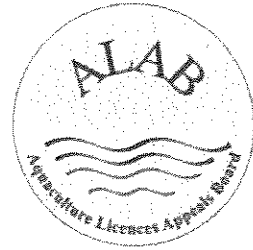


**An Bord Achomhairc Um Cheadúnais Dobharshaothraithe  
Aquaculture Licences Appeals Board**



Mr Michael Creed TD  
Minister for Agriculture, Food and the Marine  
Agriculture House  
Kildare Street  
Dublin 2

17 May 2019

Our Ref: AP1/2019  
Site Ref: T5/233  
Appellant: Marine Harvest Ireland

**Re: Appeal against the notice of Ministerial decision of the Minister for Agriculture, Food and the Marine under the Provisions of Section 68(1) and Section 19(a)4 of the Fisheries (Amendment) Act 1997, in respect of entitlement to continue Aquaculture Operations under the provisions of S19(a)4 of the Act for the Culture of Salmon in cages at a site east of Deenish Island, Ballinskelligs Bay, Co Kerry, T06/202 held by Silver King Seafoods Ltd, a wholly owned company of Comhlucht Iascaireachta Fanad Teoranta (MOWI Ireland), Fanad Fisheries, Kindrum, Fanad, Letterkenny Co Donegal**

Dear Minister

Attached please find copy of an appeal received for determination by the Aquaculture Licences Appeals Board, forwarded in accordance with Section 43(1) of the Fisheries Amendment Act 1997.

Please submit to the Board within 14 days of receipt of this letter as required under Section 43(2) of the Act:

- (a) A copy of the aquaculture licence concerned and of any drawings, maps, particulars, evidence, environmental impact statement, other written study or further information received or obtained from the applicant for the licence in accordance with a requirement of or under regulations under this Act.
- (b) A copy of any report prepared for the Minister in relation to the application, revocation or amendment and
- (c) A copy of any document recording the decision of the Minister in respect of the application, revocation or amendment and of the notification of the decision given to the applicant.

Please include, as part of the above, a location map of the surrounding area to include:

- (i) Sites under application
- (ii) Sites lapsed
- (iii) Licensed sites
- (iv) Sites currently under appeal (if any).

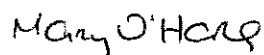
Cúirt Choill Mhínsí, Bóthar Bhaile Átha Cliath, Port Laoise, Contae Laoise, R32 DTW5  
Kilminchy Court, Dublin Road, Portlaoise, County Laois, R32 DTW5

Section 44(2) of the Act allows the Minister and each other party, except the appellant, 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 submission or observations received by the Board after the expiration of that period shall not be taken into consideration.

In accordance with the foregoing, I would be grateful if you could:

- (i) Acknowledge receipt of the Board's letter and forward the necessary documentation and
- (ii) Make, if necessary, any submission(s) or observations in accordance with Section 44(2) within the commencement date of one month, being 17 June 2019.

Yours sincerely



Mary O'Hara  
Secretary to the Board

cc Mr John Quinlan, Aquaculture and Foreshore Management Division  
Encs.



An Roinn Talmhaíochta,  
Bia agus Mara  
Department of Agriculture,  
Food and the Marine



Mr. Jan Feenstra  
Chief Executive Officer  
Comhlucht Iascaireachta Fanad Teoranta  
MOWI Ireland  
Kindrum  
Letterkenny  
Co Donegal

**COPY**

sent by registered post

12<sup>th</sup> April 2019

**Re: Entitlement to continue aquaculture operations under the provisions of Section 19(A)4 of the 1997 Fisheries (Amendment) Act for the culture of salmon in cages at a site east of Deenish Island, Ballinskelligs Bay, Co Kerry (T06/202)**

Dear Mr. Feenstra,

I am to refer to the Department's previous correspondence and discussions concerning the above issue.

The Minister has considered all aspects of this case, including all arguments adduced by the Company and its legal representatives in support of the Company's position. The Minister's consideration of the case includes the following:

1. The licence conditions in question are clearly stated in the licence. The relevant condition is condition 2(e) which states:

*"the Licensee shall not harvest more than 500 tonnes (dead weight) of salmon in any one calendar year"*

It is noted that the Dead Weight Harvest for 2016 was 1,108,907.36kg (1,108.91 tonnes). This harvest figure is 121.78% in excess of what is permitted under licence condition 2(e). The Minister has noted the arguments adduced by the Company relating to harvesting in its letter and attachments of 3<sup>rd</sup> April 2017 and elsewhere.

2. The extent of the breach by the Company of condition 2(e) is significant. The breach of the licence condition (121.78% excess of authorised limit) is of such a scale that the decision to treat as discontinued the entitlement of the Company to continue aquaculture operations under the provisions of Section 19(A)4 of the 1997 Fisheries (Amendment) Act is warranted and proportionate. In this regard the Minister has given the fullest consideration to all arguments adduced by the

Company in its communications with the Department including supporting documentation/arguments from scientific experts forwarded by the Company.

3. The breach of the licence condition took place in circumstances where the Company was fully aware of the limits set by the specific condition of the licence governing harvest tonnage. The Company was also aware from communications with the Department relating to the temporary amendment of the licence to facilitate a pilot project in 2012, that such amendment was "a once off pilot for this site only" (Department's letter of 1<sup>st</sup> April 2011 and ALAB's licence of 31<sup>st</sup> October 2012 refer). In this regard also the Minister has noted the arguments adduced by the Company relating to harvesting in its letter and attachments of 3<sup>rd</sup> April 2017 and elsewhere.
4. Breaching licence conditions serves to undermine public confidence in the regulatory system and therefore enforcement by the Department of licence conditions is in the public interest. The reasons for this include the following:
  - An increase of 121% in the stock harvested from the site must increase the effluent discharge from the site. The extent of the discharge is open to argument. However it is not open to the Company to interpret the licence conditions any way it wishes.
  - Enforcement of the licence conditions by the Department serves, inter alia, to uphold the integrity of the State's regulatory regime in respect of food production from the marine environment.
  - The Company is aware of the terms and conditions of the licence it holds and must conduct its affairs in accordance with the law.

Following consideration of all the circumstances the Minister has determined that:

1. A breach of a licence condition 2(e) has occurred. Condition 2(e) of the licence states:  
  
***"the Licensee shall not harvest more than 500 tonnes (dead weight) of salmon in any one calendar year"***
2. The statutory entitlement of Silver King Seafoods Ltd. (a wholly owned Company of Comhlucht Iascaireachta Fanad Teoranta (MOWI Ireland)) to continue aquaculture operations under the provisions of Section 19(A)4 of the 1997 Fisheries (Amendment) Act is discontinued for the following reason:

**Breach of condition 2(e) of the applicable aquaculture licence.**



A public notice of the Minister's decision will be made in accordance with the applicable legislation.

Under the provisions of Sections 40 and 41 of the Fisheries (Amendment) Act 1997, an appeal against the above decision may be made to the Aquaculture Licences Appeals Board. This appeal must be lodged within one month beginning on the date of the publication of the Minister's decision.

Yours Sincerely,

**John Quinlan**  
Principal Officer  
Aquaculture and Foreshore Management Division



An Roinn Talmhaíochta,  
Bia agus Mara  
Department of Agriculture,  
Food and the Marine



Ms. Mary O'Hara  
Secretary to the Board  
Aquaculture Licences Appeals Board  
Kilminchy Court  
Dublin Road  
Portlaoise  
Co. Laois  
R32 DTW5

11<sup>th</sup> December 2019

**Re: AP1/2019 – Appeal against the notice of Ministerial decision of the Minister for Agriculture, Food and the Marine under the provisions of Section 68(1) and Section 19A(4) of the Fisheries (Amendment) Act 1997, in respect of the entitlement to continue Aquaculture Operations under the provisions of Section 19A(4) of the Act for the culture of Salmon in cages at a site east of Deenish Island, Ballinskelligs Bay, Co. Kerry, T06/202 held by Silver King Seafoods Limited, a wholly owned company of Comhlucht Iascaireachta Fanad Teoranta (Mowi Ireland), Fanad Fisheries, Kindrum, Fanad, Letterkenny, Co. Donegal**

Dear Mary,

This is further to the Board's letter of 17<sup>th</sup> May 2019 concerning the appeal by Mowi Ireland against the Minister's decision to treat as discontinued the Statutory entitlement of Silver King Seafoods Limited (a wholly owned Company of Comhlucht Iascaireachta Fanad Teoranta (Mowi Ireland)) to continue aquaculture operations under the provisions of Section 19A(4) of the 1997 Fisheries (Amendment) Act. The Court ordered a Stay on this in view of the Judicial Review proceedings initiated by the Company in respect of the





Minister's decision. As you know this Stay was lifted on Monday 2<sup>nd</sup> December 2019. Accordingly, I enclose for the consideration of the Board, a copy of the material sought in its letter of 17<sup>th</sup> May 2019. (Legal Advice to the Minister has been redacted in accordance with standard procedures).

Please note also that having regard to the scope and content of the appeal lodged by the Company the Department will forward observations in writing to the Board in accordance with Section 44(2) of the Act within the timeline specified.

Yours Sincerely,

A handwritten signature in blue ink, appearing to read 'John Quinlan', is written over a horizontal line.

**John Quinlan**

Principal Officer

*Aquaculture & Foreshore Management Division*

*Department of Agriculture, Food and the Marine*

*National Seafood Centre*

*Clonakilty*

*Co. Cork*

*P85 TX47*





CERTIFICATION OF RENEWAL  
OF  
AQUACULTURE LICENCE No.199  
AND  
FORESHORE LICENCE No.199

Dated 30 January 1995

This is to certify that the above-mentioned licences have been renewed, subject to the modification of the Aquaculture Licence specified below, with the approval of the Minister of State at the Department of Communications, Marine and Natural Resources, for the period up to and including 15 February 2007 subject to the terms and conditions thereof and subject to the provisions of the Fisheries (Amendment) Act, 1997 (No. 23), as amended.

