



## HABITATS

Examples from left to right: Machair – Jill Dimond, Rocky Shores – K. Mitch Hodge

# Coastal

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### All about coastal habitats

The UK has one of the longest coastlines in Europe, hosting a variety of highly diverse ecosystems and habitats. These regions are important for the life they host, and for society because of the services they provide such as carbon sequestration, flood protection and improved health and wellbeing.

### Sand dunes



Sand dunes, common in the UK, are ridges of sand that have been formed parallel to the beach over many years and exist beyond the tidal range. Vegetation varies depending on the proximity of the dune to the shoreline. As dunes shift closer to the sea, their vegetation changes through time.

**Flora** includes clovers, lady's bedstraw, pyramidal orchid, kidney vetch, carline thistle, prickly saltwort, sea rocket, oraches, sea sandwort, marram grass, juniper, sea buckthorn.

**Fauna** includes bumblebees, burrowing bees, digger wasps, silver-studded blue butterfly, sand lizards, great crested newt, natterjack toad, nightjar, kestrel, chough, Dartford warbler, grey seal.

**Management** involves restoring eroded areas and stabilising others using vegetation and fencing to conserve dune formation and ecosystems. It is also important to have boardwalks to steer people from sensitive sites.

**Learn more** [wildlifetrusts.org/habitats/coastal/sand-dunes](https://wildlifetrusts.org/habitats/coastal/sand-dunes)  
[dynamicdunescape.co.uk/about-sand-dunes/dune-wildlife](https://dynamicdunescape.co.uk/about-sand-dunes/dune-wildlife)  
[conservationhandbooks.com/manage-sand-dunes/](https://conservationhandbooks.com/manage-sand-dunes/)

## Machair



This habitat is unique and rare; globally it is found only on the west and north coast of Scotland and the west coast of Ireland. While similar to sand dunes, it has a flatter landscape and a high shell content. It is often used for different grazing regimes, such as oats, rye or hay meadows.

**Flora** is typical of calcareous to neutral sand grassland including common flowers like red clover, poppies, pansies and yarrow, the rarer lesser-butterfly orchid and Irish lady's-tresses, and iris beds.

**Fauna** includes breeding waders such as lapwing, redshank, snipe, dunlin, oystercatcher, ringed plover; and corncrake, twite. Many invertebrates exist, including some rare bees e.g. great yellow bumblebee, red-shanked carder bee.

**Management** Sustainable management methods include timing in crop harvest, cultivation techniques, and engagement with local communities on best practice and education. From 2010 – 14, a large scale project in Scotland for the conservation and management of Machair took place, and a recently announced project will seek to improve Machair in western Ireland.

**Learn more** [wildlifetrusts.org/habitats/coastal/machair/](http://wildlifetrusts.org/habitats/coastal/machair/)  
[machairlife.org.uk/](http://machairlife.org.uk/)  
[gov.ie/en/press-release/e74a9-74m-life-on-machair-project-announced/](http://gov.ie/en/press-release/e74a9-74m-life-on-machair-project-announced/)

## Beaches (sand and/or shingle)



A third of the UK coastline is sand or shingle beach, but most beaches are too mobile (the impact of tides and waves) to support vegetation. Shingle beaches that are vegetated are of global significance. Sand dunes can form from sandy beaches (see above). Vegetation can form on drift lines (short-lived, but common in the UK) or above the high tide line (perennials).

**Flora** includes sea kale, oysterplant, sea-pea, yellow-horned poppy, sea campion, sea mayweed, oraches, prickly saltwort, sea rocket, sea sandwort, lichen-rich grassland. Driftwood and seaweed.

**Fauna** includes oystercatchers, terns, turnstones, ringed plover, gulls, scaly cricket, springtails, beetles, mites, sand hoppers, cockles, lugworms. Washed up: ambergris, mermaid's purse (elasmobranch eggs).

