



Environmental Statement
CHAPTER 2 – Strategic Background

Langstone FCERM Scheme

January 2025

Langstone FCERM Scheme Environmental Statement

Chapter 2

Strategic Background

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2. Strategic Background

2.1 Introduction

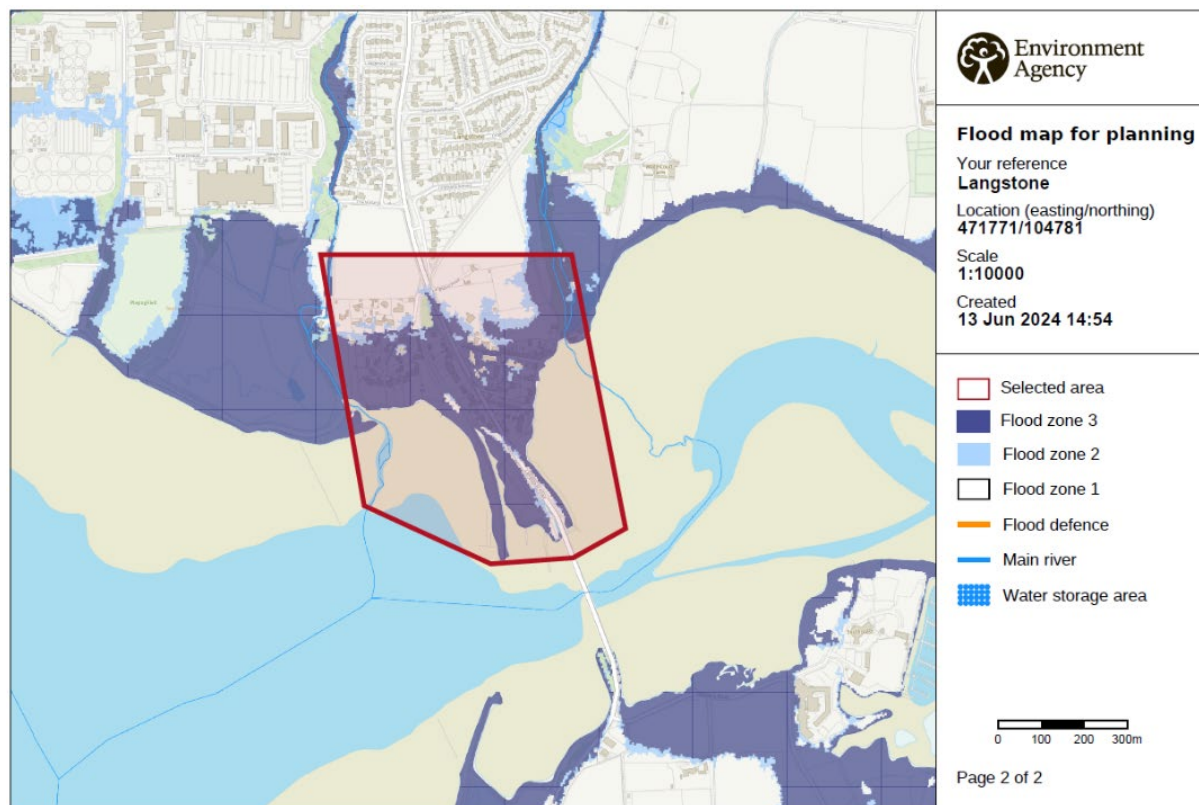
This chapter outlines the need for the proposed Langstone FCERM Scheme, detailing the approved Strategy and Plans which cover this frontage and assets at risk from flooding.

Flood risk modelling highlights that for the present day there are 73 residential properties at risk of flooding from a 1 in 200 year (0.5% Annual Exceedance Probability (AEP) tidal flood event in Langstone. There are also four non-residential properties at risk of flooding from the same return period event.

The core scheme refers to the least cost scheme alignment which protects the largest number of properties and critical infrastructure inclusive of the A3023 (the only highway access to Hayling Island) and heritage assets. This includes 53 residential and 4 business properties which will be better protected through implementing this scheme.

