

Appendix 3.1 – References

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Appendix 3.2 – Case study: the nature of Devon, a biodiversity action plan

The Devon Biodiversity Action Plan (BAP) is unique as it refers directly to RIGS and covers Earth science in some detail. Earth heritage is an important component of Devon's biodiversity. The local BAP covers a summary of Devon's Earth history, including all geological periods and geomorphology.

The different geological sites in Devon are considered in context with national, regional and local importance with specific reference to RIGS.

Geological Sites in Devon

Non-Statutory Geological Sites: "In addition to the GCR sites, there are a large number of other localities of county or regional significance for geological or geomorphological conservation. Although many of these are well known and much used by those involved in geological research and study, there has been no comprehensive protection other than where they lie within sites designated for other reasons. The Regionally Important Geological (and Geomorphological) Sites (RIGS) initiative promoted by English Nature through its earth science conservation strategy encourages the protection, management and research/educational use of such sites. These aims are being pursued on a district-wide basis in order to identify and document RIGS sites, otherwise known in Devon as 'County Geological Sites'".

The Devon local BAP attempts to evaluate Devon's Earth heritage resource against threats and losses and potential gains. This is very important for RIGS as it clearly demonstrates a rationale for protection and conservation of local Earth heritage sites.

Geological Threats and Opportunities

Nature Of Threat	Effect On Earth Science Interest
<i>Waste disposal and landfill</i>	<ul style="list-style-type: none"> ◆ Geological exposures obscured ◆ Access difficulties for remaining exposures
<i>Built development</i>	<ul style="list-style-type: none"> ◆ Geological exposures and geomorphological features obscured or obliterated
<i>Mineral extraction</i>	<ul style="list-style-type: none"> ◆ Loss of caves/karst features and other fossil landforms/'integrity' sites ◆ Geological exposures obscured by back-filling
<i>Dredging</i>	<ul style="list-style-type: none"> ◆ Disruption to natural coastal processes
<i>Natural degradation</i>	<ul style="list-style-type: none"> ◆ Vegetation obscures geological exposures ◆ Loosening of rock faces creates safety/access problems ◆ Stability and flooding problems in mines and tunnels
<i>Restoration/landscaping of worked-out Quarries</i>	<ul style="list-style-type: none"> ◆ Obscures geological exposures

...table continued overleaf

Nature Of Threat	Effect On Earth Science Interest
<i>Coastal defence</i>	<ul style="list-style-type: none"> ◆ Obscures geological exposures ◆ Prevents erosion necessary to maintain soft-rock exposures ◆ Impact on active coastal geomorphological processes
<i>Sea-level rise</i>	<ul style="list-style-type: none"> ◆ Potential loss of foreshore exposures
<i>Forestry</i>	<ul style="list-style-type: none"> ◆ Obscures rock outcrops and landforms ◆ Promotes natural degradation through growth of vegetation and burial by leaf-litter
<i>River engineering</i>	<ul style="list-style-type: none"> ◆ Impedes fluvial geomorphological processes and thereby prevents development of natural river features and study of natural river systems and processes
<i>Geological use and study</i>	<ul style="list-style-type: none"> ◆ Popular and heavily used areas can be damaged by excessive hammering, coring and collecting
<i>Agriculture</i>	<ul style="list-style-type: none"> ◆ Deep ploughing and land improvements may destroy small-scale landforms

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