



Environmental Statement

CHAPTER 1 - Introduction

Langstone FCERM Scheme

January 2025

Langstone FCERM Scheme Environmental Statement

Chapter 1

Introduction

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1. Introduction

This Environmental Statement (ES) has been prepared to support the Planning Permission and Marine Licence applications for the proposed Langstone Flood and Coastal Erosion Risk Management (FCERM) Scheme.

The Langstone coastline was divided into seven frontages for the development of the detailed design, making up the Core Scheme (Frontages 1A, 2, 3, 4 and 5) and the Additional Scheme (Frontage 1B and 6). However, at the current time, funding has only been secured for the Core scheme of works comprising Frontages 1A, 2, 3, 4 and 5. Therefore, this ES and the associated consent applications that it supports, are for the Core Scheme works only, as shown in **Figure 1.1**.

This document supports two key permitting regimes for the Langstone FCERM Scheme:

- Issue of Planning Permission by Havant Borough Council (HBC); and
- Issue of a Marine Licence by the Marine Management Organisation (MMO).

The proposed Scheme will be carried out under the powers of Section 14 under the Land Drainage Act 1991.

Details on the scheme objectives are provided in **Chapter 2 (Strategic Background)**. The overall aims and objectives of the Langstone FCERM Scheme are:

- To reduce the risk of flooding and erosion on residents, businesses, the local economy, and the A3023 at Langstone.
- To construct new coastal defences that provide a present-day Standard of Protection (SoP) of 0.5% Annual Exceedance Probability (AEP) (1:200-year event).
- To construct new coastal defence with a 50-year design life with minimal maintenance and operational requirements.
- To construct new coastal defences that are sympathetic to the heritage and landscape of the area, whilst also achieving wider benefits such as place making, regeneration, and improved amenity.

The legislative content of this Scheme is further explained in **Chapter 6 (Legislative Framework)**.

1.1 Location of the Scheme

The Langstone FCERM Scheme covers approximately 1 km of coastline in Havant, Hampshire. The Scheme extends from SU 7147 0494 in the west to SU 7191 0501 in the east. The Scheme will improve the standard of flood defences and coastal erosion protection against tidal flooding to the A3023 road link to Hayling Island and the village of Langstone.

A summary description of each frontage (Core Scheme) is provided overleaf. Further detailed design information can be found in **Section 3 of Chapter 3 of the ES (Proposed Scheme)**.

- **Frontage 1A: Billy Line Upper Section.** The flood defence comprises of a raised earth embankment and follows the line of the existing Billy Line cycleway (a National Cycle Route 2 cycleway). The existing cycle path is to be upgraded to a new 3-metre-

wide shared path for pedestrians and cyclists which sits on top of the flood embankment.

- **Frontage 2: Billy Line Lower Section.** The design for Frontage 2 consists of a sheet-piled wall. Raised earth embankments are included where the defence alignment needs to cross existing utility pipes. The existing cycle path is to be upgraded to a new 3-metre-wide shared path for pedestrians and cyclists which sits adjacent to the sheet-piled wall. Frontage 2 ties in with Frontage 1A and the existing higher levels on the A3023 road.
- **Frontage 3: A3023 road to 9 Coastguard Cottages (The Look Out).** Frontage 3 consists of a continuous flood defence that largely comprises of four flood defence structures. These structures include the A3023 flood wall, Ship Inn car park raised earth bund, Ship Inn flood wall and Ship Inn Annex flood wall. A flood gate is also to be provided between the Ship Inn and the Ship Inn Annex flood walls.
- **Frontage 4: The Look Out to No. 24 Langstone High Street (the Winklemarket).** Frontage 4 consists of new reinforced concrete flood walls in front of the existing garden walls that run along the frontage. The existing footpath is to be upgraded to a new 1.5-metre-wide footpath through the construction of a new quay wall. Two flood gates (at Green Cottage and the Winklemarket) and one demountable flood barrier (at the pedestrian access adjacent to the Watch Tower) are proposed to ensure robust continuity of the defence.
- **Frontage 5: Langstone High Street to the field north of the Royal Oak.** Frontage 5 consists of a continuous flood defence that largely comprises of five structures. These structures include the High Street flood gates, the Royal Oak flood wall, the allotment flood wall, the Footpath flood wall that runs west of the Mill Pond, and an earth embankment in the field north of the Royal Oak. Demountable flood barriers will be provided between the section transitions. In addition, flood gates will be provided at the Allotment and No.21 High Street.

