



Habitats Regulation Assessment for UKSA Native Oyster Garden

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Section 1: Background and project information


This document provides a record of the Habitats Regulations Assessment (HRA) completed by Blue Marine Foundation and Isle of Wight Estuaries Project on behalf of UKSA for authorisation of aquaculture production businesses (APBs) under the Aquatic Animal Health Regulations (England and Wales) 2009 (AAHR).


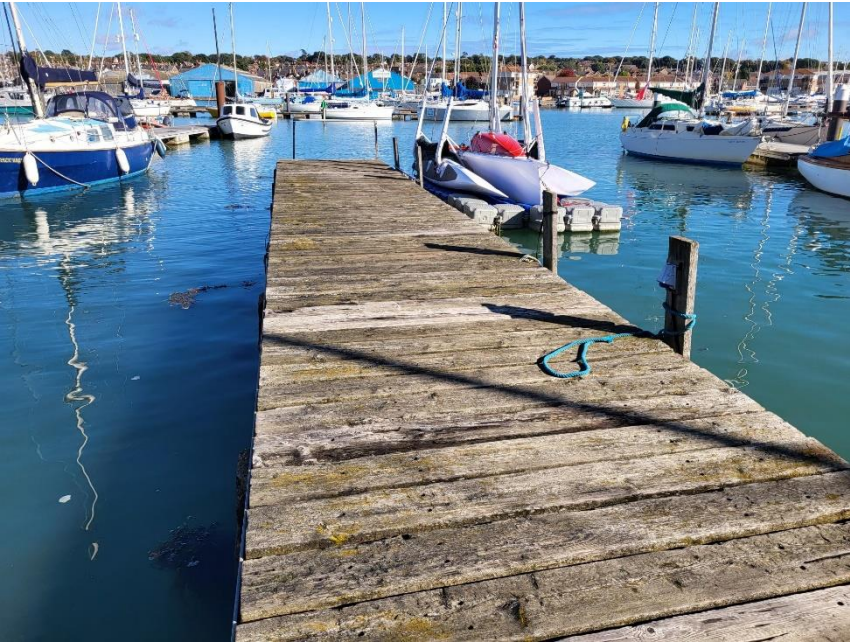
Only activities associated with the FHI authorisation under the AAHRs are assessed. These include the culture of bivalves in the marine environment and directly associated activities such as placement of and removal of bivalves, physical movements around the aquaculture site, and where applicable, transit to and from the site (if, for example through a designated site). This HRA does not assess linked activities which are regulated by other authorities (except where relevant in the in-combination assessment).

This HRA has been completed using previous advice from, and discussions with, Natural England (NE) on similar applications in the same network of marine protected areas (see section 8).

Project Description

Application details	
Name of Project or Plan	UKSA Native Oyster Garden
Description of the Project or Plan and site	<p>The UKSA Native Oyster Garden project owned by UKSA and managed by UKSA aims to initially attach aquaculture cages. Each cage will hold adult or juvenile European flat oysters (<i>Ostrea edulis</i>), sourced from suppliers in the UK with an equivalent or lesser disease status. Sources include but are not limited to those listed below. The oysters are intended to be used for restoration only, with none going to market for consumption.</p> <p>Any adult oysters held on site will be held permanently (until deceased) to provide a source of larvae into the wider Solent for restoration purposes. Re-stocking will take place as necessary.</p> <p>Any juveniles held on site will be on-grown until their valve diameter is approx. 25mm in any direction. They will be thinned out as required. The oysters will grow for around one to two years to reach maturity or a size where predation pressure is believed to be reduced. They will then be transferred to Blue Marine Foundation who will place them on seabed restoration sites in the Solent. The activity will then be repeated.</p>
Proposed method of cultivation (include details of methods and equipment used)	Initially oysters will be housed in AP6 units with three combined and additional floatation added. Approx. 1000 juveniles 10mm will be held in each AP6 basket so 3,000 per floating unit. Approx. 30 adults will be held in