Aquaculture Licence

- substitution for condition 2(l) of the following condition

- 2(l)(i) *The Licensee shall fallow the licensed area for at least 30 continuous days before restocking with fish of a different generation, in accordance with the requirements of the Department of Communications, Marine and Natural Resources (Protocol No. 5 Fallowing at Offshore Finfish Farms, as may be revised from time to time).*
- 2(l)(ii) *The Licensee shall undertake Benthic Monitoring of the licensed area in accordance with the detailed specifications of the Department of Communications, Marine and Natural Resources (Monitoring Protocol No. 1 for Offshore Finfish Farms - Benthic Monitoring, as may be revised from time to time) and promptly prepare and implement a Benthic Amelioration Plan if permitted parameters are breached.*
- 2(l)(iii) *The Licensee shall undertake Water Column Monitoring of the licensed area in accordance with the detailed specifications of the Department of Communications, Marine and Natural Resources (Monitoring Protocol No. 2 for Offshore Finfish Farms - Water Column Monitoring, as may be revised from time to time) and promptly take any required follow-up action in the light of the results of that monitoring.*
- 2(l)(iv) *The Licensee shall arrange for the treatment of fish against sea-lice and shall comply with the detailed specifications of the Department of Communications, Marine and Natural Resources (Monitoring Protocol No. 3 for Offshore Finfish Farms - Sea lice Monitoring and Control, as may be revised from time to time).*
- 2(l)(v) *The Licensee shall co-operate in the audit from time to time of its aquaculture operations and licensed area and facilities and premises in accordance with the detailed specifications of the Department of Communications, Marine and Natural Resources (Monitoring Protocol No. 4 for Offshore Finfish Farms - Audit of Operations, as may be revised from time to time)*

Signed: \_\_\_\_\_

A person authorised under Section 15 of the Minister and Secretaries Act, 1924, to authenticate the seal of the Minister for Communications, Marine and Natural Resources

Dated this 4 AUG 2004

CERTIFICATE OF ASSIGNMENT

OF  
AQUACULTURE LICENCES No's. AQ 198, AQ 199 AND AQ 299.

AND  
FORESHORE LICENCES No's AQ 198, AQ 199 AND AQ 299

This is to certify that the Licences referred to above have been assigned, with the approval of the Minister of State at the Department of Communications, Marine and Natural Resources, from:

Murpet Fish Ltd.

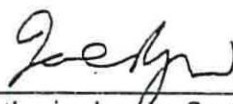
to

Silver King Seafoods Limited

c/o John Power  
Curryglass  
Waterfall  
Co. Cork

subject to the terms and conditions thereof.

Signed:



A person authorised under Section 15  
of the Ministers and Secretaries Act 1924,  
to authenticate the seal of the Minister for  
Communications, Marine and Natural  
Resources.

31 July 2004

FCL 199  
File copy

## CERTIFICATION OF ASSIGNMENT

LICENCES Nos. FCL1, FCL11, FCL64, FCL77, FCL198, FCL199 and  
FCL299, GRANTED IN ACCORDANCE WITH SECTION 15 OF THE  
FISHERIES (CONSOLIDATION) ACT, 1959.

(deemed to be Aquaculture Licences under the Fisheries (Amendment) Act, 1997)

and

LICENCES NOS. FCL 198, FCL 199 AND FCL 299, GRANTED IN  
ACCORDANCE WITH SECTION 3 (1) OF THE FORESHORE ACT, 1933

This is to certify that the above mentioned licences have been assigned with the approval of the Minister of State at the Department of the Marine and Natural Resources, on behalf of the Minister for the Marine and Natural Resources, to **Murpet Fish Ltd., Fintra Road, Killybegs, Co Donegal** with effect from **15 November, 1999**, subject to the terms and conditions thereof.

By virtue of Section 75 of the Fisheries (Amendment) Act, 1997 (No. 23) the above mentioned licences under the Fisheries (Consolidation) Act, 1959 are deemed to be Aquaculture Licences under the Fisheries (Amendment) Act, 1997 and therefore shall be subject to the provisions of the last mentioned Act.

Signed:



A person authorised under Section 15 of the Minister and Secretaries Act, 1924, to authenticate the seal of the Minister for the Marine and Natural Resources.

Date: 15 November, 1999



# DEENISH

FCC 199.

AGREEMENT made the 30th day of January, 1995.

1. The Minister for the Marine, (hereinafter referred to as "the Minister"), in exercise of the powers conferred on him by Section 15 of the Fisheries (Consolidation), Act, 1959, and the Fisheries (Transfer of Departmental Administration and Ministerial Functions) Order, 1977 (S.I. No. 30 of 1977), (as adapted by the Tourism, Fisheries and Forestry (Alteration of Name of Department and Title of Minister) Order, 1987 (S.I. No. 82 of 1987)), hereby grants to Gaelic Seafoods (Ireland) Ltd., whose registered address is at Rusheenamanagh, Carna, Co. Galway (hereinafter referred to as "the Licensee"), at the place and in the waters delineated on the map annexed hereto and thereon coloured red (hereinafter referred to as "the fishery"), the exclusive right to
  - (a) perform all operations necessary for the culture of salmon in cages, details of which have been submitted to and approved by the Minister placed in that area east of Deenish Island in Ballinskelligs Bay, Co. Kerry, designated in the agreement dated the 30th day of January, 1995 and the map annexed thereto between the Licensee and the Minister;
  - (b) at any time of year to purchase, have in possession or sell salmon and salmon smolts, the acquisition of which has been approved by the Minister;
  - (c) at any time of year to take and have in possession salmon and salmon smolts within the confines of the area referred to at (a) above;
  - (d) for the management of the fishery, to have in possession and use nets, traps or other such devices as may be approved by the Minister for the taking of salmon as aforesaid.

2. This licence shall be subject to the following conditions:

- (a) no fish other than salmon shall be cultured or taken under the terms of this licence without the prior written permission of the Minister;
- (b) the Licensee shall make adequate arrangements to ensure that the cages shall not obstruct the passage of migratory fish and shall take all measures necessary to prevent the escape of salmon from the cages and shall carry out any instructions issued in this connection by the Minister;
- (c) the licensee shall ensure that all towing of cages for any reason to and from the fish farm site is carried out only with the prior notification to and approval of the Minister;
- (d) the stock of fish in the cages shall not exceed such quantity as may be specified by the Minister from time to time, the number of smolts to be stocked at the site should not in any event exceed 400,000. Licensed stocking densities are not to be exceeded and will be subject to inspection at any time by the Department of the Marine;
- (e) the Licensee shall not harvest more than 500 tonnes (dead weight) of salmon in any one calendar year.
- (f) all chemicals and antibiotics used in the fishery shall be used in accordance with instructions issued by the Minister from time to time;
- (g) the Licensee shall keep records of all chemicals and antibiotics with which the fish have been treated, including quantities and times of use;

- (h) The Licensee shall notify the Secretary, Department of the Marine, (Aquaculture Section), Leeson Lane, Dublin 2, and the Fisheries Research Centre (Fish Pathology Unit), Abbotstown, Castleknock, Dublin 15, within forty-eight hours of the suspected appearance of any disease in the fishery or of any abnormal losses or mortalities in the fishery and shall carry out any instructions issued by the Minister as a result of the notification including instructions relating to the treatment, disposal and destruction of diseased stocks;
- (i) disposal of all dead fish shall be in a manner acceptable to the local authority;
- (j) the Licensee shall notify the Secretary, Department of the Marine, (Aquaculture Section), Leeson Lane, Dublin 2, within twenty-four hours of any escapes of fish from the fishery and shall keep records of fish escaped, including numbers, types, origin and year classes and shall make these records available to the Secretary on request;
- (k) the Licensee shall furnish to the said Secretary at the said address such returns relating to the fishery as may be required by the Minister;
- (l) the Licensee shall carry out such monitoring as the Minister shall specify from time to time and the results of such monitoring shall be furnished to said Secretary;
- (m) the licensee shall ensure that water quality monitoring is continued for the duration of this licence in accordance with specifications laid down by the Minister, which may be modified from time to time, and results should be forwarded to the Fisheries Research Centre at agreed regular intervals;



- (n) the licensee shall, before the end of each year for the duration of this licence, forward to the Fisheries Research Centre, annual review/update of water chemistry and other environmental parameters to assess the impact of operations at the fish farm;
- (o) the licensee shall ensure that sea-lice densities are monitored regularly and that all warranted measures are taken to ensure that lice densities are minimised and the licensee shall comply with any instructions issued by the Minister in this regard;
- (p) live salmon and salmon smolts shall not be sold or disposed of to any person or in any way transferred outside the said fish farm save in accordance with the prior written permission of the Minister;
- (q) the licensee shall keep the Secretary, Department of the Marine advised of ongoing precautionary measures to deal with naturally occurring algal blooms in the area of the fish farm;
- (r) the fishery and any equipment, structure, thing or premises wherever situated, used in connection with operations carried on in the fishery shall be open for inspection at any time by an authorised person (within the meaning of section 292 of the Fisheries (Consolidation) Act, 1959 (No.14 of 1959) (as amended by the Fisheries Act, 1980) other than a private water keeper), a sea fisheries protection officer (within the meaning of section 220 of the Fisheries (Consolidation) Act, 1959) or any other person appointed in that regard by the Minister;

- (s) the Licensee shall give all reasonable assistance to an authorised person, a sea fisheries protection officer or any person duly appointed by the Minister, to enable the person or officer enter and inspect the fishery, equipment, structures, things or premises pursuant to sub-paragraph (r) of this paragraph;
- (t) the Licensee shall not use any substance or thing or do anything which has a deleterious effect on the fishery environment including the use of organotin based anti-foulants and shall make adequate arrangements for the hygienic and disease-free operation of the fishery and shall comply with any directions issued by the Minister from time to time in that regard;
- (u) the Licensee shall not carry out any operations authorised by this licence in the fishery in such a manner as to interfere unreasonably with fishing or navigation in the vicinity of the fishery and shall comply with any direction given to it in that regard by the Minister;
- (v) the Licensee shall make adequate provision for the removal and disposal of all waste from the fishery;
- (w) the Licensee shall indemnify and keep indemnified the State, the Minister, his officers, servants or agents against all actions, loss, damage, costs, expenses and any demands or claims howsoever arising in connection with the construction, maintenance or use of any structures, apparatus, equipment or other thing used in connection with the fishery or in the exercise of the rights granted under this licence and the Licensee shall take such steps as the Minister may specify in order to ensure compliance with this condition;

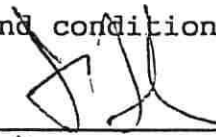


- (x) the Licensee shall obtain the consent of the Minister to any proposed major change in the shareholding or control of the Licensee where such change substantially alters the identity of the Licensee;
  - (y) this licence shall remain in operation until the 15th day of February, 2001 subject to the payment of the fee prescribed by the Department of the Marine;
3. The Minister shall be at liberty at any time to revoke or amend this licence if he considers that it is in the public interest to do so or if he is satisfied that there has been a breach of any condition specified in the licence or that the fishery to which the licence relates is not being properly maintained. Any such revocation or amendment shall be subject to the provisions of section 15 of the Fisheries (Consolidation) Act, 1959.
  4. This licence will remain subject to ongoing review in light of continued monitoring of, and research into, the two marine sites and neighbouring sea trout fisheries which may be undertaken by the Salmon Research Agency and/or the Fisheries Research Centre.
  5. In the event of proven contra-indications for sea trout stocks causatively linked to the fish farming operations permitted under this licence, the Minister may exercise his discretion to take any necessary protective measures ranging from reduction in permitted production levels to revocation of the licence and harvesting of all stock.
  6. The number given to the Licensee under this licence shall be FCL 199.
  7. This licence is not transferable.

