



**AP2-4/2018 & AP5/2018**

**Lough Swilly Shellfish Cultivation Appeal**

**Produced by**

**AQUAFACT International Services Ltd**

**On behalf of**

**Aquaculture Licences Appeals Board**

**February 2019**

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### Report Approval Sheet

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**Appeal Ref No. AP2-4/2018 & AP5/2018**

**Aquaculture Licences Appeals Board**

**Technical Advisor's Report**

<b>Description</b>	Applications for 10 year aquaculture and foreshore licences for Mussel bottom culture and Pacific Oyster trestle culture in Lough Swilly, Co. Donegal.
<b>Licence Applications</b>	T12/37 A1, T12/37 A2, T12/37 B1, T12/37 B2, T12/37 B3, T12/37 B4, T12/37 C and T12/373
<b>Appeal Ref No.s</b>	AP2/2018, AP3/2018, AP4/2018 & AP5/2018
<b>Department Ref No.</b>	
<b>Applicants</b>	<ul style="list-style-type: none"><li>- Lough Swilly Oyster Growers Co-operative Society Ltd., Station House, Malin Road, Carndonagh, Co. Donegal</li><li>- Alan O'Sullivan, Ballymacool Wood, Letterkenny, Co. Donegal</li></ul>
<b>Minister's Decision</b>	Grant Licences on 30/11/2017
<b>Appeal</b>	
<b>Type of Appeal</b>	Appeal against the decision of the Minister to grant renewal of Aquaculture and Foreshore Licences for the cultivation of Mussels/Pacific oysters in Lough Swilly.
<b>Appellants</b>	<ul style="list-style-type: none"><li>- Lough Swilly Wild Oyster Society Ltd.</li><li>- Coastwatch Ireland</li><li>- Adrian Weir</li></ul>
<b>Observers</b>	None
<b>Technical Advisor</b>	Aquafact International Services Ltd. <a href="http://www.aquafact.ie">www.aquafact.ie</a>
<b>Site Inspection</b>	None

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## 1. Appeal Details

### 1.1. Appeal Details & Observer Comments / Submissions

Appeal number	Date Appeal Received by ALAB
AP2/2018	9 <sup>th</sup> January 2018
AP3/2018	10 <sup>th</sup> January 2018
AP4/2018	11 <sup>th</sup> January 2018
AP5/2018	9 <sup>th</sup> January 2018

### 1.2. Names of Appellants

Name	Address
Lough Swilly Wild Oyster Society Ltd.	St. Johnston, Lifford, Co. Donegal
Coastwatch Ireland	Civil & Environmental Engineering, Trinity College Dublin, College Green, Dublin 2
Adrian Weir	Aught, Quigleys Point, Co. Donegal

### 1.3. Names of Observer

No observations outside of the Department's response was received.

### 1.4. Grounds for Appeal

#### 1.4.1. Lough Swilly Wild Oyster Society Ltd.

AP2/2018

Substantive Issues

**1. Legislative**

The Appellants contend that the Applicant was operating at sites without a licence and was therefore acting illegally. The Appellant states that the Applicant's original Fish Culture Licence was granted by the Minister for Marine on 20<sup>th</sup> October 1994 for a ten year period and that an application to renew the licence was submitted on 23<sup>rd</sup> September 2004. They contend that according to the coversheet of the application for a licence renewal it is strictly prohibited for a Licensee to continue his operations without a licence.

**2. EIA Screening**

The Appellants state that they have not been able to gain access to the EIA screening assessment.

**3. Impact on Native Oyster beds**

The Appellants contend that the licensed sites under appeal are predominantly native oyster areas. They state that fishing of Pacific oysters would detrimentally effect the native oyster because it is highly sensitive to smothering, organic enrichment and to the activities of suspended culture. They state that the native oyster is also highly sensitive to the introduction of non-native species and to parasites that can be transferred by the Pacific oyster. They cite an EPA report that indicates that invasive oysters may alter ecosystem functioning directly and indirectly by affecting microbial communities. The cited report recommends action to restrict or eliminate the spread of Pacific oyster before dense reefs are formed. They state that the granting of an extensive area for Pacific oyster and mussel bottom culture would be in opposition to the recommendations of the EPA report. The Appellants also cite a more recent joint Oireachtas committee (Agriculture, Food and Marine) meeting in 2015 where Inland Fisheries Ireland (IFI) acknowledged that the Pacific oyster had become feral in Lough Swilly and that indicated provision should be made to remove the Pacific oysters. The Appellant contends that this opinion was not considered when the decision to grant the licences was made.

The Appellants state that site T12/37B2 encroaches on a native oyster area and that the actions of dredging for mussels will have a negative effect on the native oyster population.

The Appellants state the T12/37C is predominantly a native oyster area and that to allow the cultivation of Pacific oysters here would contradict the decision in T12/297 where that licence application was refused on the grounds that it completely overlaps an '*Ostrea edulis* dominated



community' area.

The Appellants indicate that native oyster have been recently (December 2017) found growing in areas in Fahan Creek where licences to farm Pacific oysters have been granted (T12/37 A1 & A2). They state that allowing the cultivation of the invasive Pacific oyster would drastically impact the native oyster.

**4. Disease**

The Appellants state the *Bonamia ostreae* was detected within Lough Swilly in 2006 by the Marine Institute. They cite an MI report which indicates that imports of Pacific oyster (*Magallana gigas*) from France as the likely vector. They contend that further farming of Pacific oysters could result in the further spread of the disease in Lough Swilly.

**5. Potential Native Oyster bed areas**

The Appellants contend that many sites including T12/37A1, T12/37B2 and T12/37C which are the least impacted by Pacific oysters would make ideal native oyster nurseries and to introduce Pacific oyster and mussel bottom culture to these areas would make the area unfeasible for native oysters and further diminish their stock.

**6. Feral Pacific Oyster removal**

The Appellants maintain that all Pacific oyster farmers should undertake a site audit and remove old Pacific oysters before they spread further and affect the native oyster further. They contend that this appears not to have been considered when determining the licences.

The Appellants state that there is a serious risk that the native oyster could become extinct if immediate action to remove the Pacific oysters from the cited areas does not take place. They highlight the Fishery Natura plan to revive the native oyster population while containing the Pacific oyster population.

**7. Natural Mussel Seed Area**

The Appellants state that site T12/37B1 encroaches on a natural mussel spat fall area essential to the regeneration of mussel stocks and spawning of mussels. They contend that any disturbance in this area will have a negative impact on mussel populations.

AP5/2018Substantive Issues**1. EIA Screening**

The Appellants state that they have not been able to gain access to the EIA screening assessment.

**2. Disease**

The Appellants state the *Bonamia ostreae* was detected within Lough Swilly in 2006 by the Marine Institute. They cite an MI report which indicates that imports of Pacific oyster (*Magallana gigas*) from France as the likely vector. They contend that further farming of Pacific oysters could result in the further spread of the disease in Lough Swilly.

**3. Feral Pacific Oyster removal**

The Appellant maintains that all Pacific oyster farmers should undertake a site audit and remove old Pacific oysters before they spread further and affect the native oyster further. They contend that this appears not to have been considered when determining the licences.

The Appellants state that there is a serious risk that the native oyster could become extinct if immediate action to remove the Pacific oysters from the cited areas does not take place. They highlight a Fishery Natura plan to revive the native oyster population while containing the Pacific oyster population.

Non-substantive Issues

The Appellants state that the determination notice mentions that areas in T12/343 is licensed and managed. They state that they have not seen any management plan for site T12/343 and would be concerned that none exists which they contend has resulted in the “sprawl” of Pacific oyster to the detriment of the native oyster.

**1.4.2. Coastwatch Ireland**Substantive Issue**1. EIA Assessment**

The Appellants state that they have not seen any evidence of screening to determine whether an

EIA applies under Article 4(2) of Directive 2011/92/EU for this application. They contend that the Minister's 2014 general screening determination on shellfish aquaculture licensing in Lough Swilly is inadequate to cover the present specific application.

**2. Invasive Alien Species**

The Appellants state that Lough Swilly has a serious Gigas oyster IAS (invasive alien species) problem.

**3. Ecological Status**

The Appellants state that the Lough is not at GES as a Natura site and under the Water Framework Directive.

**4. Fishery Natura Plan**

The Appellants state that the Lough Swilly Natura plan has expired.

Non-substantive Issues

**1. Company Registration**

The Appellants contend that the company Lough Swilly Shellfish Grower's Cooperative Society Ltd. is not a registered company and that it cannot therefore be granted a licence.

**2. Extent of Licence Application Hectarage**

The Appellants state that this is the largest application in the country for 1,471.5 hectares of Gigas and mussel bottom culture in an SPA and SAC.

**3. Appropriate Assessment Cumulative Effects**

The Appellants state that the Appropriate Assessment screening process does not adequately consider the cumulative effects of other licences within Lough Swilly.

**1.4.3. Adrian Weir**

Substantive Issues

**1. Wild Fishery Dredge Licence**

The Appellant states that the licensed site T12/37 includes wild fishery areas where he as a holder of an oyster dredge licence issued by Inland Fisheries Ireland is entitled to fish for native oysters and

naturalised Pacific oysters. He contends that the issuing of the T12/37 licence without reference to his fishing rights will abolish said rights as the licence holder may order him to cease and desist fishing from these grounds.

## **2. Constitutional Rights**

The Appellant contends that failure to acknowledge his fishing rights may be in breach of his constitutional rights, namely Article 45.2., which states:

*“the State shall, in particular, direct its policy towards securing:–*

*(i) that the citizens (all of whom, men and women equally, have the right to an adequate means of livelihood) may through their occupations find the means of making reasonable provision for their domestic needs.”*

## **3. Extent of Native and Pacific Oyster Wild Fisheries**

The Appellant asks that no new or renewal applications for Aquaculture/Foreshore Licences should be granted until a scheduled (January 2018) Marine Institute survey is completed and published.

The Appellant asks that it be stipulated in licence conditions that if wild fisheries areas are included in licensed sites that persons holding a dredge licence issued by Inland Fisheries Ireland be entitled to fish without hindrance from aquaculture operators.

The Appellant requests that operators not be permitted to put trestles, cages or other devices suitable for on-growing of aquaculture species on any area that is deemed to be a wild fishery site.

### **1.5. Minister’s submission**

Section 44 (2) of the Fisheries (Amendment) Act 1997 states that *“The Minister and each other party except the Appellant may make submissions or observations in writing to the Board in relation to the appeal within a period of one month beginning on the day on which a copy of the notice of appeal is sent to that party by the Board and any submissions or observations received by the Board after the expiration of that period shall not be considered by it”*.

#### **1.5.1. T12/37**

The Department of Agriculture, Food and the Marine (DAFM) Aquaculture and Foreshore Management Division (AFMD), scientific advisors (Marine Institute - MI) and technical advisors (Marine Engineering

Divisions – MED) made a submission to the ALAB on the 23<sup>rd</sup> April 2018 in response to the appeals against the Minister's decision to grant Aquaculture Licences to Lough Swilly Shellfish Grower's Co-operative Ltd. for the cultivation of mussels and Pacific oysters at sites T12/37 A1, A2, B1, B2, B3, B4 & C in Lough Swilly. It is presented below in its entirety.

#### AP2/2018

*The Appellant contends that the Applicant was operating at the sites without a licence and was therefore acting illegally.*

*In 1994 Lough Swilly Shellfish Growers Co-operative Society Ltd were granted a 10 year foreshore licence for the cultivation of oysters and mussels under the Foreshore Act 1933 and were also granted a 10 year fish culture licence for the deposit, propagation, and harvesting of oysters and mussels under section 15 of the Fisheries (Consolidation) Act 1959.*

*The effect of section 75 of the Fisheries (Amendment) Act 1997 and section 3 of the Fisheries and Foreshore (Amendment) Act 1998 is that a foreshore licence granted under the Foreshore Act 1933 for aquaculture purposes and a fish culture licence granted under section 15 of the Fisheries (Consolidation) Act 1959 were deemed to be aquaculture licences granted under the 1997 Act. By virtue of section 19A(4) of the 1997 Act the Co-op is entitled to continue operating as if these licences, which were deemed by the 1997 and 1998 Act to be aquaculture licences, were still in force, pending a Ministerial determination of the renewal application.*

*The issue of licensing aquaculture activity in "Ostrea edulis dominated community" was fully considered and addressed in the AA report and it was acknowledged that "No aquaculture activities should be carried out in 'Ostrea edulis dominated community' as they are all considered disturbing to this habitat type. Recommendations presented in the AA report are a result of conclusions derived from interactions between aquaculture activities and information published in the Lough Swilly Conservation Objectives and supporting documents by NPWS. It is important to note that the habitat designation above appears in the Conservation Objectives set by NPWS. Subsequent references to this habitat type in the appeal should be considered in light of the conservation designations. The recommendations in the AA report relating to this particular community type identify that the implementation of the Fishery Natura Plan for the native oyster was consistent with the conservation objectives for this community type as well as the expansion and sustainable exploitation of this fishery resource. Furthermore, the Marine Institute is aware of the concerns of fishermen in the area that native oysters have been found outside of these particular habitat*

designations.

*The epidemiological study conducted by the Marine Institute proposed that the greatest likelihood of importation of Bonamiasis into Lough Swilly was as a consequence of movement of stock (Ostrea edulis as hitchhikers on Mytilus edulis) from Lough Foyle. The risk of importation with C. gigas stock from France was considered negligible. Additionally, it is important to note that the input of C.gigas seed requires a Fish Health Authorisation under Council Directive 2006/88/EC and that this be in place prior to the commencement of the aquaculture activities.*

*The Appellant contends that "fishing of the Pacific oyster would detrimentally affect the native oyster because of it being highly sensitive to smothering and sensitive to organic enrichment and to activities associated with suspended culture". Consistent with the mitigation measures set out in the Licensing Authority's Conclusion Statement the draft Aquaculture Licence does not provide for the uncontained bottom culture of C. gigas on the seabed and therefore no fishing of this species is required as part of any aquaculture activity. The presence of naturalised populations of C. gigas in Lough Swilly was acknowledged and addressed in the AA report. The use of triploid C. gigas seed as a mitigation measure was proposed and the granting of the licence at site T12/037 is conditional on the use of triploid seed only. Additionally, the AA recommended that "No aquaculture activities should be carried out in 'Ostrea edulis dominated community', as they are all considered disturbing to this habitat type.*

*The Appellant states that numerous areas including T12/37 A1, T12/37 B2 and T12/37 C are least affected by Pacific Oysters and would make an ideal native oyster nursery and to introduce Pacific Oysters and mussel bottom culture would make this area unfeasible for the native oyster nursery and further diminish their stocks. The interaction of fisheries and aquaculture in Lough Swilly and the in-combination of these activities was considered and addressed in the AA report. Specific measures relating to aquaculture and fisheries activities that might ensure sustainable levels of both activities within the bay while allowing the Natura site to attain good conservation status were presented in the AA report.*

*EIA Screening was done by the Department for each Lough Swilly application advertised —the Swilly Screening Assessment outcomes are published on the Department's website including for T12/37.*

*In revising the proposed sites for licensing there was no overlap permitted with Ostrea edulis habitat areas defined in the Conservation Objectives by NPWS for the Lough Swilly SAC. Allowance has been made in the mapping of revised sites for T12/37 for no occupancy of Ostrea edulis dominated community. Accordingly, this has reduced the overall area of foreshore to be licensed from 1470 ha to 450 ha in respect of T12/37.*

AP3/2018

*The Appellant contends that the Applicant is not a properly registered company and therefore cannot be granted a licence.*

*The Registrar of Friendly Societies deals with Industrial and Provident Societies which in the main consist of co-operatives. The legislation governing such societies is the Industrial and Provident Societies Act, 1893 — 2014. It is our understanding that Lough Swilly Shellfish Growers Co-operative Society Ltd is on the register.*

*The Appellant states that the "area already has a serious Gigas oyster IAS problem" but provides no evidence to support this. The presence of naturalised populations of *C. gigas* in Lough Swilly was acknowledged and addressed in the AA report. The use of triploid *C. gigas* seed as a mitigation measure was proposed and the granting of the licence at T12/037 is conditional on the use of triploid seed only. Additionally, the AA recommended that "No aquaculture activities should be carried out in 'Ostrea edulis dominated community', as they are all considered disturbing to this habitat type.*

*The Appellant states that this area is not at GES (Natura site and under the WFD). We assume GES refers to Good Ecological Status which is a term used under the Marine Strategy Framework Directive (MSFD). The area in question is not within the area specifically covered by the MSFD programme but is within the area covered by the Water Framework Directive (WFD). Lough Swilly currently has a "High"- classification status for the relevant biological elements under WFD.*

AP4/2018

*The Appellant contends that the granting of aquaculture licences at site T12/037 would "abolish" his right to fish in the area and may be in breach of his constitutional rights. The area in question is 'State Foreshore' and the State has a right to manage its own resources.*

**1.5.2. T12/343**

The Department of Agriculture, Food and the Marine (DAFM) Aquaculture and Foreshore Management Division (AFMD), scientific advisors (Marine Institute - MI) and technical advisors (Marine Engineering Divisions – MED) made a submission to the ALAB on the 23<sup>rd</sup> April 2018 in response to the appeals against the Minister's decision to grant Aquaculture Licences to Alan O' Sullivan for the cultivation of Pacific oysters at sites T12/343 in Lough Swilly. It is presented below in its entirety.