	<p>each AP6 basket so up to 100 per floating unit. A combination of juvenile and adult cages will be used, with all stocks recorded appropriately.</p> <p>A combination of cultivation cages may be used, including (but not limited to) oyster nurseries, AP6 cage units and Ortacs (pictured below).</p> <p>All methods will be attached to the underside of UKSA owned pontoons, accessed by foot. The below images show three AP6 cages attached together by floats at the seawilding site in Loch Craignish, previous iterations of nurseries and ortac units (deployed intertidally).</p> <div data-bbox="555 689 847 1014" data-label="Image">  </div> <div data-bbox="1110 689 1450 1025" data-label="Image">  </div> <div data-bbox="549 1014 794 1339" data-label="Image">  </div>
<p>Proposed method of Husbandry</p> <p>(include details of methods and equipment used)</p>	<p>See above. Oyster monitored for mortality regularly.</p>
<p>Supply of seed</p>	<p>Seawilding (Juvenile oysters ongrown)</p> <p>Contact: Danny Renton Location: Loch Craignish, Scotland</p> <p>Atlantic edge oysters (Juvenile oysters ongrown)</p> <p>Contact: Andy Woolmer Location: Milford Haven, Wales</p> <p>Lochnell Oysters (Juvenile oysters ongrown)</p> <p>Contact: John Hamilton Location: Loch Linnie, Scotland</p> <p>Morecambe Bay Oysters (seed oysters from hatchery)</p> <p>Contact: Kelsey Thompson Location: Morecambe Bay, England</p>


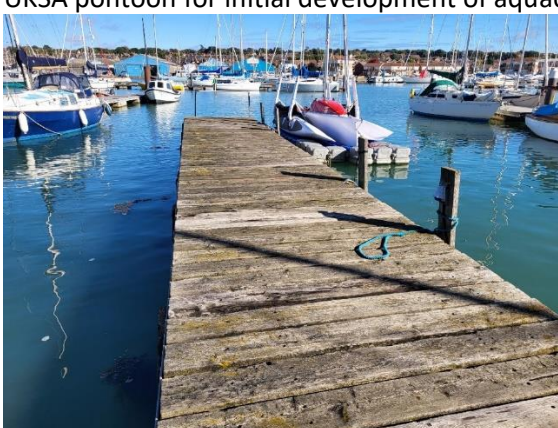
<p>Harvesting method</p> <p>(include details of frequency and duration of harvesting, methods and equipment used)</p>	<p>Adults – no harvesting, removal of shell to be weathered once deceased.</p> <p>Juveniles – “harvesting” from cages by hand from UKSA pontoon(s) to go onto seabed sites in the Solent.</p>
<p>Size and scale of proposed activity (include current size, historic size, initial size and plans of growth through time as applicable)</p>	<p>UKSA site within the waterbody - red boundary</p>  <p>UKSA pontoon (northern most pontoon within red boundary) for initial development of aquaculture structures that is approx. 25 m long. There are no plans for this pontoon to develop in size, if the aquaculture facility activities were to expand it would be on alternative pontoons</p> 

Is there an initial trial period?	N/A
1.2 Location	Coastal waterbody ID GB520710101600 MEDINA UKSA site within the waterbody – shown above within red boundary
	Map included: Y
1.3 Is the proposal directly connected with or necessary to the management of the site for nature conservation?	No
1.4 Does the project require: <ul style="list-style-type: none">• planning consent from a LPA,• A Marine Licence,• and/or a SSSI consent for the activity If so, please detail.	No

Section 2: HRA Information

Table 1: Project Details

Title	UKSA Native Oyster Garden
Reference/Code	
Applicant Name	UKSA
Activity	Cultivation of European flat oysters (<i>Ostrea edulis</i>) on underside of pontoon.

<p>Location</p>	<p>UKSA Arctic Road, West Cowes, Isle of Wight, PO31 7PQ.</p> <p>UKSA site within the waterbody - red boundary</p>  <p>UKSA pontoon for initial development of aquaculture structures</p> 
<p>Detailed description</p>	<p>The UKSA Native Oyster Garden project owned by UKSA and managed by UKSA aims to initially attach aquaculture cages to the underside of the northern most pontoon within the red box in the image above. Approx. 1000 juveniles 10mm will be held in each AP6 basket so 3,000 per floating unit. Approx. 30 adults will be held in each AP6 basket so up to 100 per floating unit. A combination of juvenile and adult cages will be used, with all stocks recorded appropriately.</p> <p>The juvenile oysters will grow for one to two years to reach spawning size before being transferred to Blue Marine Foundation's artificial reef in Langstone Harbour or elsewhere in the Solent, as appropriate. The activity will then be repeated. All shell material from deceased individuals will be collected, weathered or cleaned appropriately, before being used in other restorative work in the Solent.</p>
<p>Is the activity directly connected with or necessary for the conservation management of a European site?</p>	<p>No</p>

