

East Devon Local Plan – Topic Paper – CCF- 005

Adaptation and Resilience to Climate Change: Coastal Change

Regulation 19 consultation version 01



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Cover photo: looking west along beach from Seaton towards Beer – taken by planning policy team.

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1 Introduction

- 1.1 This topic paper sits behind and helps to explain the content and evolution of the Publication draft of the East Devon Local Plan¹. There may be new versions of this topic paper as plan making progresses into and through plan Examination.
- 1.2 The local plan designates Coastal Change Management Areas² (CCMAs) in East Devon for the first time and this paper explains how they have been defined. It also considers the implications of the subsequent publication of new National Coastal Erosion Mapping (NCERM)³.

¹ [regulation-19-plan.pdf](#)

² This is an area identified in plans as likely to be affected by physical changes to the coast. Such changes include erosion, coastal landslip, permanent inundation or accretion. [Flood risk and coastal change - GOV.UK](#)

³ [New national flood and coastal erosion risk information - GOV.UK](#)

2 Coastal change in East Devon

- 2.1 The coastline is a dynamic system being continually impacted by a range of forces and influences. Coastal change is the term used to describe any permanent physical change to the shoreline caused by erosion, landslip, permanent inundation (flooding) or coastal accretion. It is anticipated that climate change will create increasing pressure on coastal and estuarine environments through accelerating rates of sea level rise and an increased number of storms.
- 2.2 The East Devon coastline extends from Devonshire Head (just west of Lyme Regis) along the English Channel and up the Exe Estuary to the mouth of the River Clyst (west of Ebford). It includes beaches, often backed by steep rocky cliffs, together with estuaries and their important inter-tidal habitats. There are numerous environmental and heritage designations that include a World Heritage Site, a Ramsar Site, a Special Protection Area, a Special Area of Conservation, Sites of Special Scientific Interest and Marine Conservation Zones. The integrity of both the Dorset and East Devon World Heritage Site and the Sidmouth to West Bay SAC depend on the continuation of coastal processes. The East Devon coast is also home to many people and businesses, some of which could be vulnerable to the effects of coastal change.
- 2.3 East Devon District Council (EDDC) is a coastal protection authority responsible for the delivery of beach management plans and any associated coastal protection works and the preparation of shoreline management plans⁴. EDDC is responsible for the maintenance of coastal defence assets at Beer, Exmouth, Seaton and Sidmouth⁵. Beach Management Plans relate to Exmouth, Seaton and Sidmouth/East beach⁶.
- 2.4 The Shoreline Management Plan (SMP) that covers East Devon is produced by the South Devon and Dorset Coastal Advisory Group⁷. SMP16 Durlston Head to Rame Head⁸ includes the East Devon coast and identifies the most sustainable approach for managing the risk from coastal flooding and erosion over three epochs: short (0 to 20 years); medium (20 to 50 years) and long (50 to 100) term. It guides the planning and management of coastal defences and identifies areas of the coast for different approaches.

⁴ [Flood and coastal erosion: risk management authorities - GOV.UK](#)

⁵ [Our Coastal Defences - East Devon](#)

⁶ [Beach Management Plans - East Devon](#)

⁷ [Shoreline Management Plan - East Devon](#)

⁸ [Durlston Head to Rame Head SMP16 | Shoreline Management Plans](#)

2.5 In East Devon the SMP sets out four general approaches⁹:

a. No active intervention – do not defend.

This is where no defences are present, and it would be technically, economically, or environmentally unsustainable to introduce defences due to their impact on other communities, or on sites protected for their environmental importance. This applies mainly to parts of the coast that adjoin areas of countryside (except for the western part of the Budleigh Salterton). Sections of coast identified for no active intervention include from Orcombe Rocks (Exmouth) to Budleigh Salterton West; the Otter spit: Otterton Ledge, Budleigh Salterton to Chit Rocks, Sidmouth; Salcombe Hill to Beer; Beer to Seaton Hole; Axe Estuary spit and from Haven Cliff west to Monmouth Beach (Lyme Regis).

b. Hold the existing defence line - maintain/replace.

This is where protection is currently provided by coastal defence structures or managed beaches, and the intention is to retain a defence along approximately the current alignment. This will involve replacing defences when needed. Defence type, method and standard of protection may be modified over time. This applies to the Exe Estuary (from the lower Clyst to Exmouth Spit) and the main coastal settlements (from Exmouth Pier to Orcombe Rocks; Sidmouth; Beer; Seaton west to Axe Estuary spit; Axe Estuary Seaton West; Axe Estuary (Mouth Breakwater to Axmouth North).

c. Managed realignment - set back defence.