AP5/2018

*The issue of licensing aquaculture activity in 'Ostrea edulis dominated community' was fully considered and addressed in the AA report and it was acknowledged that "No aquaculture activities should be carried out in 'Ostrea edulis dominated community' as they are all considered disturbing to this habitat type. Recommendations presented in the AA report are a result of conclusions derived from interactions between aquaculture activities and information published in the Lough Swilly Conservation Objectives and supporting documents by NPWS. It is important to note that the habitat designation above appears in the Conservation Objectives set by NPWS. Subsequent references to this habitat type in the appeal should be considered in light of the conservation designations. The recommendations in the AA report relating to this particular community type identify that the implementation of the Fishery Natura Plan for the native oyster was consistent with the conservation objectives for this community type as well as the expansion and sustainable exploitation of this fishery resource.*

*The use of triploid C. gigas seed as a mitigation measure was proposed and the granting of the licence at site T12/343 is conditional on the use of triploid seed only. In addition, the footprint of this site was reduced to 2.09 ha in order to avoid any overlap with 'native oyster' community.*

*EIA Screening was done by the Department for each Lough Swilly application advertised —the Swilly Screening Assessment outcomes are published on the Department's website including for T12/343.*

**1.6. Applicant's response**

Section 44 part 2 of the Fisheries Amendment Act 1997 states *"The Minister and each other party except the Appellant may make submissions or observations in writing to the Board in relation to the appeal within a period of one month beginning on the day on which a copy of the notice of appeal is sent to that party by the Board and any submissions or observations received by the Board after the expiration of that period shall not be considered by it."*

No submission has been received from the Applicants in response to the Appeals.



## **2. Consideration of non-substantive Issues**

### AP3/2018

#### **1. Company Registration**

The Appellant contends that the company Lough Swilly Shellfish Grower's Cooperative Society Ltd. is not a registered company and that it cannot therefore be granted a licence.

As submitted in the DAFM response, the Registrar of Friendly Societies deals with Industrial and Provident Societies including co-operatives. The Registry of Friendly Societies Annual Report 2017 indicates that Lough Swilly Shellfish Growers Cooperative Society Ltd. (4689-R) is included on the 'List of Industrial and Provident Societies on the Register at 31 December 2017'.

#### **2. Extent of Licence Application Hectarage**

The Appellant states that this is the largest application in the country for 1,471.5 hectares of Gigas and mussel bottom culture in an SPA and SAC.

While the original application was for a cumulative hectarage in the order of 2,000 ha, including 1,471.5 ha of foreshore, the Minister determined that it was in the public interest to grant a variation of the licences sought, *i.e.* reducing and reconfiguring the footprint of the sites to a cumulative total of 450.25 ha. This licence variation is therefore under appeal and not the 1,471.5 ha site.

#### **3. Appropriate Assessment Cumulative Effects**

The Appellant states that the Appropriate Assessment screening process does not adequately consider the cumulative effects of other licences within Lough Swilly.

The Appellant does not specify any inadequacies they identified in the Appropriate Assessment with respect to cumulative impact.

The AA establishes the spatial extent of aquaculture and fishing activities in Lough Swilly and the in-combination effects of these activities on the individual communities and Qualifying Interests. The biological and physical impacts of each culture method are assessed, the spatial overlap with each QI is calculated with respect to the conservation objectives and the significance of impact is determined.

It is the opinion of the Technical Advisor that the Appropriate Assessment adequately assesses the cumulative impacts of aquaculture and fisheries in Lough Swilly.

#### AP5/2018

### **1. Management Plan**

The Appellant states that the determination of aquaculture/foreshore licensing application T12/343 *“mentions that areas in T12/343 are licensed and managed we have not seen any management plan and would be very concerned that none exists and for this reason the sprawl of the Pacific oyster has occurred having a detrimental effect of the native oyster population.”*

The determination notice for T12/343 states that *“the Licensing Authority's Appropriate Assessment Conclusion Statement (available on the Department's website) outlines how aquaculture activities in this SAC/SPA, including this site, are being licensed and managed so as not to significantly and adversely affect the integrity of Lough Swilly SAC and SPA.”*

The AA conclusion statement outlines the mitigation measures employed in order for aquaculture activities in Lough Swilly to be consistent with the conservation objectives and the achievement of good conservation status for habitats within the SAC and some SCIs in the SPA. These measures included exclusion of aquaculture (in accordance with the Fishery Natura Plan) from ‘*Ostrea edulis* dominated community’, significant reduction in the hectareage of licensed sites in order to reduce the overlap to <15% with each of five individual habitats (Fine sand community complex, Intertidal mixed sediment with Polychaetes, Mud community complex, Muddy fine sand with *Thyasira flexuosa* and Subtidal mixed sediment with Polychaetes and Bivalves). Uncontained bottom culture of Pacific oysters is no longer licensed. Additional conditions of the licences include the use of triploid oyster stock to mitigate against the spread of Pacific oysters. The updated and enhanced Aquaculture and Foreshore licences contain terms and conditions which reflect the environmental protection required under EU and National law.

These mitigation measures and licence conditions are applicable to all Pacific oyster culture licences in Lough Swilly. In addition, with respect to T12/343, the licence footprint has been significantly reduced from 19 ha to 2.09 ha, to ensure there is no overlap with the ‘*Ostrea edulis* dominated community’. The findings of the Underwater Archaeological Impact Assessment report on Lough Swilly identified kelp beds in proximity to the access route to T12/343. As a condition of the licence the operator will be required to comply with the designated access route to minimise any potential

impact on features of cultural heritage significance.

### **3. Oral Hearing Assessment**

In accordance with Section 49 of the Fisheries Amendment Act 1997 an oral hearing may be conducted by the ALAB regarding the licence appeals. An oral hearing has been requested by one Appellant with respect to all eight licences under appeal (T12/37 A1, A2, B1, B2, B3, B4, C & T12/343).

It is the opinion of the Technical Advisors that an oral hearing is not warranted for these appeals.

### **4. Minister's File**

In accordance with particulars of Section 43 of the Fisheries Amendment Act 1997 the following documented items were sent to the Aquaculture Licence Appeals Board (ALAB) from the Minister:

#### T12/37

- Copy of Application Forms;
- Copy of Aquaculture Licence with maps, charts, co-ordinates and drawings;
- Copy of Foreshore Licence;
- Copy of EIA Screening Assessment;
- Copy of Submission made to the Minister with recommendation to grant a variation of the licence;
- Copy of Notification to the Applicant of the Minister's Decision;
- Copy of Advertisement of the Minister's Decision;
- Copy of Appropriate Assessment and Conclusion Statement

#### T12/343

- Copy of Application Forms;
- Copy of Aquaculture Licence with maps, charts, co-ordinates and drawings;
- Copy of Foreshore Licence;
- Copy of EIA Screening Assessment;
- Copy of Submission made to the Minister with recommendation to grant a variation of the licence;
- Copy of Notification to the Applicant of the Minister's Decision;
- Copy of Advertisement of the Minister's Decision;

- Copy of Appropriate Assessment and Conclusion Statement

## 5. Section 46 submissions

Section 46(1) of the Fisheries (Amendment) Act, 1997 (the Act) provides that *“Where the Board is of the opinion that, in the particular circumstances of the appeal, it is appropriate in the interests of justice to request a party or other person who has made submissions or observations to the Board in relation to the appeal to make submissions or observations to the Board in relation to any matter which has arisen in relation to the appeal, it may, in its discretion, notwithstanding section 41(3), 44(4), 45(4) or 50(6) serve on the party or person a notice –*

- (a) requesting the party or person, within a period specified in the notice (being not less than 14 or more than 28 days beginning on the date of service of the notice) to submit to the Board submissions or observations in relation to the matter, and*
- (b) stating that, if submissions or observations are not received before the expiration of the specified period, the Board will, after the expiration of the specified period, pursuant to section 48, determine the appeal.*

### AP2/2018 & AP5/2018

The Appellants state in their appeals that *“the Department is relying on an EIA screening assessment in the granting of the licence yet we are unable to find the assessment or its findings and we would be anxious to read the findings in the assessment.”*

In accordance with the provisions of section 46(1) of the Act, ALAB provided a copy of the Environmental Impact Assessment screening conducted by the Department of Agriculture, Food & the Marine on 6<sup>th</sup> December 2018, requiring the Appellants to *“make any submissions or observations you have concerning the Environmental Impact Assessment screening with 14 days i.e. by 21 December 2018.”*

David Henry & Co. Solicitors, on behalf of the Appellants, responded on 10<sup>th</sup> December requesting they be furnished with a copy of the Appropriate Assessment referred to at pages 11 and 13 of the EIA screening assessment. The Appellants were referred to the ALAB and Department websites where the Appropriate Assessment had been available for some time. An extension was granted (up to 11<sup>th</sup> January 2019) for the receipt of submissions and David Henry & Co. Solicitors, on behalf of the Appellants, submitted a response on 9<sup>th</sup> January 2019. It states as follows:

*“The Appellant highlights for your attention the following conclusions and determinations contained with the EIA Screening Assessments T12/37 and EIA Screening Assessment T12/343:*

*EIA Screening Assessment- T12/37*

- 1. The Assessment at page 1 refers to “3 sites on expired licence”*
- 2. Lough Swilly is a designated Natura 2000 site as provided for in the Directives Habitat. The EIA Screening Assessment at page 3 thereof states unequivocally that “the development will be out of scale with the existing environment and that the development is large in scale relative to the body of coastal water within which it is located”. Furthermore, it concluded, in a further assessment pursuant to Article 6(3) Habitat’s Directive that the development “alone or in combination with other aquaculture activities would have significant impacts on the Conservation Objectives of the Lough Swill (sic) SAC and Lough Swilly SPA”.*
- 3. The Assessment further concludes at page 4 thereof that “Considering the range of impacts identified (Biodeposition, Physical Disturbance, Introduction of non-native species) and the persistent nature of the culture method, this activity is considered disturbing on all sedimentary habitats within the lough”.*
- 4. The Assessment concluded at page 8, 9 and 10: “In relation to the proposed area of the site, there is a small overlap with the Ostrea edulis dominated community. The AA concluded that bottom culture aquaculture activity is considered disturbing on the Ostrea edulis dominated community.”*

*EIA Screening Assessment- T12/343*

- 1. The EIA Assessment concludes on pages 7 and 8 thereof that “The proposed area of this site overlaps with the Ostrea edulis dominated community. The AA concluded that no aquaculture activities should be carried out in “Ostrea edulis dominated community” as they are all considered disturbing to this habitat type”.*

*The Appellant, having considered the contents of the EIA Screening Assessment T12/37 and EIA Screening Assessment T12/343 and more particularly the conclusions as set out above would submit that the Minister, in his decision to grant a licence to the Applicant herein has failed and/or neglected to give due consideration and has failed to attach appropriate weight to the specific conclusions made within the Assessments as set out above.”*

AP3/2018



The Appellant states in their appeal that *“We do not see any evidence to determine whether EIA applies under Article 4(2) of Directive 2011/92/EU for this specific application”*.

In accordance with the provisions of section 46(1) of the Act, ALAB provided a copy of the Environmental Impact Assessment screening conducted by the Department of Agriculture, Food & the Marine on 6<sup>th</sup> December 2018, requiring the Appellant to *“make any submissions or observations you have concerning the Environmental Impact Assessment screening with 14 days i.e. by 21 December 2018.”*

No submission or observations were received from the Appellant with respect to this request.

## **6. Context of the Area**

### **6.1. Physical Description**

Lough Swilly is a narrow, fjord-like sea inlet situated on the west side of the Inishowen Peninsula in north Co. Donegal (Figure 6.1.). It extends 44km from below Letterkenny to its mouth between the peninsulas of Fanad and Inishowen just north of Buncrana. The site is estuarine in character, with shallow water and intertidal sand and mud flats being the dominant habitats. The central shipping channel is greater than 18m deep. The contributing catchment of the Lough is 949.7 km<sup>2</sup> with a number of rivers draining into it including the Swilly River, the Lennan, the Owenerk, the Mill and the Crana as well a considerable number of other streams and small rivers. At low tide, extensive sand and mud flats are exposed, especially at the mouths of the Swilly and Lennan Rivers.

Lough Swilly is located in a temperate climate with the closest weather station being Malin Head (33 km to the north east), which, on average, records over 1100 mm of rain per annum. It has a 30-year long term average maximum air temperature of 16.9°C (July/Aug) and minimum of 3.55°C (January/February) (Malin Head station data [www.met.ie](http://www.met.ie) accessed 03/10/2018).

Letterkenny is the largest urban centre in Donegal with a population of approximately 19,274. It has been noted for its rapid growth rate of over 45% in recent years which has made it one of the fastest growing towns in Ireland in recent years. Buncrana, on the Lough's eastern shore, is also an urban settlement of note with a population of approximately 6,785 (CSO, 2016).



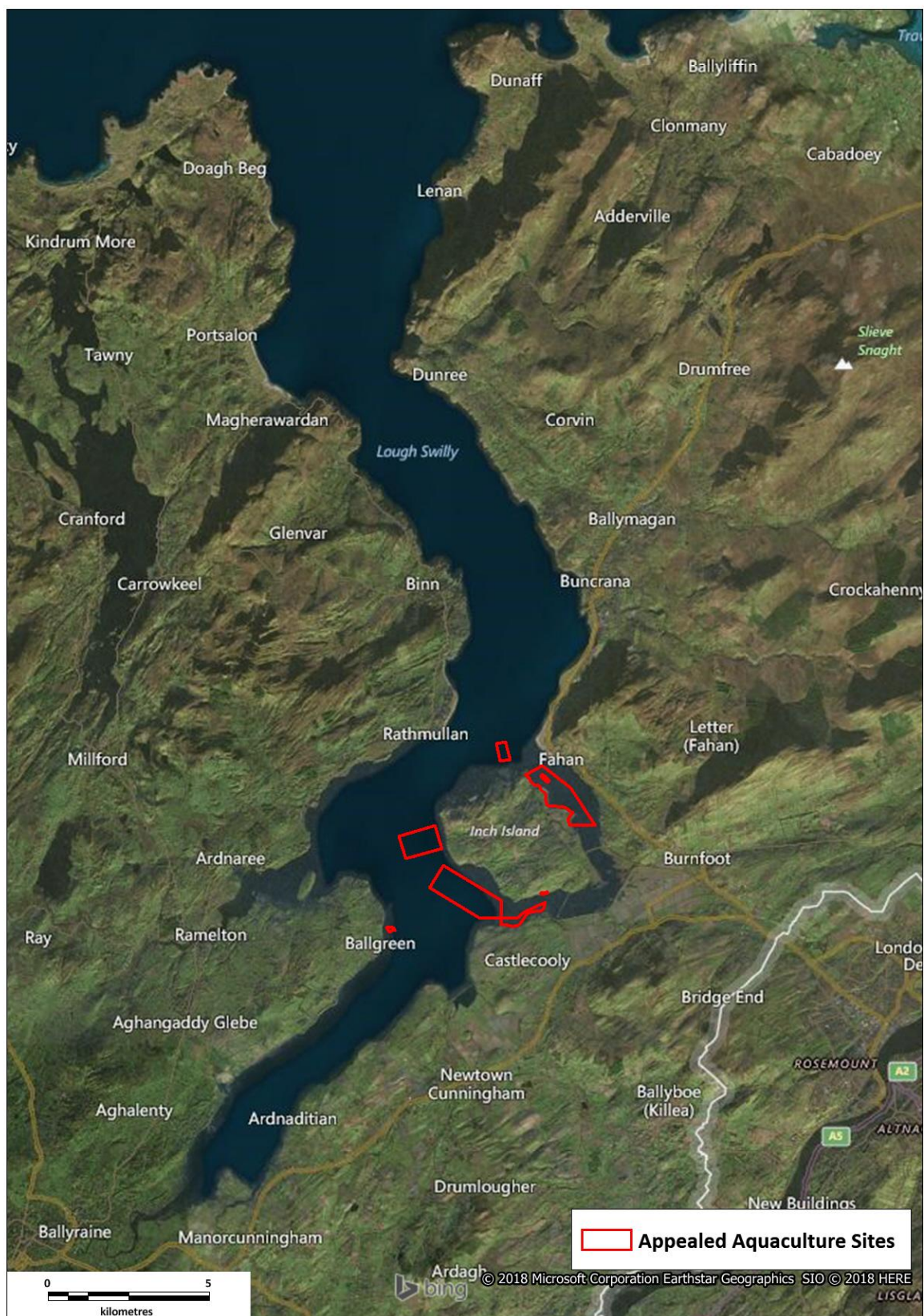


Figure 6.1: Lough Swilly, Co. Donegal.

