

FORM HR02: PROFORMA FOR STAGE 3 APPROPRIATE ASSESSMENT

PART A: Technical Consideration

1 Table 1 – Permission, plan or project details

Type of permission /plan :	Capital Scheme. Improvement to 230m of coastal flood protection.
Agency reference no:	IMSO001261
National Grid Reference:	SZ 7379 9926 – SZ 7397 9915
Site reference:	Selsmore Sea Wall Maintenance, Southeast of Hayling Island, Chichester Harbour, Hampshire.

2 Table 2 - Site details

European site name	Legal Status	Priority
Chichester and Langstone Harbours Ramsar	Ramsar	High
Chichester and Langstone Harbours SPA	SPA	High
Solent Maritime SAC	SAC	High

3 Table 3 - Features List

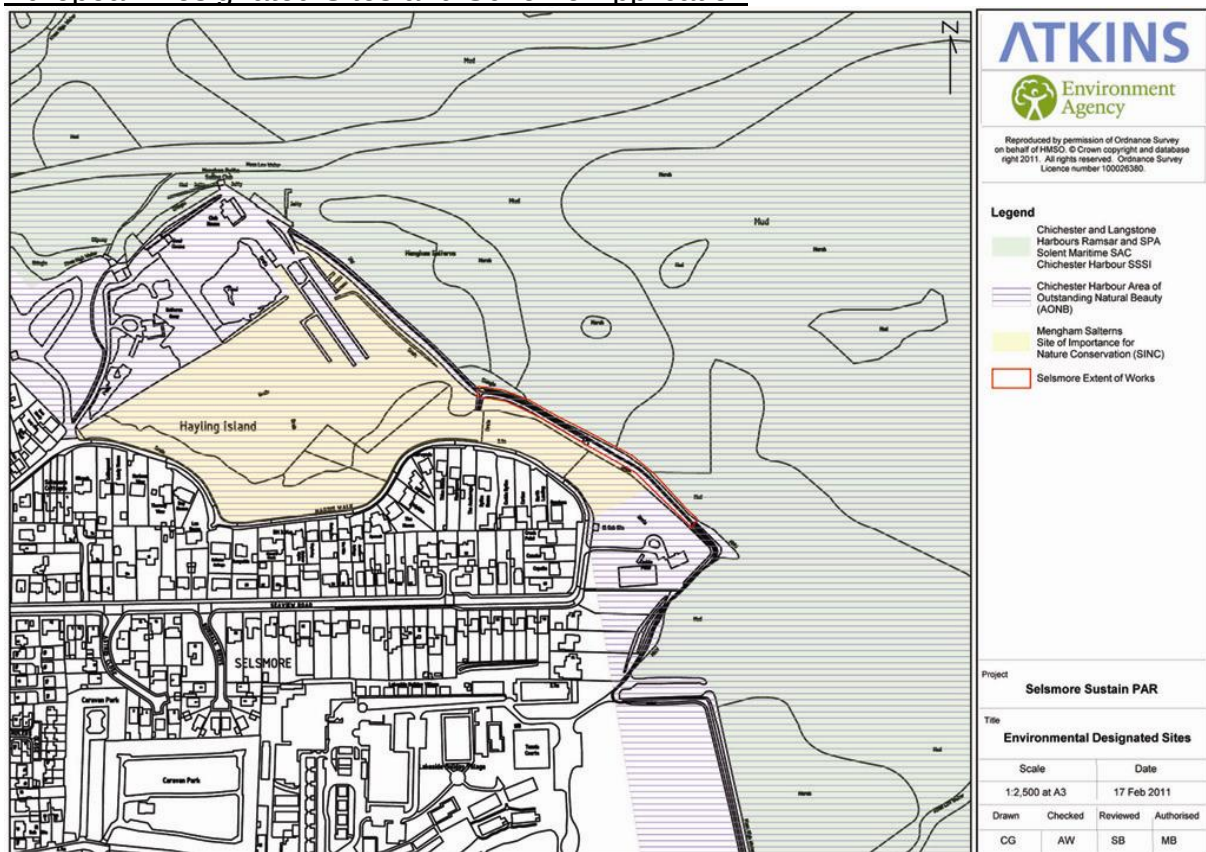
Features	Application has associated hazards to which features are sensitive?	Details of Hazard/s
Chichester and Langstone Harbours SPA		
SPA Annex 1 birds	Yes	Coastal squeeze over 20 years of Scheme life may result in the loss of some 0.2Ha of pioneer saltmarsh. This is considered a Likely Significant Effect on feeding waterfowl.
Chichester and Langstone Harbours Ramsar		
Ramsar – Criterion 1a, 3a and 3c:	Yes	Coastal squeeze over 20 years of Scheme life may result in the loss of some 0.2Ha of pioneer saltmarsh. This is considered a Likely Significant Effect on feeding waterfowl.
Solent Maritime SAC		
SAC Annex 1 habitats:		
Estuaries,	Yes	Hold the line could restrict the natural processes and ability of the estuary to evolve and adapt to rising sea level rise.
Spartina swards (<i>Spartinion maritimae</i>)	Yes	Coastal squeeze effects over 20 years of Scheme life to some 0.2Ha of pioneer saltmarsh communities, dominated by cord grass <i>Spartina anglica</i> between Mean High Water Neaps (MHWN) and Mean high Water (MHW), (including potential Atlantic salt meadows, (<i>Glauco-Puccinellia maritima</i>))