Marine Protected Areas identified (activity within, nearby or otherwise having the potential to effect)

Marine protected areas have been identified using the [MAGIC maps](#) web service. The site check tool was used including a 5km buffer searching for all SAC, SPA and Ramsar sites.

Other designated sites including Portsmouth Harbour SPA UK9011051, Portsmouth Harbour Ramsar, Chichester and Langstone Harbours SPA UK9011011, and Solent and Isle of Wight Lagoons SAC UK0017073 were considered, however, these sites are beyond the 5km screening zone. These sites are not assessed further as there is no connectivity with the proposed activity.

Table 2a: Solent and Dorset Coast SPA UK9020330

Site Name / Code: Solent and Dorset Coast SPA UK9020330			
Activity distance to site	Within		
Qualifying features	<ul style="list-style-type: none"> Common tern (<i>Sterna hirundo</i>), Breeding Little tern (<i>Sternula albifrons</i>), Breeding Sandwich tern (<i>Thalasseus sandvicensis</i>), Breeding Marine site detail (naturalengland.org.uk) (Accessed 18/10/22)		
General conservation objectives	<p>The site's conservation objectives apply to the site and the individual species and/or assemblage of species for which the site has been classified (the "Qualifying features" listed above).</p> <p><i>Include information source and date accessed</i></p> <p>The objectives are to ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the Favourable Conservation Status of its qualifying features, by maintaining or restoring:</p> <ul style="list-style-type: none"> the extent and distribution of qualifying natural habitats and habitats of the qualifying species the structure and function (including typical species) of qualifying natural habitats the structure and function of the habitats of the qualifying species the supporting processes on which qualifying natural habitats and the habitats of qualifying species rely the populations of each of the qualifying species the distribution of qualifying species within the site Marine site detail (naturalengland.org.uk) (Accessed 18/10/22)		
Conservation features and sub-features, condition assessment and supplementary advice	Feature, sub-feature or supporting habitat	Condition assessment Date and condition	Relevant supplementary advice on conservation objectives (attribute, target, relevant notes)
	Common tern (<i>Sterna hirundo</i>), Breeding	NE have not completed condition assessments for	designatedsites.naturalengland.org.uk (Accessed 18/10/2022)
	Little tern (<i>Sternula albifrons</i>), Breeding		

	Sandwich tern (<i>Thalasseus sandvicensis</i>), Breeding	this species feature for this SPA.	
	Supporting habitat – Water column		

Table 2b: Solent Maritime SAC UK0030059

Site Name / Code: Solent Maritime SAC UK0030059	
Activity distance to site	Within
Qualifying features	<ul style="list-style-type: none"> • Annual vegetation of drift lines • Atlantic salt meadows (<i>Glaucopuccinellietalia maritimae</i>) • Coastal lagoons • Desmoulin's whorl snail (<i>Vertigo moulinsiana</i>) • Estuaries • Mudflats and sandflats not covered by seawater at low tide • Perennial vegetation of stony banks • Salicornia and other annuals colonising mud and sand • Sandbanks which are slightly covered by sea water all the time • Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ("White dunes") • Spartina swards (<i>Spartinion maritimae</i>) <p>Marine site detail (naturalengland.org.uk) (Accessed 18/10/22)</p>
General conservation objectives <i>Include information source and date accessed</i>	<p>The site's conservation objectives apply to the site and the individual species and/or assemblage of species for which the site has been classified (the "Qualifying features" listed above).</p> <p>The objectives are to ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the Favourable Conservation Status of its qualifying features, by maintaining or restoring:</p> <ul style="list-style-type: none"> • the extent and distribution of qualifying natural habitats and habitats of the qualifying species • the structure and function (including typical species) of qualifying natural habitats • the structure and function of the habitats of the qualifying species • the supporting processes on which qualifying natural habitats and the habitats of qualifying species rely • the populations of each of the qualifying species • the distribution of qualifying species within the site <p>Marine site detail (naturalengland.org.uk) (Accessed 09/09/22)</p>

