

Dunes and Beaches

Location

This sub type is found around the mouth of the Duddon Estuary and south of Seascales. The sub type continues into the Lake District national park and is classified as sub type BI – Dunes and Beaches in the Lake District National Park Landscape Character Assessment.

Key Characteristics

- Hummocky dunes and flat raised beaches
- Beaches of mud, sand, shingle and pebbles
- Semi-natural grassland dominates
- Isolated farms and linear stone villages
- Bounded by small roads leading to minor tracks and paths
- Strong sense of tranquility in some parts

Physical character

This sub type is predominantly underlain by marine alluvium or undulating boulder clay covered by recent windblown sandy drift and soils. The dunes are influenced by tidal movements, coastal forces and weather events. These sculpt the dunes and beaches, changing their profile, position and shoreline orientation. Plants have trapped the sand and established colonies providing stability to the dunes in these landscapes.

Land cover and land use

The seascape comprises hummocky sand dunes, wet hollows and raised beaches and is an interface between the sea and farmland.

The vegetation is a mix of dune grassland and heathland and semi-natural grassland which is occasionally grazed or mown. Access is limited to minor tracks and paths. The landscape type is often bounded by minor rural roads serving a string of linear villages and isolated farms.

There is a strong building vernacular of a substantial stone and cobble construction. Buildings are closely spaced for shelter. Cobble stone banks and walls traditionally form the boundaries of farms and roads with some recent replacement with fences.

Hard sea defence works and tourism development contrast with the soft natural features, vernacular development and rural roads.

Ecology

All the sand dune systems in Cumbria are either of international or national ecological importance. Their damp dune slacks support 50% of the UK's population of natterjack toad, and provide habitat for breeding colonies of eider duck, terns, gulls and great crested-newt. Sand dunes are also important for rare plants, fungi and invertebrates. In Cumbria they form some of the most botanically diverse dune systems in the country. Species include coralroot orchid and dune helleborine which are often found in wet hollows. The largest UK population of coralroot orchid is found at Sandscale Haws and dune helleborine is an UK endemic species confined to a small number of sites.

Historic and cultural character

A very volatile environment frequently remodelled through wave and wind action, though rarely permanently settled evidence of prehistoric land use and occupation sometimes erodes out of the dunes in the form of stone tools and the remains of fires. The remains of ancient beaches (remnants of ancient seas) may be found far inland, complete with shells and beach pebbles.

Perceptual character

The sea is the dominant influence on this rare and dynamic landscape, the mood changing with the tides, season and

weather. The beaches have wide uninterrupted views across open sea, marsh and mudflats or landwards to mountains and fells. These open and exposed seascapes offer wide attractive views. The big skies and natural forces can be exhilarating and evocative with focal points such as Piel Island and Criffell in Scotland adding interest. In contrast the dunes offer shelter and a feeling of intimacy with plants and providing a rich variety of interest. Most enjoy a sense of tranquillity and remoteness. In contrast beaches on the fringes of settlements are more energetic and are often full of human activity.

Sensitive characteristics or features

The wildness and high ecological value of the sand dunes and dune grassland are likely to be sensitive to coastal dynamics, shoreline management responses and changes in management regimes. The small scale traditional coastal villages and farms are sensitive to medium to large scale expansion of modern housing and industry. The open and expansive views to a largely undeveloped horizon both inland and offshore are sensitive to large scale wind energy development. The feeling of tranquillity arising from 'naturalness' of the landscapes is sensitive to unsympathetic development and noisy land uses. The organic form and line along the coastal edge could be sensitive to hard realignment and changes in sea level and coastal dynamics.

Vision

The conservation and enhancement of the wild qualities and ecological value of the dunes and grassland will be a priority, while at the same time the public's freedom to roam will be retained. There will be co-ordinated management for the dynamic dune system and its ecosystem. There will be more interpretation to foster greater respect of the dune system. Important habitats such as those for Natterjack toads will be maintained and any opportunities to increase the extent of or enhance the unique features of the dune system will be taken. Impacts linked to coastal erosion will be monitored and managed. New development will be sensitively sited and designed to reflect the tranquility of the dunes and beaches. Recreational uses will be monitored and managed to minimise negative impacts.

Changes in the Landscape

Over the next 10 – 20 years this landscape could be subject to the following changes or issues:

Climate Change and Coastal Processes

- As this is a dynamic and changing seascape natural processes will continue to change the character of the area. The threat of sea level rise and increased storminess as a consequence of global warming is likely to increase pressure for more coastal defences in some areas. In some places the dunes are eroding, in others they are accreting. Evidence suggests that erosion may be related to the loss of sediment supply due to the extraction of sand and gravel or the introduction of hard coastal defences in adjacent stretches of coast. However, erosion could increase due to climatic changes and become severe in some areas resulting in direct biodiversity loss.