Atlantic salt meadows, (<i>Glauco-Puccinettalia maritima</i>)	Yes	Coastal squeeze effects over 20 years of Scheme life to some 0.2Ha of pioneer saltmarsh communities, dominated by cord grass <i>Spartina anglica</i> between Mean High Water Neaps (MHWN) and Mean high Water (MHW), (including potential Atlantic salt meadows, (<i>Glauco-Puccinettalia maritima</i>))
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4 Report Content

The objective is to sustain the current standard of defence (1:20) for the 230m frontage. The preferred option to undertake this is through a staggered gabion wall comprised of a 1.5m high wall with a 1.3m deep buried wall and foundation constructed within the environmental footprint of the existing defence. This is in keeping with the North Solent Shoreline Management approved policy of Hold the Line.

European Designated Sites and Scheme Application



Summary of targets (from Favourable Condition Tables and agreed with local NE/CCW)

Natural England has prepared favourable condition tables for Natura sites against which the impacts of any proposed schemes must be measured. A summary of the conservation objectives are provided below for each designation.

Chichester and Langstone Harbour SPA

- Maintain in favourable condition, subject to natural change, the habitats which

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support internationally important Annex I species, internationally important migratory species and internationally important assemblages of waterfowl for which the site has been designated. These habitats include sand, shingle, saltmarsh, intertidal mudflats, intertidal sandflats, boulder and cobble shore, mixed sediment shores, shallow coastal waters, saline lagoons, coastal grazing marsh, open water and terrestrial grasslands.
Chichester and Langstone Harbour Ramsar
- Under criterion 1a to maintain the internationally important wetlands characteristic of the Atlantic biogeographical region in favourable condition, in particular: Estuaries, Saltmarshes, Intertidal mudflats and sandflats. - Under criterion 3a subject to natural change, maintain the wetland regularly supporting 20,000 waterfowl in favourable condition, in particular: Shingle, Saltmarsh, Intertidal mudflats and sandflats, Mixed sediment shores and Shallow coastal waters. Subject to natural change, - Under criterion 3c maintain the wetland supporting 1% or more of the individuals in a population of waterfowl species in favourable condition, in particular: Saltmarsh, Intertidal mudflats and sandflats, Mixed sediment shores, Shingle, Sand and shingle and Shallow coastal waters (The Ramsar conservation objectives for criterion 3 interest focus on the condition of the habitats that support the bird populations. This is in recognition of changes in bird populations that may take place as a consequence of national or international trends or events)
Solent Maritime SAC
Maintain in favourable condition, subject to natural change the Annex 1 habitats for which the site has been designated as follows: <i>Salicornia</i> and other annuals colonising mud and sand, Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>), <i>Spartina</i> swards (<i>Spartinion maritimae</i>), Mudflats and sandflats - not submerged at low tide, Annual vegetation drift lines, Perennial vegetation of stony banks, Coastal lagoons, Shifting white dunes with <i>Ammophila arenaria</i>, Estuaries, Sandbanks - slightly covered by sea water all the time.

- Discussion of permission application:

The HRO1 (Stage 2) assessment for this Scheme has identified a Likely Significant Effect on the Chichester and Langstone Harbour SPA and Ramsar sites and Solent Maritime SAC. The LSE is from 20 years of coastal squeeze on some 0.2Ha of pioneer saltmarsh, dominated by cord grass (*Spartina anglica*) and the feeding birds which this supports. It is also from the implementation of the SMP policy of 'Hold the Line' which could restrict the ability of the estuary to evolve and adapt to rising sea level rise.