## 6.2. Resource Users

### Aquaculture Activity

Aquaculture activities are widespread in Lough Swilly and the principle species farmed are as follows:

**Rope Mussel culture** – Within Lough Swilly the longline culture of mussels (*Mytilus edulis*) is located both within and outside of the SAC and SPA designated areas. Five rope mussel licence applications are pending decisions as outlined in Table 6.1 below.

**Bottom Mussel culture** – Bottom culture of mussels (*Mytilus edulis*) is conducted in a number of licensed areas within Lough Swilly. Thirteen bottom culture licence applications are pending decisions as outlined in Table 6.1 below.

**Pacific oyster culture** – Pacific oyster culture (*Magallana gigas*) is conducted at a number of licensed areas in Lough Swilly. The methods employed are suspended culture, either on trestles or using a bouchot/BST method. Bottom culture of Pacific oysters is no longer permitted in Lough Swilly. Two Pacific Oyster trestle licence applications are pending decisions as outlined in Table 6.1 below.

**Native oyster culture** – Native oyster culture/fishing (*Ostrea edulis*) is carried out in a number of licensed areas throughout Lough Swilly SAC. The methods employed are bottom culture in natural oyster beds as part of the Fishery Natura Plan. One licence is pending a decision as outlined in Table 6.1 below.

**Atlantic salmon farming** – An Atlantic salmon (*Salmo salar*) farm is in operation and is located at Anny Point, Lough Swilly (Licence T12/85). It is located outside of Lough Swilly SAC.

Figure 6.2 outlines the licence boundaries and culture type of the licences under appeal.

**Table 6.1: Current status of aquaculture licence applications within Lough Swilly (*pers. comm.* DAFM).**

Licence	Culture	Current Status
T12/284	Rope mussels, Oyster trestle	Pending decision
T12/339	<i>Ostrea edulis</i> bottom culture	Pending decision
T12/340	Rope mussels, Oyster trestle	Pending decision
T12/330	Mussel bottom culture	Pending decision
T12/328	Mussel bottom culture	Pending decision
T12/293	Mussel bottom culture	Pending decision
T12/211B & C	Rope mussels	Pending decision
T12/275F	Rope mussels	Pending decision
T12/288B & C	Rope mussels	Pending decision
T12/325C	Mussel bottom culture	Pending decision



T12/341 A,B,C	Mussel bottom culture	Pending decision
T12/344 1A	Mussel bottom culture	Pending decision
T12/379A	Mussel bottom culture	Pending decision
T12/398B	Mussel bottom culture	Pending decision
T12/317A	Rope mussels	Refused ALAB- 2005
T12/273A	Mussel bottom culture	Pending decision
T12/251A	Oyster trestles	Licensed Jan 2017
T12/278	Mussel bottom culture	Licence revoked/ceased to have effect 2005
T12/280 1A	Mussel bottom culture	Pending decision
T12/273A	Mussel bottom culture	Pending decision
T12/298	Mussel bottom culture	Pending decision
T12/284	Mussel bottom culture	Pending decision

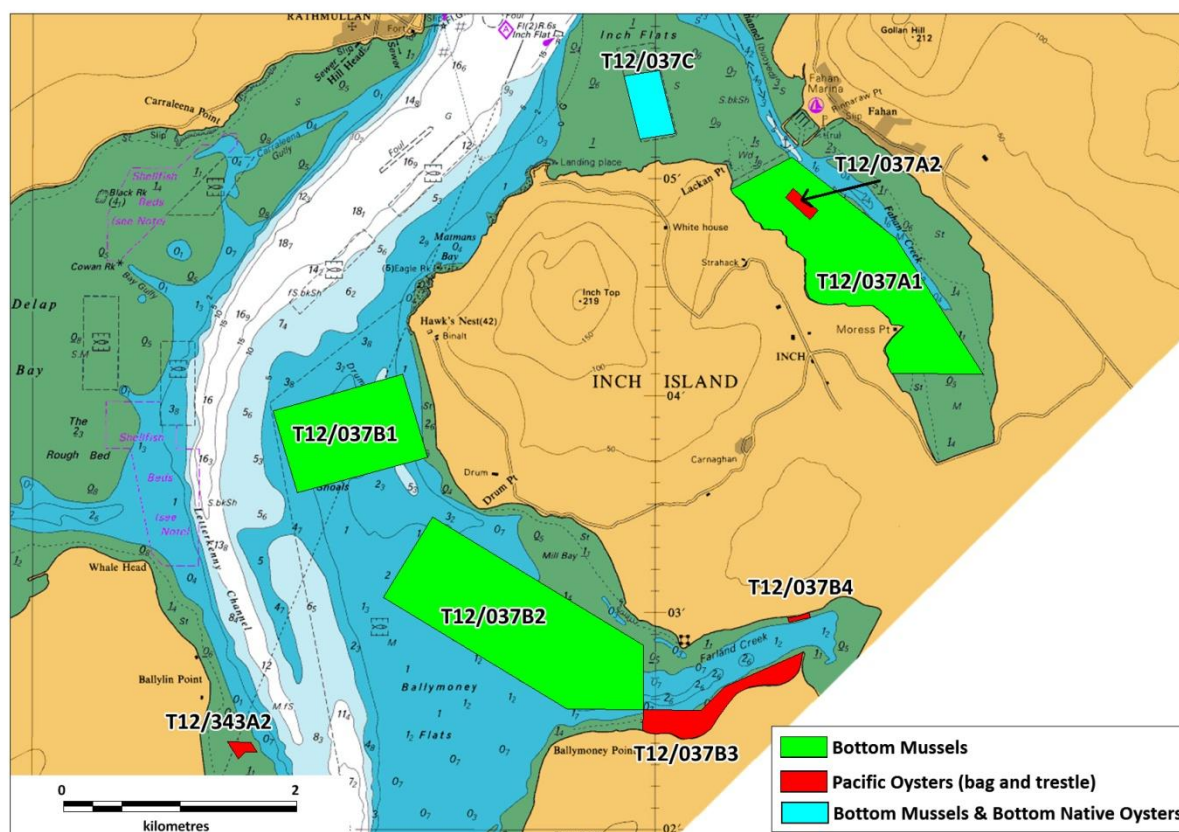


Figure 6.2 Location of licensed sites T12/37 and T12/343 within Lough Swilly indicating licensed culture method.

### Angling Activity

**Salmonid Fishing:** Both the Leannan and Crana rivers are important salmonid rivers. At present both are open for catch and release fishing only based on the advice of Inland Fisheries Ireland (IFI, 2018). The Swilly river fishery is closed.

**Deep Sea Angling:** Deep sea charter boats based at Rathmullan, Lough Swilly. Nationally renowned for the offshore wrecks and inshore tope marks. This is one of the best areas in the country for specimen red, grey and tub gurnard.

**Shore Fishing:** Good shore fishing at Fanad Head into deep water for wrasse, sea trout, pollack, mackerel and dogfish. Tope have been caught off Rathmullan Pier.

**Small Boat:** Numbers of launching sites in Rathmullan. Some excellent tope marks inshore of Rathmullan Pier. Thornback Ray are plentiful in Lough Swilly.

### Tourism

No statistics were available for this specific area; however, Fáilte Ireland statistics reported 255,000 overseas visitors to Donegal county in 2017 with associated revenue of 82 million euros and 376,000 domestic visitors with associated revenue of 96 million euros (Fáilte Ireland, 2018a). Glenveagh Castle and grounds was listed in the top fee-charging visitor attraction in 2017 with 211,000 visitors and Malin Head was listed in the top free visitor attractions in 2017 with 172,000 visitors (Fáilte Ireland, 2018b). The Wild Atlantic Way skirts Lough Swilly from Fanad lighthouse to Letterkenny, Buncrana, Dunree Head and on to Malin Head. Popular visitor locations in the area include Fanad Peninsula, Portsalon beach, Murren Hill, Croaghnaun Mountain, Grianan na Aileach and Inch Wildfowl Reserve for a range of activities including sightseeing, golfing, festivals, sea angling, river fishing, kayaking, cycling/walking tours, bird watching, surfing and sailing etc.

### Agricultural Activity

Farm sizes in the catchment vary considerably. Much of the surrounding countryside at the head of the lough is rich agricultural land. As the lough veers seawards, the average farm size falls. Unlike most other areas in Donegal, the countryside around the lough supports a good deal of tillage and beef farming. Sheep farming is of lesser importance. The estimated numbers of sheep and cattle in the catchment is approximately 318,800 (CSO 2002 Survey).

Table 6.2 provides an estimate of the average number of dairy and drystock livestock units and the average loadings of nitrogen and phosphorus chemical fertiliser per hectare of farmed land within the contributing catchment area. The figures beneath the table express the nitrate limit (and Ireland's derogation) under the Nitrates Directive in terms of livestock densities. Discharges related to agriculture can affect the levels of faecal coliforms, suspended sediments, nutrients and dissolved oxygen in receiving waters. In addition, the use of pesticides and herbicides can introduce a range of harmful chemicals to the water environment.

**Table 6.2: Livestock units and chemical fertiliser usage (Anon., 2010).**

Indicator	Catchment (per ha of farmed land)	National Average (per ha of farmed land)
Livestock units	0.68 LU	1.20 LU
Nitrogen fertiliser usage	64.01 kg	92.09kg
Phosphorus fertiliser usage	6.67 kg	9.74 kg

Nitrates Directive limit = 170 kg N per hectare = approx. 2 LU per hectare

Nitrates Directive derogation = 250 kg N per hectare = approx. 3 LU per hectare.

#### Inshore Fishing Activity

Lough Swilly Wild Oyster Society Limited (LSWOSL) was formed as a friendly Society registered with the Irish Co-operative Organisation Society Limited. It has 29 members from the wild oyster (*Ostrea edulis*) fishing community. The Society currently has no legal authority to manage the fishery but has been active in promoting the conservation and management of wild oyster in L. Swilly since 2000.

All oyster fishermen are required to hold dredge licences issued by Inland Fisheries Ireland (IFI) which specifies the season during which the dredge can be used. In addition the oyster fishing vessel should be registered on the National Sea Fishing Register administered by The Department of Agriculture, Food and Marine (DAFM) and hold the requisite bivalve or polyvalent capacity. Annually up to 30 oyster dredge licences have been issued to traditional fishermen in the locality to dredge for oysters. In 2016, 24 dredge licences were issued. The fishery is regulated by minimum landing size of 76mm and by a closed season from June 1<sup>st</sup> to August 30<sup>th</sup>. These regulations are enforced by IFI (LSWOSL, 2012).

Other inshore fishing activities within Lough Swilly include periwinkle gathering at Rathmullen and Fahan, potting for crab and lobster, and bottom otter trawling. Cockle stocks are present in Lough Swilly but are unexploited.

### Leisure Users

**Lisfannon Beach** consists of a sandy beach along the Swilly Estuary. Lisfannon is estuarine in character, with shallow water and intertidal sand and mud flats being the dominant habitats. These are exposed at times during the tidal phase during the day. These habitats support a wide variety of plant species and wildlife, including otters. This site is of high conservation value because of the extensive area of relatively unspoilt coastal habitats and the range of plant and animal species that these habitats support. Activities at Lisfannon Beach include swimming, surfing and other land-based activities such as football, kite flying, *etc.* The bathing area is designated and is approx. 0.6217 km<sup>2</sup> and the extent along the water is approximately 1200m. Lisfannon is classified as achieving Good Water Quality in 2017 based on the assessment of bacteriological results for the period 2014 to 2017. Lisfannon also had a Good Water Quality rating in 2016 and achieved an Excellent Water Quality rating in 2015 and 2014.

**Lady's Bay Beach** consists of a sandy beach in Lough Swilly confined by Buncrana pier to the South and a small rocky outcrop 550m to the North. It is one of a series of beaches along the West of Inishowen. Lady's Bay Beach supports a number of different plant and wildlife species. Important wildlife species include otter and mallard, while important plant species include Lady's fern and wood sage. Lady's Bay Beach is part of The Lough Swilly SAC which is of conservation importance and contains good examples of at least four habitats listed on Annex I of the EU Habitats Directive. Activities at Lady's Bay Beach include swimming, boating, power boating, jet skiing and other land-based activities on the beach. The designated bathing area is approx. 0.02633 km<sup>2</sup> and the extent along the water is approximately 550m. Lady's Bay, Buncrana is classified as achieving Sufficient Water Quality in 2017 based on the assessment of bacteriological results for the period 2014 to 2017. Lady's Bay, Buncrana has had a Sufficient Water Quality rating for four consecutive years 2014 to 2017.

**Rathmullan Beach** consists of a sandy beach in Lough Swilly, which is confined by Rathmullan pier to the South and runs up past Kinnegar to the Glebe outcrop to the North. Rathmullan beach supports a wide variety of plant and wildlife species including otters. The Rathmullan Wood Nature Reserve contains a wide variety of trees. Activities at Rathmullan Beach include swimming, kayaking, boating, sailing, power boating, jet skiing (outside the designated area), diving and other land based activities on the beach. The designated bathing area is approx. 0.142km<sup>2</sup> and the extent along the water is approximately 1380m. Rathmullan is classified as achieving Good Water Quality in 2017 based on the assessment of bacteriological results for the period 2014 to 2017. Rathmullan has achieved a Good Water Quality rating for four consecutive years 2014 to 2017.

**Portsalon Beach** consists of a sandy beach along the Swilly Estuary, sheltered to the south by the high rocky headland of Knockalla and contained to the north by flat land. Portsalon Beach is designated as a Blue Flag Beach. Portsalon Beach supports a wide variety of seabirds and wildfowl. The Horn Head to Fanad Head SPA is situated near to this beach. This site is of high conservation value because of the extensive area of relatively unspoilt coastal habitats and the range of plant and animal species that these habitats support. The catchment area is an idyllic location for bird watching and ecological activities. Activities at Portsalon Beach include swimming, surfing, wind surfing and other land-based activities such as football, kite flying, etc. The bathing area is designated and is approx. 0.588 km<sup>2</sup> and the extent along the water is approximately 3060m. Portsalon is classified as achieving Excellent Water Quality in 2017 based on the assessment of bacteriological results for the period 2014 to 2017. Portsalon has achieved an Excellent Water Quality rating for four consecutive years 2014 to 2017.

### **6.3. Environmental Data**

#### **6.3.1. Water Quality**

There are nine urban wastewater treatment plants in the catchment up to a distance of 20km from the Lough Swilly shellfish area. These are at Buncrana, Letterkenny, Manorcunningham, Milford, Newtowncunningham, Ramelton, Rathmullen 1 and Rathmullen 2. Additionally there are approximately 15,673 on site wastewater treatment systems in this catchment and their density is higher than the national average.

#### Environmental Protection Agency (EPA) Results

The EPA Water Quality Monitoring Programme analyses for general components in water samples at a large number of coastal and transitional waters around Ireland. Lough Swilly is one of the bays and estuaries covered by this programme. Swilly Estuary was classed as “intermediate” and Lough Swilly was classed as “unpolluted” (EPA, 2018). Winter dissolved inorganic nitrogen (DIN) were the lowest levels on the reference scales in Lough Swilly and Swilly Estuary. Salinity-dependent thresholds have been defined for DIN in transitional and coastal waters, and there is an environmental quality standard for coastal waters. These assessment thresholds range from  $\leq 2.6$  mg N/l at a salinity of 0 to  $\leq 0.25$  mg N/l at a salinity of 34.5 and are used to assess water quality of transitional and coastal waters around Ireland. Winter dissolved phosphorus concentrations were also the lowest levels on the reference scales in Lough Swilly and Swilly Estuary i.e. the assessment threshold is 0.060 mg P/l for fresh to intermediate salinity waters and ranges from 0.059–0.040 mg P/l for intermediate to full salinity waters.

### 6.3.2. Biototoxicology

The aim of the Shellfish Waters Directive is to protect or improve shellfish waters in order to support shellfish life and growth. It is designed to protect the aquatic habitat of bivalve and gastropod molluscs, which include oysters, mussels, cockles, scallops and clams. The Directive requires Member States to designate waters which need protection in order to support shellfish life and growth.

The designated shellfish area within Lough Swilly (Figure 6.3) is 113.5 km<sup>2</sup> in area and extends southwards from Dunaff Head and Fanad Head to Moneyhaughy and Greenhill, excluding the coastal areas between Colpaghs Rocks and Rinnaraw point, the Inch Island (An Inis) embankment, Drumboy embankment and the Ramelton channel upstream of point acre.