A further 6 residential properties not currently at risk but will become at risk by 2040 due to climate change will also be better protected within the 50 year lifetime of this scheme.

Figure 2.1 shows the present day Environment Agency Flood Zones 2 and 3 under a 1 in 1000 and 1 in 200 year Do Nothing scenario.



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Figure 2.1: Flood risk around the Langstone FCERM scheme area (source <https://flood-map-for-planning.service.gov.uk/>).

The current defences along the frontage consist of a mixture of concrete walls, concrete block revetments and masonry quay walls which are in a poor and degraded condition. Currently maintained by HBC, Hampshire County Council (HCC) and other private owners, the majority of present defences have residual lives of less than five years (without any maintenance) and therefore, without a Scheme at Langstone, the existing community will continue to be at significant flood and erosion risk.

The proposed Langstone FCERM Scheme will also provide opportunities for:

- Support to the local economy and businesses.
- Preservation of the local landscape, heritage and culture for future generations to come.
- Improvements for coastal access and recreational opportunities.

2.2 The North Solent SMP

The North Solent Shoreline Management Plan (SMP) (NFDC, 2010) covers the coastline between Selsey Bill, in the east and Hurst Spit, in the west, including Portsmouth, Langstone and Chichester Harbours. The SMP was adopted by Havant Borough Council (HBC) in 2010 and sets out the sustainable coastal defence policies over the next 100 years. The Langstone FCERM scheme is covered by the SMP policy unit 5A18 Wade Lane to Southmoor Lane. **Figure 2.2** below shows the proposed scheme and the SMP policy unit 5A18. The approved policy for the unit is Hold The Line (HTL) with further studies required to consider the option of managed realignment at Southmoor in the medium and longer term (**Table 2.1**) (NFDC, 2010). Southmoor is outside the Langstone FCERM scheme extent, therefore the relevant SMP policy for the scheme is HTL.