This effect is from both this scheme alone and in combination as part of the 74Ha of saltmarsh losses estimated for Epoch 1 (years one-20 of the North Solent Shoreline Management Plan (SMP) Appropriate Assessment (AA)) and the impact from this on feeding waterfowl. With regards to the estuarine function, implementation of the Hold the

Line policy within the Chichester and Langstone Harbours will have an effect both alone and in combination with the various frontages where Hold the Line is the policy identified within the North Solent Shoreline Management Plan Appropriate Assessment. The timeframe of Epoch 1 of the SMP having commenced in 2010 is largely consistent with that of the 20 year life of the Scheme programmed for completion in 2011. The scope of the impact from the Scheme does not vary from that assessed within the ambit of the SMP AA.

It is considered that there will be an adverse effect from this Scheme on the integrity of the Chichester and Langstone Harbour SPA and Ramsar sites and Solent Maritime SAC alone and in combination with adjacent frontages, where Hold the Line is the agreed policy.

Table 4 Appropriate Assessment Record – Summarised conclusions

Appropriate assessment record: Summarised conclusions

Hazard	Interest Feature	Key	Decision
Chichester and Langstone Harbour SPA			
Habitat Loss	SPA Annex 1 birds	1 Favourable condition target for relevant attribute ¹ (including range of natural variation) based on conservation objectives.	Maintain in favourable condition, subject to natural change, the habitats which support internationally important Annex I species, internationally important migratory species and internationally important assemblages of waterfowl for which the site has been designated. These habitats include saltmarsh,
		2 Contribution of attribute ¹ to ecological structure and function of site.	An area of pioneer saltmarsh as a part of the intertidal habitats within the designated sites, which provides feeding habitat for waterfowl.
		3 Contribution of management ² or other unauthorised sources to attribute and /or feature condition.	Intertidal habitats do not usually require active management to maintain their interest. Man-made features, such as flood banks or walls, have the potential to prevent natural movement of estuarine habitats as estuarine habitats respond to climate change, which may lead to a progressive loss of extent due to sea level rise / coastal squeeze.
		4 Adverse effect of proposal alone on attribute ¹ and/or feature.	An analysis of the potential impact on the intertidal area indicates that up to 0.2Ha of the intertidal zone between Mean High Water Neaps (MHWN) and Mean High Water Springs may be lost from coastal squeeze up to year 20 of the Scheme life.

		5 Adverse effect of proposal in combination with other plans or projects, on attribute ¹ and /or feature.	In combination effects have been assessed within the scope of the North Solent Management Plan Appropriate Assessment.
		6 Can adverse effects be avoided?	No
		7 Adverse effect on integrity; long term, short term. Yes, No or uncertain?	Yes
Hazard	Interest Feature	Key	Decision

Chichester and Langstone Harbour Ramsar

Habitat Loss	Ramsar – Criterion 1a, 3a and 3c:	1 Favourable condition target for relevant attribute ¹ (including range of natural variation) based on conservation objectives.	Under criterion 1a to maintain the internationally important wetlands characteristic of the Atlantic biogeographical region in favourable condition, in particular: Estuaries, Saltmarshes Under criterion 3a subject to natural change, maintain the wetland regularly supporting 20,000 waterfowl in favourable condition, in particular: Saltmarsh, Under criterion 3c maintain the wetland supporting 1% or more of the individuals in a population of waterfowl species in favourable condition, in particular: Saltmarsh,
		2 Contribution of attribute ¹ to ecological structure and function of site.	An area of pioneer saltmarsh as a part of the intertidal habitats within the designated sites, which provides feeding habitat for waterfowl.
		3 Contribution of management ² or other unauthorised sources to attribute and /or feature condition.	Intertidal habitats do not usually require active management to maintain their interest. Man-made features, such as flood banks or walls, have the potential to prevent natural movement of estuarine habitats as estuarine habitats respond to climate change, which may lead to a progressive loss of extent due to sea level rise / coastal squeeze.
		4 Adverse effect of proposal alone on attribute ¹ and/or feature.	An analysis of the potential impact on the intertidal area indicates that up to 0.2Ha of the intertidal zone between Mean High

