen probes
- pH / conductivity / TDS – Myron meters
- Nitrogen, Phosphorus, Ammonia and other standard variables – PalinTest field test kit.

Ecology

- Surber, drift and kick nets, and Petit Ponar grab sampler, for aquatic macroinvertebrates
- Malaise, emergence and pitfall traps for entomological studies
- Plankton nets
- Longworth small mammal traps
- vegetation quadrats

Meteorology and climatology

A wide range of equipment is available for manual and automated data collection.

Manual field measurements:

- Met. Office standard thermometers
- Whirling psychrometers
- Anemometers
- Kestrel multimeters

Automated field measurements:

- Campbell data loggers
- Tiny Tag data loggers

Boats

Two inflatable boats are available for lake investigations: Avon 2.4m and Avon 2.8m.