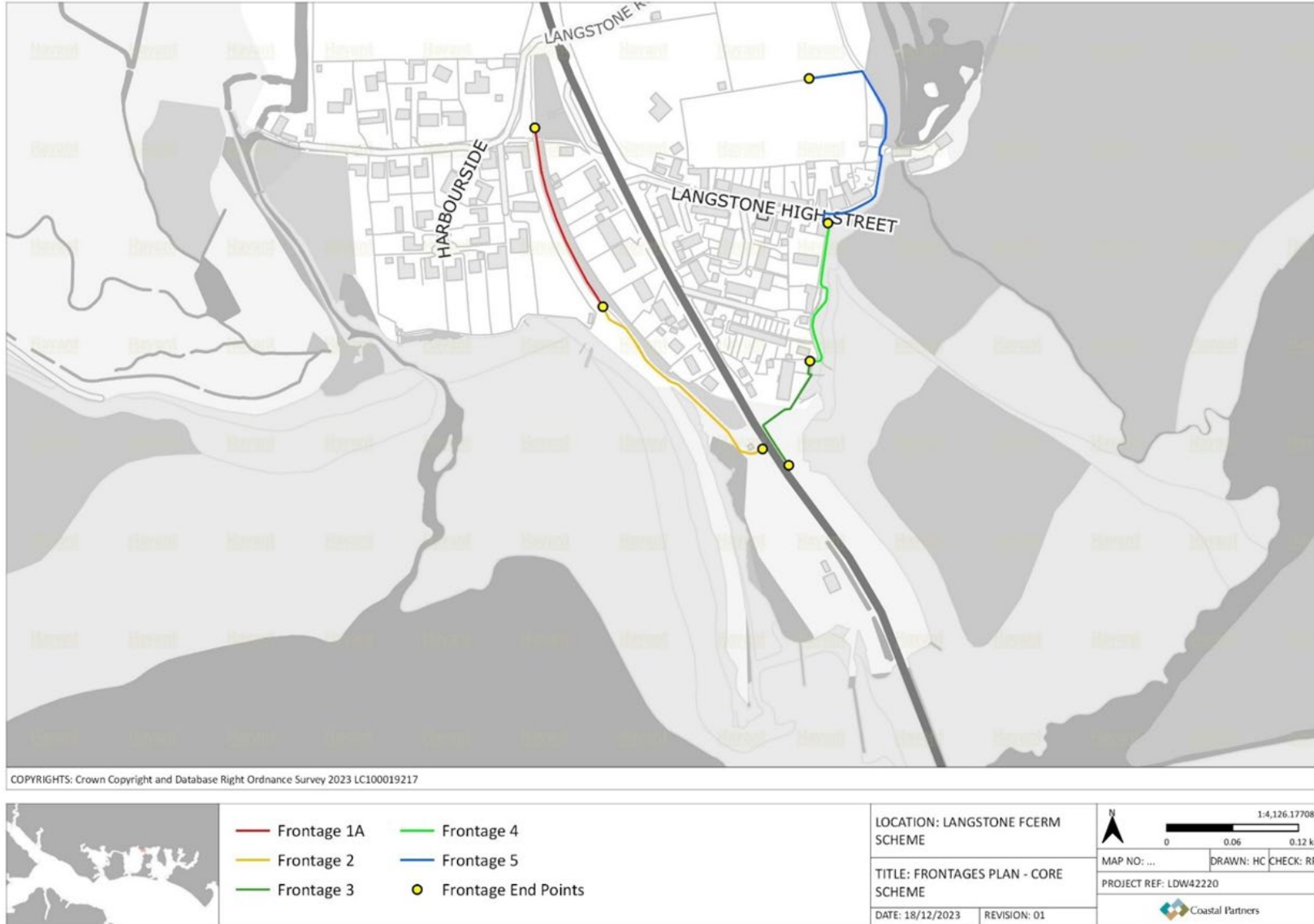


Figure 1.1: Langstone FCERM Scheme – Frontages Plan

1.2 The Environmental Impact Assessment Process

This Environmental Statement (ES) presents the results of the Environmental Impact Assessment (EIA) for the proposed scheme, for which approvals are now being sought.

