



11d7 St. Bees Head

(Technical report by Jacobs)

Policy area: 11d7 St Bees Head

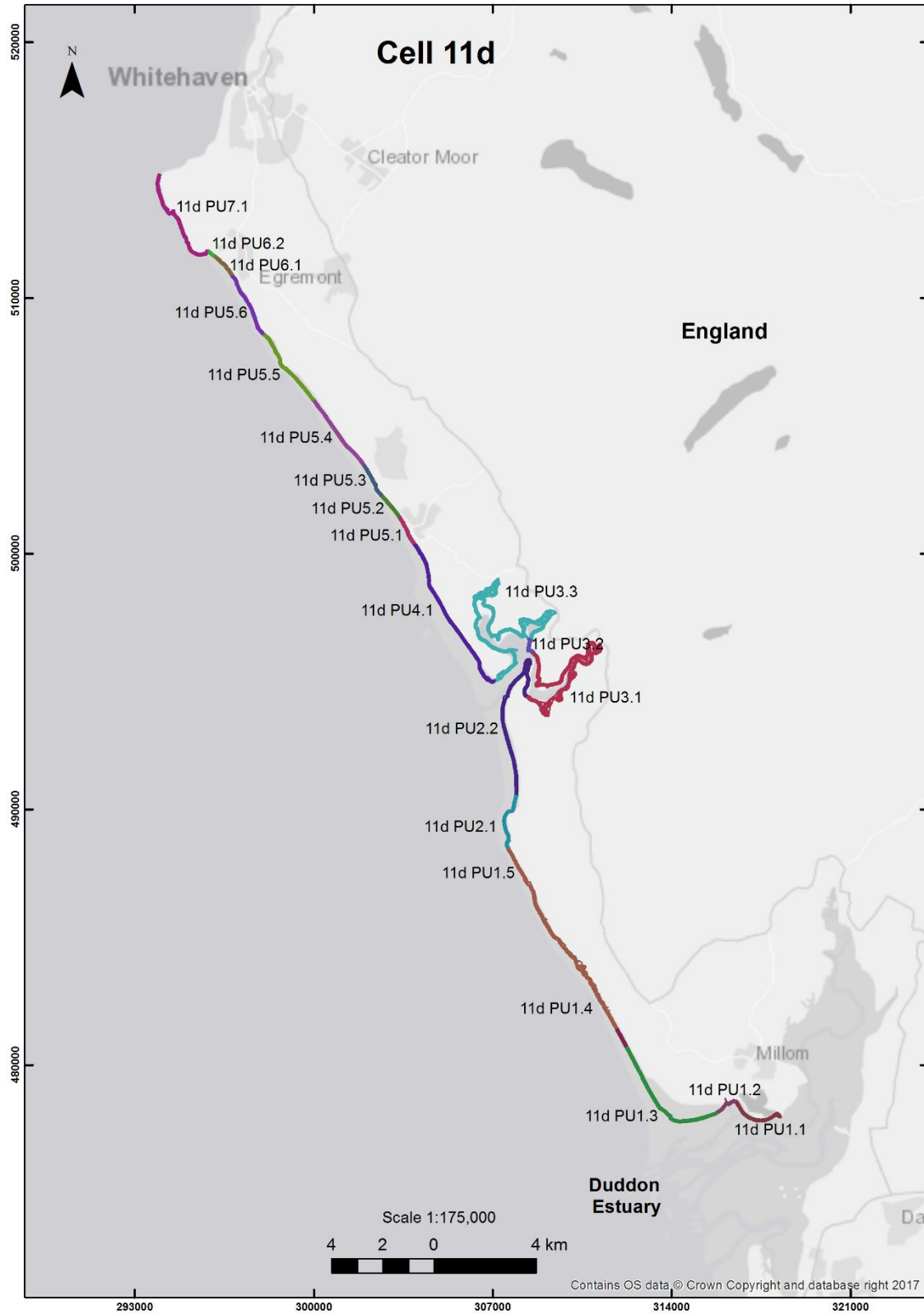


Figure 1 Sub Cell 11d Hodbarrow Point to St Bees Head Location Plan of policy units. Baseline mapping © Ordnance Survey; licence number 100026791.