8. This Licence replaces the licence dated 15th day of February, 1991 between the Minister and Salmara Fisheries Ltd.

<u>PRESENT</u> when the Seal of Office )	
of the MINISTER FOR THE MARINE )	
was affixed and was authenticated )	
by the Signature of: )	_____
_____ )	a person authorised
in the presence of: )	under section 15(1)
WITNESS: _____ )	of the Ministers and
ADDRESS: _____ )	Secretaries Act,
_____ )	1924 to authenticate
OCCUPATION: _____ )	the Seal of the
	Minister.

I agree, on behalf of Gaelic Seafoods (Ireland) Ltd. to accept the terms and conditions of this licence.

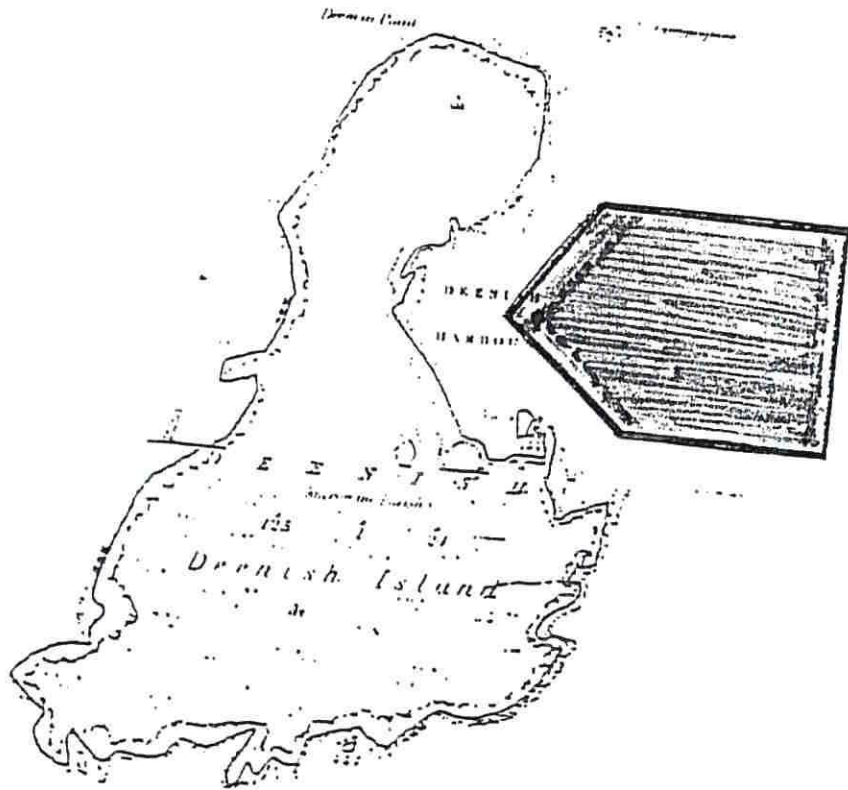
Signed: 

Date: September 14<sup>th</sup> 1995

Witness: 

Address: Co. Wick

C. Galsworthy  
Occupation: General Assistant



DEPARTMENT OF THE MARINE  
Leeson Lane, Dublin, 2. Tel No.  
Engineering Section. Fisheries Division

BASED ON THE ORDNANCE SURVEY BY  
PERMISSION OF THE GOVERNMENT  
PERMIT No 4004  
COUNTY KERRY Scale No: 105

Dated 30th January, 1995

MINISTER FOR THE MARINE

WITH

GAELIC SEAFOODS (IRELAND)

LIMITED

FISH CULTURE LICENCE

## Submission AGR 00396-18: T6/202 Deenish Submission to Minister

TO: Minister  
STATUS: Completed  
PURPOSE: For Decision  
DIVISION: Coastal Zone Management  
DECISION BY:

AUTHOR: Quinlan, John  
OWNER: Quinlan, John  
REVIEWERS: Beamish, Cecil

### Final comment

Minister wishes to have a further meeting with officials from the Licencing Division and Legal Services Division before finalising his consideration of the issue and deciding on a course of action.

### Action required

For Ministerial Decision

### Executive summary

The purpose of the submission is to provide a further update to the Minister on developments relating to the harvesting of salmon by Marine Harvest Ireland in excess of what is permitted under the terms of the Aquaculture Licence at the above site and to take account of developments since the previous submission (00228-17 of 1<sup>st</sup> November 2017) which set out the situation in detail.

On 30<sup>th</sup> November 2018 the Minister determined that there should be a meeting with Legal Services Division and others and that a further submission should be made containing a recommendation on a specific course of action. Two subsequent meetings were convened in accordance with the Minister's decision. At both meetings there was a broad discussion on the policy and legal issues that arose.

The recommendation of the Division in respect of this case is as follows:

It is recommended:

- (a) That the Minister determines that Condition 2(a) of the applicable aquaculture licence which sets out the harvest limits has been breached by the operator.
  
- (b) That the Minister treat as discontinued the entitlement of Silver King Seafoods Ltd. (Subsidiary Company of Marine Harvest Ireland) to continue aquaculture operations under the provisions of Section 19(A)4 of the 1997 Fisheries (Amendment) Act.

### Detailed information

**Recommendation to treat as discontinued the entitlement of Silverking Seafoods Ltd (Subsidiary Company of Marine Harvest Ireland) to continue aquaculture operations under the provisions of Section 19(A)4 of the 1997 Fisheries (Amendment) Act**

**(T6/202 - Deenish)**

**Submission to the Minister**



**From: John Quinlan, Principal Officer, Aquaculture & Foreshore Management Division.**

**To: 1) Dr Beamish, Assistant Secretary**

**2) Secretary General**

**3) Runai Aire**

**Date: 11<sup>th</sup> July 2018**

## **1. Purpose of the Submission**

The purpose of the submission is to provide a further update to the Minister on developments relating to the harvesting of salmon by Marine Harvest Ireland in excess of what is permitted under the terms of the Aquaculture Licence at the above site and to take account of developments since the previous submission (00228-17 of 1<sup>st</sup> November 2017) which set out the situation in detail. The full text of submission 00228-17 is attached at **TAB 8**.

On 30<sup>th</sup> November 2018 the Minister determined that there should be a meeting with Legal Services Division and others and that a further submission should be made containing a recommendation on a specific course of action.

### **Meetings of 19 December 2017 and 22 February 2018**

On 19<sup>th</sup> December 2017 a meeting took place involving the Secretary General, Assistant Secretary Beamish, officials from AFMD and officials from Legal Services Division to discuss the case.

On 22<sup>nd</sup> February 2018 a meeting took place involving the Minister, Secretary General, Assistant Secretary Beamish, officials from the Minister's office, from AFMD and from Legal Services Division.

At both meetings there was a broad discussion on the policy and legal issues that arose for the operator, the industry in general and for the licensing regime.

Condition 2(e) of the licence states that: "***the Licensee shall not harvest more than 500 tonnes (dead weight) of salmon in any one calendar year***" but in the year 2016 the operator harvested **1108.91 tonnes** of salmon from the site which represented an excess of **121.78%** over the permitted tonnage under the licence conditions.

It is recommended:

- (a) That the Minister determines that Condition 2(e) of the applicable aquaculture licence which sets out the harvest limits has been breached by the operator.
  
- (b) That the Minister treat as discontinued the entitlement of Silver King Seafoods Ltd. (Subsidiary Company of Marine Harvest Ireland) to continue aquaculture operations under the provisions of Section 19(A)4 of the 1997 Fisheries (Amendment) Act.

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## **2. Background**

The licence in question (T6/202) was held by Silver King Seafoods Limited, a wholly owned subsidiary of Marine Harvest Ireland. The

licence expired on 15<sup>th</sup> February 2007 and as a renewal application has been received by the Department, the relevant aquaculture activity is governed under the provisions of Section 19(A)4 under the 1997 Fisheries (Amendment) Act which states:

***"A licensee who has applied for the renewal or further renewal of an aquaculture licence shall, notwithstanding the expiration of the period for which the licence was granted or renewed but subject otherwise to the terms and conditions of the licence, be entitled to continue the aquaculture or operations in relation to aquaculture authorised by the licence pending the decision on the said application."***

The Aquaculture & Foreshore Management Division (AFMD) has, on foot of inspections conducted at the site by the Marine Engineering Division, given detailed consideration to possible breaches of aquaculture licence conditions by the Company.

This submission and the recommendation contained therein is based on harvested tonnage in excess of the permitted cap. **The figures in question have been supplied by the operator.**

The full text of the licence is attached at **TAB 1**.