			Water Neaps (MHWN) and Mean High Water Springs may be lost from coastal squeeze up to year 20 of the Scheme life.
		5 Adverse effect of proposal in combination with other plans or projects, on attribute ¹ and /or feature.	In combination effects have been assessed within the scope of the North Solent Management Plan Appropriate Assessment.
		6 Can adverse effects be avoided?	No
		7 Adverse effect on integrity; long term, short term. Yes, No or uncertain?	Yes
Hazard	Interest Feature	Key	Decision
Solent Maritime SAC			
Habitat Loss	SAC Annex 1 habitats: Saltmarsh	1 Favourable condition target for relevant attribute ¹ (including range of natural variation) based on conservation objectives.	Maintain in favourable condition, subject to natural change the Annex 1 habitats for which the site has been designated as follows: • Spartina swards (Spartinion maritimae), • Atlantic salt meadows, (Glaucopuccinettalia maritimae) • Estuaries,
		2 Contribution of attribute ¹ to ecological structure and function of site.	An area of pioneer saltmarsh as a part of the intertidal habitats within the designated sites, which provides feeding habitat for waterfowl.
		3 Contribution of management ² or other unauthorised sources to attribute and /or feature condition.	Intertidal habitats do not usually require active management to maintain their interest. Man-made features, such as flood banks or walls, have the potential to prevent natural movement of estuarine habitats as estuarine habitats respond to climate change, which may lead to a progressive loss of extent due to sea level rise / coastal squeeze.
		4 Adverse effect of proposal alone on attribute ¹ and/or feature.	An analysis of the potential impact on the intertidal area indicates that up to 0.2Ha of the intertidal zone between Mean High Water Neaps (MHWN) and Mean High Water Springs may be lost from coastal

			squeeze up to year 20 of the Scheme life.
		5 Adverse effect of proposal in combination with other plans or projects, on attribute ¹ and /or feature.	In combination effects have been assessed within the scope of the North Solent Management Plan Appropriate Assessment.
		6 Can adverse effects be avoided?	No
		7 Adverse effect on integrity; long term, short term. Yes, No or uncertain?	Yes

Notes

¹ **Attribute** = Quantifiable aspects of interest features that can be used to help define favourable condition for that feature

² **Management** = in this context management refers to management of the European site

STAGE 3 AGENCY CONCLUSION

CAN IT BE ASCERTAINED THAT THE PLAN OR PROJECT WILL NOT ADVERSELY EFFECT THE INTEGRITY OF THE EUROPEAN SITE(S)? NO

There will be an adverse effect alone and in combination on the Chichester and Langstone Harbour SPA and Ramsar sites and Solent Maritime SAC from the loss over 20 years of coastal squeeze of some 0.2Ha of pioneer saltmarsh, dominated by cord grass (*Spartina anglica*) and the feeding birds which this supports. There will also be an adverse effect from the restriction on the ability of the estuary to evolve and adapt to rising sea level rise in combination with adjacent frontages, where Hold the Line is the agreed policy.

However, the cumulative effects from coastal squeeze have been considered within the ambit of the North Solent Shoreline Management Plan Appropriate Assessment, and its approved Imperative Reasons of Overriding Public Interest (IROPI) case.

The package of compensatory habitat identified within the SMP for inter tidal losses within Epoch 1 (0-20 yrs) includes 'Medmerry' amongst other smaller managed realignments. The intertidal habitat creation including 122Ha of saltmarsh at Medmerry is on programme for delivery by the Environment Agency, further to a breach in Spring 2013. Within the North Solent SMP AA the following quotation is taken (p102):

"Natural England is satisfied that through the habitat creation at Medmerry a new and sustainable estuary function will be created in the region. As each estuary is different with its own ecological and physiological characteristics it would be unrealistic to attempt to replicate each estuary in a like for like basis. The new estuary at Medmerry will provide its own ecological and physiological characteristics to support Ramsar and SPA bird interests and contribute to ensuring a sustainably functioning coast."

Further to this it is considered that the Selsmore to Mengham Sea Wall Scheme will not result in a net adverse effect on the integrity of the European sites either alone or in combination with other plans or projects.

As the impacts from the scheme are in accordance with the North Solent SMP AA IROPI case, and further to Defra guidance on applying a strategic approach to Regulation 61 of the Habitats Directive. Whereby the impacts identified and assessed at Scheme level are in accordance with the impacts considered within a higher level AA, then the IROPI case for that higher level AA can be used, provided the compensation is in place before the impact occurs. As the impacts are incremental to year 20, it is considered that the creation of the new estuary at Medmerry in 2013 is in line with this.

Name of EA officer undertaking appropriate assessment:

Signed: Joshua Peacock

Date: 01/06/2011

Endorsed by (if appropriate) e.g. team leader and date: Oli Sykes

NE/CCW COMMENTS ON APPROPRIATE ASSESSMENT:

IS THERE AGREEMENT WITH THE CONCLUSION? YES

(Please provide summary and explanation for answer given)

Signed: Tom Schindl

A handwritten signature in dark ink, appearing to be 'Tom Schindl', written over a faint circular stamp or watermark.