The Classified Bivalve Mollusc Production Areas in Ireland (2011/12) designates the production areas from which live bivalve molluscs may be taken. Gatherers may only harvest live bivalve molluscs from these production areas which have fixed locations and boundaries and which are classified - as being of Class A, B or C in accordance with Regulation (EC) No 854/2004. Annex II of Regulation (EC) 854/2004 sets out the requirements for the classification of production and relaying areas, the monitoring of classified relaying and production areas and the recording and exchange of information. The Classified Bivalve Production Area is outlined in Figure 6.3.

Shellfish Flesh Monitoring Programme Shellfish flesh classifications are carried out under the European Communities (Live Bivalve Molluscs) (Health Conditions for Production and Placing on the Market) Regulations, 1996 (S.I. No. 147 of 1996)). Sampling is carried out by the Sea Fisheries Protection Authority (SFPA) on at least a monthly basis. The licensed areas are within Lough Swilly shellfish designated area which is classed as “B” for oysters and mussels indicating purification, relaying in Class A area or cooking by an approved method is required. The sample monitoring locations (DL-LS-FC and DL-LS-WH) are illustrated in Figure 6.3.

Shellfish sampling results for the period 01/01/2017 to 27/09/2018 indicated that levels of biotoxins detected in Blue Mussel (*Mytilus edulis*) and Pacific Oyster (*Magallana gigas*) samples were consistently below regulatory limits and Lough Swilly shellfish production area remained open for harvesting (<https://webapps.marine.ie/HABs/>).



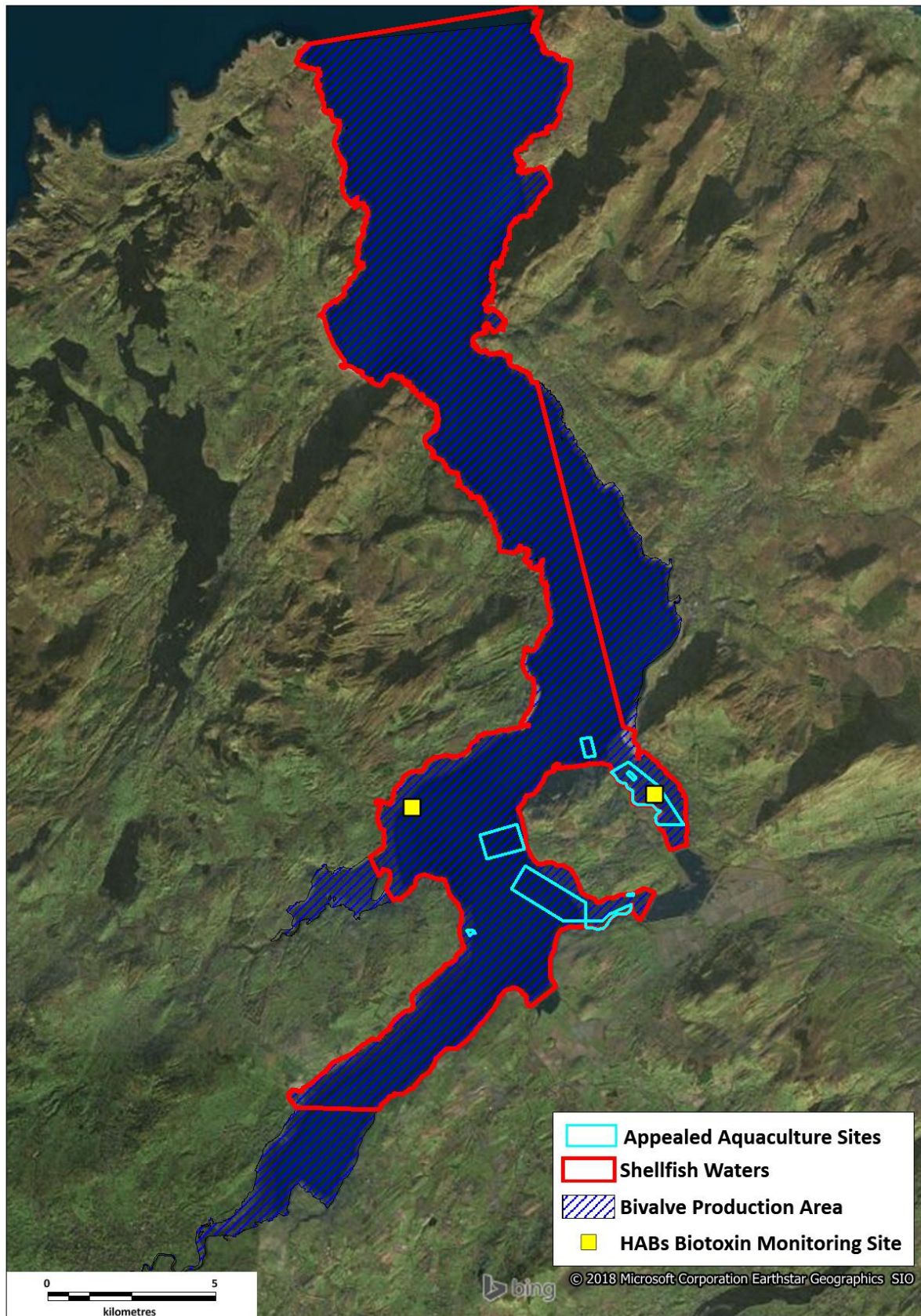


Figure 6.3: Lough Swilly Shellfish designated waters and bivalve production area.

## **6.4. Statutory Status**

### **6.4.1. Natura 2000 Designations**

Lough Swilly is designated a Special Area of Conservation (SAC) (site code: 002287). The SAC (Figure 6.4) extends from below Letterkenny to just north of Buncrana. It is estuarine in character, with shallow water and intertidal sand and mud flats being the dominant habitats. Both 'estuaries' and 'mudflats and sandflats not covered by water at low tide' are listed on Annex I of the E.U. Habitats Directive (92/43/EEC). The site is also designated for Otter.

Lough Swilly is also designated as a Special Protection Area (SPA) (site code: 004075). The SPA (Figure 6.4) comprises the inner part of Lough Swilly from just east of Letterkenny northwards to Killygarvan (c. 2 km north of Rathmullan) on the west side and to c. 2 km south of Buncrana on the east side. It includes the estuaries of the River Swilly, the River Leannan and the Isle Burn and the predominant habitat is sand and mud flats which are extensive when exposed at low tide. The SPA also includes the adjacent Inch Lough. Inch Lough was created from intertidal habitat in the mid 19th century when two embankments were built to link Inch Island to the mainland. The site includes an additional man-made lagoon at Blanket Nook and three large areas of polderland (Blanket Nook, Big Isle and Inch Levels).

Other SACs in the area include Ballyarr Wood SAC (site code: 000116) and Leannan River SAC (site code: 002176) and Fanad SPA (site code: 004148).

Table 6.3 lists the qualifying interests (habitats and species, as listed in Annex I and II of the Habitats Directive) for the SACs and SPAs within the Lough Swilly region.



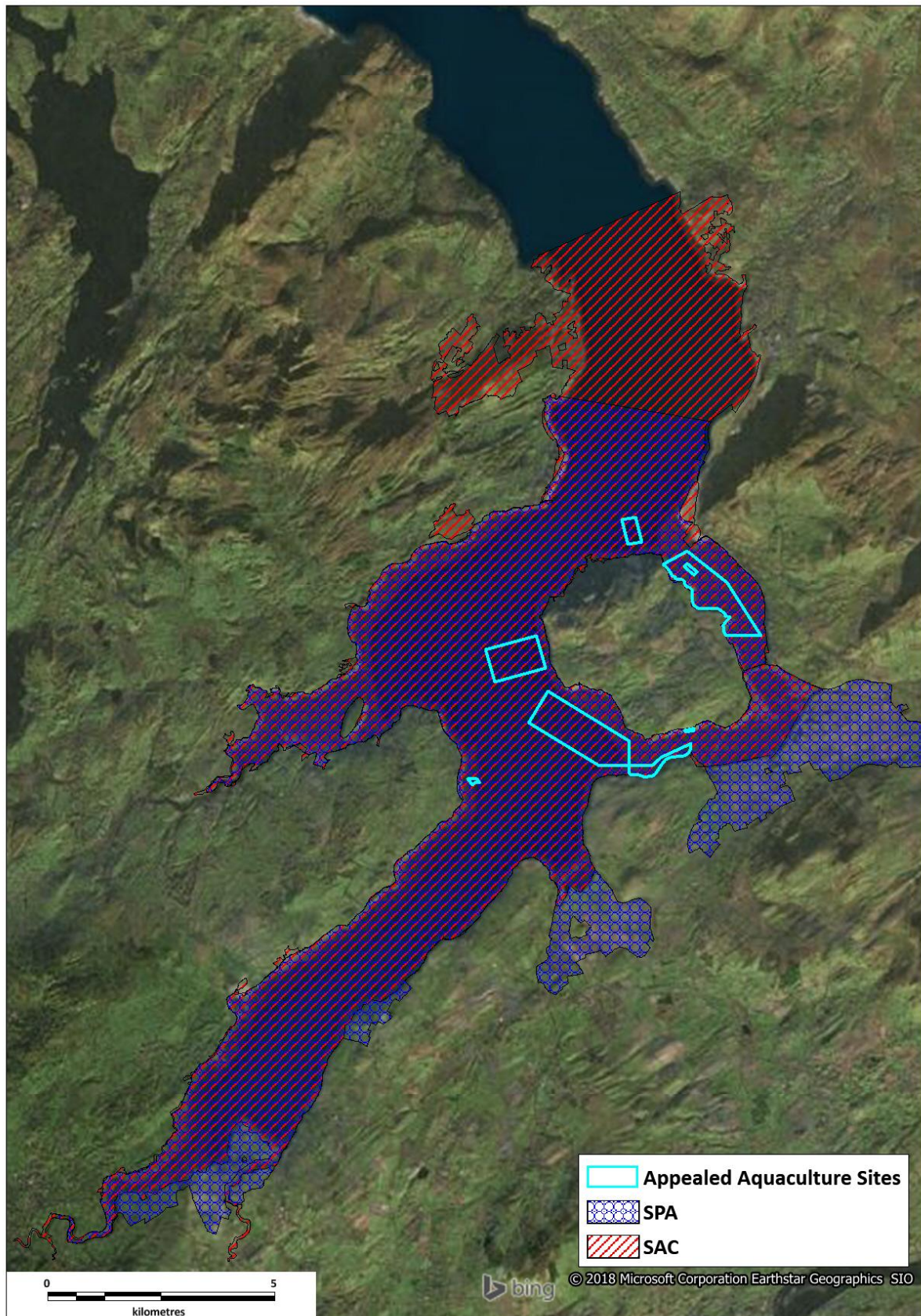


Figure 6.4: Lough Swilly SAC (002287) and Lough Swilly SPA (004075).

**Table 6.3: Qualifying Interests for SACs and SPA within the vicinity of Lough Swilly.**

Nature 2000 site	Qualifying Interests
Lough Swilly SAC (site code: 002287)	<p>Estuaries [1130]</p> <p>Coastal lagoons [1150] (<b>Priority habitat under Habitats Directive</b>)</p> <p>Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>) [1330]</p> <p>Otter (<i>Lutra lutra</i>) [1355]</p> <p>Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles [91A0]</p>
Lough Swilly SPA (site code:004075)	<p>Black-headed Gull (<i>Chroicocephalus ridibundus</i>) [A179] <b>breeding population.</b></p> <p>Sandwich Tern (<i>Sterna sandvicensis</i>) [A191] <b>breeding population</b></p> <p>Common Tern (<i>Sterna hirundo</i>) [A193] <b>breeding population</b></p> <p>Great Crested Grebe (<i>Podiceps cristatus</i>) [A005]</p> <p>Grey Heron (<i>Ardea cinerea</i>) [A028]</p> <p>Whooper Swan (<i>Cygnus cygnus</i>) [A038]</p> <p>Greylag Goose (<i>Anser anser</i>) [A043]</p> <p>Shelduck (<i>Tadorna tadorna</i>) [A048]</p> <p>Wigeon (<i>Anas penelope</i>) [A050]</p> <p>Teal (<i>Anas crecca</i>) [A052]</p> <p>Mallard (<i>Anas platyrhynchos</i>) [A053]</p> <p>Shoveler (<i>Anas clypeata</i>) [A056]</p> <p>Scaup (<i>Aythya marila</i>) [A062]</p> <p>Goldeneye (<i>Bucephala clangula</i>) [A067]</p> <p>Red-breasted Merganser (<i>Mergus serrator</i>) [A069]</p> <p>Coot (<i>Fulica atra</i>) [A125]</p> <p>Oystercatcher (<i>Haematopus ostralegus</i>) [A130]</p> <p>Knot (<i>Calidris canutus</i>) [A143]</p> <p>Dunlin (<i>Calidris alpina</i>) [A149]</p> <p>Curlew (<i>Numenius arquata</i>) [A160]</p> <p>Redshank (<i>Tringa totanus</i>) [A162]</p> <p>Greenshank (<i>Tringa nebularia</i>) [A164]</p> <p>Common Gull (<i>Larus canus</i>) [A182]</p> <p>Greenland White-fronted Goose (<i>Anser albifrons flavirostris</i>) [A395]</p> <p>Wetland and Waterbirds [A999]</p>

Nature 2000 site	Qualifying Interests
Ballyarr Wood SAC (site code:000116)	Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles [91A0]
Leannan River SAC (site code: 002176)	<p>Oligotrophic waters containing very few minerals of sandy plains (<i>Littorelletalia uniflorae</i>) [3110]</p> <p>Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea uniflorae</i> and/or <i>Isoeto-Nanojuncetea</i> [3130]</p> <p><i>Margaritifera margaritifera</i> (Freshwater Pearl Mussel) [1029]</p> <p><i>Salmo salar</i> (Salmon) [1106]</p> <p><i>Lutra lutra</i> (Otter) [1355]</p> <p><i>Najas flexilis</i> (Slender Naiad) [1833]</p>
Fanad SPA (site code:004148)	Corncrake ( <i>Crex crex</i> ) [A122]

### **Lough Swilly SAC**

An Appropriate Assessment (AA) of Fisheries and Aquaculture in Lough Swilly (Marine Institute, 2013) was conducted to assess the potential ecological impacts of aquaculture activities within Lough Swilly SAC on the Conservation Objectives of the site.

The AA focused on aquaculture activities which fall within the qualifying interest of Estuaries [1130]. Constituent communities and community complexes recorded within the qualifying interest Estuaries consist of:

- Fine sands community complex
- Intertidal mixed sediment with polychaetes
- Subtidal mixed sediment with polychaetes and bivalves
- Muddy fine sand with *Thyasira flexuosa*
- Mud community complex
- *Ostrea edulis* dominated community

Conservation objectives for the SAC were identified by NPWS (2011) and outlined in Table 6.4 below. The natural condition of the designated features should be preserved with respect to their area, distribution, extent and community distribution. Habitat availability should be maintained for designated species and human disturbance should not adversely affect such species.



**Table 6.4: Conservation Objectives for Lough Swilly SAC.**

Feature	Objective	Target
<b>Estuaries</b>	Maintain favourable conservation condition	6118ha, permanent habitat is stable or increasing, subject to natural processes
Fine sands community complex	Maintain favourable conservation condition	583ha, conserved in a natural condition, persistent disturbance to ecology <15% of area
Intertidal mixed sediment with polychaetes	Maintain favourable conservation condition	655ha, conserved in a natural condition, persistent disturbance to ecology <15% of area
Subtidal mixed sediment with polychaetes and bivalves	Maintain favourable conservation condition	1314ha, conserved in a natural condition, persistent disturbance to ecology <15% of area
Muddy fine sand with <i>Thyasira flexuosa</i>	Maintain favourable conservation condition	1320ha, conserved in a natural condition, persistent disturbance to ecology <15% of area
Mud community complex	Maintain favourable conservation condition	1127ha, conserved in a natural condition, persistent disturbance to ecology <15% of area
<i>Ostrea edulis</i> dominated community	Maintain favourable conservation condition	906ha, conserved in a natural condition, persistent disturbance to ecology <15% of area
<b>Otter (<i>Lutra lutra</i>)</b>	Restore the favourable conservation condition	Maintain distribution, 88% positive survey results 839ha, no significant decline in extent of marine habitat Couching sites and holts, no significant decline and minimise disturbance Fish biomass, no significant decline in marine fish species in otter diet Barriers to connectivity, no significant increase

**Lough Swilly SPA**

The Conservation Objectives for the Black-headed Gull, Common Tern and Sandwich Tern breeding populations at Lough Swilly are to maintain their favourable conservation condition (NPWS, 2011). These conditions include breeding population abundance: apparently occupied nests (no significant decline); productivity rate: fledged young per breeding pair (no significant decline); distribution: breeding colonies (no significant decline).

