



Seaton West Sea Wall where the old sea defence structure has been renovated and faced with sprayed concrete

During October and November 2005 renovation works were carried out to the old sea wall to the west of the main promenade at Seaton and fronting cliff slopes in Mercia Mudstone strata below the Check House Nursing Home. The scheme options assessment, engineering design and renovation works supervision was by David Roche GeoConsulting and the works were undertaken by contractors Bridge Civil Engineering. East Devon District Council is the client and the works are funded by coast protection grant administered by DEFRA.



“We identified the need to look at this old seawall and adjoining cliff slopes about three years ago as an action from our annual cliffs and beaches safety audits for East Devon DC” says **David Roche**. “We carried out the engineering inspection and condition survey and produced an initial report identifying several options and cost estimates, and were able to advise the client of the best solution from a range of options. We then obtained approvals from DEFRA and statutory consultees”.

Following scouring and removal of all loose concrete and debris from the old mass concrete wall, built over 100 years ago using beach material which had become very weathered and pitted, the new sprayed concrete ‘guniting’ facing was applied in layers with mesh reinforcement, anchor ties and drain holes. The seawall was also extended to the west by a gabion structure.



The guniting option was tendered by the contractor and provided a substantial cost saving compared with conventional reinforced concrete facing wall. It also minimised the import of materials and plant in a sensitive and difficult access location.

“Bridge and their guniting subcontractor Paul Clark produced impressive results despite some bad weather interruptions” says **Keith Ellis** who led the project and acted as Engineer for the Works.

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KING GEORGE V
GeoValue
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King George V David Roche and Dr Richard Scrivener at Swindon Railway Museum attending a meeting of the British Geological Survey Regional Advisory Panel. The famous GWR locomotive No 6000 is displayed hauling The Bristolian; the geologists later waited on Swindon station for a modern equivalent to return west.

GeoValue Project Update

Following on from the initial scoping study phase completed in March 2005, the main GeoValue project now runs until early 2007.

Funded by the Aggregates Levy Sustainability Fund (ALSF) through the MIST programme managed by MIRO, **GeoValue: Valuing Geodiversity for the Community** is the fourth MIST research project award to David Roche GeoConsulting.

Professor Peter Scott is project leader with a series of project presentations to the ProGEO International Conference on Geoconservation in Portugal, to the Extractive Industry Geology Conference in Edinburgh, to the Ussher Society, and to the specially convened stakeholder group seminar.

Geodiversity Profile testing involves assessments at sites with a range of geology across the country, and inputs from several RIGS groups and BGS.

Safe access to sites of high geovalue is the other main component of study with inputs from HSE and quarry companies.

PHIL STEPHENSON BACK FROM DOWNUNDER

Engineering Geologist Phil Stephenson has returned following two years in Australia. After working with David Roche GeoConsulting during 2003 Phil departed for Brisbane with wife Karen who took a stable isotopes research appointment at the University of Queensland. Phil extended his own professional experience with local firm Bowler Geotechnical. His work included slope stability projects for residential developments in the Gold Coast and Sunshine Coast hinterland north and south of Brisbane, and foundation investigations for multi-storey buildings and highway structures. Heavy tropical rainfall, deep tropical weathering profiles and the resulting engineering soils and rockmass conditions are major factors in geoenvironmental work in Queensland.



Dean Quarry on the Lizard in Cornwall is one of the sites where the Geodiversity Profile has been tested. The site provides excellent exposures of gabbro, and there is a public viewpoint from the adjacent coastal footpath.

GeoValue project partner contributions from Helen Turner (Health & Safety Executive), Abbie Richards (MIRO), Victoria Whitehouse (Cornwall Wildlife Trust), Jonathan Larwood (English Nature), Andrew Bloodworth (British Geological Survey), Dr Robin Shail (Camborne School of Mines), Peter Ealey, Hugh Prudden, Prof Jim Griffiths, Dr Clive Nicholas, David Roche and Prof Peter Scott.

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