### **3. Temporary amendment to the Aquaculture Licence granted in October 2012 (Pilot Project)**

The company applied for a temporary amendment of the Aquaculture Licence in 2011 so as to facilitate a once-off pilot project involving the use of maximum standing stock biomass as a means of gauging and capping production capacity rather than tonnage. The temporary amendment was granted by the Aquaculture Licences Appeals Board (ALAB) on 31<sup>st</sup> October 2012. This temporary amendment ceased on 31<sup>st</sup> March 2015 and the Company received a written reminder to this effect on 27<sup>th</sup> March 2015. A condition of this amendment was that it ***"is strictly a once off pilot for this site only and that any repeat of the stocking pattern would have to be considered, inter alia, in light of the outcome of the monitoring and the progress of the implementation of overall licensing policy towards the use of "maximum standing stock biomass" as a control point in licence terms and conditions"***.

### **4. Harvesting in excess of maximum permitted under the terms and conditions of the Aquaculture Licence**

(Now operating however under the provisions of Section 19(A)4 of the 1997 Fisheries Amendment Act)

The key points in relation to the temporary amendment which facilitated the pilot project are:

1. The amendment was time bound and expired on **31<sup>st</sup> March 2015**.
2. Marine Harvest Ireland were written to on **27<sup>th</sup> March 2015** and were reminded of the expiry of the amendment.
3. The Marine Harvest Ireland report on the Pilot Study dated **20<sup>th</sup> January 2015** acknowledged that the amendment was for two years duration.

Details of the conditions of the Pilot Study, Communications and Reports are attached at **TAB 3a-c**.

### **5. Engineering Reports and Company response of 29<sup>th</sup> January 2016**

The Department's Marine Engineering Division (MED) carried out an inspection at the site on the 2<sup>nd</sup> July 2015. The MED Report advised of an excess stock of smolts in the order of 84% and also referred to the permitted harvest limit of 500 tonnes (dead weight) in a year.

The Engineering Report was forwarded to the Company on 6<sup>th</sup> January 2016. The Company was advised that remedial actions necessary on foot of the Engineering Report should be completed within 2 weeks of the letter that issued. On 29<sup>th</sup> January 2016 the Company responded and raised the following key points:

1. The company queried the accuracy of the MED Report in respect of the type of fish stocked (smolts v salmon).
2. The Company stated that no harvest had taken place at the site (in 2015)
3. The Company stated there had been no exceedance of the maximum harvest allowable.

The Engineering Report is attached at **TAB 2a**.

#### **6. Meeting with the Company 14<sup>th</sup> March 2016**

The Department convened a meeting with the Company on 14<sup>th</sup> March 2016. The purpose of the meeting was to afford the Company an opportunity to outline further its position on overstocking in respect of Deenish and also another site at Inishfarnard which has been the subject of a separate submission. At the meeting the Department provided an overview of its position, including the Engineering Report of 2<sup>nd</sup> July 2015 and the fact that the Pilot Programme concerning measurement based on biomass had ended on 31<sup>st</sup> March 2015. The Department noted the Company's response contained in its letter of 29<sup>th</sup> January 2016.

At the meeting the Company said it could not state what tonnage would be harvested but in any event harvesting would not occur from the site as the fish would be removed in the same manner as Innisfarnard. The Department restated its position that it regarded removal of fish from the site for slaughter as representing harvesting from the site in accordance with condition 2 (e) of the licence.

A copy of the Company's letter of 29<sup>th</sup> January 2016 is attached at **TAB 2c**.

The Summary Report of the meeting is attached at **TAB 2e**.

#### **7. Harvest Data for 2016**

In response to a request from the Department, Marine Harvest Ireland supplied harvest data for 2016 on 24<sup>th</sup> February 2017 and also confirmed that there had been no harvest in 2015. The details are as follows:

- Total Harvest (Dead Weight) for 2016 was **1108.91 tonnes**.
- The harvest figure is **121.78%** in excess of what is permitted under licence condition No. 2(e).
- 2016 harvest took place between 2<sup>nd</sup> October 2016 and 21<sup>st</sup> December 2016.
- Based on the available prices for organic certified salmon during the period in question there can be little doubt that the unauthorised excess harvesting resulted in substantial commercial benefits for the operation.

Email communication in relation to the harvest data is attached at **TAB 4**.

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**Consideration of termination of statutory entitlement to operate pursuant to Section 19(A)4 of the 1997 Fisheries (Amendment) Act**



## **8. Department's Letter of 9<sup>th</sup> March 2017**

On 9<sup>th</sup> March 2017 the Department wrote to the Company advising it that consideration was being given to the termination of the Company's statutory entitlement to continue aquaculture operations at the Deenish site pursuant to Section 19(A)4 of the 1997 Fisheries (Amendment) Act. The breach of licence Condition 2(e) which sets out the maximum harvest levels was cited as the reason for this action. The company was afforded 28 days in which to make representations to the Minister in relation to the proposed cessation of its statutory entitlement.

The full text of the Department's letter of 9<sup>th</sup> March 2017 is attached at **TAB 5**.

## **9. Company response dated 3<sup>rd</sup> April 2017**

The Company wrote to the Department on 3<sup>rd</sup> April 2017 in response to the Department's letter of 9<sup>th</sup> March 2017. The following are the key issues raised by the company in their response:

1. That previous representations made to the Department in relation to the Deenish site "remain relevant"
2. That there has been no breach of the Licence conditions or consequential environmental impacts.
3. That the legislation does not provide for the revocation of the company's statutory entitlement to operate and that the Company relies on its constitutional property rights to operate under the provisions of Section 19(A)4 of the 1997 Fisheries Amendment Act.
4. That the "parameters and terminology of the Licence are out of date when compared to best international practises"
5. That revocation of the Company's statutory entitlement to continue aquaculture operations at the Deenish site pursuant to Section 19(A)4 of the 1997 Fisheries (Amendment) Act would not be in the public interest.

The letter also included the following attachments:

- Previous correspondence (15/06/16) and 19/07/16)
- Professor Randolph Richards' "expert opinion" dated 29 November 2016 and resume
- Aquaculture Stewardship Council's Certificate of Conformity dated 10 March 2015
- Environmental Survey carried out by Aquafact International Services Limited, issued September 2016
- MHI Submission to Independent Aquaculture Licensing Review Group

The full content of the Company's letter together with the attachments have been fully reviewed by the Division and also referred to the Department's Legal Services Division for consideration and advice.

Company letter and attachments are attached at **TAB 6a-g**.

## **10. Consideration of the Representations made by the Company (letter of 3<sup>rd</sup> April 2017)**

Aquaculture Licences are issued by the Department subject to the provisions of the 1997 Fisheries (Amendment) Act, the 1933 Foreshore Act (where appropriate) and applicable EU legislation, including the EU Birds and Habitats Directive and the EU Directive

on Public Participation and Decision Making (Aarhus Convention). Licensing decisions must be taken in accordance with legislation. The licence in question states:

***"the Licensee shall not harvest more than 500 tonnes (dead weight) of salmon in any one calendar year"***

The Division has considered each of the points raised by the Company in its letter of 3<sup>rd</sup> April 2017.

A copy of the letter of 3<sup>rd</sup> April 2017 is attached at **TAB 6a**.

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### **Arguments put forward by the Company**

#### **11. That previous representations made to the Department in relation to the Deenish site "remain relevant"**

The previous representations referred to by the operator consist of two letters dated 15<sup>th</sup> June and 19<sup>th</sup> July 2016 (the letter dated 15<sup>th</sup> June 2016 was in fact incorrectly dated by the operator and should read 15<sup>th</sup> July 2016). Both letters were received subsequent to a letter issued by the Department dated 23<sup>rd</sup> June where the company was advised that the Department was giving consideration to the withdrawal of the Company's statutory entitlement to continue aquaculture operations at the Deenish site pursuant to Section 19(A)4 of the 1997 Fisheries (Amendment) Act on foot of a breach of Licence Condition 2(d) which sets out the maximum smolt stocking levels.

#### **Letter of 15<sup>th</sup> July 2016.**

This letter sets out a series of general complaints concerning the licensing system. The following points were raised in the letter:

- ***"MHI asserts that the licence term attaching to T6/202 limiting the number of 'smolts' is anachronistic, legally and technically meaningless and its application is contrary to modern good salmon farming practice.***
- ***The irrefutable evidence arising from the benthic impact monitoring programme is that the stocking levels at this site are and have been comfortably within the site's 'biological assimilative capacity'. Thus it is a matter of fact that no significant environmental damage has been visited on the state's foreshore by MHI's actions. Surely this demonstrates clearly and in a quantifiable fashion that the company has been acting within the spirit of the regulatory system and thereby securing the public interest.***
- ***The department, armed with this data, can show any interested parties that it is effectively regulating the activity at the site and that it is ensuring the highest levels of environmental protection."***

The licence condition referred to above by the company is in relation to smolt stocking levels and does not form part of the matters under consideration in this submission. The issue of benthic impacts was also subsequently raised by the company in their letter of 3<sup>rd</sup> April 2017 and is considered separately below. The data referred to by the company is also addressed separately below.

A copy of the letter of 15<sup>th</sup> June 2016 is attached at **TAB 6b**.

**Letter of 19<sup>th</sup> July 2016.**

The advice of the Department's Legal Services Division in respect of this particular letter is as follows:

[REDACTED]

Accordingly this letter does not form any part of the consideration of the matters that arise in this submission.

A copy of the letter of 19<sup>th</sup> July 2016 is attached at **TAB 6c**.

LSD advice is attached at **TAB 7**.

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**12. That there has been no breach of the Licence conditions or consequential environmental impacts**

Marine Harvest Ireland raises two separate but inter-linked issues in its letter of 3<sup>rd</sup> April 2017. Essentially they argue that:

1. There has been no breach of the license condition in relation to harvest limits (Condition 2(e)).
2. That there have been no negative environmental impacts.

The text of Licence Condition 2(e) is unambiguous, the Licensee is not permitted to harvest more than "**500 tonnes (dead weight) of salmon in any one calendar year**".

There is no dispute in relation to the quantum of the harvest in 2016. Marine Harvest Ireland in its email of 24<sup>th</sup> February 2017 has advised that the Dead Weight Harvest for 2016 was 1,108,907.36 Kgs (1108.91 tonnes). This harvest figure is 121.78% in excess of what is permitted under licence condition 2(e).

