

Cliff Stabilisation Works and Management – at Sidmouth, Devon

Connaught Gardens Cliff at Sidmouth, formed in characteristic red Otter Sandstone, is very steep, locally overhanging with small caves. The Millennium Footpath which links the Sidmouth Town and Jacobs Ladder beaches passes along the base of the cliff with a further footpath along the cliff top. East Devon District Council commissioned David Roche GeoConsulting to advise on potential instability risks and then to design and supervise the stabilisation works.



Investigation and Assessment

Engineering geological investigation of the cliff was carried out by rope access inspection. This revealed that most of cliff in sandstone bedrock was generally sound subject to scaling of loose materials. Along the upper cliff, loose soil and vegetation presented risks of debris falls, and at the eastern end a length of wall along the cliff top path was found to be at risk of toppling.



Cliff Stabilisation Works

Stabilisation works included vegetation cutting along the top of the steep cliff slopes, removal of loose or potentially loose soil and rock from all the cliff faces, followed by reinforcement of the upper cliff slope with rocknet fixed to rockbolts, with additional spot bolting on the rock faces to fix individual blocks at risk of becoming unstable in the future. The cliff top wall at the eastern end was taken down, and new beam foundations were underpinned with mini-piles prior to reconstruction.



Cliff Management

After completion of the stabilisation works a cliff management plan was implemented which includes annual inspections and maintenance. This includes inspection and light scaling of the steep cliffs utilising rope access and checking of the engineered works.

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