The Conservation Objectives for non-breeding species (listed in Table 6.4 above) are to maintain their favourable conservation condition with respect to population trend and distribution (NPWS, 2011). The target for population trend is the long term, stable or increasing populations of the listed species. With regard to distribution, there should be no significant decrease in the range, timing or intensity of use by these species, other than that occurring from natural patterns of variation.

The Conservation Objectives for wetlands and waterbirds at Lough Swilly is to maintain the favourable conservation condition of the wetland habitat at Lough Swilly SPA as a resource for regularly-occurring

migratory waterbirds that use it (NPWS, 2011). The target for the habitat area is that the permanent area occupied by the wetland should be stable and not significantly less than the areas of 4,162ha, 2,419ha, 201ha and 317ha for subtidal, intertidal, supratidal and lagoon respectively, other than that occurring from natural patterns of variation.

The potential ecological effects of aquaculture on the conservation objectives relate to the physical and biological effects of aquaculture structures, fishing activity and associated human activities on designated species, intertidal and subtidal habitats and invertebrate communities and biotopes of those habitats. The effects depend primarily on the type of species being cultured or fished, the system of culture and fishing and the properties of the receiving habitat. Both extensive and intense aquaculture and fishing practices can alter the surrounding environment, both physically and biologically, not only due to the presence of the culture organisms (*e.g.* increased deposition, disease, shading, fouling, alien species) but also due to the activities associated with the culture mechanisms (*e.g.* structures resulting in current alteration, dredging, sediment compaction), the extraction of commercial natural populations and the physical effects of fishing.

NPWS provide guidance on interpretation of the conservation objectives which are management targets for habitats and species in the sites. Some activities are wholly inconsistent with long term maintenance of certain sensitive habitats while other habitats can tolerate a range of activities. For the practical purpose of management of sedimentary habitats a 15% threshold of overlap between disturbing activity and habitat is given in the NPWS guidance. Below this threshold, disturbance is deemed to be non-significant for certain habitat types. In the case of designated bird species trends in populations and range of habitat use are important.

#### **6.4.2. Protected Species**

##### **6.4.2.1. CETACEANS**

Cetaceans have been regularly sighted in the waters of Lough Swilly. Records from the National Biodiversity Data Centre ([maps.biodiversityireland.ie](https://maps.biodiversityireland.ie); accessed 25/09/2018) indicate the following species have been recorded within Lough Swilly in the last 10 years: Bottlenose dolphin (*Tursiops truncatus*), Harbour porpoise (*Phocoena phocoena*) and Killer whale (*Orcinus orca*).

##### **6.4.2.2. SEALS**

In Ireland, Harbour seals (*Phoca vitulina*) and Grey seals (*Halichoerus grypus*) are protected under the Wildlife Acts (1976 and 2000) and are listed under Annex II of the EU Habitats Directive as species of Community Interest, whose conservation requires the designation of Special Areas of Conservation (SACs).

In 2011 aerial survey of harbour seals in Ireland (Duck & Morris, 2013) 20 harbour seals and 3 grey seals were recorded in the Lough Swilly area (Malin Head to Fanad Head subregion).

#### 6.4.2.3. BIRDS

Table 6.5 presents the bird baseline population data as well as the population status at baseline for Lough Swilly SPA.

**Table 6.5: Designation Summary: listed species for Lough Swilly SPA (NPWS, 2011).**

Lough Swilly SPA site code 4075						
	Special Conservation Interests	Annex I species	Baseline population		Population status at baseline	
Site Selection Species	Assemblage of over 20,000 waterbirds					
	Whooper Swan	Yes	1,673		International Importance	
	Greenland White-fronted Goose	Yes	847		International Importance	
	Greylag Goose		1,218		International Importance	
	Shelduck		772		All-Ireland Importance	
	Teal		1,581		All-Ireland Importance	
	Mallard		1,169		All-Ireland Importance	
	Red-breasted Merganser		127		All-Ireland Importance	
	Great Crested Grebe		284		All-Ireland Importance	
	Oystercatcher		1,595		All-Ireland Importance	
	Dunlin		7,285		All-Ireland Importance	
	Curlew		1,720		All-Ireland Importance	
	Redshank		1,404		All-Ireland Importance	
	Black-headed Gull (breeding)		800 pairs		All-Ireland Importance	
	Sandwich Tern (breeding)	Yes	258 pairs		All-Ireland Importance	
	Common Tern (breeding)	Yes	89		All-Ireland Importance	
Additional Special Conservation Interests	Wigeon		1,580		All-Ireland Importance	
	Shoveler		60		All-Ireland Importance	
	Scaup		103		All-Ireland Importance	
	Goldeneye		170		All-Ireland Importance	
	Grey Heron		57		All-Ireland Importance	
	Coot		514		All-Ireland Importance	
	Knot		303		All-Ireland Importance	
	Greenshank		48		All-Ireland Importance	
	Common Gull		1,523		All-Ireland Importance	
Other conservation designations associated with the site		SAC	Ramsar	IBA	Wildfowl Sanctuary	Other
		Yes	Yes	Yes	Yes	

#### 6.4.2.4. OTTER

The Otter (*Lutra lutra*) is protected under the Irish Wildlife Acts (1976 and 2000) and is also listed in Annexes II and IV of the EU Habitats Directive. It is listed as one of the qualifying features of interest in Lough Swilly SAC. National surveys of otter in Ireland in 2006 found that 65% of sites surveyed in the north-west of Ireland showed signs of otter occupancy. There are no specific data on otter population size in Lough Swilly although they are present throughout the area.

#### 6.4.2.5. ATLANTIC SALMON

Salmon (*Salmo salar*) populations run into the River Leannan which flows into Lough Swilly. Current estimates have the numbers of adult salmon returning to the River Leannan at 79% of the conservation limits based upon 2017 returns (IFI, 2018). Consequently there is no estimated surplus and the river is advised to be open for catch and release only fishing. Based upon an extensive review the status of the stocks in the river and the supporting habitats it has been concluded that a number of issues present in relation to water and habitat quality in the broader catchment and in particular tributaries (IFI, 2011). The Estimates of numbers of adult salmon return to the Crana River are at 57% of the conservation limits based on 2017 returns (IFI, 2018). It too is open for catch and release only.

#### 6.4.2.6. PEARL MUSSEL

The freshwater pearl mussel (*Margaritifera margaritifera*) is a highly threatened animal, categorised as critically endangered across Europe. Owing to its threatened status and dramatic decline, the freshwater pearl mussel is listed on Annex II and Annex V of the Habitats Directive. The status of the species across the EU was assessed in 2007 and found to be bad throughout. In Ireland, all populations of the species were considered unfavourable-bad. The main cause of the poor status and the ongoing decline of the species across Ireland and Europe is sedimentation and enrichment (eutrophication) of its habitat ([www.npws.ie](http://www.npws.ie)). Pearl mussels are found in the Leannan river SAC.

#### 6.4.3. Donegal County Development Plan 2018-2024

The County Development Plans 2018-2024 states that the county has a strong aquaculture sector (*e.g.* Salmon, Oyster and Mussel farming) providing considerable local employment both onshore and offshore for coastal communities around the Donegal Coastline. Consent for aquaculture developments on the Foreshore and in coastal waters remains the remit of the Department and fish farming activities in particular require careful environmental management. However the Council will support the sustainable development of onshore/ancillary aquaculture developments to maximise the potential of the sector in terms of employment and product export.

Marine Resource and Coastal Management objectives (Chapter 10 of Development Plan) with respect to aquaculture and its impacts in Lough Swilly include:

**MRCM-O-1:** To maximise the social and economic potential of Donegal's marine sector by: Supporting the offshore primary production sector of the aquaculture industry, subject to adequate environmental assessments and safeguards being provided to the satisfaction of the Council and to the avoidance of the development giving rise to an overbearing visual impact on the locality in which it is proposed.

**MRCM-O-2:** To safeguard and improve and the health of our Marine ecosystem by: Protecting the qualifying habitat and species of Natura 2000 sites through Appropriate Assessment of development proposals.

Natural Heritage objectives of Development Plan (Chapter 7) include:

**NH-O-2:** To comply with Article 6 of the Habitats Directive (92/43/EEC) and have regard to the relevant conservation objectives, management plans, qualifying interests and threats to the integrity of Natura 2000 sites.

**NH-O-3:** To maintain the conservation value of all existing and/or proposed SACs, SPAs, NHAs and RAMSAR sites including those plant and animal species that have been identified for protection under the EU Habitats Directive (92/43/EEC), EU Birds Directive (79/409/EEC as amended by 2009/147/EC), the Wildlife Acts (1976-2014) and the Flora Protection Order (2015).

**NH-O-6:** To protect and improve the integrity and quality of Designated Shellfish Waters, and Freshwater Pearl Mussel Basins and to take account of any relevant Shellfish Reduction Program or Fresh Water Pearl Mussel Sub-basin Plan.

**NH-O-10:** To maintain and restore ecosystems and to conserve valuable or threatened habitats and species in order to prevent further loss of biodiversity and to meet the EU's target to halt biodiversity loss by 2020 through the implementation of the EU Biodiversity Strategy (2011) or as updated.

#### **6.4.4. Buncrana & Environs Development Plan 2014-2020**

The Buncrana & Environs Development make no specific reference to aquaculture, however it does recognize the importance of maintaining the quality of the Shellfish designated waters and protecting shellfish growing areas from pollution.

**NH-P-3:** It is the policy of the Council to require the consideration of designated Shellfish Waters and their Shellfish Pollution Reduction Programmes in all development proposals that fall within their catchment.

#### **6.4.5. Water Quality Status**

Lough Swilly WFD water quality status (2010-2015) comprises and assessment of two water bodies namely Swilly Estuary transitional water body (IE\_NW\_220\_0100) and Lough Swilly coastal water body (IE\_NW\_220\_0000). Swilly Estuary transitional water body is classified as 'Moderate' status and whereas Lough Swilly coastal water body is classified as 'High' status. (source: [www.catchments.ie/maps/](http://www.catchments.ie/maps/)).



## **6.5. Man-made Heritage**

### **6.5.1. Archaeological Study of Lough Swilly**

A desktop Archaeological Impact Assessment was conducted on behalf of BIM by Littleton & O' Donoghue (2017). Information on all the known archaeological sites was gathered from a number of sources including the Record of Monuments & Places (RMP), the Shipwreck Inventory of Ireland, the Record of Piers and Harbours, the Excavations Bulletin, historic cartography, aerial photography, documentary sources and geophysical data. Additionally a field survey was conducted to assess the potential archaeological impact of proposed access routes and new oyster sites in Lough Swilly on behalf of BIM by John Cronin & Associates (Mc Gonigle, 2017).

The Shipwreck Inventory of Ireland maintained by the National Monuments Service in the Department of the Arts, Heritage, Regional, Rural and Gaeltacht Affairs (DAHRRG), includes all known wrecks for the years up to and including 1945. The entries highlight the pattern of wrecking from c.1750, after which regular records were maintained of such events. Littleton & O' Donoghue (2017) indicate that the inventory includes at least 44 wrecking events for the Lough Swilly area, the precise location for which are mostly unknown. They also list 3 instances of ship wrecking within the general area of the proposed licensed sites in Lough Swilly.

The Record of Monuments & Places (RMP) is a list of archaeological sites known to the National Monuments Service with accompanying RMP Maps, based on the Ordnance Survey six-inch series, which indicates the location of each recorded site. The Sites and Monuments Records (SMR) are lists with accompanying maps and files of all known or possible archaeological sites and monuments, predominately pre-1700AD in date, for all counties. Littleton & O' Donoghue (2017) catalogue the multitude of archaeological sites recorded from the area around Lough Swilly that includes megalithic tombs, cist burials, lintel graves, court tombs, graveyards, stone circles, standing stones, decorated stones, souterrains, ring forts, promontory forts, hilltop enclosures, bawns, middens, churches, religious houses, a friary, a priory, holy wells, tower house, country house and castles.

The National Inventory of Architectural Heritage (NIAH) is a county by county database that identifies, records, and evaluates the post-1700 architectural heritage of Ireland as an aid to the protection and conservation of the country's built heritage. From this database Littleton & O' Donoghue (2017) list a number of sites of architectural significance situated directly on the shoreline in Lough Swilly including Inch Fort and Fort Stewart Ferry Pier/Jetty in vicinity of the licences under appeal.

### 6.5.2. Potential Impacts on Archaeology at licensed sites

The licensed sites under appeal are a mix of bottom cultures of mussel and native oysters; intertidal trestle and basket cultures of pacific oysters and bouchot or BST longline method. Each of these sites has been assessed by the archaeologists for any potential impact on archaeological sites or features known to be situated on the seabed or foreshore of Lough Swilly.

#### Licence renewal Sites using bottom culture

Mussel beds are slightly elevated above the natural seabed. The dredge is composed of a fixed bar, without teeth and a frame with a net bag attached and it is designed to skim the surface of the substrate without digging into it. This bar in effect 'peels' the overlying mussel 'mat' away from the underlying substrate and in doing so removes the mussel which is caught in a bag. Four sites involve this culture method, namely T12/37 A1, B1, B2 and C.

Consultation of cartographic, documentary and geophysical sources did not identify any known archaeological sites on the shoreline, foreshore and seabed. Despite this, it is possible that unknown potential archaeological sites such as shipwrecks, fish traps, and artefacts may be buried in the sediment within the licence area. Therefore, the use of a dredge on the seabed during harvesting may impact on previously unidentified archaeological sites. However, as this application is a licence renewal and the area has previously been subject to harvesting and the type of dredge used in bottom culture harvesting does not penetrate the seabed deeply, the likelihood of encountering *in situ* features are greatly reduced. The archaeological impact assessments for each site are presented in Table 5.5.

#### Licence renewal sites using trestles and baskets

A number of sites involve cultivating Pacific oyster cultures in baskets on trestles located on the foreshore of the Lough. Such cultures are farmed using trestles laid directly onto the foreshore surface. An optional method of culture is the bouchot or BST method whereby oysters in baskets are suspended from longlines strung between poles inserted into the substrate.

Consultation of cartographic and archaeological sources did not identify any known archaeological sites on the shoreline, foreshore and seabed. Given the nature of placing the short legs of the trestles directly onto the surface of the foreshore or the BST poles inserted into the substrate, there will be minimal disturbance to potential buried archaeological sites, structures or features such as fish traps and shipwrecks. While the passage of tractors or other vehicles to and from the cultivation area may compress upon unknown buried

archaeological remains, the routes are well established access ways have been in use for a number of years. The archaeological impact assessments for each site are presented in Table 6.6.

**Table 6.6: Archaeological Impact Assessment of aquaculture on licensed site T12/37 (Littleton & O'Donoghue, 2017; Mc Gonigle, 2017).**

Site	Species	Culture Method	Archaeological Impact Assessment
<b>T12/37 A1</b>	Mussels	Bottom culture	Low
<b>T12/37 B1</b>	Mussels	Bottom culture	Low
<b>T12/37 B2</b>	Mussels	Bottom culture	Low
<b>T12/37 C</b>	Mussels & Native Oysters	Bottom culture	Low
<b>T12/37 A2</b>	Pacific Oysters	Trestles	Imperceptible
<b>T12/37 B3</b>	Pacific Oysters	Trestles	Imperceptible
<b>T12/37 B4</b>	Pacific Oysters	Trestles/BST method	Imperceptible

#### New Licence applications using trestles and baskets

One new licence application (T12/343) involves cultivating Pacific oysters on trestles on the foreshore of the Lough. Trestles are laid directly onto the foreshore surface.

This new area of cultivation is located c. 400m NE off Ballygreen Point on the western shore of Lough Swilly. It includes foreshore subject to tidal waters, as well as deeper estuarine waters. Consultation of cartographic and archaeological sources did not identify any known archaeological sites on the foreshore and seabed. Given the nature of placing the short legs of the trestles directly onto the surface of the foreshore, there will be minimal disturbance of buried archaeological sites, structures or features such as fish traps and shipwrecks. An aerial photograph supplied by BIM indicates that access onto the foreshore for work vehicles and personnel will be via a laneway in the townland of Ballygreen that leads towards Ballygreen Point to the south. The passage of tractors or other vehicles to and from the cultivation area may compress upon unknown buried archaeological remains on the foreshore. A series of kelp grids and linear stone alignments are visible in the intertidal zone. The proposed metal trestles will pose no direct impact on these cultural heritage features. However, there is potential for inadvertent damage to these kelp grids caused by increased human traffic and in particular by vehicular traffic associated with the operation of the aquaculture site.

The archaeologists recommended that a commitment is made by the developers of the proposed aquaculture site at T12/343 that the kelp grids and associated features will not be removed and will be preserved *in situ*. The proposed access route will traverse part of a kelp grid, however the impact is deemed

negligible. Access to this site during operation should adhere strictly to agreed route to minimise impact on features of cultural heritage significance. These recommendations have been adopted as conditions of the licence (outlined in Schedule 4).