1 Introduction

1.1 Location and site description

Policy units:	11d7.1: St Bees Head
Responsibilities:	Copeland Borough Council
Location:	The policy area covers the headland of St Bees Head, between North Head and South Head.
Site overview:	<p>The cliffs along this frontage reach heights of 90 m in places and expose St Bees Triassic Sandstone. Although the cliffs are fairly resistant, there are lines of weakness along the vertical joints, bedding planes and fault lines. Erosion tends to be in the form of cliff falls, as large blocks become detached from the main cliff face. These blocks are gradually broken down by waves with material moved alongshore to feed adjacent frontages. The sheer cliffs are fronted by a narrow shore platform, which is strewn with rock debris, derived from erosion of the cliffs. Fleswick Bay is a small embayment which has formed between the headlands of South Head and North Head; here a small, narrow shingle beach overlies the rock platform within an embayment. This bay can only be reached by boat or by foot.</p> <p>The cliffs fall within the St Bees SSSI and are of great geological interest for their sedimentary structures and exposures and the number of different habitats they support. The sheer cliffs provide an important breeding site on the coast of Cumbria for a variety of colonial seabirds, including guillemots, fulmar, kittiwake, razorbill, cormorant, shag and herring gull. The cliffs are also the only breeding site on the entire coast of England for black guillemots.</p> <p>The headland of St Bees Head is defined as a Heritage Coast; heritage coasts were established to conserve, protect and enhance the natural beauty of the coastline, together with their supported habitats and heritage features.</p> <p>The nearshore zone was designated as a Marine Conservation Zone in 2013, covering the Cumbria Coast, to protect the diversity of habitats found along the headland and to retain its natural character.</p> <p>The cliff top is undeveloped, characterised by a patchwork of arable fields. St Bees Lighthouse lies around over 100 m from the cliff edge and is therefore not expected to be at erosion risk during the strategy lifespan (100 years).</p> <p>There is potential for material released from the cliffs to be gradually moved alongshore to feed adjacent frontages, once it becomes broken down by waves. Any fine sediments are, however, likely to be lost offshore due to the exposed nature of this shoreline.</p>

1.2 Current SMP policy

The policy details for this policy area are shown in Table 1, taken directly from the SMP2 (Halcrow, 2011).

Table 1 Current SMP policy for policy area 11d7.

Location		Policy and Approach (from 2010)		
		0-20 years	20-50 years	50-100 years
11d7.1	St Bees Head	No active intervention – Continued natural erosion of designated cliffs.	No active intervention – Continued natural erosion of designated cliffs.	No active intervention – Continued natural erosion of designated cliffs.

2 Appraisal of non priority units

There is only one unit within this policy area, and this has been defined as a non priority unit.

A light touch review has been undertaken of current SMP recommendations, taking into account conclusions from option appraisals for the adjacent frontages, where appropriate.

2.1 11d7.1 St Bees Head

2.1.1 Existing approach to flood and coastal erosion risk management

The existing SMP2 policy along this frontage is No active intervention from the short term, to “allow continued natural evolution of the cliffs”. The primary justification for the policy was that continued erosion maintains the geological SSSI and value of the Heritage Coast.

There are no defences present along this coast (Figure 2).



Figure 2 St Bees Head. Aerial photograph © North West Regional Monitoring Programme, 2015.

2.1.2 Strategy considerations

Since the SMP2 was adopted, the intertidal and nearshore zone of the Cumbria coast has been designated as a Marine Conservation Zone (MCZ) (designated in 2013) to protect a wide range of habitats found within the site, including honeycomb worm reefs and rock habitats.

The status of the SSSI sites are favourable and the SMP policy is in accordance with the management principles for this designation, which is to allow “coastal processes to proceed freely”, which is considered essential for the “constant renewal of geological exposures and for maintaining the range of habitats and associated species” (Natural England Views About Management (VAM) statement, 2005¹).

¹ The VAM is available online: <https://designatedsites.naturalengland.org.uk>

The cliff top is undeveloped and used for arable farming. There is a public right of way that runs along the cliff edge; the route of the new England Coast Path follows this along most of the frontage (the route is now open, but not yet available for public use; anticipated summer or autumn 2018).

There is a proposal by West Cumbria Mining for a new underground or undersea mine, together with an above ground enclosed processing and storage area on the former Marchon Industrial site, located inland from the coast. The proposed mining areas lie offshore of this frontage. The EIA prepared in support of the proposals did not identify any direct impacts on this frontage but did recognise that the direct impacts on the marine and intertidal environment relate to subsidence of the seabed following mining works; the impact of which has not been fully assessed (West Cumbria Mining, 2017). The EIA includes recommendations for further study and monitoring.

On average, erosion of the cliffs is very slow, less than 0.15 m per year (Halcrow, 2002). There is potential for isolated rock falls, which could cause a few metres of erosion but only affect very short stretches of coastline. The SMP estimated that cliffs along this stretch are likely to erode less than 15 m by year 100 (Halcrow, 2011) and will not be significantly affected by climate change: still water levels will simply lie further up the cliff face, with resultant submergence of the shore platforms.

2.1.3 Discussion

There have been no significant changes to coastal risks and therefore there is no justification for any change in policy, which supports the SSSI designation for this frontage. Therefore, the recommendation would be for the policy to remain.

Future actions are:

- Safe siting of the England Coast Path, the route of which runs along the cliff top. Although anticipated erosion rates along this stretch are extremely low, there remains some potential for cliff falls that could cause a few metres of erosion along isolated stretches; the proposals do recognise the potential need to roll back the route to follow the cliff line (see <https://www.gov.uk/government/publications/england-coast-path-in-the-north-west-of-england>). The route should therefore be monitored.

3 References

Halcrow (2002). Futurecoast. CD produced as part of the Futurecoast project for Defra.

Halcrow (2011). North West England and North Wales Shoreline Management Plan SMP2. North West & North Wales Coastal Group. Main report and appendices.

West Cumbria Mining (2017). Cumbrian Metallurgical Coal Project. Woodhouse Colliery Planning Application Environmental Statement.