Conservation features and sub-features, condition assessment and supplementary advice	Feature, sub-feature or supporting habitat	Condition assessment Date and condition	Relevant supplementary advice on conservation objectives (attribute, target, relevant notes)
	H1110 Sandbanks which are slightly covered by sea water all the time	01/06/2018 100% Unfavourable - No change	
	H1140 Mudflats and sandflats not covered by seawater at low tide	11/06/2020 70% Unfavourable - No change 30% Unfavourable - Declining	
	H1150 Coastal lagoons	08/02/2018 100% Favourable	
	H1210 Annual vegetation of drift lines	*	
	H1220 Perennial vegetation of stony banks	*	
	H1310 Salicornia and other annuals colonising mud and sand	*	
	H1320 Spartina swards (Spartinion maritimae)	*	
	H1330 Atlantic salt meadows (Glaucopuccinellietalia maritimae)	*	
	H2120 Shifting dunes along the shoreline with Ammophila arenaria ('White dunes')	*	
	H1130 Estuaries	*	
	S1016 Desmoulin's whorl snail, Vertigo moulinsiana	*	
* Features that are not included in the current Marine Condition Assessment			

Table 2c: RAMSAR sites; Solent and Southampton Water Ramsar

Site Name / Code: Solent and Southampton Water Ramsar	
Activity distance to site	1.2km from nearest boundary, respectively.
Qualifying features	<ul style="list-style-type: none"> • Ramsar Criteria; • 3, 6. • • Note: For Ramsar sites, a decision has been made by Defra and Natural England not to produce Conservation Advice packages, instead focussing on the production of High Level Conservation Objectives. As the provisions on the Habitats Regulations relating to Habitat Regulations Assessments (HRAs) extend to Ramsar sites, Natural England considers the Conservation Advice packages for the overlapping European Marine Site designations to be, in most cases, sufficient to support the management of the Ramsar interests. • Therefore, the features of these Ramsar sites are considered to be sufficiently assessed within the overlapping European Marine Sites. <p>Marine site detail (naturalengland.org.uk) (Accessed 18/10/22)</p>

Section 3: LSE screening

In formulating the LSE alone assessments, Natural England's Conservation Advice Package, as outlined in Table 2, have been consulted and the following principles applied:

- The Advice on Operations (AoO) category of marine activity used are:
 - *[Shellfish aquaculture: trestle culture];*
- Shellfish aquaculture: trestle culture' has been selected as a proxy for the cages proposed for the current activity'. The pressures created from trestle culture are considered to be synonymous with the proposed cage method described in Section 2.
- Where available, the 'Advice on Operations' (AoO) matrix to determine pressures associated with the proposed activity that may potentially harm the qualifying habitat features and/ or species of the sites has been used.
- Low risk pressures; unless there is evidence or site specific factors that increase the risk, or uncertainty on the level of pressure on a receptor, this pressure generally does not occur at a level of concern and should not require consideration as part of the assessment.
- Features deemed sensitive to pressures (medium and high risk) for both direct and indirect pathways are taken forward into the LSE assessment.
- The individual pressure/ feature interactions categorised as 'Not Sensitive' at the benchmark are not taken forward into the LSE assessment. It is considered that the impacts on these

features as a results of the activities will be less than the benchmarks specified for these pressure/ feature interactions.

- For pressure/ feature interactions categorised as 'Not Relevant' these are not taken forward into the LSE assessment. It is considered that there is no interaction of concern between the pressure/ feature or the activity and the feature could not interact.
- Features deemed sensitive to pressures (medium and high risk) for both direct and indirect pathways are taken forward into the LSE assessment.
- Pressure/ feature interactions categorised as either 'Insufficient Evidence' or 'Not Assessed' have been taken forward into the LSE assessment in accordance with the precautionary principle.

Pressures

The following pressures have been identified as relevant to the LSE screening using Natural England's AoO as described above. A matrix of the pressures and features, replicating the AoO tables used to support this HRA is presented in Appendix B.