The potential negative impact is classified as **low**.

## 7. Section 61 Assessment

Section 61 of the Fisheries (Amendment) Act 1997 Section 61 states that:

*“The licensing authority, in considering an application for an aquaculture licence or an appeal against a decision on an application for a licence or a revocation or amendment of a licence, shall take account, as may be appropriate in the circumstances of the particular case, of—*

- (a) the suitability of the place or waters at or in which the aquaculture is or is proposed to be carried on for the activity in question,*
- (b) other beneficial uses, existing or potential, of the place or waters concerned,*
- (c) the particular statutory status, if any, (including the provisions of any development plan, within the meaning of the Local Government (Planning and Development) Act, 1963 as amended) of the place or waters,*
- (d) the likely effects of the proposed aquaculture, revocation or amendment on the economy of the area in which the aquaculture is or is proposed to be carried on,*
- (e) the likely ecological effects of the aquaculture or proposed aquaculture on wild fisheries, natural habitats and flora and fauna, and*
- (f) the effect or likely effect on the environment generally in the vicinity of the place or water on or in which that aquaculture is or is proposed to be carried on—*
  - (i) on the foreshore, or*
  - (ii) at any other place, if there is or would be no discharge of trade or sewage effluent within the meaning of, and requiring a licence under section 4 of the Local Government (Water Pollution) Act, 1977, and*
- (g) the effect or likely effect on the man-made environment of heritage value in the vicinity of the place or waters.”*

### 7.1. Site Suitability

**T12/37**

The Marine Engineering Division stated that it would not be considered appropriate to further renew a licence of the size applied for (2,000 ha including 1,470 ha of foreshore) given low productivity and excessive area licensed. The current proposals for licensing (*i.e.* footprint significantly reduced to 450.25 ha) have been developed in consultation with Marine Engineering Division and taking account of habitats requirements.

The site (T12/37) under appeal is suitable for the intended purpose for the following reasons:

1. The species to be farmed (Pacific oyster *Magallana gigas* and Mussels *Mytilus edulis*) have been and are currently being grown successfully at a number of sites within Lough Swilly.
2. Suitable levels of plankton occur naturally at the location and shellfish cultivation at this scale will not result in limiting plankton growth or abundance.
3. The development is not out of scale relative to other operators in the bay.
4. The development can be considered as minor and reversible as all trestles/poles can be removed from the foreshore.
5. It will not need additional infrastructure developments (*e.g.* new roads, landing facilities).

### **T12/343**

The original site application of 19 ha was reduced to 6 ha due to its proximity with adjacent bottom mussel site and to reduce possible negative visual impact. The Marine Engineering Division had no objection to the licensing of this site of 6 ha, however, following the AA Report, MED was further involved in reducing this site to 2.09 ha in order to avoid overlap with 'native oyster' community.

The site (T12/343) under appeal is suitable for the intended purpose for the following reasons:

1. The species to be farmed (Pacific oyster *Magallana gigas*) have been and are currently being grown successfully at a number of sites within Lough Swilly.
2. Suitable levels of plankton occur naturally at the location and shellfish cultivation at this scale will not result in limiting plankton growth or abundance.
3. The development is not out of scale relative to other operators in the bay.
4. The development can be considered as minor and reversible as all trestles/poles can be removed from the foreshore.
5. It will not need additional infrastructure developments (*e.g.* new roads, landing facilities).

## 7.2. Other uses

### T12/37

BIM stated no objections to the renewal of licences and stated that they are satisfied that the proposed operation does not conflict with any other aquaculture or inshore fisheries in the area.

The Commissioner of Irish Lights and the Marine Survey Office stated no objection to the licence renewal applications from a navigational viewpoint.

Inland Fisheries Ireland recommended that cognisance be taken of the Lough Swilly Appropriate Assessment (as part of the renewal site (T12/37) overlaps with a native oyster bed, and other habitats) as well as the extent of the disturbing activities. This has been considered and the footprints of the licensed sites have been reduced to mitigate this overlap.

An objection was raised (AP4/2018) with respect to wild fishing rights (native oysters and feral Pacific oysters) for dredge licence holders (licences issued by IFI).

A general objection was raised during public consultation that any mussel spat areas should not be licensed but should remain as a common resource. Licence area T12/37 B1 has been identified in AP2/2018 as an important mussel spat area. The Department's response is that their information indicates that mussel spat areas have been intermittently/infrequently found at different parts of the lower Lough and not in any specific area. Information from BIM indicates that this location is not important for mussel spat fall, and that areas to the north of Inch Island were more important, however the last major mussel spat fall there was ten years ago (Mike Murphy, BIM, *pers. comm.*).

As the proposed licensed site (T12/37) is a licence renewal, dredge licence holders have been excluded from fishing for oysters within the licence boundaries. Since this licence has been reduced in size from 2000 ha (with 1,471.5 ha of foreshore) to 450.25 this has opened up new areas for wild fishery dredging.

The proposed aquaculture site (T12/37) is **not likely** to have a significant impact on other users of the area.

### T12/343

Inland Fisheries Ireland recommended that cognisance be taken of the Lough Swilly Appropriate Assessment (as part of the site (T12/343) overlaps with a native oyster bed) as well as the extent of the

disturbing activities. They also advised that care should be taken to avoid any obstruction to the passage of salmon and sea trout as the site is located close to the Leannan channel. The AA concludes that with respect to salmon, the population size of spawners and out migrating smolts will not be impeded or captured by the proposed activity. In addition, the footprint of the licensed site has been significantly reduced from 19 ha to 2.09 ha in order to avoid overlap with the native oyster community.

The Commissioner of Irish Lights and the Marine Survey Office stated no objection to the licence renewal applications from a navigational viewpoint.

The proposed aquaculture site (T12/343) will have **no significant impact** on other users of the area.

### **7.3. Statutory Status**

#### **T12/37**

It is **not** foreseen that the aquaculture operations at the site would impact on current or potential development plans or measures within the vicinity, in accordance with the Donegal County Development Plan or other plans.

#### **T12/343**

It is **not** foreseen that the aquaculture operations at the site would impact on current or potential development plans or measures within the vicinity, in accordance with the Donegal County Development Plan or other plans.

### **7.4. Economic Effects**

#### **T12/37**

The granting of the Aquaculture licences has the potential to provide benefits to the local community. It is expected by the Applicant that the development employ the same number of workers as the previous iteration of the licence. There are eleven members of the Co-op who have a stake in this licence. It is unknown if there will be a reduction in the number of workers employed as a result of the reduction in the licence footprint.

The proposed licensed site will have a non-significant **positive** impact on the economy of the area.



**T12/343**

The granting of the Aquaculture licences has the potential to provide benefits to the local community. It is expected by the Applicant that the development will initially be owner operated, increasing to two full time workers in year 3 and two full and two part time workers in year 4. Workers will be involved directly in the farming and harvesting of oysters in the licensed area. It is unknown if there will be a reduction in the number of workers employed as a result of the reduction in the licence footprint.

The proposed licensed site will have a non-significant **positive** impact on the economy of the area.

**7.5. Ecological Effects****7.5.1. Designated Sites**

The Appropriate Assessment conclusion statement indicated that the status-quo in relation to aquaculture activities in Lough Swilly was not consistent with the conservation objectives for habitats within the SAC and some SCIs in the SPA. It suggested a number of measures needed to be taken to reduce the possible impacts of aquaculture on habitats and species to levels consistent with achievement of good environmental status and that are consistent with the conservation objectives. They included:

- Only native oyster activity (in accordance with the Fishery Natura Plan) will be allowed in 'Ostrea edulis dominated community'. Figure 7.1 illustrates the boundaries of the licensed sites under appeal with respect to the 'Ostrea edulis dominated community.'
- Rationalizing bottom community based aquaculture areas down to reduce overlap to <15% with each of the 5 individual habitats (Fine sand community complex, Intertidal mixed sediment with Polychaetes, Mud community complex, Muddy fine sand with *Thyasira flexuosa* and Subtidal mixed sediment with Polychaetes and Bivalves). Bringing such activities below the 15% overlap threshold with the specified habitats will represent a significant reduction in the extent of such activities. The reductions on each site have to target specific reductions in each of the habitat subzones so it is not a matter of simply reducing the area involved anywhere – the reductions have to be relevant to habitat areas.
- The disturbance caused by un-contained bottom culture of the Pacific oyster cannot be mitigated and therefore will not be licensed.
- The above rationalisation will also mitigate any potentially significant impacts on protected bird species.
- A additional condition of the licences is that the cultivation of Pacific Oysters is conditional on the

use of Triploid Seed. The introduction of non-native species is a cause for concern for the native oyster fishing industry, as *M. gigas* has become naturalised (i.e. establishment of a breeding population) in the Lough and may compete with the native species for space and food. The use of triploid stock (non-reproducing) is the main method employed to manage this issue.

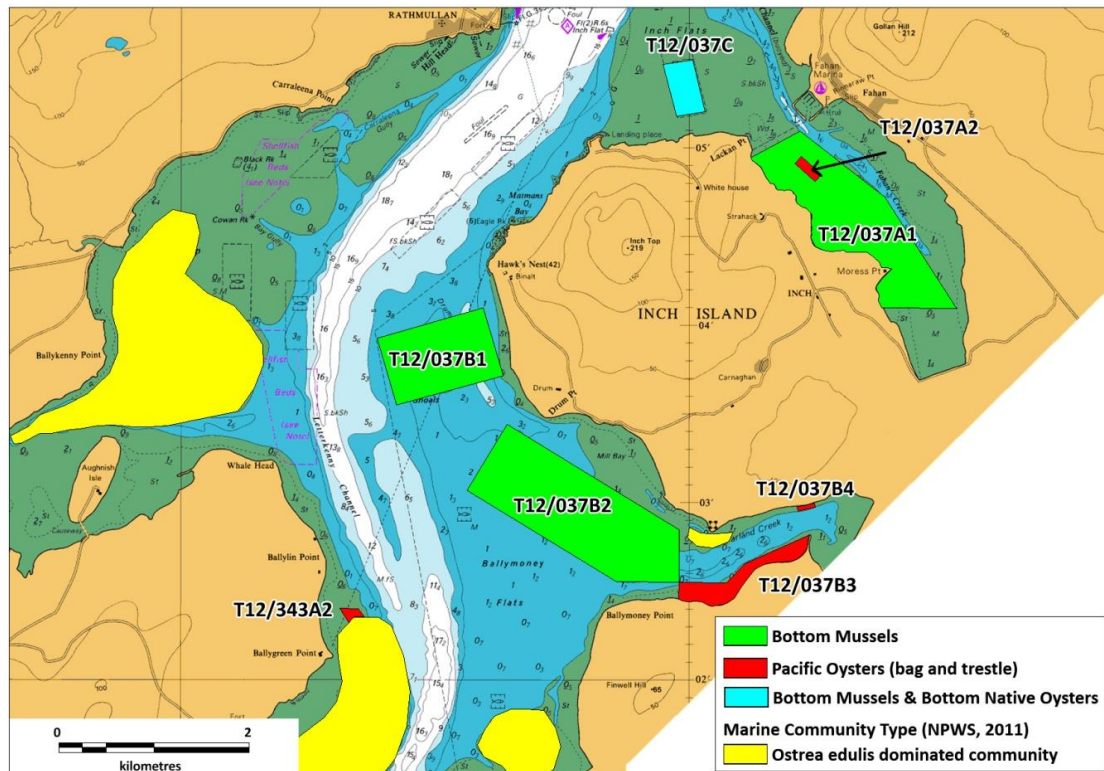


Figure 7.1: '*Ostrea edulis* dominated community' in Lough Swilly with respect to the licensed sites under appeal.

### T12/37

In accordance with the mitigation measures outlined in the Appropriate Assessment the revised licence granted for T12/37 has been reduced from a cumulative hectareage in the order of 2,000 ha, including 1,471.5 hectares of foreshore in Lough Swilly to 450.25 ha of foreshore. This management action is being taken to mitigate the risk of the deterioration of conservation status of habitats/bird species that is directly attributable to aquaculture operations.

Given the conclusions and recommendations of the AA process, along with the implementation of measures that will mitigate certain pressures on Natura QIs, the proposed licensed activities are **not likely** to have a significant impact on the integrity of Lough Swilly SAC and Lough Swilly SPA.

**T12/343**

In accordance with the mitigation measures outlined in the Appropriate Assessment the revised licence granted for T12/343A now has a footprint of 2.09 ha for suspended Pacific oyster culture.

Given the conclusions and recommendations of the AA process, along with the implementation of measures that will mitigate certain pressures on Natura QIs, the proposed licensed activities are **not likely** to have a significant impact on the integrity of Lough Swilly SAC and Lough Swilly SPA.

**7.6. General Environmental Effects****T12/37**

An EIA screening assessment was conducted by the Screening Group on 13/10/2015 behalf of DAFM for sites T12/37 A1, A2, B1, B2, B3, B4 and C. It stated that the source of mussel seed would be from “Natural falling/Irish Sea mussel seed” and oyster seed from “France Naissain”. Projected productions of mussels would be c. 1000MT each year from year 1 to year 4 and 200 tonnes of oysters each year from year 1 to year 4. This was under the licence application for 1,471.5 ha (this has subsequently been reduced to 450.25 ha). The screening assessment concluded that “it was likely that the proposed activity, alone or in combination with other aquaculture activities, would have impacts on the conservation objectives of the Lough Swilly SAC/SPA. The conclusions of the Appropriate Assessment need to be fully considered prior to any licence determination being made.”

**Use of Natural Resources** – *“High levels of plankton occur naturally at the location and shellfish cultivation at this scale will not result in limiting plankton growth or abundance.”*

**Waste** – *“The amount of produced faeces and pseudofaeces will be small and the impacted area will be limited to the area of the sites. The sites are well flushed and build up of excess organic matter with subsequent reduction in oxygen is not considered likely. Amounts of discarded shells will be small and build up of excess on site will not be permitted. Discarding of old bags, trestles or other material into the sea or on the foreshore will not be permitted.”*

**Noise** – *“There will be noise associated with the husbandry and harvesting of shellfish from tractors/boats and other machinery. Noise levels will not be significant.”*

**Public Access**– *“Public access to recreational and other activities will not be impacted by the project.”*

**Existing Water Quality** – *“Results from monitoring under the Shellfish Waters Directive do not indicate any water quality issues in the vicinity of the proposed shellfish production area. Mussels and Oysters in this area currently have a ‘B’ classification under Annex II of EU Regulation 854/2004.”*

Taking all of the above into account it is considered that the environmental effects of the proposed aquaculture activity are **not likely to be significant**.

### **T12/343**

An EIA screening assessment was conducted by the Screening Group on 13/10/2015 behalf of DAFM for sites T12/343. It stated that the source of oyster seed would be from "Seasalter UK". Projected production of oysters would be year 1 – 0 tonnes, year 2 – 0 tonnes, year 3 – 10 tonnes and year 40 tonnes under the licence application of 6 ha (Reduced from 19 ha in application and subsequently reduced to 2.09 ha). The screening assessment concluded that "it was likely that the proposed activity, alone or in combination with other aquaculture activities, would have impacts on the conservation objectives of the Lough Swilly SAC/SPA. The conclusions of the Appropriate Assessment need to be fully considered prior to any licence determination being made."

**Use of Natural Resources** – *"High levels of plankton occur naturally at the location and shellfish cultivation at this scale will not result in limiting plankton growth or abundance."*

**Waste** – *"The amount of produced faeces and pseudofaeces will be small and the impacted area will be limited to the area directly beneath the trestles. The sites are well flushed and build up of excess organic matter on site will not be permitted. Discarding of damaged old bags, trestles or other material into the sea or on the foreshore will not be permitted."*

**Noise** – *"There will be noise associated with the husbandry and harvesting of shellfish from tractor and other noise. Noise levels will not be significant."*

**Public Access**– *"Public access to recreational and other activities will not be impacted by the project."*

**Existing Water Quality** – *"Results from monitoring under the Shellfish Waters Directive do not indicate any water quality issues in the vicinity of the proposed shellfish production area. Mussels and Oysters in this area currently have a 'B' classification under Annex II of EU Regulation 854/2004."*

Taking all of the above into account it is considered that the environmental effects of the proposed aquaculture activity are **not likely to be significant**.

## **7.7. Effects on man-made heritage**

### **T12/37**

DAHG recommended that a full underwater archaeological impact assessment be carried out. An

underwater archaeological study was commissioned and this found no evidence of archaeological structures, features or objects within the site (T12/37A1 – C) of the proposed aquaculture in Lough Swilly.

The proposed aquaculture site will **not** significantly impact on known man-made heritage, either terrestrial or marine, in the area.