Projects and plans that are likely to have significant effects on the environment must be subject to an environmental assessment, prior to their approval as per the EIA Directive (2014/52/EU). This ES has been produced in accordance with the 'The Marine Works (Environmental Impact Assessment) Regulations 2007 (as amended) and the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 Scoping Opinions (see **Appendix A**) received from the MMO and HBC in 2021. The Scoping Opinions summarises the responses of our environmental stakeholders, including our Statutory Nature Conservation Advisors (Natural England), the Environment Agency, Cefas and Historic England to the outline designs of the Langstone FCERM Scheme. The Scoping Opinions concluded that the proposed development constitutes a project that falls under:

- Planning - Schedule 2, Infrastructure Project, 10 (m) of the Town & Country Planning (Environmental Impact Assessment) Regulations 2017 (as amended)
- Marine - under Schedule A2 (69) of The Marine Works EIA Regulations 2007 (as amended)

The Scoping Opinions made a number of requests to be actioned as part of the development of this ES and the supporting licence and consent applications. A summary of the Scoping Opinions and the topics scoped into further assessment has been included in **Table 1.1**, together with cross references to where they have been actioned in this ES; N.B. this information relates to the core scheme only.

The main purpose of this ES is to:

1. Identify and reduce impacts of the proposed scheme on the wider environment and its interest features and identify opportunities to improve the environment through the scheme's delivery.
2. Fulfil the requirements of the following EIA legislation:
 - a. The Marine Works (Environmental Impact Assessment) Regulations 2007 (as amended).
 - b. Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (as amended).
3. Describe the proposed scheme.
4. Document how the EIA process has influenced the design and the proposed construction methods and enabled potentially significant impacts to be avoided.
5. Provide a description of the option selection process, how alternatives to the proposed scheme were considered and the reasons for promoting the preferred options.
6. Identify, assess, and evaluate potentially significant impacts resulting from the construction of the proposed scheme. Then determine the significance of the predicted residual environmental effects.
7. Identify appropriate mitigation and management measures required to avoid, reduce or remedy adverse impacts identified through the assessment process.

Table 1.1: Summary of Scoping Opinion requests for consideration in the EIA

Topic	Impact pathways scoped in/requests for consideration	Chapter in ES/document where further information is provided
Strategic Background	ES should include risk of major accidents and disasters relevant to the project (including those caused by Climate Change)	Chapter 2 (Strategic Background)
Proposed Scheme	The ES should ideally include a detailed map of the footprint of the proposed works superimposed on an elevation base map to understand the works with respect to the water elevation. This chapter would benefit from photos from each element of the scheme at each location.	Chapter 3 (Proposed Scheme)
Consideration of Alternatives	The ES must include a full assessment of all available options, including alternatives. The assessment must make it clear why the chosen options for the scheme have been selected.	Chapter 4 (Consideration of Alternatives)
Legislative Framework	The ES should reflect the principles for consideration of biodiversity of the 'England Biodiversity Strategy' published by Defra and identify how the developments effects on the natural environment will be influenced by climate change, and how ecological networks will be maintained.	Chapter 6 (Legislative Framework)
Designated Sites and Features	The ES must assess the impact of all phases of the proposal on protected species (for example, pinnipeds (seals), cetaceans (including dolphins, porpoises whales), fish (including seahorses, sharks and skates), marine turtles, birds, marine invertebrates, bats, etc.) and Habitats and Species of Principal Importance (s41 NERC Act 2006).	Chapter 7 (Designated Sites), Chapter 8 (Marine Ecology), Chapter 9 (Terrestrial Ecology), Chapter 10 (Ornithology), Appendix C (HRA) and Appendix D (WFD).
Marine Ecology (inc. Benthic Ecology, Fish and Shellfish and Marine Mammals)	Impact pathways scoped in: • Temporary loss and/or disturbance of intertidal sediment habitats and saltmarsh vegetation • Permanent loss of intertidal habitat under the footprint of new defence structures and due to coastal squeeze • Underwater noise and vibration during construction (benthic ecology, marine mammals and fish)	Chapter 8 (Marine Ecology)
Terrestrial Ecology	Impact pathways scoped in: • Damage to TPO woodland via construction of the set-back floodwall • Disturbance to bat species roosting and feeding in the area • Disturbance to reptile species and loss of reptile habitat • Disturbance to badgers • Great Crested Newts	Chapter 9 (Terrestrial Ecology)