- Above water noise
- Abrasion/disturbance of the substrate on the surface of the seabed
- Genetic modification & translocation of indigenous species
- Introduction of microbial pathogens
- Introduction or spread of invasive non-indigenous species (INIS)
- Smothering and siltation rate changes (Light)
- Visual disturbance

Table 3a: LSE screening Solent and Dorset Coast SPA

Site Name / Code: Solent and Dorset Coast SPA UK9020330			
Pressure	Conservation feature/sub-feature or supporting habitat	LSE screening justification	LSE conclusion (Y/N)
Above water noise	Common tern (<i>Sterna hirundo</i>), Breeding Little tern (<i>Sternula albifrons</i>), Breeding Sandwich tern (<i>Thalasseus sandvicensis</i>), Breeding	There are no activities which would lead to above water noise as the cages are attached to the underside of a pontoon, therefore there is no impact pathway.	N
Abrasion/disturbance of the substrate on the surface of the seabed	Common tern (<i>Sterna hirundo</i>), Breeding Little tern (<i>Sternula albifrons</i>), Breeding Sandwich tern (<i>Thalasseus sandvicensis</i>), Breeding	There are no activities which would lead to abrasion/disturbance of the substrate on the surface of the seabed, as the cages are attached/suspended to the underside of a pontoon, therefore there is no impact pathway.	N
Genetic modification & translocation of indigenous species	Common tern (<i>Sterna hirundo</i>), Breeding Little tern (<i>Sternula albifrons</i>), Breeding Sandwich tern (<i>Thalasseus sandvicensis</i>), Breeding	<p>Conservation advice pressure benchmark - <i>Translocation/displacement outside of a geographic area; introduction of farm/hatchery-reared individuals outside of geographic area from which adult stock derives.</i></p> <p>Introduction of farmed native oysters from hatchery stock is a potential pathway to introduce different genetic stock to the wild population.</p> <p>This is a dispersive pressure which has the potential to act over a wide area (as far as larval dispersal) and therefore is potentially relevant to all habitat features.</p>	N

		However, the only indigenous species which are translocated into the area are native oysters and native oysters are not a feature of any of the qualifying habitat types potentially at risk. Therefore, while there is a theoretical pathway for genetic modification of wild oysters, no designated features would be affected. Therefore, there is no pathway for effects on any designated features.	
Introduction of microbial pathogens	Common tern (<i>Sterna hirundo</i>), Breeding Little tern (<i>Sternula albifrons</i>), Breeding Sandwich tern (<i>Thalasseus sandvicensis</i>), Breeding	There is no pathway for introduction of avian pathogens and therefore bird features are screened out.	N
Introduction or spread of invasive non-indigenous species (INIS)	Common tern (<i>Sterna hirundo</i>), Breeding Little tern (<i>Sternula albifrons</i>), Breeding Sandwich tern (<i>Thalasseus sandvicensis</i>), Breeding <u>Supporting habitat</u> Water column	The only species intended to be moved into the area is the European flat oyster (<i>Ostrea edulis</i>), therefore there is no direct risk of introduction of invasive non-indigenous species (INIS), however NE have advised of a potential risk of accidental introduction of INIS as seed is brought in from outside the area (see Section 8), therefore supporting habitat features are screened in. There is no pathway for the introduction of species which may be predatory or compete with bird features. Effects on bird features are screened out.	Y: All habitat features
Visual disturbance	Common tern (<i>Sterna hirundo</i>), Breeding Little tern (<i>Sternula albifrons</i>), Breeding Sandwich tern (<i>Thalasseus sandvicensis</i>), Breeding <u>Supporting habitat</u> Water column	Activities take place on and in the water and have the potential to cause visual disturbance to any features present. All features are screened in.	Y: All features

Table 3b: LSE screening Solent Maritime SAC

Features: Estuaries; Sandbanks which are slightly covered by sea water all the time

Generic Sub-feature: Subtidal mixed sediments

Activities assessed: On-growing and reproducing of *Ostrea edulis* in floating or suspended aquaculture systems.