Date: 3 June 2011

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PART B: Final Appropriate Assessment Record

Type of permission /plan :	Capital Scheme
National Grid Reference:	SZ 7379 9926 – 7397 9915
Site reference:	Selsmore Sea Wall Maintenance, Southeast of Hayling Island, Chichester Harbour, Hampshire

Description of the Scheme:	The works being constructed involve excavation along the existing flood defence embankment and approximately 220 linear meters of staggered gabion wall construction to a 1.5m high wall with a 1.3m buried wall and foundation. This will maintain the existing standard of defence to 230m of sea wall. The works will be undertaken from the centre of the scheme by two gangs working from either end of the scheme to the centre. A 15T excavator will be located in the compound area for handling the imported gabion fill material into 5T dumpers with low pressure tyres to deliver the material to the workface. This will mean that the known over wintering bird site at East Cackle Point will be worked away from. The 15T excavator will place gabion stone below ground to reduce manual handling into gabion baskets. Only facing gabion stone above ground level will be hand packed. A pump will be in attendance to keep excavations dry as required. An electricity connection will be made to prevent noise from generator use. There will be very little vibration from the placement of rock due to the small dimensions of the gabion baskets receiving the fill, requiring small placements of material at a time. The small size of the plant (15T excavator and 5T dumpers) also mitigates this affect. The dumpers transporting the material from the compound will be equipped with low pressure tyres to better disperse weight across the foreshore. The foreshore has an approximate 4-5m width of unvegetated compacted shingle creating a hard platform for this plant to run on. Plant will be limited to this area to run on. Eve trackway mats will otherwise be locally layed on the foreshore to provide a 5m wide easement where required. This will allow the foreshore to be protected and mitigate any risk of damage. Silt wash out will be mitigated by not storing excavated material on the foreshore (moved directly to fill area), and ensuring only limited excavations are open. A sediment trap will be used whilst pumping from the excavation. Sandbags will be used locally where required. On completion of the wall construction the excavation will be backfilled and the area behind the wall also backfilled and compacted. Gabion baskets above Mean High Water Springs (MHWS) will be compacted with existing topsoil from this location. This will allow recolonisation with upper saltmarsh species.
Date:	01/06/2011

This is a record of the appropriate assessment required by Regulation 61 of the Conservation of Habitats and Species Regulations 2010 (SI No. 2010/490), undertaken by the Environment Agency in respect of the above project, in accordance with the Habitats Directive (Council Directive 92/43/EEC). Having considered that the project would be likely to have a significant effect on the Chichester and Langstone Harbour Ramsar site and Solent Maritime SAC and that the Scheme was not directly connected with or necessary to the management of the site for nature conservation, an appropriate assessment has been undertaken of the implications of the proposal in view of the site's conservation objectives.

Natural England were consulted under Regulation 61(3) on 14/04/2011 and their representations, to which the Environment Agency has had regard, are attached at Annex 1. The conclusions of this appropriate assessment **are** in accordance with the advice and recommendations of NE/CCW.

The site's nature conservation objectives have been taken into account, including consideration of the citation for the site and information supplied by NE. The likely effects of the proposal on the international nature conservation interests for which the site was classified or designated may be summarised as up to 0.2Ha of saltmarsh being lost over 20 years from coastal squeeze impact , with an effect on the feeding waterfowl which this supports. It will also restrict the ability of the estuary to evolve and adapt to rising sea level rise.

The assessment has concluded that:

- The plan or project as proposed **can** be shown to have an adverse effect on the integrity of the site.
- However, the cumulative effects from coastal squeeze have been considered within the ambit of the North Solent Shoreline Management Plan Appropriate Assessment, and its approved Imperative Reasons of Overriding Public Interest (IROPI) case.
- The package of compensatory habitat identified within the SMP for inter tidal losses within Epoch 1 (0-20 yrs) includes 'Medmerry' amongst other smaller managed realignments. The intertidal habitat creation including 122Ha of saltmarsh at Medmerry is on programme for delivery by the Environment Agency, further to a breach in Spring 2013.
- Through the habitat creation at Medmerry it is considered that a new and sustainable estuary function will be created in the region.
- Further to this it is considered that the Selsmore to Mengham Sea Wall Scheme will result in a net adverse effect on the integrity of the European sites alone and in combination with other plans or projects.
- However as the impacts from the scheme are in accordance with the North Solent SMP AA IROPI case, and further to Defra guidance on applying a strategic approach to Regulation 61 of the Habitats Directive. Whereby the impacts identified and assessed at Scheme level are in accordance with the impacts considered within a higher level AA, then the IROPI case for that higher level AA can be used, provided the compensation is in place before the impact occurs. As the impacts are incremental to year 20, it is considered that the creation of the new estuary at Medmerry in 2013 is in line with this.

Signed:

Area Management Team member:

Date: