

Appropriate Assessment Screening for Aquaculture activities Kinsale Harbour Co. Cork	
Brief description of the project or plan	<p>The following species are cultured in Kinsale Harbour (number of licences in parenthesis) -oysters (3). Additionally applications has been submitted for the following species - mussels (2), and oysters (1)</p> <p>Site T05/530A is licenced for the production of oysters (<i>C. gigas</i>) Site T05/530B is licenced for the production of oysters (<i>C. gigas</i>) Site T05/530C is licenced for the production of oysters (<i>C. gigas</i>)</p> <p>An application for a licence for the production of mussels (<i>M. edulis</i>) has been submitted for Site T05/472A and an application for the production of mussels (<i>M. edulis</i>) and Oysters (<i>C. gigas</i>) has been submitted for Site T05/543A</p> <p>The locations of the aquaculture sites are shown in Figure 1.</p>

Brief description of the Natura 2000 sites	<p>The area of Kinsale Harbour in question is not located within a Natura 2000 site. The following Natura 2000 sites are adjacent to (within 15Km) of the aquaculture sites in Kinsale Harbour and are also shown in Figure 1.</p> <p>Old Head of Kinsale (Site code: 004021) The Old Head lies approximately 10 km south of the town of Kinsale in Co. Cork, and is a 5 km long headland formed of steeply inclined beds of rock. The site comprises a section of the cliffs on the western side of the narrow isthmus leading to the Head and a 500 m seaward extension. These are vertical rock cliffs providing optimum habitat for ledge nesting seabirds. Maritime grassland and heath occurs above the steep cliffs. The site is a Special Protection Area (SPA) of special conservation interest for the following species: Kittiwake and Guillemot</p> <p>The Conservation Objectives of this site are¹:</p> <p>To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA:</p> <ul style="list-style-type: none"> • Kittiwake • Guillemot
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¹ NPWS (2018) Conservation objectives for Old Head of Kinsale SPA [004021]. Generic Version 6.0. Department of Culture, Heritage and the Gaeltacht

	<p>Sovereign Islands SPA (Site Code 004124)</p> <p>The Sovereign Islands are two very small marine islands located approximately 1 km off the coastline at the entrance to Oysterhaven Bay in Co. Cork. The islands are rocky stacks separated by a narrow sound of about 20 m width. The eastern island is flat-topped and rises to 24 m above sea level; the western one is more peaked and rises to 30 m. The site is a Special Protection Area (SPA) of special conservation interest for the following species: Cormorant.</p> <p>The Conservation Objectives of this site are:²</p> <p>To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA:</p> <ul style="list-style-type: none"> • Cormorant
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Assessment criteria	
Describe the individual elements of the project (either alone or in combination with other plans or projects) likely to give rise to impacts on the Natura 2000 site.	<p>Intertidal culture of <i>C. gigas</i> is carried out in bags on trestles in the intertidal zone. Depending on the size of the stock the numbers of oysters in each bag will vary with lower number in bags with larger oysters. Typically seed is sourced from hatcheries in the UK or France but half-grown oysters, sourced from Ireland or within the EU (typically France) may also be used as stock. At Site T05/543A it is also proposed to culture <i>M. edulis</i> in bags on trestles in the intertidal zone.</p> <p>At Site T05/472A it is proposed to culture mussels (<i>M. edulis</i>) on the seabed in the subtidal zone. It is intended that mussel seed will be sourced from the Irish Sea. Typically seed, sourced from elsewhere in Ireland is brought in at between 15mm to 40mm and on-grown to market size before placing on the market. Once seed is relayed it is usually not disturbed until harvest with the exception of monthly sampling to check for performance. Harvesting of mussels from the site will be carried out by dredging.</p>

² NPWS (2018) Conservation objectives for Sovereign Islands SPA [004124]. Generic Version 6.0. Department of Culture, Heritage and the Gaeltacht.

Describe any likely direct, indirect or secondary impacts of the project (either alone or in combination with other plans or projects) on the Natura 2000 site by virtue of:	
size and scale;	There are no direct or indirect impacts from the culture operations on the adjacent SPAs
Distance from the Natura 2000 site or key features of the site:	<p>There is no spatial overlap between any of the aquaculture sites and the adjacent Natura 2000 sites.</p> <p>Sites T05/530A, B and C, are located a minimum of 7.5Km, by sea, from the nearest boundary of the Sovereign Islands SPA and 11.5Km from the nearest boundary of the Old Head of Kinsale SPA.</p> <p>Site T05/472A is located 5.2Km, by sea, from the nearest boundary of the Sovereign Islands SPA and 8.4Km from the nearest boundary of the Old Head of Kinsale SPA.</p> <p>Site T05/543A is located 4.5Km, by sea, from the nearest boundary of the Sovereign Islands SPA and 7.0Km from the nearest boundary of the Old Head of Kinsale SPA.</p>
Resource requirements (water abstraction etc.):	Cultured bivalves (mussels and oysters) are filter feeders and they feed upon suspended particulate matter. They selectively ingest phytoplankton and other organic material (e.g. small zooplankton and bacteria) and dispose of inorganic and larger organic matter in pseudofeces, which is excreted into the water column. Typically the fecal and pseudofecal pellets will fall to the sea floor and may cause localised organic enrichment and/or sedimentation. The level of enrichment is a function of, <i>inter alia</i> , water depth current speed, density of culture, the quantity of suspended particulate matter in the water column, or a combination of these. The build-up of excess organic matter beyond the footprint of the sites is not considered likely. The bivalve shellfish production activities do not use any resources required by the qualifying features within the Natura 2000 sites.
Emissions (disposal to land, water or air):	The aquaculture sites in the intertidal area in the Kinsale Harbour area are accessed mainly by tractors, with other vehicles used as required. The proposed aquaculture site in the subtidal area would be accessed by boat. As a consequence, noise and