1. Is the activity/activities directly connected with or necessary to the management of the site for nature conservation?	No	
2. What potential pressures, exerted by the gear type(s), are likely to affect the feature(s)/sub-feature(s)?	<ol style="list-style-type: none"> 1. Abrasion/disturbance of the substrate on the surface of the seabed 2. Changes in suspended solids (water clarity) 3. Genetic modification & translocation of indigenous species 4. Introduction of microbial pathogens 5. Penetration and/or disturbance of the sub-stratum below the surface of the seabed, including abrasion 6. Introduction or spread of invasive non-indigenous species (INIS) 7. Smothering and siltation rate changes (Light) 8. Physical change (to another sediment type) 	
3. Is the feature(s)/sub-features(s) likely to be exposed to the pressure(s) identified?	Pressure	Screening - Justification
	1.	OUT - There is no provision in the planned restoration activities for oysters to be harvested.
	2.	OUT – The presence of oysters is likely to improve the conditions, reducing the total suspended solids in the water column through biofiltration. Some minor addition through faeces may occur but there is likely to be a net reduction. None of the activities will take place on the seabed.

	3.	OUT - The species to be introduced is a native species to UK inshore waters with greatly denuded populations that require restoration. Any interactions with existing species are entirely natural. The species will not be cultivated but re-seeded into the wild and not subsequently disturbed.
	4.	OUT - Both UKSA and the suppliers of oyster seed will work to a strict Biosecurity Measures Plan (BMP) that is to the highest aquaculture industry standards and has also been reviewed by Cefas. This will ensure that the best possible provisions have been made to prevent the introduction of microbial pathogens.
	5.	OUT - There is no provision in the planned activities for any impact on the seabed.
	6.	OUT - Both UKSA and the suppliers of oyster seed will work to a strict BMP that is to the highest aquaculture industry standards and has also been reviewed by Cefas. This will ensure that the best possible provisions have been made to prevent the introduction of or spread of INIS.
	7.	OUT - The introduction of oysters is likely to help reduce suspended sediments in the long-term through biofiltration. As above the planned activities do not involve the use of bottom impacting gear, so suspension of sediment is unlikely to occur.
	8.	OUT – Restoration activities will only occur in the water column.
4. What key attributes of the site are likely to be affected by the identified pressure(s)?	While several potential pressures have been identified, they are not likely to significantly affect any key attributes of the site.	
5. What conservation objectives are likely to be affected by the identified pressure(s)?	<p>It is likely that the restoration of the native oyster may help to further the conservation objectives of maintaining and restoring the following supporting processes on which qualifying habitats rely:</p> <ul style="list-style-type: none"> • Restoring the species composition of component communities • Restoring water quality to mean winter dissolved inorganic nitrogen levels at which biological indicators of eutrophication (opportunistic macroalgal and phytoplankton blooms) do not affect the integrity of the site and features • Reducing the introduction and spread of non-native species and pathogens, and their impacts. 	
6. Potential scale of pressures and mechanisms of effect/impact (if known)	As this activity is taking place in the water column it is unlikely that any pressure will result in any significant impact on the SAC.	

	<p>Changes in suspended sediments may cause both changes in light penetration and smothering, likely to be an increase in light penetration and reduction in smothering. This is due to reduction in suspended sediments through fixing by oysters through biofiltration. As this activity is taking place on a small scale there are likely to be minimal changes.</p> <p>Translocation and cultivation of <i>O. edulis</i> is the stated aim of this project to reinstate populations of this species. Genetic mixing is an important part of the establishment of diverse and resilient populations. Areas being restored to have with little or no oysters, there is not likely to be any significant effect.</p> <p>Subtidal mixed sediments can be highly sensitive to the introduction of both microbial pathogens and INIS. As standard practice, the project adheres to a strict biosecurity measures plan to prevent any translocation. This involves screening source sites for pathogens/diseases and INIS and cleaning oyster shells before entering the recipient location. Meaning any impact is highly unlikely.</p> <p>The site will not be sensitive to penetration of the substratum due to all works taking place in the water column with no impact on the seabed.</p> <p><i>O. edulis</i> naturally occur in subtidal mixed sediments in the region. The introduction of them will not lead to a change in substrate – indeed, it is likely that they will help to improve the condition of this feature.</p> <p>The total footprint of these works will likely cover one marina area. On all levels this work can be considered as small scale.</p> <p>Any impacts will not be of a scale to have any significant effect on the integrity of the site.</p>	
7. Is the potential scale or magnitude of any effect likely to be significant?	Alone	In-Combination
	No	All relevant projects and plans have been screened and it was concluded that there will be no significant in-combination effects.