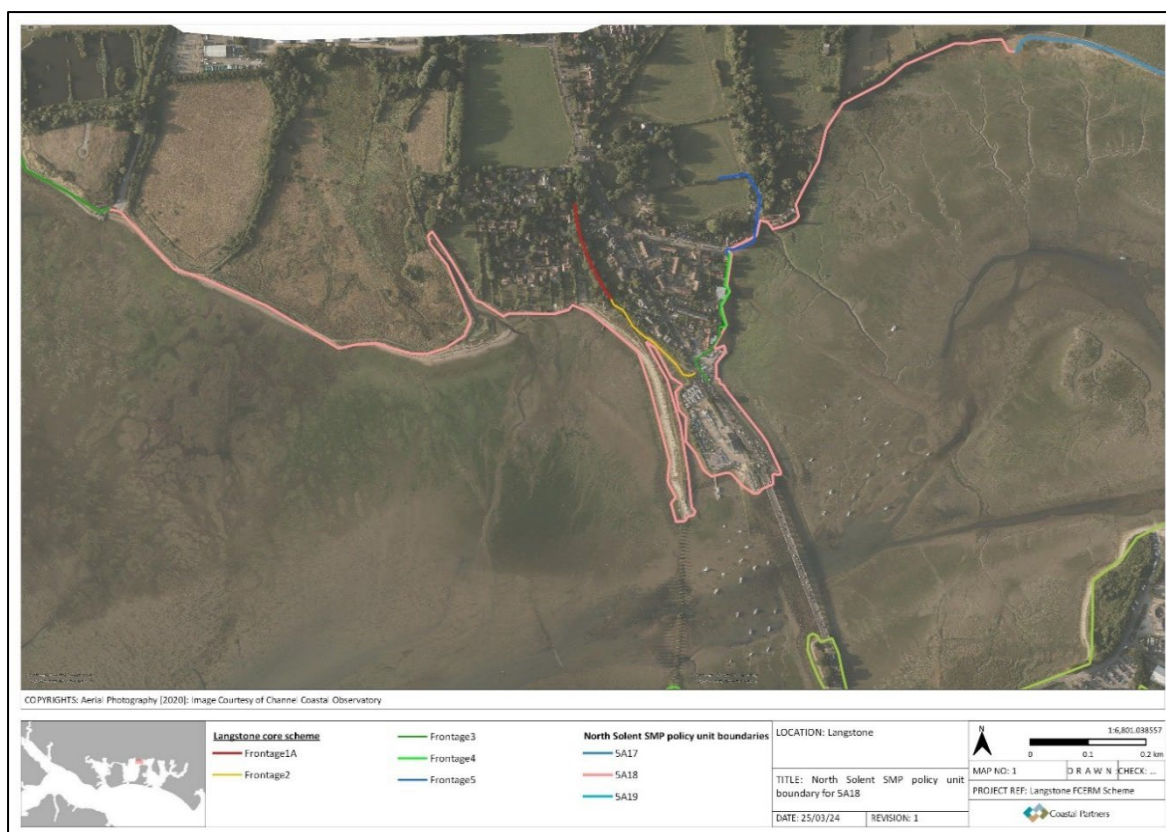


Figure 2.2: North Solent SMP policy unit 5A18 Wade Lane to Southmoor Lane.

Table 2.1: SMP policy option for policy unit 5A18 Wade Lane to Southmoor Lane.

North Solent SMP Policy Unit	Portchester Castle to Emsworth Flood and Erosion Management Strategy	Epoch 1 Short Term	Epoch 2 Medium Term	Epoch 3 Long Term
		2005 - 2025	2025 to 2055	2055 to 2105
5A18 Wade Lane to Southmoor Lane	Langstone and Southmoor	Hold the Line	Hold The Line	Hold the Line
			Further detailed studies are required which consider whether managed realignment may occur at Southmoor.	

2.3 The Portchester to Emsworth Coastal Strategy

The Portchester Castle to Emsworth Flood and Erosion Management Strategy (PEMS) (Environment Agency, 2012) was approved in 2013 and covers 27 km of northern coast of Portsmouth, Langstone and Chichester Harbours. It divided the coastline into nine sub-frontages, the proposed Langstone FCERM scheme is covered by sub-frontage Langstone and Southmoor from PEMS.

PEMS looked at how the policies from the second round of SMPs covered by the North Solent SMP (NFDC, 2010) could be implemented at a more local level and identified areas where work may be required over the next 100 years. PEMS confirmed the North Solent SMP policy for Hold the Line (HTL) and the Strategy's recommendations were adopted by Havant Borough

Council (HBC) in 2013 for improvements to the defences at Langstone through a phased approach.

2.3.1 Details of the approved strategic options

The PEMS recommended upgrading the existing defences to increase the current Standard of Protection (SoP) to 1.3 % Annual Exceedance Probability (AEP) (1 in 75 year) sustained for 100 years. **Table 2.2** below provides an outline description of the approved strategic option for the sub-frontage recommended by PEMS (Environment Agency, 2012).

Table 2.2: The PEMS approved strategic option for the Langstone sub-frontage

PEMS Sub-Frontage	Description of Approved Strategic Option
Langstone and South Moor	Hold the Line: Improve defences in year 10, 1.3% SoP with Managed Realignment at South Moor (Yr 20+). The preferred option is to upgrade the existing defences (hold the existing line) along Langstone West and East, by increasing the crest height of the existing defences to reduce the risk of flooding to residential properties and the approach to Langstone Bridge (the only mainland road link to Hayling Island), and hold the line maintain at South Moor for 10 years whilst a further study concludes the importance of this area for high level roost function function).

2.3.2 Strategic Environmental Assessment

The PEMS Strategic Environmental Assessment [SEA] (Environment Agency, 2011) and Habitats Regulations Assessment [HRA] (Environment Agency, 2012) were all completed in 2011/2012 to establish the environmental acceptability of the preferred strategic policy options described in **Table 2.2**.