Topic	Impact pathways scoped in/requests for consideration	Chapter in ES/document where further information is provided
	Potential beneficial impacts through planting, habitat enhancements and landscaping	
Ornithology	Impact pathways scoped in: - Noise from construction works on site displacing birds in the local area (construction) – nesting & passage/over-wintering - Visual disturbance from construction works on site displacing birds in the local area (construction) – nesting & passage/over-wintering - Physical disturbance of upper intertidal habitats during construction leading to a reduction in feeding area for birds (construction) – nesting & passage/over-wintering - Loss of feeding areas for birds through permanent loss of habitat from scheme footprint and coastal squeeze (operation) – nesting & passage/over-wintering - Disturbance/displacement of birds during any maintenance and repair work required during the lifetime of the sea defence (operation) – nesting & passage/over-wintering	Chapter 10 (Ornithology)
Archaeology and Historic Environment	Impact pathways scoped in: - Disturbance to archaeology, heritage assets and historic environment (construction) - Disturbance to archaeology, heritage assets and historic environment (operation)	Chapter 11 (Historic Environment and Archaeology)
Landscape/Seascape and Visual	Impact pathways scoped in: - Temporary effects on landscape character during construction activities - Permanent effects on landscape character (operation) - Temporary effects on views as a result of construction activities - Permanent effects on views (operation)	Chapter 12 (Landscape/Seascape and Visual)
Traffic and Access	Impact pathways scoped in: - Changes in the route, volume, composition or speed of traffic during construction - Changes in road safety (construction) - Reduced accessibility (construction) - Changes in accessibility (operation)	Chapter 13 (Traffic and Access)
Noise and Vibration	Impact pathways scoped in: - Traffic noise (Construction) - Airborne noise (Construction) - Ground borne vibration (construction)	Chapter 14 (Noise and Vibration)

Topic	Impact pathways scoped in/requests for consideration	Chapter in ES/document where further information is provided
Amenity, Recreation and Socio-economics	• Temporary effects on socio-economic, amenity and recreation (Construction) • Permanent effects on socio-economic, amenity and recreation (Operation)	Chapter 15 (Amenity, Recreation and Socio-Economics)
Cumulative Impacts	The scheme should be assessed in combination with other schemes/projects and plans within the study area.	Chapters 8 to 16
Water Framework Directive (WFD) Assessment	As per the scoping tables completed. A standalone WFD recommended. The conclusions of the WFD scoping report are supported in particular the inclusion of fish requiring an impact assessment for the potential of underwater noise to impact normal fish behaviour such as migration, movement and spawning. Also, the inclusion of SPA and SAC protected areas, habitats and non-native invasive species.	Appendix D (WFD Assessment)
Habitats Regulations Assessment (HRA)	As per the screening tables completed. It is considered that in accordance with the Conservation of Habitats and Species Regulations 2017 an Appropriate Assessment as part of the Habitats Regulations Assessment process should be conducted due to the likely significant effects upon Chichester and Langstone Harbours Special Protection Area (SPA) and Ramsar site, and its functionally linked land.	Appendix C (HRA)

As per the Scoping Opinions (**Appendix A**) and the work completed at the Scoping stage, the following topics have been scoped out of further assessment for the Core scheme:

- **Land Quality and Hydrology** – a contamination method statement, materials management plan and a Construction Environmental Management Plan (CEMP) will be submitted for approval to the Local Planning Authority (LPA) prior to the commencement of the construction works.
- **Water and Sediment Quality** – no further information required. A contamination method statement, materials management plan and a Construction Environmental Management Plan (CEMP) will be submitted for approval to the LPA prior to the commencement of the construction works.
- **Coastal Processes** – scoped in for the additional scheme only (Frontages 1B and 6) which are not being taken forward at this time.
- **Air Quality and Climate Change** – significant air quality effects scoped out of further assessment. Scheme reduces impact of climate change (sea level rise and increased flood risk).
- **Navigation and Commercial Fisheries** - scoped in for the additional scheme only (Frontages 1B and 6) which are not being taken forward at this time.

1.3 Methodology of Assessment

The EIA process is a tool for systematically examining and assessing the potential impacts of the proposed development on the environment. Impacts can be positive and negative and can result directly or indirectly from activities associated with the proposed scheme.

Potential environmental impacts of both the construction and operational phases of the Langstone FCERM Scheme were identified by:

- Recommendations in the screening and scoping opinion, as summarised in **Table 1.1** and **Appendix A**.
- Consultation with statutory advisors including, but not limited to, Natural England (NE), Historic England (HE), Hampshire County Council (HCC) Highways, the LPA and utilities providers.
- A review of existing data.
- A review of the proposed Langstone FCERM Scheme, as presented in **Chapter 3** of this ES.