Management Practices

- Practices such as tipping, heavy grazing and intensive mowing have tended to tame the wild qualities of the dune grasslands and their ecological interest.
- Scrub can establish quickly in areas that are not appropriately managed by mowing or grazing.

Development

- Energy infrastructure including tidal, large scale wind and pylons could be considered in the adjacent estuary and bay areas. These could have significant effects on natural coastal processes, habitats and the open seascape character.
- Major and medium scale development in adjacent landscapes including coastal defences, energy infrastructure, communication masts and caravan site extensions could compromise the remote qualities of these areas.
- Minor detractors include engineered urban detailing to features such as streams, fences and walls along with neglect of traditional features such as cobblestone banks.
- Development in nearby settlements could influence the need for changes to shoreline management that could influence the character of the area.

Access and Recreation

- Damage due to recreational pressures including wear and erosion by vehicular access, spoiling by litter, fly

tipping, unauthorised camping, fires and disturbance to wildlife.

- Damage to the dune system from the misuse of four wheel drive vehicles, quads, mussel fishers and unrestricted parking is very evident here, leaving the shingle shore and vegetation in an unmanaged state. Plover, tern, oystercatcher and other protected birds are also vulnerable.
- The planned implementation, over the next decade, of enhanced access to the whole of the English coast could result in some disturbance to wildlife in sensitive locations at certain times of the year.
- Coastal access will be improved to support the coastal open access programme. Space will be needed to allow the route to shift in this dynamic area and in response to any future coastal erosion.
- Some poorly designed facilities such as informal car parks can visually detract.
- Large scale tourism developments could detract from the open qualities of the area.

Guidelines

Climate Change and Coastal Processes

- Support the reinforcement of the dune system as a coastal defence and favour 'soft' accretion solutions for coastal protection in favour of less compatible 'hard' coastal defences.
- Ensure coastal defence schemes are carefully planned and based on knowledge of local erosion and deposition processes along the seacoast. They should also minimise visual intrusion, avoid indirect damage to adjacent coast and selectively protect the most valuable wildlife and historic sites.

Management Practices

- Manage dune grassland for low key recreation by reducing grazing levels in areas that are overgrazed, and maintaining a suitable grazing regime, to maximise species diversity and prevent scrub encroachment.
- Encourage the reclamation of improved pasture to dune grassland with restriction of fertiliser and herbicide applications.
- Encourage improvement of species diversity on golf courses and extent of 'rough' grassland by controlled grazing, relaxing mowing regimes, reducing the use of fertilisers and herbicides.
- Conserve and manage traditional features such as

cobblestone banks to strengthen a sense of place. Minimise the intrusion of incongruous features such as fences, tracks, hard coastal defences, engineered drains and channels that compromise the remote and wild qualities of the dunes.

Development

- Ensure large scale development does not cause significant harm to natural coastal processes and habitats.
- Protect the periphery of dunes from the intrusion of large scale development within neighboring landscape types.
- Development should be sited and designed to maintain an open and undeveloped shoreline character.
- Ensure that new facilities are carefully sited and designed to minimise their landscape and visual effects on this undeveloped and natural seascape.
- Provide and replace vehicle restraints to a robust and consistent design sympathetic to the dune character.
- In the Solway Coast Area of Outstanding Natural Beauty, ensure that housing development and associated stone walls utilise traditional materials from locally sustainable sources. Cobble removal from the shoreline should be managed to prevent a negative change in character and changes in function as a natural sea defence.
- Prohibit extraction of sand and gravel from the foreshore.

Access and Recreation

- Coastal access footpaths, areas and facilities should be improved and developed to be compatible with the undeveloped and natural character of this sub type. In line with the Marine and Coastal Access Act consideration should be given to routing coastal access footpaths along appropriate sea defence structures.
- In areas where coastal access will introduce new routes, appropriate access management may be needed in sensitive locations at certain times of the year, to minimise disturbance to wildlife.
- Information should be provided to encourage responsible enjoyment of these undeveloped and natural seascapes, and the importance of not damaging the dune system with unauthorised vehicles.
- Develop coordinated programmes of recreation management including repair and maintenance of

facilities, regulating public access, repairing grassland damaged by vehicles and pedestrians, removal of rubbish, interpretation of wildlife interest.

- Consider relocation of existing car parks away from dune grassland, particularly where these are exacerbating erosion problems and are poorly screened.
- Improve the appearance of facilities such as car parks, picnic areas, toilet blocks, signs, footpath links and boundary treatments. Unify designs in an appropriate coastal vernacular avoiding urban municipal characteristics and using high quality durable materials.