This is where the intention is to defend elsewhere in flood plain inland from present shoreline or allow erosion/recession to a defined alignment. New defences might be constructed at that new location if needed. This may involve the creation of inter-tidal habitat. This applies to the Otter Estuary (where the Lower Otter Restoration Project¹⁰ has delivered floodplain reconnection and habitat creation that has helped to reduce flood risk within the estuary) and part of the Axe Estuary (Axmouth North to Seaton North).

d. Managed realignment - slow erosion.

This is where measures might be introduced or permitted that slow, not stop, erosion of cliffs or other features at the back of the shoreline. This applies to River Sid and Sidmouth East and in the medium and long term epochs for Seaton Hole to Seaton West.

⁹ Further details are given in areas 5, 6, 7 and 8 of [Durlston Head to Rame Head SMP16 | Shoreline Management Plans](#) including a summary management approach for the relevant areas from 6A23 to 6B07

¹⁰ [Home: Lower Otter Restoration Project](#)

- 2.6 The SMP policy can change between epochs and in East Devon this happens in Seaton Hole to Seaton West, where the policy is to hold the line in the short term and managed realignment (slow erosion) in the medium and long term.

3 National policy and guidance

- 3.1 The national approach to planning for coastal areas can be summarised as avoiding development in vulnerable areas and not increasing the rate of coastal change. It emphasises working with natural processes to adapt to coastal change rather than trying to prevent it. The National Planning Policy Framework¹¹ (NPPF) states that local planning authorities should identify a Coastal Change Management Area (CCMA) in any area likely to be affected by physical changes to the coast¹².
- 3.2 The purpose of a CCMA is to identify areas where special policies and actions are likely to be needed to deal with the anticipated physical changes to the coast. Development in a CCMA will only be appropriate if it can be shown to have wider sustainability benefits and be safe over its planned lifetime without having an unacceptable impact on coastal change, compromising designations or undermining the character of the coast.
- 3.3 The National Planning Guidance¹³ (NPG) states that a CCMA should be defined where rates of shoreline change are likely to be significant over the next 100 years, taking account of climate change. They will not normally need to be defined where the accepted shoreline management plan policy is to hold the line. The NPG gives guidance on what type of development is likely to be acceptable in a CCMA in areas likely to be affected by coastal change in the short (up to 20 years), medium (20 to 50 years) and long term (50 to 100 years)¹⁴. A vulnerability assessment may be required to demonstrate whether development is appropriate in a CCMA and the NPG gives guidance on what issues this should address¹⁵. There may be circumstances in which existing development and infrastructure should be relocated to areas at less risk of coastal change¹⁶.
- 3.4 The NPG advises local planning authorities defining CCMA's to use the best available evidence¹⁷. Sources can include the Shoreline Management Plan¹⁸, coastal strategies (including beach management plans) and the Environment Agency national coastal erosion risk map¹⁹.

¹¹ All references to the NPPF are to the December 2023 [version](#), under which the local plan will be examined, unless otherwise stated.

¹² Paragraph 171 of [\[ARCHIVED CONTENT\] \[ARCHIVED CONTENT\] National Planning Policy Framework - GOV.UK](#)

¹³ Paragraph 72 of [Flood risk and coastal change - GOV.UK](#)

¹⁴ Paragraph 73 of [Flood risk and coastal change - GOV.UK](#)

¹⁵ Paragraph 74 of [Flood risk and coastal change - GOV.UK](#)

¹⁶ Paragraph 12 of [Flood risk and coastal change - GOV.UK](#)

¹⁷ Paragraph 72 of [Flood risk and coastal change - GOV.UK](#)

¹⁸ [Durlston Head to Rame Head SMP16 | Shoreline Management Plans](#)

¹⁹ [Sign In](#)