The company goes on to argue that, as it "**transfers live salmon from Deenish to the quay at Castletownbere, where the harvesting of this salmon occurs**" there is consequently no breach of the licence. It ignores the fact that Licence Condition 2(e) refers only to harvest and is not specific on location. In any event it is clear that the fish are removed from the Deenish site for the purpose of slaughter and therefore Deenish is a harvest site. There is no reasonable basis for the Company's argument in relation to this aspect. If the Marine Harvest argument was to be accepted, it would effectively render all harvest limits at all Aquaculture sites as redundant and entitle operators to effectively produce and harvest without restriction by simply stating that they had removed the stock from site and harvested (effectively slaughtered) elsewhere.

It is also worth noting that the Company did not apply for or obtain a Fish Movement Order from the Marine Institute which would be the case if the fish were being moved for further on-growing. It is a requirement on all operators to notify the Marine Institute in advance where fish are moved for 'on-growing'. The company did not in this case apply for a Fish Movement Order and it is clear that any movement from the site was to harvest/slaughter.

The Company has argued that there has been no negative/adverse environmental impact arising from their breach of Condition 2 (e) of the licence.

It is axiomatic that an increase of 121% in the stock harvested from the site must increase the effluent discharge from the site. The extent to which this increase in effluent discharge is significant is open to argument, however, it is not open to the Company to interpret the licence conditions any way it wishes.

Legal Services Division provided the following advice in relation to the Company's argument:



[REDACTED]

Copy of email correspondence of 24<sup>th</sup> February 2017 is attached at **TAB 4**.

The full text of the legal advice is attached at **TAB 7**.

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**13. That the legislation does not provide for the revocation of the company's statutory entitlement to operate and that the Company relies on its constitutional property rights to operate under the provisions of Section 19(A)4 of the 1997 Fisheries Amendment Act**

The Department's Legal Services Division has examined the argument made by the Company and has concluded that:

[REDACTED]

[REDACTED]

[REDACTED]

The full advice of Legal Services Division is attached at **TAB 7** and specific attention is drawn to Section 5-18 inclusive.

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**14. That the "parameters and terminology of the Licence are out of date when compared to best international practises"**

The Company has stated that *"the parameters and terminology of the Licence are out of date when compared to best*

**international practise" and also that "the Licence sets stocking limits by reference to "smolts", rather than 'Maximum Allowable Biomass', despite the fact Maximum Allowable Biomass is internationally-recognised as the most appropriate standard metric of production and that the Minister issued a press release on 5 December 2011 clearly outlining the policy to implement a Maximum Allowable Biomass limit to salmon rearing operations".**

In support of its position the Company commissioned a report by an industry professional which is attached. Not surprisingly, the report is also of the view that the wording of the licence is out of date and contrary to supporting best practices.

Even if the Department accepted this view, which it does not, the relevant facts in respect of the licence are as follows:

- The licence held by the company sets out clearly the terms and conditions attaching to that licence.
- The company was fully aware of the terms and conditions of the licence.
- The company had sought and obtained a temporary amendment to the licence which allowed it to operate on revised terms and conditions for the duration only of the pilot study.
- The company was notified and fully aware of the expiry of the temporary amendment to the licence with effect from 31<sup>st</sup> March 2015.

In addition to the above, Legal Services Division has advised as follows:

[REDACTED]

The use of Maximum Allowable Biomass (MAB) as a measure for capping production has yet to be implemented by the Department and will require scientific, technical and possibly legal input before implementation. The application of MAB to licences is likely to represent a material change to each licence and therefore will require both public and statutory consultation as well as the submission of an Environmental Impact Statement. The obvious time for such a transition is therefore when licence renewal is under consideration. In the meantime the current mechanism for capping production is of general application throughout the industry and unilateral departure by one operator would inject huge levels of uncertainty into the overall system in addition to being unlawful. Prior to transitioning to MAB the Department will need to assess every renewal application with a view to ensuring that production levels are properly transitioned from the existing calculation methods over to MAB. It should be clear therefore that the transition to MAB will be a significant operation for the Department and relevant agencies.

For all of these reasons the argument put forward by the Company is not sustainable and is rejected in full.

A copy of the report is attached at **TAB 6d**.

The full text of the legal advice is attached at **TAB 7**.

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**15. That revocation of the Company's statutory entitlement to continue aquaculture operations at the Deenish site pursuant to Section 19(A)4 of the 1997 Fisheries (Amendment) Act would not be in the public interest**

The public interest argument is of particular interest and relevance in relation to this case. The Company has adduced a number of technical and quasi legal arguments in support of its case but it can be argued that the most important consideration is the public interest. This Company is by far the largest producer of organic finfish in the country. The Company has substantial technical, administrative and managerial resources available to it in order to manage its production and also the licences which underpin that



production. Because of its dominant role in the industry the Company has a close working relationship with the Licensing Division through a series of Coordination meetings. The Company is fully aware of the terms and conditions of all licences held or operated by them. Furthermore, on all relevant occasions the Department has underlined the importance of compliance with the regulatory regime operated by the State. There is absolutely no doubt whatsoever that the Company has been and continues to be fully aware of the importance of compliance with licence conditions. In its letter of 3<sup>rd</sup> April 2017 the Company has emphasised the employment it creates and the revenue it generates from its operation and also states as follows:

***"In light of the current deadlock being experienced in the existing aquaculture licensing system, MHI cannot understate the importance of being able to operate every facility for which it has permission in order to maintain our viability and levels of employment."***

Of course the problem is that the Company has not only operated ".....**every facility for which is has permission**....." but has exceeded the permission it has under the terms and conditions of its licence and that is the core issue.

Advice from Legal Services Division in respect of the "public interest" argument put forward by the Company indicates that the Minister's consideration of relevant issues should include the following:

**i.**

**ii.**

In relation to **i.** above

In relation to **ii.**

There are further public interest considerations beyond those raised by the Company. The actions by the Company if allowed to go unchecked could place in jeopardy the ongoing acceptance by the EU Commission that the licensing of aquaculture is being carried out by the State in compliance with the ECJ judgement against Ireland of 2007. Anything which would cause the Commission to review its position would have very serious implications for the industry as a whole and the employment generated thereby.

The setting of a cap on production and the enforcement of same is clearly in the public interest in respect of all operators. The specific reasons applicable to this case include the following:

1. An increase of 121% in the stock harvested from the site must increase the effluent discharge from the site. The extent of the discharge is open to argument. However it is not open to the Company to interpret the licence conditions any way it wishes.
2. Enforcement of the licence conditions by the Department serves, inter alia, to uphold the integrity of the State's regulatory regime in respect of food production from the marine environment.
3. The maintenance and development of Ireland's food exports is clearly dependent upon the acceptance by the general public and the authorities in other jurisdictions of the certitude attached to Ireland's regulatory regime.

4. Failure or perceived failure by the Department to enforce licence conditions will inevitably provide an incentive for further non-compliance by this operator and perhaps by others.
5. Failure to enforce licence conditions by the Department would amount to a de facto anti-competitiveness measure as it affords a major commercial advantage to the operator that is non compliant.
6. The current iteration of the Department's Mission Statement states:

***"Serving the government and people of Ireland by leading, developing and regulating the agri-food sector, protecting public health and optimising social, economic and environmental benefits."***

The explicit reference to regulation underscores not only the Department's commitment to carrying out this function but also acts as a recognition of the liabilities associated with non enforcement.

The final argument must be that the Company is aware of the terms and conditions of the licence it holds and must conduct its affairs in accordance with the law.

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#### **16. Attachments appended to the company's letter of 3<sup>rd</sup> April 2017**

The following documents were appended to the Company's letter of 3<sup>rd</sup> April 2017:

- Previous correspondence (15/06/16) and 19/07/16)
- Professor Randolph Richards expert opinion dated 29 November 2016 and résumé
- Aquaculture Stewardship Council's Certificate of Conformity dated 10 March 2015
- Environmental Survey carried out by Aquafact International Services Limited, issued September 2016
- MHI Submission to Independent Aquaculture Licensing Review Group.

All of these documents have been given the fullest consideration by the Division in the preparation of this submission.

The documents are attached at **TAB 6b-g**.

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#### **17. Actions for consideration on foot of a breach of the Licence condition No 2(e) by Marine Harvest Ireland.**

The following are the available options identified by the Division:

1. Do Nothing
2. Seek to amend the licence
3. Treat the entitlement of Silver King Seafoods Ltd (Subsidiary Company of Marine Harvest Ireland) to continue aquaculture operations as discontinued, under the provisions of Section 19(A)4 of the 1997 Fisheries (Amendment) Act.



The Division has given detailed consideration to each of these options and has sought and obtained extensive legal advice from the Department's Legal Services Division in relation to the legislative options available. The three options are discussed in detail below.

#### 18. Do Nothing

The Department has an obligation to implement the State's aquaculture licensing regime in an impartial manner in accordance with the provisions of the applicable legislation. Aquaculture and Foreshore Management Division has, within the resources available to it, sought to monitor and police compliance with the terms of all aquaculture and foreshore licences issued. The 1997 Fisheries (Amendment) Act does not provide for an extensive suite of sanctions, short of revocation, to be used in line with the seriousness of the breach of licence condition No 2(e).

As set out above, the Company has brought forward a number of arguments in support of its position and the Department's response to these has also been set out. The total tonnage harvested in 2016 **is not in dispute and the Division is in fact relying on the harvest data provided by the Company**. There can be no doubt that harvesting 121% in excess of what is permitted under the licence condition 2(e) represents a very serious breach. This breach occurred notwithstanding the Department's clearly stated position in relation to harvest limits as set out at its meeting with the Company earlier that same year on 14<sup>th</sup> March 2016 and the expiry on 31<sup>st</sup> March 2015 of the temporary amendment to the Aquaculture Licence.