Chapters 8 to 15 provide the environmental assessments, and each Chapter is structured in the following way:

- **Introductions:** Describes the specific environmental element being assessed:
- **Baseline conditions:** Details the baseline environment of each environmental element, expanding on the work of the environmental scoping report. Additional data has been included to fill identified gaps in the baseline information, including results from field surveys and investigations. For the scheme works, each section provides a full summary of the baseline environment, allowing a complete impact assessment to be made;
- **Potential impacts:** Details any impacts the proposed scheme could have on the baseline environment.
- **Mitigation and residual Impacts:** Presents mitigation that has been identified to remove or reduce the identified impacts of the proposed scheme on the baseline environment, highlighting any residual impact.
- **Conclusions:** Confirms whether the full works are considered environmentally acceptable following the implementation of any required mitigation.

For each potential impact of the Langstone FCERM Scheme that has been identified during the EIA process, a textual description of the impact is provided, together with a characterisation of the impact in terms of its nature and magnitude and/or physical extent. The magnitude and physical extent of impacts has been quantified wherever possible. Each potential impact identified has then been assessed for its likely significance. To classify the significance of each impact, and to provide a consistent approach for the consideration and evaluation of impacts on different environmental parameters, the terminology in Table 1.2 has been adopted throughout this ES.

Table 1.2: Terminology for defining and classifying environmental impacts

Impact	Definition
Negligible	The impact is not of concern
Minor adverse	The impact is undesirable, but of limited concern
Moderate adverse	The impact gives rise to some concern, but it is likely to be tolerable (depending on the scale and/or duration)
Major adverse	The impact gives rise to serious concern; it should be considered as unacceptable
Minor beneficial	The impact is of minor significance, but has some environmental benefit
Moderate beneficial	The impact provides some gain to the environment
Major beneficial	The impact provides a significant positive gain to the environment

To determine the significance of an impact, the following criteria detailed in **Table 1.3** have been considered. These criteria are defined in further detail in **Table 1.4**.

Table 1.3: Criteria for determination of significance

Effect criteria	Receptor criteria	Other criteria
Spatial extent (local, regional or national; quantified where possible)	Vulnerability	Reversibility (permanent or temporary)
Magnitude (high, medium or low; quantified where possible)	Sensitivity/intolerance (high, medium, low)	Probability of occurrence
Duration (short or long term; quantified)	Resilience/recoverability (low, medium, high)	Confidence in prediction
Timing and frequency (continuous, frequent or infrequent)	Value/importance (rarity, conservation value, social value, commercial value)	Margins by which baseline conditions and/or threshold values are exceeded

For the purposes of the EIA process, a significant effect or change is defined as an effect caused by an activity or process which is predicted to exceed the normal variation in baseline conditions that would be expected to occur without the proposed scheme.

Table 1.4: Definitions of impact significance criteria

Sensitivity of the receiving parameter	
This is a measure of the tolerance (resistance) and resilience (recoverability) of an environmental parameter to an identified impact.	
High	The environmental parameter is fragile, and an impact is likely to leave it in an altered state from which recovery would be difficult or impossible.
Medium	The parameter has a degree of acceptability and resilience and is likely to cope with the changes caused by an impact, although there may be some residual modification as a result.
Low	The parameter is adaptable and is resilient to change.
Magnitude of the impact	
This is the scale of change which the impact may cause compared to the baseline and how this change relates to accepted thresholds and standards.	
High	A large change compared to variations in the baseline. Potentially a clear breach of accepted limits.

Medium	Change which may be noticeable and may breach accepted limits.
Low	When compared to the baseline, change which may only just be noticeable. Existing thresholds would not be exceeded.
<u>Frequency of the impact</u> This is the duration of the impact compared to the activity causing it.	
Continuous	The impact persists over the life of the activity causing it.
Frequent	The impact is likely to occur for a period of greater than 5% of the life of the activity or will be intermittent.
Infrequent	The impact is likely to occur for a period of less than 5% of the life of the activity.
<u>Extent of the impact</u> Relates to the geographical area that the impact may affect. It is considered that all identified impacts are local in extent unless otherwise specified in the accompanying text, although interest features of potential national and/or international significance may be affected.	
Local / immediate	The impact is likely to affect interests at district level or for a limited area around the scheme.
National	The impact is likely to affect national concerns such as regional and county level interests.
International	The impact is likely to affect an interest of an international concern.
<u>Timescale of the impact</u> This is the duration of the impact irrespective of the activity causing it.	
Short-term	The period over which the impact is experienced is temporary and lasts for the period of construction or less.
Medium-term	The impact occurs for longer than the full period of construction.
Long-term	The impact remains for a substantial time, perhaps permanently after construction.