Likely Significant Effect Conclusion

Advice on operations tables have been used to inform the LSE screening.

For the Solent and Dorset Coast SPA LSE could not be ruled out from:

- Introduction or spread of invasive non-indigenous species (INIS)
- Visual disturbance

These pressures and the features they have the potential to interact with have been taken forward to the appropriate assessment (Section 4).

Section 4: Appropriate Assessment

Table 4: Appropriate Assessment Solent and Dorset Coast SPA UK9020330

Site Name / Code: Solent and Dorset Coast SPA UK9020330					
Pressure	Conservation feature/sub-feature or supporting habitat	Assessment evidence and justification	Adverse Effect on Integrity? (Y/N)	Mitigation proposed	Adverse Effect on Integrity with Mitigation? (Y/N)
Introduction or spread of invasive non-indigenous species (INIS)	<u>Supporting habitat</u> Water column	<p>Seed is sourced from outside the body of water where they will be placed and therefore NE have advised that for this project there is a potential risk of accidental introduction of INIS to the area. The seed is from authorised hatcheries or other aquaculture facilities. Authorised hatcheries or other aquaculture facilities are bound by strict controls under The Aquatic Animal Health (England and Wales) Regulations 2009.</p> <p>Stocks of <i>O. edulis</i> will be obtained from several sources in the UK. INIS assessments will be conducted for each of these sites and compared with known INIS species in the water.</p> <p>Therefore, the risk of accidental introduction of INIS is low and no significant adverse effects are</p>	N (Mitigations are precautionary and not considered necessary to exclude AEoSI)	<p>All APBs operate to a biosecurity measures plan as part of authorisation under the Aquatic Animal Health (England and Wales) Regulations, 2009.</p> <p>The biosecurity measures plan for this project details that Oysters will be delivered from Oban and will have any additional species in the delivery removed and destroyed, and biofouling manually removed and will be bleached (for at least 10 minutes) upon arrival</p>	N

		predicted and therefore adverse effects on integrity can be ruled out.		prior to being placed into aquaculture structures, as described in the biosecurity measures plan.	
Visual disturbance	<p>Common tern (<i>Sterna hirundo</i>), Breeding Little tern (<i>Sternula albifrons</i>), Breeding Sandwich tern (<i>Thalasseus sandvicensis</i>), Breeding</p> <p><u>Supporting habitat</u> Water column</p>	<p>Activities taking place on and in the water in the APB area have the potential to cause visual disturbance to any bird features present. However, as the activity occurs on a pre-existing pontoon where significant recreational boating activity already takes place the potential for additional disturbance is minimal.</p> <p>The proposed activity does not involve any machinery or vessels likely to cause visual disturbance.</p> <p>The existing pontoon is in a well-used area, and therefore the activity of small groups operating on the pontoon is unlikely to be detectable above existing baseline conditions.</p> <p>Due to the low level of activity being undertaken it is concluded that there is no likely significant effect on designated bird features of the Solent and Dorset Coast SPA and therefore adverse effects on integrity can be ruled out.</p>	N	N/A	N/A

Section 5: In-combination Assessment

The in-combination assessment considers projects or plans which may generate pressures on the same qualifying features as the assessed activity. Projects and plans are identified on the MMO's public register and consultation with Natural England.

No other plans or projects were identified in the searches. As there are no known plans or project in the vicinity of the proposed activity or other aquaculture activities there is no potential for in-combination effects with the current project.