An additional issue in this case is the statutory entitlement to operate which applies given that operations are subject to Section 19(A)4 of the 1997 Fisheries (Amendment) Act (see Section 2 above). Section 19(A)4 is the means by which most of Ireland's aquaculture industry (shellfish and finfish) has continued to function while the "Appropriate Assessment" procedure has been rolled out in respect of NATURA bays. The continued applicability of Section 19(A)4 has not been without controversy as environmental NGO's have asserted that it allows aquaculture operators to continue to function without a licence (and the environmental impact analysis that goes with consideration of licences). However the State has successfully argued that the continued applicability of Section 19(A)4 is essential to the survival of the industry pending completion of the "Appropriate Assessment" process. The EU Commission has, at least tacitly, accepted this position following confirmation from the national authorities that no new licences would be issued or existing licences renewed until a full "Appropriate Assessment" is available for the NATURA bays in which the aquaculture in question takes place. It is clear however that a breach of licence conditions by any operator while operating under Section 19(A)4 weakens the whole basis for this measure and lends substantial credence to the NGO argument. If NGO's, via the Courts, or via approaches to the EU Commission succeeded in having Section 19(A)4 overturned on the basis that it is not policed adequately by the State there would undoubtedly be serious consequences for both the finfish and shellfish industry.

Legal Services Division has [REDACTED]

[REDACTED] In this regard, it must be acknowledged that Section 19(A)4 was not designed to take into account the circumstances surrounding Deenish (and indeed other cases of a similar nature). However, the Department must cope as best it can with the existing legislation and cannot ignore complexities that arise from the current legislation. Whether the facilities available under the legislation can extend to an actual amendment of an out of date licence is undoubtedly open to argument.

There is always a strict separation between the Minister's role as Regulator and the Ministerial duty to promote the sustainable development of the industry. This situation is essential in view of the dual role of the Department as regulator and developer in respect of the industry. In the current circumstances, while it can be argued that the development of the industry will be affected adversely by any sanction against the Company, the overriding obligation of the Department is to take action in accordance with the obligations set out in the legislation. In circumstances where there has been a clear breach by the Company of their obligations under the licence and under the law, anything less than this will seriously undermine the State's regulatory system in relation to marine aquaculture. The long term effect which this would have on the development of the industry is as serious as it is obvious. In this regard the recent Supreme Court Decision in the State's appeal of a High Court Case on mussel seed availability (Cromane Seafoods Ltd & Others -v- The Minister for Agriculture, Food and Fisheries & Others) has explicitly pointed to the "**overarching legal duty**" of the Minister to comply with and implement EU law. It has long been asserted by Environmental NGO's and others that the State's regulatory regime in respect of Marine Aquaculture is implemented inadequately. The EU Commission has twice opened a Pilot Case against the State in respect of sea lice controls, for example. For its part the Department has always provided robust responses to these assertions and has successfully defended the regulatory regime. To that extent, dealing vigorously with significant breaches of licence conditions constitutes no more than the discharge of both regulatory and developmental responsibilities which must be a crucial consideration, in the public interest.



The representations made by the Company to the Minister on foot of the Department's letter of 9<sup>th</sup> March 2017 have been carefully considered by the Division as set out above. In relation to the breach of Licence Condition 2(e) the company has argued that as it **"transfers live salmon from Deenish to the quay at Castletownbere, where the harvesting of this salmon occurs"** that there is no breach of the licence. There is as already set out, no reasonable basis for the Company's argument in relation to this aspect. The legislation, and the upholding of same, is clearly in the public interest of all aquaculture operators. The Company has availed of an enhanced bilateral communication facility with the Department's Licensing Division due to its overwhelming prominence in the industry. This took the form of regular scheduled bilateral coordination meetings with agreed detailed agendas. This group has met on at least 20 occasions and it would be fair to say that the Department has emphasised the need to comply with licence conditions at all times during these meetings. The operator, by virtue of its dominant role in the industry, its administrative and technical resources and its participation in the Coordination Group meetings is acutely aware of the importance the Department attaches to compliance with legislation.

It should also be noted that a number of Parliamentary Questions have been received in respect of this and related cases. In all the circumstances, it is clear that to do nothing is not an option which is desirable or, indeed, available in any meaningful way to the Department in this case. Furthermore it is considered that action such as a letter of admonishment to the company will be tantamount to doing nothing and will be seen as such by the company, by other stakeholders and by the general public. This would seriously undermine the integrity of the regulatory process.

A "do nothing" option cannot therefore be recommended.

A copy of the legal advice is attached at **TAB 7**.

See copy of Department's letter attached at **TAB 5**.

#### **19. Amendment of the Aquaculture Licence**

Although the recommendation in this submission is that the Minister withdraw the entitlement enjoyed by Silver King Seafoods Limited (Subsidiary Company of Marine Harvest Ireland) to continue aquaculture operations under Section 19(A)4 of the 1997 Fisheries (Amendment) it should be noted that Condition No 3 of the Aquaculture Licence provides for an amendment to the licence where the Minister considers that it is in the public interest to do so or if he is satisfied that there has been a breach of any condition specified in the licence.

##### Condition No 3.

*"The Minister shall be at liberty at any time to revoke or amend this licence if he considers that it is in the public interest to do so or if he is satisfied that there has been a breach of any condition specified in the licence or that the fishery to which the licence relates is not being properly maintained. Any such revocation or amendment shall be subject to the provisions of Section 15 of the Fisheries (Consolidation) Act 1959"*

##### Legislation

Sections 68 and 70 of the 1997 Fisheries (Amendment) Act are the relevant provisions dealing with any amendments to the licence that might be considered in this case. The Division previously received the advice of Legal Services Division in relation to the possible amendment of aquaculture licence conditions where the operator is operating under the provisions of Section 19(a)4 of the 1997 Fisheries Amendment Act. The Division was advised that [REDACTED]

[REDACTED] :

[REDACTED]



Copy of relevant Legal advice attached at **TAB 7**.

**Aquaculture Licences Appeals Board**

It should also be noted that the Ministerial decision to amend another licence held by the operator (Inishfarnard) was appealed by the operator to the Aquaculture Licences Appeals Board.

On the 4 May 2018 the Minister was formally notified by ALAB that, at a meeting of the Board on 1 May 2018, ALAB had decided to uphold the appeal by the operator and to amend the conditions of the licence by:

1. "Deleting Conditions 2 (d) and 2 (e) of the Licence ; and
2. Substituting as a new Condition 2 (d) the following:-
3. "The cages or pens shall be subject to a Maximum Allowable Biomass of 2,200 tonnes, being the Maximum Standing Stock permitted at the licensed area. The stocking of the licensed area shall be subject to inspection at any time by the Department of Agriculture, Food and the Marine"

The ALAB decision on the case has effectively doubled the production limit on the site. This has given rise to a number of concerns which were referred to the Department's Legal Services Division for preliminary advice. [REDACTED]

[REDACTED]

[REDACTED] It is possible to say at this stage, however, that the Minister's decision to amend the licence was not intended to result in the doubling of the production capacity of the licence in question.

The ALAB decision on the Inishfarnard amendment is a further indication of why the amendment option is not only unwarranted in the current case (Deenish) but is also likely to lead to entirely unpredictable outcomes.

**Conclusion**

Given that the Minister is precluded from amending the licence in any fashion that could be seen as punitive it is difficult to see how any amendment to the conditions of the Aquaculture Licence (now operation under the provisions of Section 19(A) 4 of the 1997 Fisheries (Amendment) Act) could be seen as any form of sanction against the company for the breach of Condition 2(e) of the licence (which sets out the maximum harvest limit under the terms and conditions of the licence).

The 1997 Fisheries (Amendment) Act does not permit the amendment of a licence as a sanction against the licensee but Condition 3 of the licence does provide for an amendment of the licence where the Minister is satisfied that there has been a breach of any condition specified in the licence. Any such amendment is however subject to the legislation. An amendment in this particular case is simply not viable as it cannot be by way of punitive sanction. Since there is no other reason to amend the licence other than as some sort of punitive sanction this course of action is not viable.

Amendment of the licence is therefore not recommended in the circumstances.

**20. Withdrawal of the entitlement to continue aquaculture operations under the provisions of Section 19(A)4 of the 1997 Fisheries (Amendment) Act**



As will be seen above, amendment of the licence is not recommended in this case for reasons of clear public interest. What remains therefore, is the option of treating as discontinued the statutory entitlement to engage in aquaculture operations provided for by Section 19(A)4 of the 1997 Act. There is no doubt that withdrawal of the consent to operate will have the effect of extinguishing the Company's activity in relation to this site. It should be noted however, that the Company's application for renewal of the licence will still be operative and will be processed in the normal way.

Withdrawal by the Department of the Company's entitlement to continue operations is proportionate to the breach of the applicable licence condition (excess production by 121%) for all of the reasons set out heretofore in this submission and, while it will undoubtedly impact the commercial interests of the operator it is unlikely to have a catastrophic impact having regard to the overall size of the Company and the wide scale of its operations.

It is considered that withdrawal of the entitlement to continue aquaculture operations under the provisions of Section 19(A)4 of the 1997 Fisheries (Amendment) Act, is not only appropriate in this case given all of the circumstances, but also necessary in view of the seriousness of the breach in question having regard to the following:

1. The extent of the breach of Condition 2(e) which sets the harvest limits, (121% excess) resulting in a significant commercial gain for the Company.
2. The fact that the breach of the licence condition took place in circumstances where the Company was fully aware of the limits set by the specific condition of the licence governing harvest tonnage.

## 21. Recommendation

Having regard to all of the above, it is recommended:

1. That the Minister determine that a breach of Condition 2(e) of the applicable aquaculture licence has occurred as described above.
2. That the Minister treat the statutory entitlement of Silver King Seafoods Ltd (Subsidiary Company of Marine Harvest Ireland) to continue aquaculture operations under the provisions of Section 19(A)4 of the 1997 Fisheries (Amendment) Act as discontinued for the following reason:

Breach of condition 2(e) of the applicable aquaculture licence which states:

***"the Licensee shall not harvest more than 500 tonnes (dead weight) of salmon in any one calendar year"***

Submitted please for approval.

## Related submissions

There are no related submissions.