The criteria described above have then been used to score the level of significance of a particular impact, using the formula below:

A typical matrix for the calculation of significance is shown in **Table 1.5** below.

Table 1.5: Matrix for calculation of impact significance

Magnitude of effect	Value and sensitivity of feature		
	High	Medium	Low
High	Major	Major/Moderate	Moderate
Medium	Major/Moderate	Moderate	Minor
Low	Moderate/Minor	Minor	Minor or None/Negligible

Where significant adverse impacts have been identified, potential mitigation measures have been recommended in order to reduce potential impacts, as far as reasonably practicable, to environmentally acceptable levels. Mitigation measures can be defined as measures taken to avoid or reduce negative impacts. This can include measures such as changes to design, working methods or timing of works. Any residual impact after mitigation is then stated. The

mitigation measures which are proposed as part of this ES will be used to inform the CEMP, an outline of which has been submitted alongside this application.

Best practice and guidance require that certain technical disciplines are required to follow topic-specific criteria for determining significance. Where this is the case, the criteria to be used has been presented clearly in the specific topic chapters within the ES.

1.4 Report Structure

The ES comprises of the following chapters, which consider the core scheme of the Langstone FCERM Scheme.

- **Chapter 1 – Introduction:** Introduces the scheme, its purpose, location and the content and format of the ES.
- **Chapter 2 – Strategic Background:** Describes the need for the scheme, provides the strategic context and the objectives of the scheme.
- **Chapter 3 – Proposed Scheme:** Describes the location and the character of the site and provides a detailed description of the scheme.
- **Chapter 4 – Consideration of Alternatives:** Describes the alternative options considered during the development of the project.
- **Chapter 5 – Consultation:** Summarises the consultation and engagement undertaken for the project.
- **Chapter 6 – Legislative Framework:** Summarises the legislative requirements of the scheme and the approach to securing the required consents.
- **Chapter 7 – Designated Sites and Features:** Summarises the environmentally designated sites, heritage and archaeological features that could be potentially impacted by the scheme.
- **Chapters 8 to 15:** Detail the environmental assessment of the impacts, proposed mitigation and residual effects for the following receptors:
 - **8 – Marine Ecology**
 - **9 – Terrestrial Ecology**
 - **10 – Ornithology**
 - **11 – Historic Environment and Archaeology**
 - **12 – Landscape/Seascape and Visual Impacts**
 - **13 – Traffic and Access**
 - **14 – Noise and Vibration**
 - **15 – Amenity, Recreation and Socio-Economics**
- **Chapter 16 – Cumulative Impacts:** Summarises other schemes, projects and activities in the project area, and the potential for cumulative impacts as a result.
- **Chapter 17 – Conclusions, with a full mitigation plan for the Langstone FCERM Scheme:** Concludes the Environmental Acceptability of the proposed scheme following the detailed EIA process and presents an overall mitigation plan for the

Langstone FCERM Scheme, pulling together all the proposed mitigation from **Chapters 8 to 15**, the HRA and the WFD assessment.

In addition to the chapters above, the following appendices to the ES have also been provided:

Table 1.6: List of ES Appendices

Appendix #	Item/Report name
A1	EIA Scoping Opinions – LPA
A2	EIA Scoping Opinions – MMO
A3	EIA Scoping Opinions – MMO clarifications letter
B	Langstone FCERM Scheme Environmental Scoping Report
C	Habitats Regulations Assessment (HRA)
D	Water Framework Directive Assessment (WFDA)
E	BNG Statement
F	Materials Report
G	Drainage Strategy
H1	Outline Design and Decision Criteria Report
H2	NE briefing note on review and refinement of outline design options
I	Statement of Community Involvement (SCI)
J1	Langstone Coastal Processes Study
J2	Technical Note on Extremes & SLR
J3	Modelling Narrative Note
J4	Langbrook Stream Tidal and Fluvial Modelling
J5	Langstone Overtopping Assessment
K	Langstone Ground Investigation Report
L1	Langstone Preliminary Ecological Appraisal
L2	Intertidal habitat survey report
L3	Botanical Survey Report
L4	Langstone Preliminary Ground Level Bat Roost Assessment (Trees) Report
L5	Langstone Badger Survey Report
L6	Langstone Great Crested Newt Survey Report
L7	Langstone Reptile Survey Report
L8	Arboricultural Survey & AIA
L9	Langstone Breeding Bird Survey Report
L10	Langstone Over-wintering Bird Survey Report
M1	Cultural Heritage DBA
M2	Heritage Statement
N	Landscape and Visual Impact Assessment (LVIA)
O	Noise Survey & Impact Assessment Report