The PEMS SEA concluded that overall, the strategic environmental impacts of the PEMS are positive. However, these documents also confirmed that the adoption of the policies would have some adverse environmental impacts. HTL policies will have adverse effects on the SPA/SAC/Ramsar (through continuation of ‘coastal squeeze’ processes and loss will also occur during construction due to footprint losses), but that PEMS supports the longer-term integrity of these designated sites by meeting the habitat replacement (for coastal squeeze and knock-on losses) requirements identified through the NS Solent SMP and secured through the Habitat Compensation and Restoration Programme (HCRP), which will maintain the integrity of the designated sites. The PEMS HRA concluded that HTL was the best option to best manage coastal and defended habitat needs to maintain potential high level roost sites. It justified HTL for imperative reasons of overriding public importance (IROPI) based on the provision of clear and demonstrable environmental benefit providing flood protection to people and property in Langstone Village.

2.4 Current Approach to FCERM Management

A number of existing FCERM assets are in place along the Scheme frontage, including a mixture of concrete walls, concrete block revetments and masonry quay walls. Many of these assets are reaching the end of their life and are inadequate to provide the required standard of protection.

The scheme has been broken down into frontages as shown in **Figure 2.3** below.

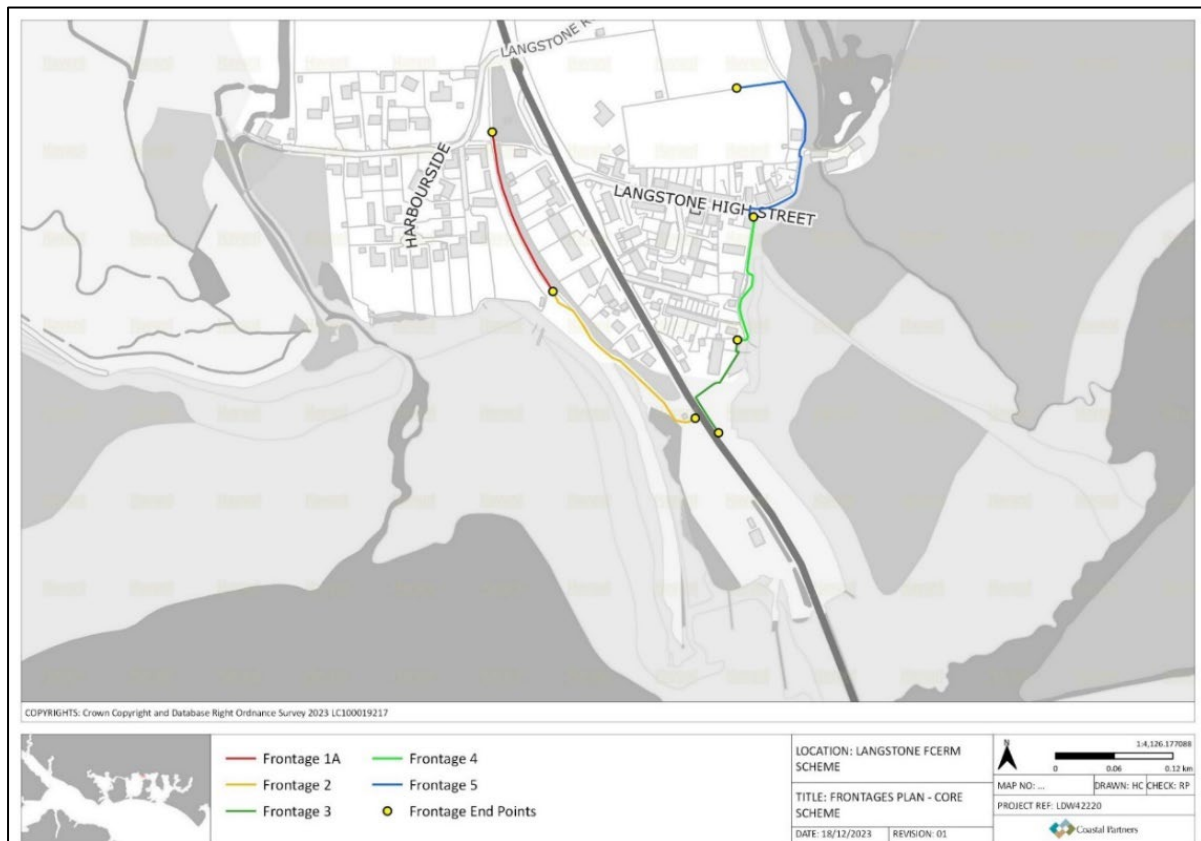


Figure 2.3: Scheme frontages.