## Comments

**Beamish, Cecil** - 19/07/2018 17:25

This is an updated Submission and the earlier substantive submission on this is at Tab 20. My detailed comments on this issue ,dated 17/11/2017, are contained in that submission. Given the effluxion of time since this was last considered and the complexity of the issues to be considered by the Minister in considering what course of action to take , I feel it might be useful if a further meeting was held between the Minister and officials from the Licencing Division and Legal Services Division to traverse the issues before the Minister finalises his consideration of the issue and decides on a course of action.

**Ball, Siobhan** - 23/07/2018 12:15

Approved for submission to Minister.

## User details

INVOLVED: Quinlan, John  
Beamish, Cecil  
Sub Sec Gens Office  
eSub Ministers Office

READ RECEIPT: Quinlan, John  
BTSSP-SC  
Beamish, Cecil  
Smith, Ann  
Ball, Siobhan  
Lennox, Graham  
Waldron, Ultan

## Action log

ACTION	USER	DATE	DESCRIPTION
Attachment removed	Quinlan, John	11/07/2018 10:31	Quinlan, John removed attachment TAB 8.pdf
Sent For Review	Quinlan, John	11/07/2018 10:36	Submission sent to Cecil Beamish for review by John Quinlan
Sent to the Secretary General	Beamish, Cecil	19/07/2018 17:26	Submission sent to Secretary General for review by Cecil Beamish
Sent to the Minister	Ball, Siobhan	23/07/2018 12:15	Submission sent to Minister for review by Siobhan Ball on behalf of the Secretary General
Completed	Lennox, Graham	26/07/2018 16:45	Submission completed by Graham Lennox on behalf of the Minister



CERTIFICATION OF RENEWAL  
OF  
AQUACULTURE LICENCE No.199  
AND  
FORESHORE LICENCE No.199

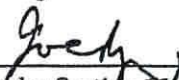
Dated 30 January 1995

This is to certify that the above-mentioned licences have been renewed, subject to the modification of the Aquaculture Licence specified below, with the approval of the Minister of State at the Department of Communications, Marine and Natural Resources, for the period up to and including 15 February 2007 subject to the terms and conditions thereof and subject to the provisions of the Fisheries (Amendment) Act, 1997 (No. 23), as amended.

Aquaculture Licence

- substitution for condition 2(l) of the following condition

- 2(l)(i) *The Licensee shall fallow the licensed area for at least 30 continuous days before restocking with fish of a different generation, in accordance with the requirements of the Department of Communications, Marine and Natural Resources (Protocol No. 5 Fallowing at Offshore Finfish Farms, as may be revised from time to time).*
- 2(l)(ii) *The Licensee shall undertake Benthic Monitoring of the licensed area in accordance with the detailed specifications of the Department of Communications, Marine and Natural Resources (Monitoring Protocol No. 1 for Offshore Finfish Farms - Benthic Monitoring, as may be revised from time to time) and promptly prepare and implement a Benthic Amelioration Plan if permitted parameters are breached.*
- 2(l)(iii) *The Licensee shall undertake Water Column Monitoring of the licensed area in accordance with the detailed specifications of the Department of Communications, Marine and Natural Resources (Monitoring Protocol No. 2 for Offshore Finfish Farms - Water Column Monitoring, as may be revised from time to time) and promptly take any required follow-up action in the light of the results of that monitoring.*
- 2(l)(iv) *The Licensee shall arrange for the treatment of fish against sea-lice and shall comply with the detailed specifications of the Department of Communications, Marine and Natural Resources (Monitoring Protocol No. 3 for Offshore Finfish Farms - Sea lice Monitoring and Control, as may be revised from time to time).*
- 2(l)(v) *The Licensee shall co-operate in the audit from time to time of its aquaculture operations and licensed area and facilities and premises in accordance with the detailed specifications of the Department of Communications, Marine and Natural Resources (Monitoring Protocol No. 4 for Offshore Finfish Farms - Audit of Operations, as may be revised from time to time)*

Signed: 

A person authorised under Section 15 of the Minister and Secretaries Act, 1924, to authenticate the seal of the Minister for Communications, Marine and Natural Resources

Dated this 4 AUG 2004



CERTIFICATE OF ASSIGNMENT

OF  
AQUACULTURE LICENCES No's. AQ 198, AQ 199 AND AQ 299.

AND  
FORESHORE LICENCES No's AQ 198, AQ 199 AND AQ 299

This is to certify that the Licences referred to above have been assigned, with the approval of the Minister of State at the Department of Communications, Marine and Natural Resources, from:

Murpet Fish Ltd.

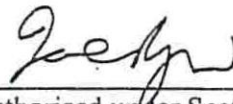
to

Silver King Seafoods Limited

c/o John Power  
Curryglass  
Waterfall  
Co. Cork

subject to the terms and conditions thereof.

Signed:



A person authorised under Section 15  
of the Ministers and Secretaries Act 1924,  
to authenticate the seal of the Minister for  
Communications, Marine and Natural  
Resources.

31 July 2004



FCL 199  
File copy

## CERTIFICATION OF ASSIGNMENT

LICENCES Nos. FCL1, FCL11, FCL64, FCL77, FCL198, FCL199 and  
FCL299, GRANTED IN ACCORDANCE WITH SECTION 15 OF THE  
FISHERIES (CONSOLIDATION) ACT, 1959.

(deemed to be Aquaculture Licences under the Fisheries (Amendment) Act, 1997)

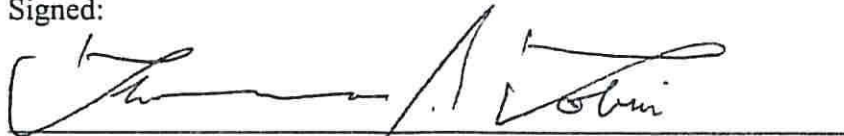
and

LICENCES NOS. FCL 198, FCL 199 AND FCL 299, GRANTED IN  
ACCORDANCE WITH SECTION 3 (1) OF THE FORESHORE ACT, 1933

This is to certify that the above mentioned licences have been assigned with the approval of the Minister of State at the Department of the Marine and Natural Resources, on behalf of the Minister for the Marine and Natural Resources, to **Murpet Fish Ltd., Fintra Road, Killybegs, Co Donegal** with effect from **15 November, 1999**, subject to the terms and conditions thereof.

By virtue of Section 75 of the Fisheries (Amendment) Act, 1997 (No. 23) the above mentioned licences under the Fisheries (Consolidation) Act, 1959 are deemed to be Aquaculture Licences under the Fisheries (Amendment) Act, 1997 and therefore shall be subject to the provisions of the last mentioned Act.

Signed:



A person authorised under Section 15 of the Minister and Secretaries Act, 1924, to authenticate the seal of the Minister for the Marine and Natural Resources.

Date: 15 November, 1999

# DEENISH

FCC 199.

AGREEMENT made the 30th day of January, 1995.

1. The Minister for the Marine, (hereinafter referred to as "the Minister"), in exercise of the powers conferred on him by Section 15 of the Fisheries (Consolidation), Act, 1959, and the Fisheries (Transfer of Departmental Administration and Ministerial Functions) Order, 1977 (S.I. No. 30 of 1977), (as adapted by the Tourism, Fisheries and Forestry (Alteration of Name of Department and Title of Minister) Order, 1987 (S.I. No. 82 of 1987)), hereby grants to Gaelic Seafoods (Ireland) Ltd., whose registered address is at Rusheenamanagh, Carna, Co. Galway (hereinafter referred to as "the Licensee"), at the place and in the waters delineated on the map annexed hereto and thereon coloured red (hereinafter referred to as "the fishery"), the exclusive right to
  - (a) perform all operations necessary for the culture of salmon in cages, details of which have been submitted to and approved by the Minister placed in that area east of Deenish Island in Ballinskelligs Bay, Co. Kerry, designated in the agreement dated the 30th day of January, 1995 and the map annexed thereto between the Licensee and the Minister;
  - (b) at any time of year to purchase, have in possession or sell salmon and salmon smolts, the acquisition of which has been approved by the Minister;
  - (c) at any time of year to take and have in possession salmon and salmon smolts within the confines of the area referred to at (a) above;
  - (d) for the management of the fishery, to have in possession and use nets, traps or other such devices as may be approved by the Minister for the taking of salmon as aforesaid.

2. This licence shall be subject to the following conditions:

- (a) no fish other than salmon shall be cultured or taken under the terms of this licence without the prior written permission of the Minister;
- (b) the Licensee shall make adequate arrangements to ensure that the cages shall not obstruct the passage of migratory fish and shall take all measures necessary to prevent the escape of salmon from the cages and shall carry out any instructions issued in this connection by the Minister;
- (c) the licensee shall ensure that all towing of cages for any reason to and from the fish farm site is carried out only with the prior notification to and approval of the Minister;
- (d) the stock of fish in the cages shall not exceed such quantity as may be specified by the Minister from time to time, the number of smolts to be stocked at the site should not in any event exceed 400,000. Licensed stocking densities are not to be exceeded and will be subject to inspection at any time by the Department of the Marine;
- (e) the Licensee shall not harvest more than 500 tonnes (dead weight) of salmon in any one calendar year.
- (f) all chemicals and antibiotics used in the fishery shall be used in accordance with instructions issued by the Minister from time to time;
- (g) the Licensee shall keep records of all chemicals and antibiotics with which the fish have been treated, including quantities and times of use;



- (h) The Licensee shall notify the Secretary, Department of the Marine, (Aquaculture Section), Leeson Lane, Dublin 2, and the Fisheries Research Centre (Fish Pathology Unit), Abbotstown, Castleknock, Dublin 15, within forty-eight hours of the suspected appearance of any disease in the fishery or of any abnormal losses or mortalities in the fishery and shall carry out any instructions issued by the Minister as a result of the notification including instructions relating to the treatment, disposal and destruction of diseased stocks;
- (i) disposal of all dead fish shall be in a manner acceptable to the local authority;
- (j) the Licensee shall notify the Secretary, Department of the Marine, (Aquaculture Section), Leeson Lane, Dublin 2, within twenty-four hours of any escapes of fish from the fishery and shall keep records of fish escaped, including numbers, types, origin and year classes and shall make these records available to the Secretary on request;
- (k) the Licensee shall furnish to the said Secretary at the said address such returns relating to the fishery as may be required by the Minister;
- (l) the Licensee shall carry out such monitoring as the Minister shall specify from time to time and the results of such monitoring shall be furnished to said Secretary;
- (m) the licensee shall ensure that water quality monitoring is continued for the duration of this licence in accordance with specifications laid down by the Minister, which may be modified from time to time, and results should be forwarded to the Fisheries Research Centre at agreed regular intervals;