The following documents have also been provided separately in support of the planning and marine licence applications:

- Planning Design and Access Statement (PDAS);
- Draft Construction Traffic Management Plan (CTMP); and
- Draft Construction Environmental Management Plan (CEMP).

Schedule 4 of the EIA Regulations sets out the requirements for an ES, which are presented in **Table 1.7** with reference to the ES chapter where information can be found.

Table 1.7: ES requirements, as per the EIA Regulations (Schedule 4)

Schedule Reference	Requirements for ES	ES chapter(s)
1	A description of the project, including in particular:	
	a) A description of the location of the development	Chapter 1 (Introduction)
	b) A description of the physical characteristics of the whole development, including, where relevant, requisite demolition works, and the land-use requirements during the construction and operational phases	Chapter 3 (Proposed Scheme)
	c) A description of the main characteristics of the operational phase of the development (in particular any production process), for instance, energy demand and energy used, nature and quantity of the materials and natural resources (including water, land, soil and biodiversity)	Chapter 3 (Proposed Scheme)
	d) An estimate, by type and quantity of expected residues and emissions (such as water, air, soil and subsoil pollution, noise, vibration, light, heat, radiation and quantities and types of waste produced during the construction and operation phases	Chapters 8 to 17, notably Chapter 14 (Noise and Vibration)
2	A description of the reasonable alternatives (e.g., in terms of development, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects.	Chapter 4 (Consideration of Alternatives)
3	A description of the relevant aspects of the current state of the environment (baseline scenario) and an outline of the likely evolution thereof without implementation of the development as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge.	Chapter 4 (Consideration of Alternatives) and Chapters 8 to 17
4	A description of the factors specified in regulation 4(2) likely to be significantly affected by the development: population, human health, biodiversity (for example fauna and flora), land (for example land take), soil (for example organic matter, erosion, compaction, sealing), water (for example hydromorphological changes, quantity and quality), air, climate (for example greenhouse gas emissions, impacts relevant to adaptation), material assets, cultural heritage, including architectural and archaeological aspects, and landscape.	Chapters 8 to 17.

Schedule Reference	Requirements for ES	ES chapter(s)
5	The description of the likely significant effects on the factors specified in regulation 4(2) should cover the direct effects and any indirect, secondary, cumulative, transboundary, short-term, medium-term and long-term, permanent and temporary, positive and negative effects of the development. A description of the likely significant effects of the development on the environment resulting from, inter alia: a) The construction and existence of the development, including, where relevant, demolition works b) The use of natural resources, in particular land, soil, water and biodiversity, considering as far as possible the sustainable availability of these resources c) The emission of pollutants, noise, vibration, light, heat and radiation, the creation of nuisances, and the disposal and recovery of waste d) The risks to human health, cultural heritage, or the environment (e.g., due to accidents or disasters) e) The cumulation of effects with other existing and/or approved projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources f) The impact of the project on climate (e.g., the nature and magnitude of greenhouse gas emissions) and the vulnerability of the project to climate change g) The technologies and substances used	Chapters 8 to 17 and the Non-Technical Summary.
6	A description of the forecasting methods or evidence, used to identify and assess the significant effects on the environment, including details of difficulties (for example technical deficiencies or lack of knowledge) encountered compiling the required information and the main uncertainties involved.	Chapter 1 (Introduction) and Chapters 8 to 17
7	A description of the measures envisaged to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects on the environment and, where appropriate, of any proposed monitoring arrangements (for example the preparation of a post-project analysis). That description should explain the extent, to which significant adverse effects on the environment are avoided, prevented, reduced or offset, and should cover both the construction and operational phases.	Chapters 8 to 17
8	A description of the expected significant adverse effects of the development on the environment deriving from the vulnerability of the development to risks of major accidents and/or disasters which are relevant to the project concerned.	Chapters 8 to 17
9	A non-technical summary of the information provided under paragraphs 1 to 8 above.	Non-Technical Summary
10	A reference list detailing the sources used for the descriptions and assessments included in the ES.	All ES chapters where relevant.