Section 6: Appropriate Assessment and in-combination assessment conclusions

This document provides a record on the Habitats Regulations Assessment carried out by completed by Blue Marine Foundation and Isle of Wight Estuaries Project on behalf of UKSA. Following the LSE screening in Section 3 it was determined that the UKSA aquaculture site has the potential to have a significant effect on one marine site (i.e. LSE could not be excluded):

- Solent and Dorset Coast SPA

An Appropriate Assessment has considered the activity and potential pressures on features of these sites in detail. Effects from the introduction of microbial pathogens and accidental introduction of INIS was considered and it was concluded that no significant adverse effects could occur due to seed being sourced from an authorised hatcheries and aquaculture facilities and strict controls under The Aquatic Animal Health (England and Wales) Regulations 2009, which implement Council Directive 2006/88/EC (as amended) on the prevention and control of certain diseases in aquatic animals. Furthermore, additional mitigations committed to in the applicant's biosecurity measures plan (visual inspection, manual cleaning and bleaching of oysters) give further confidence that any adverse impacts are highly unlikely and that adverse effects on site integrity can be excluded.

Visual disturbance to birds was assessed and it was concluded that no adverse effects are considered possible. This was due to the very small scale of the activity, no involvement of machinery or vessels, existing baseline visual cues and extensive use by marina users at UKSA already.

The potential for in-combination effects with other plans or projects was considered and it was concluded that there was no potential for adverse effects on site integrity in-combination with other plans or projects.

It has been concluded beyond reasonable scientific doubt that the UKSA operation would not have an adverse effect on site integrity either alone or in-combination with other plans or projects.

Section 7: References

N/A

Section 8: Correspondence with SNCBs:

N/A

Section 9: Version Control and approval:

Version	Author	QA	Date	Comment
1.0	Dr Luke Helmer, Susan Hawley		19/11/22	First issue

Appendix A: Figures

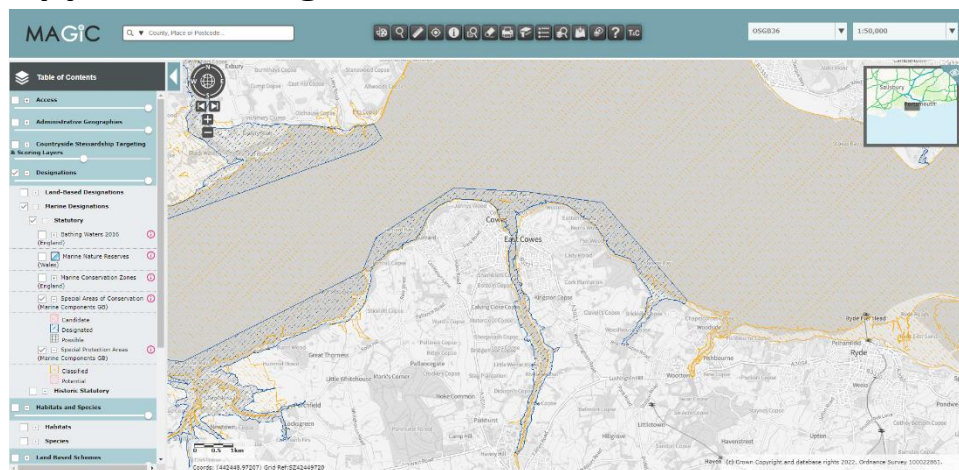


Figure 1: MAGIC Map of the area where UKSA pontoon is situated and the statutory marine designations that are in place for the area (SPA and SAC).



Centre for Environment
Fisheries & Aquaculture
Science



Department
for Environment
Food & Rural Affairs

Appendix B: Advice on Operations LSE screening matrix

S = Sensitive

IE = Insufficient information

NS= Not sensitive

NA= Not assessed

Blank = Not Relevant

Activity: Trestle culture

Site	Feature	Above water noise* (trestle culture only)	Abrasion/ disturbance of the substrate on the surface of the seabed	Changes in suspended solids (water clarity)	Genetic modification & translocation of indigenous species	Introduction of microbial pathogens	Introduction or spread of invasive non-indigenous species (INIS)	Penetration and/or disturbance of the substratum below the surface of the seabed, including abrasion	Removal of non-target species	Removal of target species	Smothering and siltation rate changes (Light)	Visual disturbance
Solent and Dorset Coast SPA	Common tern	S				S	S					S
Solent and Dorset Coast SPA	Little tern	S				S	S					S
Solent and Dorset Coast SPA	Sandwich tern	S				S	S					S
Solent and Dorset Coast SPA	Supporting habitat-water column				S	NS	S					S