

## Geodiversity and Geoconservation

**Geodiversity is the variety of rocks, minerals, fossils, landforms, etc, and the natural processes which have formed these features through geological time.**

David Roche GeoConsulting has carried out a series of research consultancy projects in geodiversity, including a review of geodiversity in the UK, and can provide clients with the expertise to observe and record, to assess and evaluate, and to enhance and develop the geodiversity of specific sites – such as quarries, coastal cliffs and natural outcrops – or of larger areas and regions.



*Dorset and East Devon World Heritage Coastline (UNESCO) with outstanding geodiversity. Sea cliffs in Triassic strata with active erosion and instability*

### Geodiversity Reviews

Geodiversity Reviews can be carried out to provide an initial review of geodiversity within defined subject areas – eg individual sites or regions – to gather and evaluate existing information and its status and relevance, etc. The review may be a precursor to undertaking a full geodiversity audit and developing an action plan.

### Geodiversity Audits

Geodiversity Audits survey and record the range and variety of geological features within defined subject areas – sites or regions. Audits include descriptive reports with photographs and illustrations, and all relevant information and references. The scope includes geomorphology, landform and surface soils, as well as the geological strata. Audit reports provide permanent records, and can be updated when new exposures are created, eg in actively eroding cliffs and working quarries, to provide 4D records over time.

### Geodiversity Action Plans

Geodiversity Action Plans (GAPs) have developed as a mechanism for recognition, promotion, conservation and management of geodiversity for site or regions, in the same way as Biodiversity Action Plans (BAPs) exist for ecosystems. The process involves audits, planning and prioritising actions, and taking actions followed by further reviews. GAPs may be site specific, or for whole organisations (eg quarry company operations), or for local areas, national parks, regions or countries.

### Geoconservation Projects

Where geoconservation potential is recognised, scheme identification and applications for funding can be made, and design and arrangements for geoconservation works to be achieved. Works include safe access walkways, viewing areas, rock parks, information boards, stabilisation, etc. Research consultancy and site enhancement projects in geodiversity and geoconservation have been carried out with UK ALSF funding at and near active and former quarries as part of the UK sustainable aggregates initiative.



*Angular unconformity - Jurassic limestones overlie Carboniferous Limestone - old sketch of Vallis Vale SSSI*

*Geoconservation project in nearby old quarry with similar geology and good exposures of unconformity with safe access for study and enjoyment*



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