**Management** Shingle beaches are typically managed through the local authority or relevant government agency (environment Agency/Natural England) due to the extensive labour required. These organisations will be responsible for maintaining structures to control sediment movement (e.g. groyne, breakwaters, revetments) or methods to manage flooding / erosion (e.g. beach re-profiling and replenishment). Vegetation can only be supported in areas of low movement. Where there is growth above the drift line, it should be protected to avoid damage from pedestrians and vehicles.

Learn more [wildlifetrusts.org/habitats/coastal/beaches-and-strandlines](https://wildlifetrusts.org/habitats/coastal/beaches-and-strandlines)  
[cdn.naturalresources.wales/media/689060/nrw-evidence-report-no-273-advice-on-sustainable-management-of-coastal-shingle-resources.pdf](https://cdn.naturalresources.wales/media/689060/nrw-evidence-report-no-273-advice-on-sustainable-management-of-coastal-shingle-resources.pdf) [section 8]

## Cliffs (hard and soft)



Cliffs vary due to different rock types and exposure to wind and waves.

**Flora** is highly variable across sea cliffs; a comprehensive review of cliff vegetation has been provided by the JNCC.

Hard cliffs are rocky vertical slopes, reaching heights of over 300 m.

**Fauna** is dominated by seabirds, including guillemot, razorbill, puffin, cormorant, shag, fulmar, gannets, kittiwake. Other species include choughs, house martins, snails, beetles.



Soft cliffs are smaller and are less inclined making it easier for vegetation to establish.

**Fauna** is thought to include invertebrate species that are restricted to soft cliffs including Cliff tiger beetles, weevils, shore bugs, and the Glanville fritillary butterfly. Sand martins often make their nest holes in soft cliffs.

**Management** Reduced interventions are typically best for cliff conservation as natural processes shape the habitat e.g. soft cliffs reset the growth of plant life allowing a rich range of flora and fauna. Intensive land use can disrupt natural erosion. Certain recreational activities may need to be restricted, for example during seabird-breeding season.

Learn more [sac.jncc.gov.uk/habitat/H1230](https://sac.jncc.gov.uk/habitat/H1230)  
[wildlifetrusts.org/habitats/coastal/maritime-cliff](https://wildlifetrusts.org/habitats/coastal/maritime-cliff)  
[buglife.org.uk/resources/habitat-management/maritime-cliffs-and-slopes/](https://buglife.org.uk/resources/habitat-management/maritime-cliffs-and-slopes/)

## Rocky Shores



Rocky shores are relatively stable habitats compared to sandy shores or vegetated shingle. Life that establishes on rocky shores will depend on the type of rock, weather conditions and water characteristics. Different animals and plants vary in their tolerance to the tides going in and out, resulting in a very defined pattern of species across the shore.

**Flora** includes lichens, brown seaweeds (e.g. channeled wrack, toothed wrack and bladder wrack), kelps, red seaweeds, oarweed.

**Fauna** includes periwinkles, barnacles, limpets, mussels, shore crabs, beadlet and snakelocks anemones, cushion starfish, oystercatchers, purple sandpipers.

**Management** Like with other sub-habitats in coastal regions, monitoring rocky shores is an important aspect of effective management. Shores that have suffered anthropogenic disturbances are often best left to recover without intervention. To prevent damage, education and protection of certain areas are important.

**Learn more** [mba.ac.uk/what-we-do/our-science/coastal-ecology/](http://mba.ac.uk/what-we-do/our-science/coastal-ecology/)  
[| beachstuff.uk/seaweeds.html](http://beachstuff.uk/seaweeds.html)  
[| ukmpa.marinebiodiversity.org/uk\\_sacs/communities/intertidal-reef/ir7\\_4.htm](http://ukmpa.marinebiodiversity.org/uk_sacs/communities/intertidal-reef/ir7_4.htm)

## Salt marshes and mudflats



Salt marshes and mudflats are found in many sheltered estuaries around the UK. Low-lying fine and nutrient-rich mud is covered during high tide, and revealed at low tide. Further inland as the mud becomes drier, mudflats become salt marshes.