4 Evidence for Coastal Change in East Devon and how CCMA lines have been drawn

- 4.1 Work on understanding and mapping changes to the coast to inform the local plan started with involvement in a partnership project with the Environment Agency, Natural England, the Marine Management Organisation, North Devon and Torridge Councils working with the Coastal Processes Research Group in the School of Biological and Marine Sciences, University of Plymouth²⁰. The project partnership was formed to develop a robust methodology to predict likely rates of coastal change. This was felt to be necessary because, although CCMA's were first suggested by Central Government in 2010, very few had been designated nationally and these varied in scope. It was thought that that may have been because there was limited guidance on how a CCMA should be defined with no consistent methodology for identifying areas at risk at a detailed level, rather than the broad brush approach of the SMP's. Although the SMP was considered to be a useful starting point, it was noted that it was dated and did not incorporate future climate change impacts or the more detailed work necessary to understand the complex East Devon coastal system.
- 4.2 Partnership work on a methodology was completed in 2020 and led to an East Devon specific report defining the areas likely to be affected by coastal change for inclusion in a CCMA²¹ that was completed in 2022. The study defines a number of different lines that indicate the potential extent of physical changes to the coast in three epochs (short, medium and long term). Additional lines indicate a buffer²² for each of the epoch lines, which stretch further inland.
- 4.3 In accordance with national guidance, CCMA's have not been defined for stretches of coast where the SMP policy is to hold the existing defence line. CCMA's have not been drawn around flood lines related to permanent inundation as this is an issue best dealt with through the separate flood risk policy²³. For areas of the coast where the SMP policy is 'no active intervention' or 'managed realignment', CCMA's have generally been drawn to include the 100 year epoch plus buffer defined by the University of Plymouth.²⁴ This includes the largest area shown to be potentially affected by coastal change and represents a precautionary approach so that longer term issues can be identified and taken into account in planning decisions. The areas designated as CCMA's are shown on the interactive local plan map²⁵.

²⁰ [Application of Coastal Change Management Areas \(CCMA's\) for coastal adaptation to climate change impacts in SW England - SWEEP](#)

²¹ [cfl-007-ccma-methodology.pdf](#)

²² The calculations for determining buffers are set out in section 4 of [cfl-007-ccma-methodology.pdf](#)

²³ [regulation-19-plan.pdf](#) Strategic Policy AR01: Flooding

²⁴ [cfl-007-ccma-methodology.pdf](#)

²⁵ [EDDC Local Plan 2020 to 2042](#)

- 4.4 There is one location, to the east of the River Sid in Sidmouth, where the CCMA does not follow the University of Plymouth line in the Regulation 19 local plan. The CCMA defined in the Regulation 18 local plan consultation²⁶ had used the 'Plymouth' line for the whole of the East Devon coast. This showed very significant erosion rates east of the River Sid with a considerable number of houses included in the CCMA in the Regulation 18 local plan. Several responses were received²⁷ expressing concern about the extent of the CCMA, including that it was far larger than the recession line defined in the Sidmouth Beach Management Plan²⁸.
- 4.5 Following the Regulation 18 consultation, a further option for the Sidmouth Beach Management Plan (BMP) was agreed²⁹. This includes constructions designed to slow the rate of erosion from the existing levels, on which the University of Plymouth work is based. It is anticipated that the work will be complete by 2030. The Sidmouth and East Beach Outline Business Case (BMP OBC) included a plan³⁰ that shows a much slower retreat rate than the 'Plymouth' study. Whilst this rate of erosion is still higher than the 'original' BMP erosion rate³¹, there are no projected erosion lines following implementation of the BMP so future monitoring will be needed to inform a new erosion rate.
- 4.6 The 5th of November Strategic Planning Committee³² agreed to draw this part of the CCMA boundary in accordance with the BMP OBC line. This is in accordance with the principle of considering recent evidence from detailed studies in the designation of a CCMA. It also reflects the fact that the Plymouth work was based on past erosion rates and did not take account of the proposed works at Sidmouth that will slow the rate of erosion.
- 4.7 Most recently, the SMP's have been updated with maps that show the new National Coastal Erosion Risk Mapping (NCERM), which provides the most up to date national picture of coastal erosion risk for England³³. The relevant map³⁴ shows the coastal erosion risk projection climate change (upper end), 2105 to be very similar to that of the Sidmouth BMP OBC (see appendix A for plans from various sources that show differing erosion rates). This provides further evidence to justify the reduction in the size of the CCMA to the east of the River Sid in the Regulation 19 local plan.

²⁶ [Draft Local Plan Consultation - Nov 2022 to Jan 2023 - East Devon and sidmouth.pdf](#)

²⁷ Summarised from page 353 of [accessible-reg-18-consultation-feedback-report-spring-2023.pdf](#)

²⁸ [Sidmouth Beach Management Plan: Frequently Asked Questions - East Devon](#)

²⁹ [Outline Design, General Arrangement](#)

³⁰ See Figure 7: Sidmouth East Beach historic and predicted erosion lines on page 11 of [Outline Business Case Template for non EA Risk Management Authorities](#)

³¹ [Microsoft Word - Coastal Processes Baseline v16 \(final\).docx](#)

³² [1. Local Plan redrafted chapters 5 Nov mtng.pdf](#)

³³ [Shoreline management plans - GOV.UK](#)

