

---

# Coastal geomorphology of Great Britain. GCR volume 28

## [Title page and preliminaries](#)

Acknowledgements

Access to the countryside

Preface

## [1 An introduction to the coastal geomorphology of Great Britain](#)

Introduction

Organization of this volume

Coastal research in Britain

The geological background

The coastal marine environment: tides, waves, surges and currents

Coastal sediment supply and sediments cells

Sea-level history

Coastal management and coastal engineering

Further reading

GCR site selection guidelines

Anthropogenic influences and the GCR

Legal protection of the GCR sites

GCR site selection in conclusion

## [2 The geomorphology of the coastal cliffs of Great Britain](#)

Introduction

Inland and coastal cliffs

Coastal slope processes

Processes of marine erosion of cliffs and shore platforms

The form of coastal cliffs

Geological controls on cliff form

Characteristic medium-scale features of cliffs

Influence of inland topography on cliff form

Shore platforms

Evidence of inheritance

Sea cliffs as biological SSSIs and Special Areas of Conservation (SACs)

### [3 Hard-rock cliffs — GCR site reports](#)

Introduction

[St Kilda, Western Isles](#)

[Villians of Hamnavoe, Shetland](#)

[Papa Stour, Shetland](#)

[Foula, Shetland](#)

[West Coast of Orkney](#)

[Duncansby to Skirza Head, Caithness](#)

[Tarbat Ness, Ross and Cromarty](#)

[Loch Maddy–Sound of Harris Coastline, Western Isles](#)

[Northern Islay, Argyll and Bute \(Potential GCR site\)](#)

[Bullers of Buchan, Aberdeenshire](#)

[Dunbar, East Lothian](#)

[St Abb's Head, Berwickshire](#)

[Tintagel, Cornwall](#)

[South Pembroke Cliffs, Pembrokeshire](#)

[Hartland Quay, Devon](#)

[Solfach, Pembrokeshire](#)

### [4 Soft-rock cliffs — GCR site reports](#)

Introduction

[Ladram Bay, Devon](#)

[Robin Hood's Bay, Yorkshire](#)

[Blue Anchor–Watchet–Lilstock, Somerset](#)

[Nash Point, Glamorgan](#)

[Lyme Regis to Golden Cap, Dorset](#)

[South-west Isle of Wight](#)

[Kingsdown to Dover, Kent](#)

[Beachy Head to Seaford Head, East Sussex](#)

[Ballard Down, Dorset](#)

[Flamborough Head, Yorkshire](#)

[Joss Bay \(GCR Name: Foreness Point\), Kent](#)

[Porth Neigwl, Gwynedd](#)

[Holderness \(Potential GCR Site\), Yorkshire](#)

[5 Beaches, spits, barriers and dunes — an introduction](#)

Introduction

Provenance of beach sediments

Coastal sediment movements

Beach plan

Beach profiles

Beach states

Bars and troughs

Lateral grading

Prograding beaches

Beach ridges

Spits, tombolos and cusped forelands

Coastal barriers

Coastal dunes

[6 Causes of beach and dune erosion 6 Gravel and 'shingle' beaches — GCR site reports](#)

Introduction

[Westward Ho! Cobble Beach, Devon](#)

[Loe Bar, Cornwall](#)

[Slapton Sands and Hallsands, Devon](#)

[Slapton Sands](#)

[Hallsands](#)

[Budleigh Salterton Beach, Devon](#)

[Chesil Beach, Dorset](#)

[Porlock, Somerset](#)

[Hurst Castle Spit, Hampshire](#)

[Pagham Harbour, West Sussex](#)

[The Ayres of Swinister, Shetland](#)

[Whiteness Head, Moray](#)

[Spey Bay, Moray](#)

[The West Coast of Jura, Argyll and Bute](#)

[Benacre Ness, Suffolk](#)

[Orfordness and Shingle Street, Suffolk](#)

[Dungeness and Rye Harbour](#)

[Rye Harbour, East Sussex](#)

[Dungeness, Kent](#)

[7 Sandy beaches and dunes — GCR site reports](#)

Introduction

[Marsden Bay, County Durham](#)

[South Haven Peninsula, Dorset](#)

[Upton and Gwithian Towans, Cornwall](#)

[Braunton Burrows, Devon](#)

[Oxwich Bay, Glamorgan](#)

[Tywyn Aberffraw, Anglesey](#)

[Ainsdale, Lancashire](#)

[Luce Sands, Dumfries and Galloway](#)

[Sandwood Bay, Sutherland](#)

[Torrisdale Bay and Invernaver, Sutherland](#)

[Dunnet Bay, Caithness](#)

[Balta Island, Shetland](#)

[Strathbeg, Aberdeenshire](#)

[Forvie, Aberdeenshire](#)

[Barry links, Angus](#)

[Tentsmuir, Fife JD. Hansom](#)

## [8 Sand spits and tombolos — GCR site reports](#)

Introduction

[Pwll-ddu, Glamorgan](#)

[Ynyslas, Ceredigion](#)

[East Head \(Chichester Harbour\), West Sussex](#)

[Spurn Head, Yorkshire](#)

[Dawlish Warren, Devon](#)

[Gibraltar Point, Lincolnshire](#)

[Walney Island, Lancashire](#)

[Winterton Ness, Norfolk](#)

[Mortha Harlech, Gwynedd](#)

[Morfa Dyffryn, Gwynedd](#)

[St Ninian's Tombolo, Shetland](#)

[Coast of the Isles of Scilly](#)

[Central Sanday, Orkney](#)

## [9 Machair](#)

Introduction

[Machir Bay, Islay, Argyll and Bute](#)

[Eoligarry, Barra, Western Isles](#)

[Ardivachar to Stoneybridge, South Uist, Western Isles](#)

[Hornish and Lingay Strands \(Machairs Robach and Newton\)](#)

[Pabbay, Harris, Western Isles](#)

[Luskentyre and Corran Sellebost, Harris, Western Isles](#)

[Mangersta, Lewis, Western Isles](#)

[Tràigh na Berie, Lewis, Western Isles](#)

[Balnakell, Sutherland](#)

## [10 Saltmarshes](#)

## [Introduction](#)

[Culbin, Moray \(see also Chapter 11\)](#)

[Morrich More, Ross and Cromarty \(see also Chapter 11\)](#)

[St Osyth Marsh, Essex](#)

[Dengie Marsh, Essex](#)

[Keyhaven Marsh, Hurst Castle, Hampshire](#)

[Solway Firth saltmarshes](#)

[Solway Firth \(north shore\), Dumfries and Galloway](#)

[Upper Solway flats and marshes \(south shore\), Cumbria](#)

[Cree Estuary, Outer Solway Firth, Dumfries and Galloway](#)

[Loch Gruinart, Islay, Argyll and Bute](#)

[11 Coastal assemblage GCR sites](#)

## [Introduction](#)

[Culbin, Moray](#)

[Morrich More, Ross and Cromarty](#)

[Carmarthen Bay, Carmarthenshire](#)

[The Coast of Caernarfon Bay \(Newborough Warren and Morfa Dinlle\)](#)

[Newborough Warren, Isle of Anglesey](#)

[Morfa Dinlle, Gwynedd](#)

[Holy Island, Northumberland](#)

[North Norfolk Coast](#)

[The Dorset Coast: Peveril Point to Furry Cliff](#)

[References](#)

[Glossary](#)

[Index](#)

[Figures and tables](#)

[Tables](#)