1.5 The Applicant, Further Information and Contact Details

This ES has been produced by Coastal Partners on behalf of Havant Borough Council as the applicant. For further information, please contact either:

Project Manager	Environmental Lead
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1.6 Statement of Professional Competence

The EIA Regulations, Regulation 18 (5) (a and b) state the following:

- The developer must ensure that the environmental statement is prepared by competent experts; and
- The environmental statement must be accompanied by a statement from the developer to outline the relevant expertise or qualifications of such experts.

In accordance with EIA Regulation 18 (5) (a and b), the EIA has been undertaken by, and prepared by, competent organisations and individuals listed in **Table 1.8**. This assessment has been co-ordinated and led by Coastal Partners who are a team of engineers, surveyors, project managers, environment and research experts.

Table 1.8: Competence of technical leads for each ES topic.

ES Topic	Technical Lead	Statement of Competence
Chapter 1: Introduction, Chapter 4: Consideration of Alternatives, coordination of Chapter 14: Noise and Vibration, Chapter 16: Cumulative Impacts	Laura Denham	Laura has a BSc (Hons) in Geography and has 10 years' experience in undertaking Environmental Impact Assessments. The noise and vibration assessment was led by consultant AECOM, who have internal expertise in this discipline.
Chapter 2: Strategic Background, Chapter 15: Amenity, Recreation and Socio-economics	Malgosia Hiett	This assessment has been undertaken by a Coastal Environmental Scientist with over 15 years' experience.
Chapter 5: Consultation and coordination of Chapter 11: Heritage and Archaeology and Chapter 12: Landscape, Seascape and Visual	Rachel Hucklesby	Rachel has an MSc and BSc (Hons) degree in Oceanography with 5 years experience undertaking EIAs and coordinating cultural heritage DBAs and impact assessments. Additionally, she led community consultation and engagement on the proposed scheme from 2017 – 2019. The LVIA was undertaken by consultant AECOM who have external expertise in this discipline. The Heritage Statement was

ES Topic	Technical Lead	Statement of Competence
		produced by Wessex Archaeology, expert providers of heritage and archaeological services.
Chapter 6: Legislative Framework	Nicola Reid	Nicola has been a planner since 2006, with a particular focus since 2014 on major applications and EIA. She has worked in both the public and private sector. She has a BSc (Hons) in Environmental Protection and a PGDip in Planning Policy and Practice and is currently working towards her application for RTPI Chartership as an Expert Practitioner.
Chapter 7: Designated Sites and features and Chapter 9: Terrestrial Ecology	Zoe Palmer	Zoe has a MSc in Coastal Zone Management and a BSc (Hons) in Geography. She is an experienced ecologist with over 5 years' experience in undertaking ecological impact assessments.
Chapter 8: Marine Ecology	Hilary Ferres	Hilary has a MSc in Coastal Management and a BSc (Hons) in Oceanography with Marine Biology and is a Chartered Marine Scientist and Member of IMarEST with over 15 years' experience in undertaking marine ecological impact assessments.
Chapter 10: Ornithology	Ed Rowsell	Ed has a BSc in Ecology and Conservation. He is an experienced ecologist with a strong focus on ornithology with over 27 years' experience in undertaking ornithological impact assessments
Chapter 11: Heritage and Archaeology	Wessex Archaeology	Leading provider of heritage and archaeology services for 40 years in the UK and a registered ClfA organisation
Chapter 12: Landscape, Seascape and Visual	AECOM	A world leading infrastructure firm who provide a vast array of environmental services, including Landscape, Visual and Noise Impact Assessment and Modelling in accordance with best practice as set out in published guidance regarded as the 'industry standard'.
Chapter 3: Proposed Scheme and Chapter 13: Traffic and Access	Hannah Jackson	Hannah has a MSc in Coastal Management and a BSc (Hons) in Marine Geography. She has over 15 years' experience of undertaking EIAs.
Non-Technical Summary and Chapter 17: Conclusions	Lauren Burt	Lauren has a MSc in Coastal Engineering, a BSc (Hons) in Geography, and is a Chartered Geographer and member of the Royal Geographical Society. Lauren has more than 10 years' experience working on projects in a coastal setting.