³⁴ [Beer Head to Salcombe Hill 6A34 | Shoreline Management Plans](#)

5 Potential implications of new National Coastal Erosion Risk Management Mapping (NCERM)

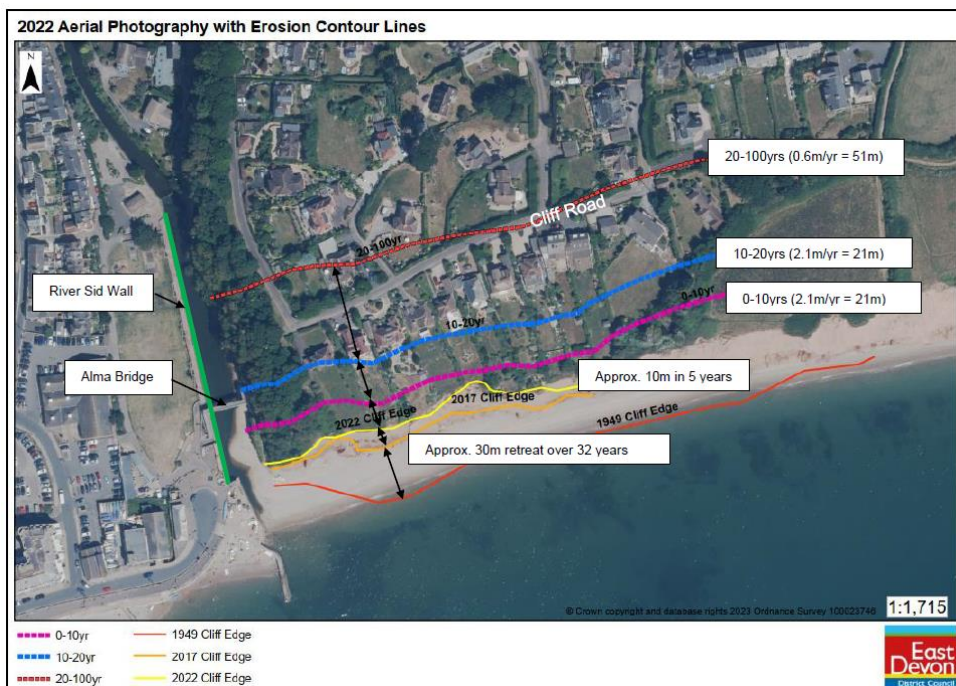
- 5.1 The CCMA is based on a robust methodology devised specifically to define a CCMA in East Devon. There are alternative evidence sources which show different erosion lines and, in the case of the area west of Sidmouth, alternative evidence has been used to define the CCMA as set out in paragraphs 4.4 to 4.7.
- 5.2 The new NCERM mapping was published just before the Regulation 19 consultation. The NCERM mapping is the most up-to-date evidence of coastal change at a national level. It does not 'supersede' the CCMA lines in the plan, but is an additional source of data that should be taken into account before the CCMA lines are finalised through the local plan examination.
- 5.3 There are some parts of the coast where the CCMA is less extensive than the coastal risk projections shown in the NCERM and in other areas the opposite is the case. For example, the CCMA does not affect Peak Hill Road, west of Sidmouth, but it is shown to be affected in the NCERM (relevant extracts are included in Appendix B). Another potentially significant difference is west of Seaton, where less housing is shown to be affected by coastal change than in the CCMA (also shown in Appendix B).
- 5.4 The implications of this new source of evidence will need to be considered before the plan is submitted. One option would be to take a 'precautionary' approach and redraw the CCMA line to follow the NCERM line where this is further inland than the CCMA defined in the Regulation 19 plan. This would require additional consultation because land would be subject to the more restricted policies that apply in a CCMA. An alternative approach would be to keep the CCMA lines the same as in the Regulation 19 plan.

