

## North Solent Shoreline Management Plan

### Appendix E: Issues and Objective Evaluation

#### Consideration of potential inter-tidal habitat creation sites

## Introduction

The North Solent area is atypical compared to other sections of coast nationally, due to the complexities that pertain to the region, such as,

- 80% of shoreline has a European or International nature conservation designation as Special Areas of Conservation (SACs), Special Protection Areas (SPAs) and or Ramsar sites;
- 80% of shoreline is defended with structures and/or beach management;
- the majority of the existing defences have European and International nature conservation designated site(s) landward and seaward of the line of defence;
- over 60% of the shoreline is privately owned or maintained; and
- there is a paucity of habitat creation opportunities as determined in the Solent Dynamic Coast Project

Maintaining or improving the existing defences must comply with environmental legislation and objectives, including biodiversity targets set under the EU Habitats and Birds Directives, Ramsar Convention and DEFRA High Level Target 4 (DEFRA, 2006), in order to maintain favourable conservation status of the designated sites, and a coherent network of coastal habitats.

The need for a strategic approach for identifying and quantifying habitat creation opportunities for compensating for losses of inter-tidal habitat caused by coastal squeeze resulting from the maintenance of flood and coastal defences was identified in advance of the North Solent SMP commencing.

The Solent Dynamic Coast Project (SDCP) was conducted to provide technical advice and to inform development of the North Solent SMP to comply with the requirements of the EU Habitats Directive 92/43/EEC and EU Birds Directive 79/409/EEC. The focus was on inter-tidal mudflat and saltmarsh habitats as these form the largest expanse of coastal habitats across the north Solent that are immediately under threat from climate change, sea level rise and coastal management decisions. The consequent effect to transitional freshwater habitats (primarily coastal grazing marsh) was also considered. The main objectives were to;

- quantify the amount of inter-tidal coastal squeeze over the next 100 years that requires replacement habitat
- identify sites where inter-tidal habitat creation is topographically possible
- quantify the amount of inter-tidal habitat creation sites that could potentially offset inter-tidal coastal squeeze over the next 100 years
- undertake preliminary ranking and assessment of the feasibility of conducting managed re-alignment relative to other impacting variables
- develop a region-wide framework of potential inter-tidal habitat mitigation and compensation sites

In order for the SMP and the proposed policies to comply with the various environmental legislation and targets, extensive discussions were held with Natural England, the Environment Agency, the CSG, and the Environment Group. The advice provided by Natural England, aims to provide a consistent and precautionary approach when considering potential inter-tidal habitat creation opportunities. It is deliberately at a broad and high level, and does not consider the site specific features and function of the transitional freshwater habitats that may be affected if inter-tidal habitat creation opportunities are realised. Their advice fully considers the results and supporting information provided by an independent ecological consultant, commissioned by the Environment Agency.

Results from the North Solent Wader and Wildfowl High Water and Terrestrial Habitat Use: Workshop Outcomes (Cox 2009a) stated that each of the roost sites were of equal importance and that the network of roost sites needed to be maintained. Additional work looking at just the roost sites protected by existing defences identified the role of 3 sites (Farlington Marshes, Thorney Island and Lymington to Keyhaven Marshes) that are key to the functioning of SPA designated areas.

The habitat compensation requirements assessments (Cox 2009b) identified the designated features and function at each potential realignment site, and likely timescales for recreating the designated features and functions that would be affected by a realignment of defences.

At sites where a proposed inter-tidal habitat creation site would result in realignment of existing defences, and would result in a loss of transitional freshwater habitat (e.g. coastal grazing marsh) Natural England recommend that existing defences continue to be maintained for the first two epochs (i.e. for 50 years), as it has been determined it would take 50 years to re-create the necessary complex Ramsar habitats and assemblages that would be affected. The managed realignment could only progress and be realised once the compensatory measures were recreated, established and functioning. This approach is in line with previous Natural England advice in 'Managing change at the coast (2006).

The latest SMP guidance recommends that coastal Local Authorities and the Environment Agency plan for a dynamic coast where it may not be sustainable to maintain habitats in their current locations. However, a Hold The Line policy could be proposed, as long as it is sustainable to do so, while allowing the necessary time for the compensatory measures to be delivered, on a 'like-for-like' basis. It is recognised that there may be a conflict between what is sustainable and the length of time taken to deliver compensation. The timeframe for recreating the features and function affected through inter-tidal habitat creation should be revised following more detailed assessments and investigations, such as through Coastal Defence Strategies, Regional Habitat Creation Programme studies and other site-specific investigations.

Habitat compensation through Imperative Reasons of Overriding Public Interest (IROPI) can be 'secured' through the Regional Habitat Creation

Programme (RHCP) for SMP's and Coastal Defence Strategies but should be delivered before an adverse effect is actually incurred.

In order to determine the environmental and potential compensatory habitat creation opportunities in a consistent and auditable manner, the advice from Natural England and the Environment Agency Biodiversity Team has been closely followed and applied. This broad scale advice fully considered and supported the results from the North Solent Wader and Wildfowl High Water and Terrestrial Habitat Use: Workshop Outcomes and the habitat compensation requirements assessments, undertaken by an independent ecological expert.