Salt marsh: **Flora** includes samphire, cord-grasses, sea purslane, sea aster, sea lavender, marsh mallow.

**Fauna** includes snails, mud shrimps, fanworm, ragworm, wintering wildfowl and waders, breeding waders (e.g. redshank).



Mudflat: **Flora** includes eelgrass.

**Fauna** includes bristle worms, bivalves, snails, wildfowl and waders (e.g. brent goose, shelduck).

**Management** The best way to allow salt marshes to thrive is to avoid any disturbances and interventions and to let tides to be unimpeded.

**Management** The best way to allow salt marshes to thrive is to avoid any disturbances and interventions and to let tides to be unimpeded. Vegetation transitions across the salt marshes (lower to upper marshes) should all be retained, and biodegradable debris kept (e.g. seaweed, wood) as this supports invertebrates.

**Learn more** [wildlifetrusts.org/habitats/coastal/saltmarsh-and-mudflats](http://wildlifetrusts.org/habitats/coastal/saltmarsh-and-mudflats)  
[coastalwiki.org/wiki/Salt\\_marshes#Fauna](http://coastalwiki.org/wiki/Salt_marshes#Fauna)  
[buglife.org.uk/resources/habitat-management/coastal-saltmarsh/](http://buglife.org.uk/resources/habitat-management/coastal-saltmarsh/)

**DID YOU KNOW?** In the UK, no-one is more than 80 miles away from the coast.

**Seagrass meadows absorb twice as much carbon as forests, per unit area.**

**The UK coastlines hosts over 1200 different animal and plant species.**

**Snails and limpets can help form rockpools, by grinding rock with their tough teeth!**

## How can we help?

We can look after our marine environment in different ways. Taking part in beach or river cleans, dive cleans, being careful not to stand on animals or vegetation, not purchasing marine ornaments, only consuming sustainable seafood, reducing single-use plastics, and a richer understanding of the ocean, all help secure a better environment.

Climate change is having a big impact on the coast and our seas. Therefore climate action will also help towards a cleaner and healthier marine environment. This can be in the form of personal lifestyle changes to reduce our carbon footprint, or activism and advocacy to encourage governments and companies to make green and ethical decisions. The ocean is at the heart of the climate system; UNESCO has a core theme 'One Planet, One Ocean'.

## Learn more

- Plantlife Guide for common coastal floral species [plantlife.org.uk/uk/our-work/publications/habitat-wildflower-guides-coastal](https://plantlife.org.uk/uk/our-work/publications/habitat-wildflower-guides-coastal)
- Ecological Monographs – The value of estuarine and coastal ecosystem services [esajournals.onlinelibrary.wiley.com/doi/abs/10.1890/10-1510.1](https://esajournals.onlinelibrary.wiley.com/doi/abs/10.1890/10-1510.1)
- UK Terrestrial & Freshwater Habitat Types: Coastal Habitat descriptions [data.jncc.gov.uk/data/b0b5e833-7300-4234-8ae5-bdbf326e854c/habitat-types-coastal.pdf](https://data.jncc.gov.uk/data/b0b5e833-7300-4234-8ae5-bdbf326e854c/habitat-types-coastal.pdf)
- [oceanconservationtrust.org/world-ocean-day-largest-ever-ocean-awareness-survey-results](https://oceanconservationtrust.org/world-ocean-day-largest-ever-ocean-awareness-survey-results)
- Habitat Wildflower Guide Coastal habitats [plantlife.org.uk/application/files/9614/9797/5998/WAP\\_coastal.pdf](https://plantlife.org.uk/application/files/9614/9797/5998/WAP_coastal.pdf)
- Contact an A Rocha UK naturalist at [naturalist@arocha.org](mailto:naturalist@arocha.org)