### **T12/343**

DAHG recommended that a full underwater archaeological impact assessment be carried out. An underwater archaeological study was commissioned and this found no evidence of archaeological structures, features or objects within the site (T12/343) of the proposed aquaculture in Lough Swilly. However, a series of kelp grids and linear stone alignments are visible in the intertidal zone on the access route to the site. It is a condition of the licence that any kelp grids and associated features will not be removed and will be preserved in situ. A designated access route will be used to minimise the impact on features of cultural heritage significance.

The proposed aquaculture site will **not** significantly impact on known man-made heritage, either terrestrial or marine, in the area.

## **7.8. Section 61 Assessment Conclusions**

### **7.8.1. T12/37**

#### **Site Suitability**

The site (T12/37) under appeal **is** suitable for the intended purpose for the following reasons:

1. The species to be farmed (Pacific oyster *Magallana gigas* and Mussels *Mytilus edulis*) have been and are currently being grown successfully at a number of sites within Lough Swilly.
2. Suitable levels of plankton occur naturally at the location and shellfish cultivation at this scale will not result in limiting plankton growth or abundance.
3. The development is not out of scale relative to other operators in the bay.
4. The development can be considered as minor and reversible as all trestles/poles can be removed from the foreshore.
5. It will not need additional infrastructure developments (e.g. new roads,

landing facilities).

#### Other Uses

The proposed aquaculture site (T12/37) **not likely** to have a significant impact on other users of the area..

#### Statutory Status

There are **no** known impacts on the statutory status of the area.

#### Economic Effects

The proposed licensed site will have a non-significant **positive** impact on the economy of the area.

#### Ecological Effects

The proposed licensed activities are **not likely** to have a significant impact on the integrity of Lough Swilly SAC and Lough Swilly SPA.

#### General Environmental Effects

The environmental effects of the proposed aquaculture activity are **not likely** to be significant.

#### Man-made Heritage

The proposed aquaculture site will **not** significantly impact on known man-made heritage, either terrestrial or marine, in the area.

### **7.8.2. T12/343**

#### Site Suitability

The site (T12/343) under appeal **is** suitable for the intended purpose for the following reasons:

1. The species to be farmed (Pacific oyster *Magallana gigas*) have been and are currently being grown successfully at a number of sites within Lough Swilly.
2. Suitable levels of plankton occur naturally at the location and shellfish cultivation at this scale will not result in limiting plankton growth or abundance.
3. The development is not out of scale relative to other operators in the bay.
4. The development can be considered as minor and reversible as all trestles can be removed from the foreshore.
5. It will not need additional infrastructure developments (e.g. new roads, landing facilities).

### Other Uses

The proposed aquaculture site will have **no significant impact** on other users of the area.

### Statutory Status

There are **no** known impacts on the statutory status of the area.

### Economic Effects

The proposed licensed site will have a non-significant **positive** impact on the economy of the area.

### Ecological Effects

The proposed licensed activities are **not likely** to have a significant impact on the integrity of Lough Swilly SAC and Lough Swilly SPA.

### General Environmental Effects

The environmental effects of the proposed aquaculture activity are **not likely** to be significant.

### Man-made Heritage

The proposed aquaculture site will **not** significantly impact on known man-made heritage, either terrestrial or marine, in the area.

## **7.9. Confirmation re Section 50 Notices**

There are no pertinent matters which arise in the Section 61 assessment which the Board ought to take into account which have not been raised in the appeal documents and it is not necessary to give notice in writing to any parties in accordance with section 50 (2) of the 1997 Act.

## **8. Screening for Environmental Impact Assessment**

### **T12/37**

An *ad hoc* pre-screening assessment was carried out by DAFM according to various documents in the Ministerial file. As stated in the Ministerial file in accordance with the requirement of Regulation 5(2) of the Aquaculture (Licence Application) Regulations, 1998

*“the Minister may require the Applicant to submit an environmental impact statement if the*



*Minister considers that the proposed aquaculture is likely to have a significant impact on the environment."*

The Technical Advisor is of the view that pre-screening assessment for the environmental impact of the proposed licences was adequate and that the proposed aquaculture will not have significant effects on the environment by virtue of *inter alia*, its nature, size or location. As a result it should not be subject to an environmental impact assessment in accordance with S.I. 468 of 2012.

### **T12/343**

An *ad hoc* pre-screening assessment was carried out by DAFM according to various documents in the Ministerial file. As stated in the Ministerial file in accordance with the requirement of Regulation 5(2) of the Aquaculture (Licence Application) Regulations, 1998

*"the Minister may require the Applicant to submit an environmental impact statement if the Minister considers that the proposed aquaculture is likely to have a significant impact on the environment."*

The Technical Advisor is of the view that pre-screening assessment for the environmental impact of the proposed licences was adequate and that the proposed aquaculture will not have significant effects on the environment by virtue of *inter alia*, its nature, size or location. As a result it should not be subject to an environmental impact assessment in accordance with S.I. 468 of 2012.

## **9. Screening for Appropriate Assessment**

Screening for the Appropriate Assessment was an initial evaluation of the possible impacts that the aquaculture activities may have on the qualifying interests and is outlined in the AA report. Screening of the qualifying interests against the proposed activities is based on spatial overlap *i.e.* if the qualifying interests overlap spatially with the proposed activities then significant impacts due to these activities on the conservation objectives for the QIs is not screened discounted (screened out) except where there is absolute and clear rationale for doing so. Where there is relevant spatial overlap appropriate assessment is warranted.

The Technical Advisor is of the view that the pre-screening assessment for appropriate assessment of the aquaculture in Lough Swilly as set evaluated in the AA report was adequate in determining whether the

aquaculture activities in view of the best scientific knowledge and in view of the conservation objectives of the sites, individually or in combination with other plans or projects is likely to have a significant effect on a Natura site.

## **10. Technical Advisor's Evaluation of the Substantive Issues in Respect of Appeal and Submissions/Observations Received**

An evaluation of the substantive appeals and submissions has been undertaken, with each categorised within one of 7 areas of concern. The issues raised by the Appellants are collectively considered in the following sections.

### **10.1. Legislative Issues**

AP2/2018 contended that the Applicant (T12/37) was operating at sites without a licence, that the original licence expired in September 2004 and that an application to renew the licence was then submitted. It is their opinion that continued operation by the Appellant while the licence renewal was under consideration was not permitted under the Department's guidelines in relation to foreshore licences. Thus they state that pursuant to Section 4 of the Fisheries (Amendment) Act 1998 the application of the Applicant should have failed. They state that *"despite any contention by the Applicant, or for that matter the Minister for Agriculture, Food and the Marine that the Sea Fisheries and Maritime Jurisdiction Act 2006 and the inclusion of any such representation in his application that the Act should be applied, it is submitted that at the time of the Applicant's renewal application the law applicable was that of the Fisheries and Foreshore (Amendment) Act 1998. It is further submitted that a change of law in 2006 (commenced by Commencement Order dated the 4<sup>th</sup> April 2006), does not entitle the Department of Agriculture, Food and Marine to deviate from the law when this application for a renewal was made on the 23rd September 2004."*

In response, the Department stated that *"the effect of section 75 of the Fisheries (Amendment) Act 1997 and section 3 of the Fisheries and Foreshore (Amendment) Act 1998 is that a foreshore licence granted under the Foreshore Act 1933 for aquaculture purposes and a fish culture licence granted under section 15 of the Fisheries (Consolidation) Act 1959 were deemed to be aquaculture licences granted under the 1997 Act. By virtue of section 19A(4) of the 1997 Act the Co-op is entitled to continue operating as if these licences, which were deemed by the 1997 and 1998 Act to be aquaculture licences, were still in force, pending a Ministerial determination of the renewal application."*

The issue of the legality of licence T12/37 has been the subject of a Supreme Court case (259/2011) whereby the Court held that the plaintiff's (Applicant's) licences remained in force following their expiration under amended legislation, and that s.19A (4) of the 1997 Act had come into force under the amending 2006 Act, and did not require a new commencement order.

At present, this issue is again under judicial review in the High Court (Lough Swilly Wild Oyster Society Ltd. - v- Minister for Agriculture, Food and the Marine (2018/189)). Peter Finlay SC, for the society, secured leave from Ms Justice Miriam O' Regan to seek orders quashing the issuing by the Minister for Agriculture, Food and the Marine of certain licences concerning farming of non-native oyster species in Lough Swilly.

As this case is on-going, the Technical Advisor cannot comment further on this issue, pending the outcome of the High Court proceedings.

### **10.2. EIA screening**

Two of the Appellants indicate that they have not seen adequate evidence of EIA screening to determine whether an EIA was required under Article 4(2) of Directive 2011/92/EU. One Appellant (AP2/2018) acknowledges that they are aware of the Minister's determination in relation to EIS requirements concerning the cultivation of shellfish in Lough Swilly published on the website of the Department but that this was inadequate to cover the specific applications. A second Appellant (AP3/2018) indicates that they are aware of the EIA screening assessment but that this was not available to them to read the findings.

The response by the Department was that EIA screening was carried out for each Lough Swilly application advertised and that the outcomes are published on the Departments website (Minister's Determination in relation to EIS requirements).

It is the opinion of the Technical Advisor that the EIA screening assessment adequately assessed the significance of the potential impacts of the proposed aquaculture activities and whether they should be subject to an EIA. This assessment is routinely carried out by the Department's Screening Group which is comprised of members from the Department's Marine Engineering Division, Bord Iascaigh Mhara, Marine Institute and representatives from the Department's Aquaculture and Foreshore Division. However, in order to address concerns over a lack of transparency with respect to the EIA screening process the publishing of the full EIA screening assessment carried out by the Screening Group is advisable and seems

now to be policy for more recent application assessments.

#### Response to Section 46 submissions

In accordance with section 46(1) of the Fisheries (Amendment) Act, 1997 ALAB determined it appropriate in the interests of justice to provide the Appellants with copies of the aforementioned EIA screening assessments and to request submissions or observations on the assessment be made to ALAB within the required timeframe.

Appellant AP3/2018 made no submission or observations.

Appellant AP2/2018 and AP5/2018 made a submission as outlined in Section 5 above.

#### AP2/2018. EIA screening assessment T12/37.

The EIA screening assessment T12/37 was completed on 13<sup>th</sup> October 2015 and was based on the Aquaculture Licence Application submitted by the Applicant on 23<sup>rd</sup> September 2004. It is important to note that this application was for a licensed area of 1,174 ha as assessed in the Appropriate Assessment.

As highlighted by the Appellant under Section 46, the screening assessment determined that this proposed project of 1,174 ha *“would be out of scale with the existing environment and that the development is large in scale relative to the body of coastal water within which it is located.”* Furthermore it concluded that the development *“alone or in combination with other aquaculture activities would have significant impacts on the Conservation Objectives of the Lough Swilly SAC and the Lough Swilly SPA.”* With respect to the cumulative impacts of bottom mussel cultivation in the Lough *“it was concluded that this aquaculture type, both currently licensed sites and sites for which new applications have been made, overlaps all of the six different community types found within the qualifying interest of Lough Swilly SAC”* and as stated in the Section 46 submission *“this activity is considered disturbing on all sedimentary habitats within the Lough.”* Additionally the Appellants highlighted that *“In relation to the proposed area of the site, there is a small overlap with the Ostrea edulis dominated community. The AA concluded that bottom culture aquaculture activity is considered disturbing on the Ostrea edulis dominated community.”*

The Appellants submit that *“the Minister, in his decision to grant a licence to the Applicant herein has failed and/or neglected to give due consideration and has failed to attach appropriate weight to the*

*specific conclusions made within the Assessments as set out above.”*

As part of a separate process, an Appropriate Assessment was carried out under Article 6(3) of the Habitats Directive which concluded that it was likely that the proposed activity (comprising 1,174 ha), alone or in combination with other aquaculture activities, would have impacts on the Conservation Objectives of the Lough Swilly SAC/SPA. In order to mitigate against any significant and adverse impact on the integrity of Lough Swilly SAC and SPA, the following relevant mitigation measures were proposed:

- The primary mitigation measure to ensure reduction in impact is the reduction of spatial extent of the aquaculture sites within Lough Swilly SAC/SPA, including no occupancy of *Ostrea edulis* dominated community areas.
- Bottom based aquaculture areas are being rationalised to reduce overlap to <15% with each of the 5 individual habitats (Fine sand community complex, Intertidal mixed sediment with polychaetes, Mud community complex, Muddy fine sand with *Thyasira flexuosa* and Subtidal mixed sediment with polychaetes and bivalves).
- The footprint of T12/37 is being reduced from a cumulative hectareage in the order of 2,000 ha, including 1,471.5 hectares of foreshore in Lough Swilly to 450.25 ha of foreshore. This management action is being taken to mitigate the risk of the deterioration of conservation status of habitats/bird species that is directly attributable to aquaculture operations.

The EIA Screening Group recommended that these conclusions be fully considered prior to any licence determination being made.

In the conclusion statement of the EIA Screening Assessment, having taken account of the mitigation measures detailed in the AA Conclusion Statement, the screening group states that *“Having considered the likelihood of the proposed aquaculture having significant effects on the environment the consensus of the Screening Group is that an Environmental Impact Statement is not required for this project.”*

Following due consideration of the conclusions and advice outlined in the EIA Screening Assessment, the Appropriate Assessment, the Appropriate Assessment Conclusion Statement, and all issues raised in the technical, statutory and public consultations, a recommendation to grant a variation of the Aquaculture and Foreshore Licences was submitted to the Minister on 30<sup>th</sup> November 2017 incorporating all of the proposed mitigation measures. Subsequently, the Minister for Agriculture, Food and the Marine determined that it was in the public interest to grant a variation of the licences sought *i.e.* reducing and reconfiguring the footprint of the sites to a cumulative total of 450.25 ha.

The Technical Advisor contests the submission of the Appellant that *“the Minister, in his decision to grant a licence to the Applicant herein has failed and/or neglected to give due consideration and has failed to attach appropriate weight to the specific conclusions made within the Assessments”*. On the contrary, it is the opinion of the Technical Advisor that the Department and the Minister have considered carefully the conclusions made within the Assessments and have reduced and reconfigured the footprint considerably to a cumulative total of 450.25 ha to mitigate against significant impacts on the conservation objectives of the Lough Swilly SAC/SPA.

AP5/2018. EIA screening assessment T12/343.

The EIA screening assessment T12/343 was completed on 13<sup>th</sup> October 2015 and was based on the submitted Aquaculture Licence Application submitted by the Applicant on 10<sup>th</sup> February 2004. It is important to note that this application was for a licensed area of 6 ha.

As highlighted by the Appellant under Section 46, the EIA screening assessment “concludes at pages 7 and 8 thereof that *“The proposed area of this site overlaps with the *Ostrea edulis* dominated community. The AA concluded that no aquaculture activities should be carried out in “*Ostrea edulis* dominated community” as they are all considered disturbing to this habitat type.”*

The Appellants submit that *“the Minister, in his decision to grant a licence to the Applicant herein has failed and/or neglected to give due consideration and has failed to attach appropriate weight to the specific conclusions made within the Assessments as set out above.”*

The Licensing Authority's Appropriate Assessment Conclusion Statement outlines how aquaculture activities in this SAC/SPA, including these sites, are being licensed and managed so as not to significantly and adversely affect the integrity of Lough Swilly SAC and SPA. Lough Swilly SAC is designated for a number of habitats and species, including Estuaries, and constituent communities recorded within this qualifying interest includes *Ostrea edulis* dominated community. The footprint of site T12/343 is being significantly reduced to 2.09 ha to ensure there is no overlap with the *Ostrea edulis* (native oyster) dominated community. This management action is being taken to mitigate the risk of the deterioration of the conservation status of *Ostrea edulis* (native oyster) and is directly attributable to aquaculture operations.

Following due consideration of the conclusions and advice outlined in the EIA Screening Assessment, the Appropriate Assessment, the Appropriate Assessment Conclusion Statement, and all issued raised

in the technical, statutory and public consultations, a recommendation to grant a variation of the Aquaculture and Foreshore Licences was submitted to the Minister on 30<sup>th</sup> November 2017.

Subsequently, the Minister for Agriculture, Food and the Marine determined that it was in the public interest to grant a variation of the licence sought *i.e.* reducing and reconfiguring the footprint of the sites to a total of 2.09 ha.

The Technical Advisor contests the submission of the Appellant that *“the Minister, in his decision to grant a licence to the Applicant herein has failed and/or neglected to give due consideration and has failed to attach appropriate weight to the specific conclusions made within the Assessments”*. On the contrary, it is the opinion of the Technical Advisor that the Department and the Minister have considered carefully the conclusions made within the Assessments and have reduced the footprint to a total of 2.09 ha to ensure no overlap with the *Ostrea edulis* dominated community.

### **10.3. *Ostrea edulis* dominated community**

Oyster stocks are assessed by annual surveys which provide biomass estimates. Stock biomass in Lough Swilly is generally low and management measures to restore recruitment and re-build spawning stocks are deemed necessary (Marine Institute & BIM, 2017). Various threats to native oyster stocks exist including *Bonamia* infection, naturalisation of Pacific oyster, poor water quality and unfavourable habitat conditions for settlement and low spawning stocks. Pacific oysters have naturalised in Lough Swilly in recent years and in some years the population of feral Pacific oysters has supported a commercial fishery.