6 Appendix 1 Map extracts showing alternative erosion lines for land east of the River Sid, Sidmouth

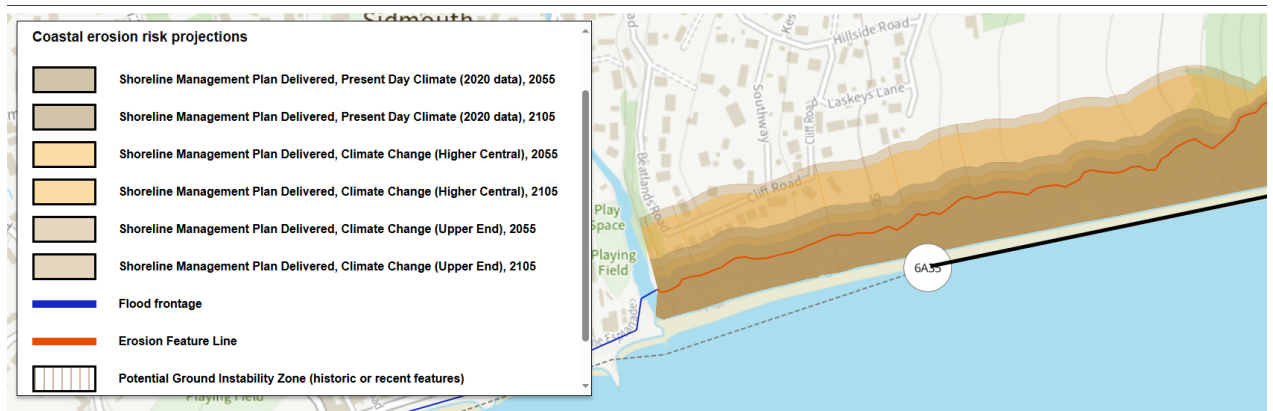
6.1 Map 1 Extract from CCF02 – CCMA [methodology](#)



Map 2 Extract from Sidmouth [BMP OBC](#)



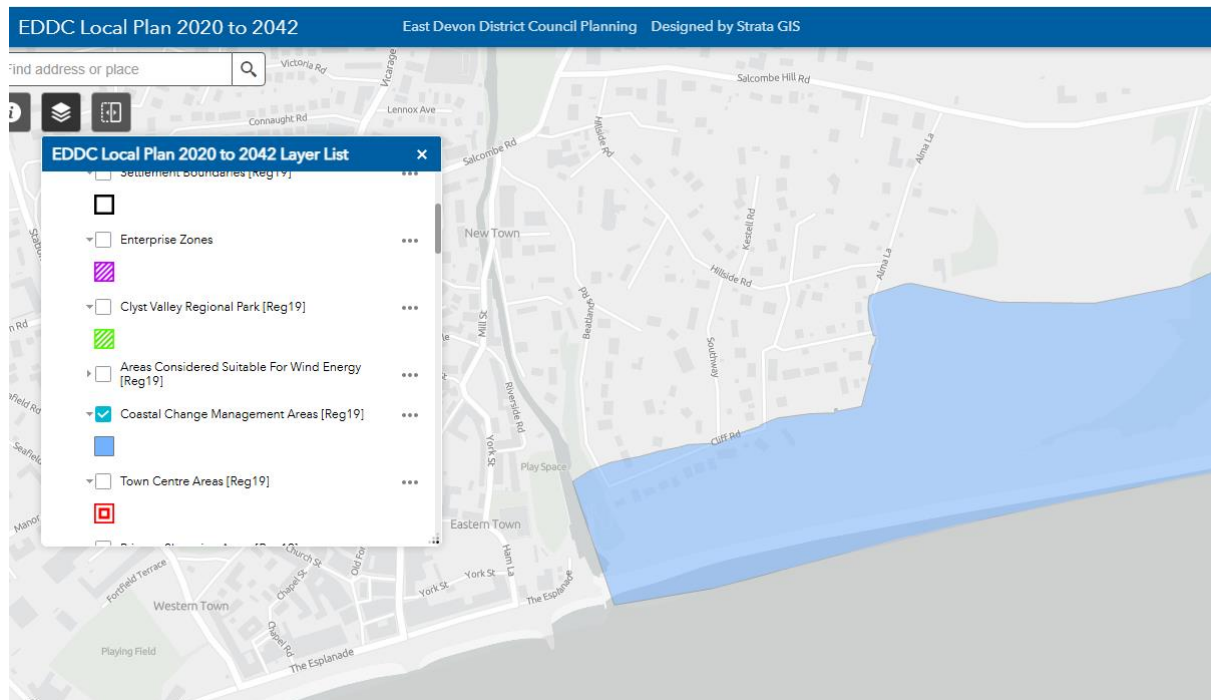
6.2 Map 3 Extract from SMP map [Beer Head to Salcombe Hill 6A34 | Shoreline Management Plans](#)



6.3 Map 4 Extract from [sidmouth-and-east-bmp_options-appraisal-report_final_23-01-2017.pdf](#)



6.4 Map 5 Extract from Regulation 19 local plan map with only CCMA layer visible



7 Appendix B Comparison maps of CCMA and NCERM

7.1 Map 6 Land west of Sidmouth CCMA



7.2 Map 7 Land west of Sidmouth NCERM



7.3 Map 8 Land west of Seaton CCMA



7.4 Map 9 Land west of Seaton NCERM