The following section provides details of the current defences along each frontage (AECOM, 2018) (ESCP, 2018).

2.4.1 Frontage 1A

Frontage 1 A includes the northern section of the National Cycle Route 2 (Billy Line), a public footpath between the A3023 opposite the Ship Inn car park to Mill Lane. The current defence comprises of a raised earth embankment that follows the line of the existing Billy Line cycleway.

2.4.2 Frontage 2

Frontage 2 includes the southern section of the National Cycle Route 2 (Billy Line), a public footpath between the A3023 opposite the Ship Inn car park to Mill Lane. The current defences along this frontage include part of the shingle spit and earth embankment to the rear shingle of the beach.

2.4.3 Frontage 3

The current defences along this frontage are varied including masonry walls and concrete block work walls. There is a 100m vertical masonry wall in front of the Ship Inn car park walkway which acts as a formal defence, a 5m slipway providing access to the foreshore, a vertical concrete blockwork wall forming a parapet wall approximately 0.6m high in front of the Ship Inn and 12m concrete apron with garden fencing adjacent to the Ship Inn.

2.4.4 Frontage 4

The current defences along this frontage include vertical brick walls with footpath on top set back from garden walls. Setback garden walls form informal (de-facto) secondary defences.

2.4.5 Frontage 5

The current defences along this frontage include a 100 m vertical stone wall in front of the Royal Oak and various setback walls forming informal (de-facto) setback defences. This frontage includes a slipway providing access to the foreshore and part of the frontage has no formal defences.

2.5 Scheme Objectives

The aims of the Langstone FCERM Scheme are as follows:

- To reduce the impacts of flooding and erosion on residents, businesses, the local economy, and the A3023 at Langstone.
- To develop a detailed design that is affordable and represents best value for money, ensuring the optimal use of resources.
- To develop a detailed design which is acceptable to the employer, statutory and non-statutory consultees, wider stakeholders, and residents and to have engaged with the local community.
- Design buildable coastal defences that are sympathetic to the heritage and landscape of the area and achieve wider benefits such as place-making, regeneration and improved amenity.
- Enhance and improve the environment and provide a minimum of 10% biodiversity net gain through the scheme.
- Actively seek efficiencies in the design, construction and operation of the completed scheme.

The objectives of the proposed scheme are to address the current flood and erosion risk and are listed below:

- To construct new coastal defences providing a present-day Standard of Protection (SoP) of 0.5% AEP from tidal still water for Langstone, including a freeboard for uncertainties. This SoP exceeds the minimum recommendation by the Portchester to Emsworth Strategy (1.3% AEP) at the outset (the SoP will decline over time as a function of sea level rise).

- To reduce the erosion risk along the Frontages.
- To provide a scheme that is fully compliant with current standards, guidance, and legislation relevant to the United Kingdom (UK) jurisdiction.
- To construct new coastal defences for 50-year design life with minimal maintenance and operation requirements.

2.6 References

AECOM (2018) Langstone FCERM Short List Options Report.

ESCP (2018) Langstone Flood and Coastal Erosion Risk Management Scheme Asset Condition Report. February 2018.

Environment Agency (2011) Portchester to Emsworth Coastal Management Strategy PEMS Strategic Environmental Assessment. July 2011.

Environment Agency (2012) Portchester to Emsworth Coastal Management Strategy Habitats Regulations Assessment. September 2012.

New Forest District Council (2010) North Solent Shoreline Management Plan Available at: [Shoreline Management Plan - Shoreline Management Plan \(northsolentsmp.co.uk\)](http://northsolentsmp.co.uk) [Accessed 27 March 2023].