The Potential Managed Realignment sites that have been identified as individual Policy Units, due to significant scale of inter-tidal habitat creation opportunities and potential feasibility, are presented in Table 1. Table 2 summarises potential sites for localised Managed Realignment, regulated tidal exchange (RTE) or environmental enhancement (EE); these sites are considered as caveats and not individual Policy Units, as other policy drivers have been identified for the overriding policy for that particular frontage.

Please note that:

a) Land ownership and land use are considered key factors at the proposed sites identified but are not considered as policy drivers at this stage. Discussions with landowners and land managers through discussions in advance of and during public consultation will be essential in order to determine viability and feasibility of the proposed habitat creation opportunities.

The North Solent SMP recognises that there are private individuals and organisations that have rights or powers to protect their own property and to continue to maintain existing defences on a like-for-like basis without the need for planning permission, provided it does not constitute 'development' of any kind. The rights of private owners apply and remain regardless of the SMP policies proposed at public consultation and in the Final SMP.

Where the objective-led approach indicates potential managed re-alignment or environmental enhancement behind privately managed defences, the owner's willingness or otherwise to consider the proposed policy will need to be recorded through the public consultation and landowner's wishes will be reflected in the preferred policy in the final SMP.

A policy of managed realignment on a private frontage will only be achievable and implemented with land owner's consent. No managed realignment, or environmental enhancement opportunities will be imposed or implemented in these circumstances without the landowner's full consent.

b) Natural England, in conjunction with the Environment Agency, are currently reviewing their advice, particularly with respect to objectives and time frames for recreating inter-tidal and transitional freshwater habitats.

c) The Solent Dynamic Coast project was purely a desktop study, focusing on inter-tidal habitats, designed to inform the North Solent Shoreline Management Plan (SMP), and SMP's Appropriate Assessment.

The main objective of the project was to quantify inter-tidal loss and identify potential for re-creation at a strategic level across the north Solent. In doing so, a method was devised based on approximate benefit-cost calculations to categorise potential inter-tidal habitat creation sites into possible managed re-alignment sites, possible abandonment sites (No Active Intervention) and possible hold the line sites. The project was able to estimate a balance of inter-tidal loss versus the potential for inter-tidal gain. The requirement for replacement EU designated freshwater habitat was also quantified.

The work was undertaken by the key statutory authorities. However, this study did not involve any decision making on the part of any statutory authority. The options suggested in this study are there to facilitate future debate and decision making as part of the SMP process. No landowners or wider stakeholders were consulted as part of the project. Detailed discussions will be required with landowners before any site management changes. These views will be sought as part of the SMP process. The SMP process will integrate all aspects of sustainable development, social, economic as well as environmental, prior to any final decisions on coastal management being made. The basis of the framework applied in the Solent Dynamic Coast project was therefore technical and does not reflect a formal proposal to change the management.

North Solent Shoreline Management Plan – Appendix E Issues and Objective Evaluation –  
 Consideration of potential inter-tidal habitat creation sites

SDCP Reference	SMP Reference	Policy Unit	Proposed Policy Scenario			Area of inter-tidal habitat creation (ha)	Area of transitional freshwater habitat required if MR realised (ha)
			0-20 years	20-50 years	50-100 years		
Policy Key HTL = Hold the Line; HTRL = Hold the Realigned Line; MR = Managed Realignment							
Medmerry	Medmerry	5A01	MR	HTRL	HTRL	347	0
Fishbourne_a	Fishbourne	5A06	HTL	HTL	MR	21.3	21.3
West Chidham_b	Chidham	5A08	MR	HTL	HTL	37	0
Nutbourne	Nutbourne	5A10	MR	HTRL	HTRL	25.6	25.6
Thorney Island_a	Marker Point	5A14	MR	HTRL	HTRL	63.3	63.3
Thorney Island_b	The Deeps west	5A15 west & 5A12 east	HTL	HTL	MR	190	190
Farlington marsh	Farlington Marshes	5A20	HTL	HTL	MR	74	74
Northney Farm	Northney Farm	5AHI02	MR	HTRL	HTRL	46	46
Verner Common_a	Verner Common	5AHI03	HTL	HTL	MR	6 (Verner Common a); 2.4 (Verner Common a); 10.2 (Pounds Marsh) & 44 (Tournerbury)	63
Verner Common_b							
Tournerbury Marsh							
Beaulieu_Warren & Warrens_NOre_b	Beaulieu River	5C18	HTL	HTL	MR	193 (Beaulieu_Warren) & 44.3 (Warrens_NOre_b)	237.3

Table 1 Potential Managed Realignment sites, identified as individual Policy Units

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 Consideration of potential inter-tidal habitat creation sites