	<p>pollution e.g. as a result of a fuel spill may present a risk to features of adjoining Natura sites with a specific marine element. The risks are, however, not considered significant at current levels of aquaculture activity. It is considered that impacts would be localised and minor. Also, licence conditions specify that vessels and vehicles used in the conduct of aquaculture operations must maintain strict operation and safety standards, such that risks associated with noise, spills and emissions are minimised and/or mitigated.</p> <p>The risk of the introduction of non-native species is considered to be low. The risk of the transfer of non-native species with mussel seed sourced from the Irish Sea is considered to be low. Similarly the risk of the transfer of non-native species with hatchery sourced seed of <i>C. gigas</i> is also not considered to be significant. The use of half-grown oysters from outside the State as a source of stock has the potential to result in the introduction of non-native species into the bay. Adoption of industry best practice and implementation of measures set out in relevant guidelines as they relate to the risk of introduction of non-target species (e.g. Invasive Species Ireland guideline available at http://invasivespeciesireland.com/biosecurity/aquaculture/) would also significantly reduce the risk.</p>
Excavation requirements:	There are no excavation or similar activities associated with the aquaculture activity
Transportation requirements:	Access routes to the aquaculture sites do not spatially overlap with any of the adjacent Natura 2000 sites. The produced aquaculture products are transported offsite by lorry using the existing national road network with no impact on the adjoining Natura 2000 sites.
Duration of construction, operation, decommissioning:	None
Other:	

Describe any likely changes to the site arising as a result of:	
Reduction of habitat area:	There is no reduction in habitat area within any of the Natura 2000 sites considered arising from the aquaculture production activities.
Disturbance to key species:	Given the separation distance of the production sites from the adjacent Natura 2000 sites and the absence of any clear “source –pathway – receptor” there will be no disturbance to key species within any Natura 2000 sites. There is no evidence in the scientific literature to suggest that aquaculture activities as proposed significantly impact on the bird species listed as Features of Interest in the SPAs, i.e., Kittiwake, Guillemot and Cormorant

Habitat or species fragmentation:	There is no habitat or species fragmentation within the Natura 2000 sites arising from the aquaculture production activities.
Reduction in species density:	There is no reduction in species density within the Natura 2000 sites arising from the aquaculture production activities.
Changes in key indicators of conservation value (water quality):	There are no changes in key indicators of conservation value within the Natura 2000 sites arising from the aquaculture production activities.
Climate change:	Given the nature and scale of the aquaculture production activities the contribution to climate change is considered insignificant.

Describe any likely impacts on the Natura 2000 site as a whole in term of;	
Interference with the key relationships that define the structure of the site:	None of the activities associated with the shellfish production in the Kinsale Harbour area will interfere with the key relationships that define the structure of the adjacent Natura 2000 sites.
Interference with the key relationships that define the function of the site	None of the activities associated with the shellfish and seaweed production in the Kinsale Harbour area will interfere with the key relationships that define the function of the adjacent Natura 2000 sites.
Provide indicators of significance as a result of the identification of effects set out above in terms of:	
Loss	None identified
Fragmentation:	None identified
Disruption:	None identified
Disturbance:	None identified
Change to key elements of the site (e.g. water quality etc.):	None identified
Describe from the above those elements of the project or plan, or combination of elements, where the above impacts are likely to be significant or where the scale or magnitude of impacts is not known.	None identified

Finding of no significance effect report:	
Name of project or plan:	Aquaculture activities in the Kinsale Harbour area, Co. Cork.
Name and location of Natura 2000 site It would be helpful for a map or plan to be provided:	Old Head of Kinsale (Site code: 004021 and Sovereign Islands SPA (Site Code 004124) – See Figure 1.
Description of the project or plan	Shellfish culture activity in the Kinsale Harbour area, Co. Cork.
Is the project or plan directly connected with or necessary to the management of the site (provide details)?	No.
Are there other projects or plans that together with the project or plan being assessed could affect the site (provide details)?	No.
Describe how the project or plan (alone or in combination) is likely to affect the Natura 2000 site.	The cultivation of shellfish in the Kinsale Harbour area is not likely to affect the features of adjoining Natura 2000 sites.
Explain why these effects are not considered significant.	<p>There is no spatial overlap of the aquaculture activities with Natura sites. In addition, there would be no interference with key relationships that define the function of the sites. The culture activities will not result in habitat loss, there will not be significant disturbance to key species and there will be no habitat or species fragmentation. There will be no direct discharge of pollutants into the environment and water quality will not be affected. Consequently, it is concluded that the culture of shellfish as it is currently constituted and proposed, in the Kinsale Harbour area does not pose significant risk to the conservation features of the adjacent sites and as such does not require a full appropriate assessment.</p> <p>On the basis of the above it is considered that there will be <u>no significant effects</u> on the qualifying feature / interests' of the Natura 2000 sites.</p>
Who carried out the assessment?	Marine Institute, January 2019

Figure 1: Location of aquaculture sites in the Kinsale Harbour area and adjacent Natura 2000 sites

