

GEOMATICS AND SURVEY

The term **geomatics** covers all aspects of the collection, processing and interpretation and presentation of spatial information. The range of services offered by MoLAS falls into three principal categories: surveying, Computer-Aided Design (CAD) and Geographical Information Systems (GIS).

Survey work includes the implementation and maintenance of control networks and project grids, and the georeferencing of captured data in relation to both project specific coordinate systems, and to Ordnance Survey National Grid. Surveyors also carry out the rapid capture of digital archaeological and topographic data on site, using GPS and total stations interfaced with dataloggers and pencomputers to produce real-time results. Three-dimensional standing building and monument survey uses state-of-the-art reflectorless instruments or laser scanners where necessary.

CAD work at MoLAS includes mapping site locations onto OS digital data, integration of engineering and architectural scheme proposals with existing digital surveys, reconstruction of plans and elevations from measured building survey data, including digitisation from rectified photography, historic map regression analysis, and the production of site plans for publication, client reports and research archives. CAD is also extensively used to prepare datasets for use in GIS, for contour mapping, Digital Terrain Modelling and 3D deposit modelling.

MoLAS **GIS work** links spatial information to finds, environmental and stratigraphic data, and allows inter- and intra-site cross-referencing and interrogation, and the statistical analysis of spatial data sets and artefact distribution patterns.

Thematic and landscape analysis is also referenced to heritage, environmental, geological, geo-archaeological, hydrological and topographic data sets. GIS is also used for 3D landscape contour, surface and deposit modelling and analysis. MoLAS is able to create bespoke GIS projects integrating diverse datasets, for monument conservation and heritage management planning.

MoLAS understands the importance of high quality survey, spatial and location data in the successful delivery of project requirements, employing a dedicated team of staff experienced in survey and spatial data processing. The Geomatics team is responsible for ensuring that all MoLAS field projects are accurately georeferenced and works with excavation staff to provide a high quality and affordable service. In association with GeoQuest Associates MoLAS geomaticians also provide a fully integrated **Archaeomagnetic Dating** service to clients.