SDCP Reference	SMP Reference	Policy Unit	Proposed Policy Scenario			Area of inter-tidal habitat creation (ha)	Area of transitional freshwater habitat required if MR realised (ha)
			0-20 years	20-50 years	50-100 years		
Policy Key HTL = Hold the Line; HTLNPFA = Hold the Line (No Public Funding Available); MR = Managed Realignment							
West Wittering	West Wittering	5A04	HTL	HTL	HTL (MR)	13.6	13.6
Horse Pond	Horse Pond	5A05	HTLNPFA	HTLNPFA (MR Ella Nore)	HTLNPFA (MR Horse Pond)	5.8	5.8
Ella Nore	Ella Nore					5.1	0
East Chidham_a	East Chidham	5A07	HTL (MR East Chidham & Bosham)	HTL	HTL	4.7	0
Bosham_b	Bosham					4.8	0
Warblington	Warblington	5A17	HTL (MR Conigar)	HTL	HTL (MR Warblington)	4.8	0
Conigar	Conigar					4.1	0
Southmoor	Southmoor	5A18	HTL	HTL (MR)	HTL	13.9	13.9
West Northney	Stoke	5AHI09	HTL	HTL	HTL (MR)	7	0
Stoke	Common					4.6	0
Titchfield Haven	Titchfield Haven	5B03	HTL (EE)	HTL	HTL	170	0
Lym reedbeds	Lymington River reedbeds	5C21	HTL (MR)	HTL	HTL	35.6	35.6
Avon Water	Avon Water	5C22	HTL (MR Saltgrass Lane & RTE Avon Water)	HTL	HTL	40.7	0
Saltgrass Lane	Saltgrass Lane					15.9	15.9

Table 2 Potential Managed Realignment (MR), regulated tidal exchange (RTE) or environmental enhancement (EE) sites identified as caveats and not individual Policy Units

Table 3 details the other potential managed realignment or environmental enhancement sites identified in SDCP that have been considered in the SMP as unfeasible due to other policy drivers that require a specific policy to be proposed.

<b>SDCP Reference</b>	<b>Area of inter-tidal habitat creation (ha)</b>	<b>Reason not considered as caveat sites in SMP</b>
Chaldock Point	Naturally occurring	Changes in habitat and conditions are already naturally occurring
Itchenor	11.5	Located behind defences that will be maintained (e.g. residential properties)
Birdham	25	Located behind Chichester Marina, so RTE not feasible or practical
Apuldram	10.7	Located behind defences that will be maintained (e.g. strategic sewage plant)
Fishbourne_b	9.8	Located behind defences that will be maintained (e.g. residential properties)
East Chidham_c	4.7	Freshwater site that currently floods, but part of flood storage area
East Chidham_b	16.6	Uncertainty with accuracy of the flood risk mapping; local knowledge of the site identified for potential MR suggests it is terraced and inter-tidal habitats would not readily establish
Prinstead	8.6	Located behind defences that will be maintained (e.g. residential properties)
Thorney Island_c	11.9	Potentially included within the Thorney Island b proposed MR Unit
Portchester Rec	8.1	Located behind defences that will be maintained (e.g. residential properties and open space)
Wicor	1.0	Site within proposed NAI frontage, so may evolve naturally as conditions change
Gillies	2.2	Located behind defences that will be maintained (e.g. residential properties)
North Common	4	Located behind defences that will be maintained (e.g. residential properties)
Gutner Point	Naturally occurring	Changes in habitat and conditions are already occurring
Selsmore	3.7	Located behind defences that will be maintained – residential properties
Newtown	1.6	Site within proposed NAI frontage
Fleet	2.3	Site within proposed NAI frontage
Hook Park	46	Not currently defended so will naturally evolve as conditions change
Hamble Valley_a	Naturally occurring	Changes in habitat and conditions are already occurring

Hamble Valley_b	Naturally occurring	Changes in habitat and conditions are already naturally occurring. Site within proposed NAI frontage, so may evolve naturally as conditions change
Hamble Valley_c	Naturally occurring	Changes in habitat and conditions are already naturally occurring. Site within proposed NAI frontage
Test Valley	Naturally occurring	Changes in habitat and conditions are already naturally occurring. Site within proposed NAI frontage
Stanswood Valley	13.7	Site within proposed NAI frontage
Stansore Point	15.4	Site within proposed NAI frontage
Darkwater	Naturally occurring	Changes in habitat and conditions are already naturally occurring. Site within proposed NAI frontage
Beaulieu river a	Naturally occurring	Changes in habitat and conditions are already naturally occurring. Site within proposed NAI frontage
Beaulieu river b	Naturally occurring	Changes in habitat and conditions are already naturally occurring. Site within proposed NAI frontage
Warrens NOre_a	12.3	Located behind defences that will be privately maintained (e.g. residential properties)
Keyhaven_Pen_a	24	Located behind defences that will be maintained maintained (e.g. residential properties)
Keyhaven_Pen_b	101	Located behind defences that will be maintained (e.g. residential properties)

Table 3 Sites identified in Solent Dynamic Coast Project but discounted due to other factors and policy drivers