‘*Ostrea edulis* dominated community’ are constituents of habitats designated under the Habitats Directive and the conservation objectives for Lough Swilly are to maintain a favourable conservation status by keeping the habitat in a natural condition and limiting persistent disturbance to <15%.

The Appropriate Assessment report acknowledged that all aquaculture activities are disturbing to the “*Ostrea edulis* dominated community” and as such instructed that no aquaculture activities should be carried out in areas with this community. The Fishery Natura Plan (LSWOSL, 2012) for native oysters in Lough Swilly outlined a comprehensive list of management strategies to: rebuild and maintain native oyster biomass at levels that maximise productivity and spat fall potential; develop a control programme for Pacific oysters; to increase monitoring of *Bonamia* and to develop a framework for the management of the



fishery. The AA report identify that the implementation of the Fishery Natura Plan for native oysters was consistent with the conservation objectives for this community type as well as the expansion and sustainable exploitation of this fishery resource.

NPWS (2011) surveyed and identified the boundaries of habitats (including *Ostrea edulis* dominated community) within the qualifying interests of Lough Swilly SAC. The total area of the *O. edulis* dominated community was calculated at approximately 906 ha. The AA identified the extent of licensed aquaculture site and sites under application and considered the cumulative impacts each culture method was likely to have on these qualifying interests. It was determined that due to the sensitivity of *O. edulis* dominated community no aquaculture licences should be allowed overlap these habitats as they are all considered disturbing to this habitat type. The licence boundaries were subsequently redrawn based on this determination (and the <15% overlap with 5 other benthic habitats identified in the conservation objectives) and in the case of the current licences under appeal, the area licensed has been reduced from 2000 ha to 450.25 ha (T12/37) and from 19 ha to 2.09 ha (T12/343).

Annual surveys of native and feral Pacific oysters in Lough Swilly are carried out by Marine Institute and BIM (MI & BIM, 2014, 2015, 2017) as part of their Shellfish Stocks and Fisheries Review. Areas surveyed within Lough Swilly indicate that *O. edulis* stocks are low and *O. edulis* is not a dominant characterising species in *O. edulis* habitat in Lough Swilly.

AP4/2018 asks that no new or renewal applications for Aquaculture/Foreshore Licences should be granted until a scheduled (January 2018) Marine Institute survey is completed and published. The most recent survey (January 2018) has not been published as of yet, however, survey and analysis has been completed. The relevant results for Lough Swilly were made available to the Technical Advisors for examination and indicate that the only licence in close proximity to an area surveyed in 2018 is T12/37 B2. AP2/2018 contends that this site encroaches on a native oyster area and that the dredging for mussels would have a detrimental effect on the native oyster population. The results of the latest survey (MI, *pers comm.*) indicate no overlap with native oyster bed for this licence.

AP2/2018 also suggests that T12/37 B2 (as well as T12/37 A1 and C) are least affected by Pacific oysters and would make an ideal native nursery and to introduce Pacific oysters and mussel bottom culture into these areas would make this area unfeasible for the native oyster nursery and further diminish their stock. As outlined in the AA:

*“As the existing extent of habitat defined as oyster habitat includes areas where oyster is at very low*

*density and given that only a proportion of it is fished and given the uncertainty regarding how feasible it is to restore oyster stocks the activities associated with the oyster fishery plan should only occur in 'Ostrea edulis dominated community' and not in other habitats. The main activity affected will be the location of the spawning reserve for oyster which should be moved into the 'Ostrea edulis dominated community' This may be a reasonable compromise, considering the very significant reductions in aquaculture activity required to bring aquaculture activity below the 15% overlap threshold with habitats."*

NPWS determined the boundaries of the Qualifying Interest habitats within Lough Swilly SAC. The extent of the '*Ostrea edulis* dominated community' was described and the Appropriate Assessment stipulated a reduction in the footprint of the aquaculture licences to avoid any overlap with this habitat. The AA considered the Fishery Natura Plan is broadly compatible with the conservation objective of '*Ostrea edulis* dominated community' that constitutes approx 906 ha of the conservation feature of the SAC. While the ultimate goal of the fishery plan is to increase the standing stock of native oysters in the Lough, to a level which can sustain fishery activity, this is considered a beneficial management proposal to the overall status of the native oyster, and native oyster habitat, in the Lough.

As stated above, the AA advises that the fishery plan should only occur in '*Ostrea edulis* dominated community' and not in other habitats. AP2/2018 states that there are areas in the licences under appeal (T12/37A1 and C) where native oysters have been found. Densities of native oysters are low in Lough Swilly and *O. edulis* is not a dominant characterising species in the '*Ostrea edulis* dominated community'. The stock surveys do not survey native oyster populations in the two areas cited in AP2/2018, however, these areas have been previously identified as areas where native oysters occur (LSWOSL, 2012). It is however, the responsibility of NPWS to designate the conservation objectives of the SAC and to determine if any changes to the boundaries of the '*Ostrea edulis* dominated community' QI be made.

It is the assessment of the Technical Advisors that the licensed sites under appeal do not overlap with any of the '*Ostrea edulis* dominated community' areas as established by NPWS. AA advice is that activities of the fishery be confined to these areas. We acknowledge that native oyster populations may become established in a number of areas in the bay but the boundaries of the qualifying interests could only be altered by NPWS following their own analysis.

#### **10.4. Feral Pacific Oysters**

Surveys carried out as part of the Fishery Natura Plan and by the Marine Institute and BIM have indicated that a naturalised/feral Pacific oyster population had established in Lough Swilly in many native oyster beds at various densities and were found to be of multiple year classes. Annual recruitment was found to be occurring and growth rates appeared to be strong. The Fishery Natura Plan proposed a number of activities aimed at boosting the native oyster population and controlling the impact of feral Pacific oysters. The proposed plan was assessed in the Appropriate Assessment and it was concluded that it would be *“necessary to implement all of the measures outlined in the oyster fishery plan and where necessary to give these measures legislative support, if it is to achieve its objective and therefore be compatible with the conservation objectives for ‘Ostrea edulis dominated community’.”*

AP3/2018 states that Lough Swilly has a serious Gigas oyster IAS (invasive alien species) problem. The Department submits that the Appellant provides no evidence to support this. The presence of naturalised/feral populations of Pacific oysters in Lough Swilly is well established and acknowledged in the Fishery Natura Plan and the AA.

There is some confusion surrounding definitions of what an invasive species is or when an introduced species becomes naturalised/feral or invasive. Blackburn *et al.* (2011) propose a unified framework for biological invasions. They describe the invasion process as divided into a series of stages and that each stage there are barriers that need to be overcome before a species is determined to be invasive. These include barriers of geography, captivity or cultivation, survival, reproduction, dispersal and environment. They would consider naturalised/feral populations as self-sustaining populations in the wild, with individuals surviving and reproducing a significant distance from the original point of introduction. Fully invasive species they define as species with individuals dispersing, surviving and reproducing at multiple sites across a greater or lesser spectrum of habitats and extent of occurrence. So, while barriers seem to exist in Lough Swilly to the more widespread dispersal of Pacific oysters beyond the lough, it is imperative that measures are taken to try to minimise the invasive potential of feral Pacific oysters in Lough Swilly.

In order to further prevent the new culture Pacific oysters from reproducing and adding to the naturalised population in Lough Swilly, all cultured oysters must be of triploid stock. Additionally no bottom culture of oysters will be permitted and so the fishing of Pacific oysters (as suggested in AP2/2018) will be prohibited in any of the licensed sites under appeal.

AP2/2018 maintains that all Pacific oyster farmers should undertake a site audit and remove old Pacific oysters before they spread further and affect the native oyster further. They maintain that this appears not

to have been considered when determining the licences. They say that there is a serious risk that the native oyster could become extinct if immediate action to remove the Pacific oysters from the cited areas does not take place.

Communication with the Marine Institute and BIM indicated that it is considered that licences operating for bottom culture of mussels in Lough Swilly will already be harvesting the Pacific oysters within their sites as they will be a bycatch of the mussel dredging operations and that there is a market for these feral pacific oysters.

It is recommended that licence operators remove feral Pacific oysters from their licensed sites either through harvest to market or by removal from Lough Swilly by destruction when encountered (typically by hammer). While this will assist in the control of feral Pacific oysters, it is the opinion of the Technical Advisors that the feral Pacific Oyster problem in Lough Swilly is a whole bay problem that needs to be managed with a whole bay management plan.

The Fishery Natura Plan and the Lough Swilly Wild Oyster Society Ltd. have no legal authority to manage the fishery in Lough Swilly but have been active in promoting the conservation and management of wild oyster in Lough Swilly since 2000. The Fishery Natura Plan was initially proposed for 2012-2017. Typically Fishery Orders and aquaculture licences devolved the management authority of oyster fisheries to local co-ops in other areas in Ireland. However, for Lough Swilly, the local co-op has not been granted this authority.

While it is not within the scope of ALAB's authority to instigate, it is the view of the Technical Advisors that a new Fishery Natura Plan should be developed to continue the measures outlined in the previous plan, but more importantly it would be vital to devolve the authority to manage the local fishery to the local co-op either by granting a Fishery Order or through aquaculture licensing. In addition to this, there should be some measure to control the spread of Pacific oysters if they occur in significant numbers on licensed aquaculture sites.

### **10.5. Disease**

AP2/2018 cites the potential risk of *Bonamia ostreae* to oyster populations in Lough Swilly. They cite a report that indicates that imports of Pacific oyster from France as the likely vector and another report that highlights the sensitivity of native oysters to parasites that can be transferred by the Pacific oyster.

The Department's submission cites the epidemiological study conducted by the Marine Institute that proposed that the greatest likelihood of importation of Bonamiasis in Lough Swilly was as a consequence of movement of stock (*Ostrea edulis* as hitchhikers on *Mytilus edulis*) from Lough Foyle, although movements of boats or equipment between the loughs could also be responsible (Marine Institute *et al.*, 2006).

The licences under appeal propose to source their seed stock from suppliers in France and UK. The import of *M. gigas* seed requires a Fish Health Authorisation under Council Directive 2006/88/EC which was transposed into Irish law by the European Communities (Health of Aquaculture Animals and Products) Regulations 2008 (S.I. No. 261 of 2008), and European Communities (Health of Aquaculture Animals and Products (Amendment) Regulations 2010 (S.I. No. 398 of 2010) and 2011 (S.I. No. 430 of 2011). The authorisation must be in place prior to the commencement of the aquaculture activities. Member states refuse to issue an authorisation if the activity in question would pose an unacceptable risk of spreading diseases or parasites to other aquaculture animals or to wild stocks of aquatic animals.

The risk of import of parasites such as *Bonamia ostreae* or other parasites and diseases from *M. gigas* imports is considered negligible. Prevention approaches are designed to ensure that *B. ostreae* is not transferred into new areas. Within the EU countries are required to monitor regularly for a number of diseases, which are notifiable. The Directive includes measures that are required in relation to notification, control and epizootic investigations that should take place, if unusual mortalities occur, or if a possible pathogen is present. Movements of oysters are permitted only between zones in such a way that *Bonamia* cannot be transferred into a new area (*i.e.* transport from bonamiosis-free to bonamiosis-free, from free to infected, or from infected to infected areas).

#### **10.6. Natural mussel spat**

AP2/2018 states that licensed site T12/37B1 overlaps on a natural mussel spat fall area that is essential for the regeneration of mussel stocks and spawning of mussels and that any disturbance there would have a negative effect on the mussel population.

Mussel seed is sourced from both within the Lough and as part of the National Seed Allocations. Mussel seed sources for Lough Swilly come both from within the bay and from the managed Irish Sea Fishery. According to the Appropriate Assessment the main local seed area is to the west of Inch Island stretching from Drum Point to Hawk's Nest. This area, as raised in AP2/2018 is where the licence T12/37 B1 has been granted.

A general objection was raised during public consultation that any mussel spat areas should not be licensed but should remain as a common resource. The Department's response is that their information indicates that mussel spat areas have been intermittently/infrequently found at different parts of the lower Lough and not in any specific area.

Information from BIM indicates that this location (T12/37 B1) is not important for mussel spat fall, and that areas to the north of Inch island were more important, however the last major mussel spat fall there was ten years ago (Mike Murphy, BIM, *pers. comm.*)

### **10.7. Wild Fishery Dredge Licences**

AP4/2018 contends that the licensed site T12/37 includes wild fishery areas where he as a holder of an oyster dredge licence issued by Inland Fisheries Ireland is entitled to fish for native oysters and naturalised Pacific oysters. He maintains that the issuing of the T12/37 licence without reference to his fishing rights will abolish said rights as the licence holder may order him to cease and desist fishing from these grounds. The Appellant states that failure to acknowledge his fishing rights may be in breach of his constitutional rights. The Appellant also asks that it be stipulated in licence conditions that if wild fisheries areas are included in licensed sites that persons holding a dredge licence issued by Inland Fisheries Ireland be entitled to fish without hindrance from aquaculture operators.

The Department's response to this that the area in question is 'State Foreshore' and the State has a right to manage its own resources.

All oyster fishermen in Lough Swilly are required to hold dredge licences issued by IFI which specifies the season during which the dredge can be used. In addition the oyster fishing vessel should be registered on the National Sea Fishing Register administered by DAFM and hold the requisite bivalve or polyvalent capacity. There is no legal mechanism in place to limit the number of vessels fishing for oysters, the total fishing effort or the annual outtake. Other oyster fisheries in Ireland have either a Fishery Order which authorises the local co-op to manage the fishery or they have an aquaculture licence which gives them this same authority. There is however no Fishery Order for Lough Swilly. Dredge licences are issued for Lough Swilly and are not specified to any particular area within the lough.

T12/37 is a licence renewal application. The original licence of 2000 ha has been reduced to 450.25 ha as



part of the mitigation measures outlined in the Appropriate Assessment conclusion statement in order to reduce the impact of aquaculture activities on 'Ostrea edulis dominated communities' in particular (as well as 5 other QI habitats). Dredge licence holders had been excluded from the original aquaculture sites, but now that the licensed footprint has been reduced to avoid native oyster beds, these areas have been opened to oyster fishery dredging. In any case it is, as the Department submits in its response to this appeal, the right of the State to manage its own resources.

### **10.8. Ecological Status**

An Appellant (AP3/2018) has state that Lough Swilly is not at GES (Good Ecological Status) as a Natura site and under the Water Framework Directive.

The Department submits that they *"assume GES refers to Good Ecological Status which is a term used under the Marine Strategy Framework Directive (MSFD). The area in question is not within the area specifically covered by the MSFD programme but is within the area covered by the Water Framework Directive (WFD). Lough Swilly currently has a "High"- classification status for the relevant biological elements under WFD."*

Under the Water Framework Directive monitoring 2010-2015, Lough Swilly (coastal water body IE\_NW\_220\_0000) is at a High Ecological Status. Swilly Estuary (transitional water body IE\_NW\_220\_0100) is at a Moderate Ecological Status. This moderate status was based on moderate monitoring results from phytoplankton status or potential and water chemistry (oxygenation). The status of the benthic invertebrate biological quality element was High as indicated by the Department ([www.catchments.ie](http://www.catchments.ie)).

## **11. Recommendation of Technical Advisor with Reasons and Considerations**

### T12/37

In accordance with Section 59 of the Fisheries (Amendment) Act 1997 the Technical Advisor gives a recommendation that the licence be **granted** for the site reference number T12/37 for the following reasons and considerations:

- The Technical Advisor has found that the Appropriate Assessment adequately determined the

impacts of aquaculture activities to sensitive habitats, species and birds within Lough Swilly. The implementation of recommended mitigation measures including significant reduction in size to prevent overlap with '*Ostrea edulis* dominated community' and the stipulation of triploid Pacific oyster stock is consistent with the conservation objectives of the Natura sites.

### T12/343

In accordance with Section 59 of the Fisheries (Amendment) Act 1997 the Technical Advisor recommends that the licence be **granted** for the site reference number T12/343 for the following reasons and considerations:

- The Technical Advisor has found that the Appropriate Assessment adequately determined the impacts of aquaculture activities to sensitive habitats, species and birds within Lough Swilly. The implementation of recommended mitigation measures including significant reduction in size to prevent overlap with '*Ostrea edulis* dominated community' and the stipulation of triploid Pacific oyster stock is consistent with the conservation objectives of the Natura sites.

## **12. Draft Determination**

**It is recommended to uphold the Minister's decision and grant licence T12/343.**

**It is recommended to uphold the Minister's decision and grant licence T12/343.**

**Technical Advisor:** AQUAFACT International Service Ltd.

**Date:** 05/02/2019

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