- (n) the licensee shall, before the end of each year for the duration of this licence, forward to the Fisheries Research Centre, annual review/update of water chemistry and other environmental parameters to assess the impact of operations at the fish farm;
- (o) the licensee shall ensure that sea-lice densities are monitored regularly and that all warranted measures are taken to ensure that lice densities are minimised and the licensee shall comply with any instructions issued by the Minister in this regard;
- (p) live salmon and salmon smolts shall not be sold or disposed of to any person or in any way transferred outside the said fish farm save in accordance with the prior written permission of the Minister;
- (q) the licensee shall keep the Secretary, Department of the Marine advised of ongoing precautionary measures to deal with naturally occurring algal blooms in the area of the fish farm;
- (r) the fishery and any equipment, structure, thing or premises wherever situated, used in connection with operations carried on in the fishery shall be open for inspection at any time by an authorised person (within the meaning of section 292 of the Fisheries (Consolidation) Act, 1959 (No.14 of 1959) (as amended by the Fisheries Act, 1980) other than a private water keeper), a sea fisheries protection officer (within the meaning of section 220 of the Fisheries (Consolidation) Act, 1959) or any other person appointed in that regard by the Minister;



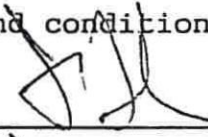
- (s) the Licensee shall give all reasonable assistance to an authorised person, a sea fisheries protection officer or any person duly appointed by the Minister, to enable the person or officer enter and inspect the fishery, equipment, structures, things or premises pursuant to sub-paragraph (r) of this paragraph;
- (t) the Licensee shall not use any substance or thing or do anything which has a deleterious effect on the fishery environment including the use of organotin based anti-foulants and shall make adequate arrangements for the hygienic and disease-free operation of the fishery and shall comply with any directions issued by the Minister from time to time in that regard;
- (u) the Licensee shall not carry out any operations authorised by this licence in the fishery in such a manner as to interfere unreasonably with fishing or navigation in the vicinity of the fishery and shall comply with any direction given to it in that regard by the Minister;
- (v) the Licensee shall make adequate provision for the removal and disposal of all waste from the fishery;
- (w) the Licensee shall indemnify and keep indemnified the State, the Minister, his officers, servants or agents against all actions, loss, damage, costs, expenses and any demands or claims howsoever arising in connection with the construction, maintenance or use of any structures, apparatus, equipment or other thing used in connection with the fishery or in the exercise of the rights granted under this licence and the Licensee shall take such steps as the Minister may specify in order to ensure compliance with this condition;

- (x) the Licensee shall obtain the consent of the Minister to any proposed major change in the shareholding or control of the Licensee where such change substantially alters the identity of the Licensee;
  - (y) this licence shall remain in operation until the 15th day of February, 2001 subject to the payment of the fee prescribed by the Department of the Marine;
3. The Minister shall be at liberty at any time to revoke or amend this licence if he considers that it is in the public interest to do so or if he is satisfied that there has been a breach of any condition specified in the licence or that the fishery to which the licence relates is not being properly maintained. Any such revocation or amendment shall be subject to the provisions of section 15 of the Fisheries (Consolidation) Act, 1959.
  4. This licence will remain subject to ongoing review in light of continued monitoring of, and research into, the two marine sites and neighbouring sea trout fisheries which may be undertaken by the Salmon Research Agency and/or the Fisheries Research Centre.
  5. In the event of proven contra-indications for sea trout stocks causatively linked to the fish farming operations permitted under this licence, the Minister may exercise his discretion to take any necessary protective measures ranging from reduction in permitted production levels to revocation of the licence and harvesting of all stock.
  6. The number given to the Licensee under this licence shall be FCL 199.
  7. This licence is not transferable.

8. This Licence replaces the licence dated 15th day of February, 1991 between the Minister and Salmara Fisheries Ltd.

<u>PRESENT</u> when the Seal of Office )	
of the MINISTER FOR THE MARINE )	
was affixed and was authenticated )	
by the Signature of: )	_____
_____ )	a person authorised
in the presence of: )	under section 15(1)
WITNESS: _____ )	of the Ministers and
ADDRESS: _____ )	Secretaries Act,
_____ )	1924 to authenticate
OCCUPATION: _____ )	the Seal of the
	Minister.

I agree, on behalf of Gaelic Seafoods (Ireland) Ltd. to accept the terms and conditions of this licence.

Signed:  \_\_\_\_\_

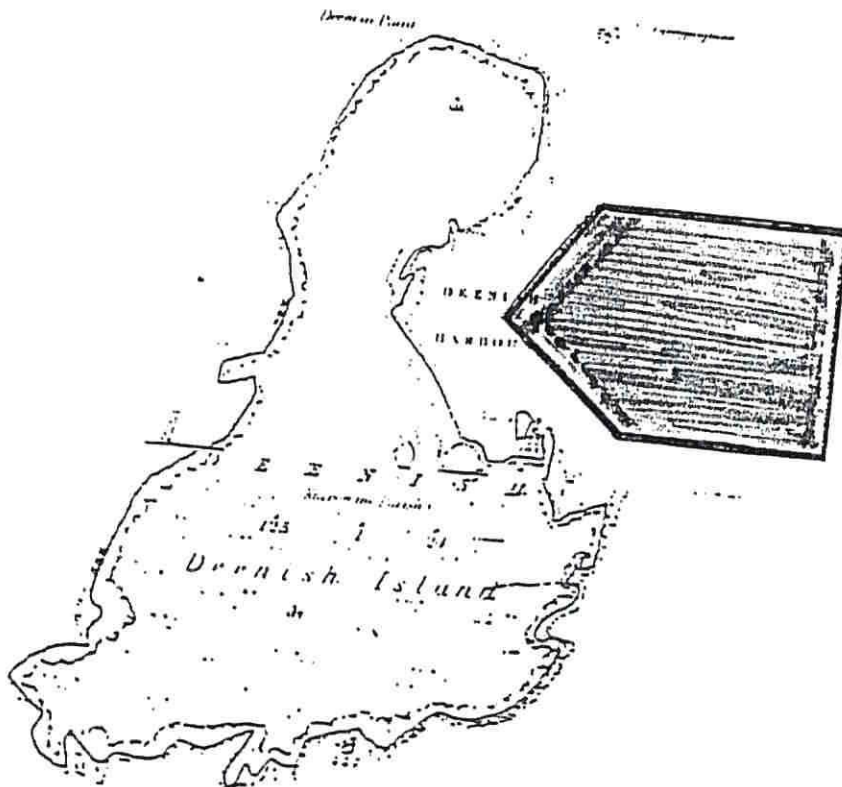
Date: SEPTEMBER 16<sup>th</sup> 1995

Witness: Colin R. O'Leary

Address: C. Gaelic Seafoods

C. Gaelic Seafoods

Occupation: General Assistant



DEPARTMENT OF THE MARINE  
Leeson Lane, Dublin, 2. Tel No.  
Engineering Section. Fisheries Division

BASED ON THE ORDNANCE SURVEY BY  
PERMISSION OF THE GOVERNMENT  
PERMIT No 4004  
COUNTY KERRY SHEET No: 105



Dated 30th January, 1995

MINISTER FOR THE MARINE

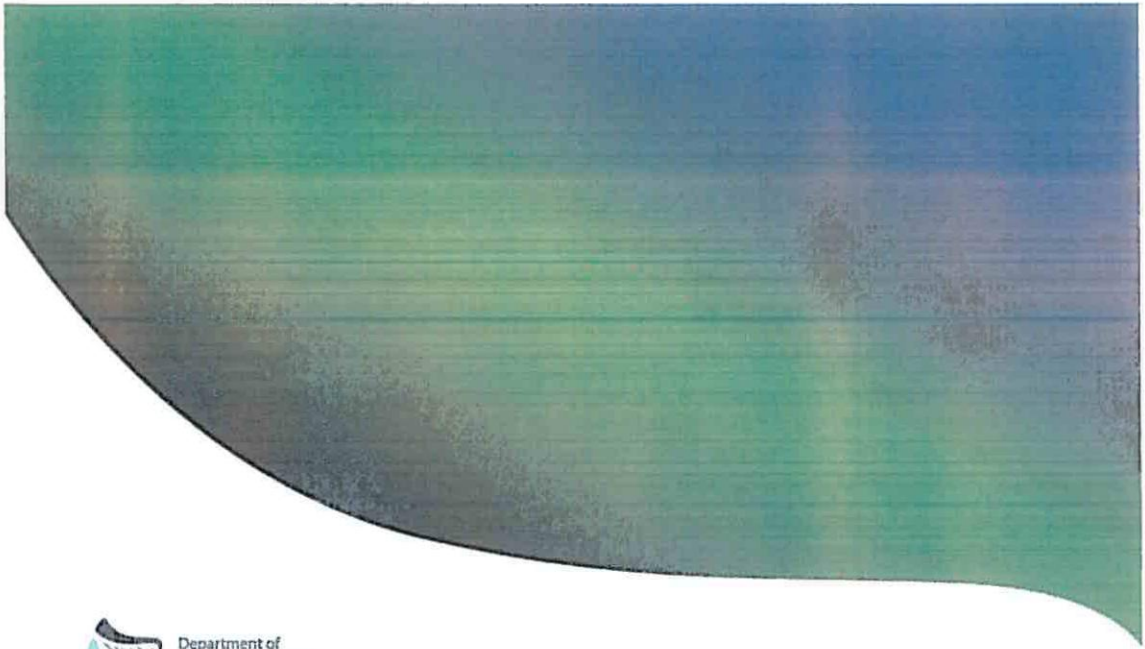
WITH

GAELIC SEAFOODS (IRELAND)

LIMITED

FISH CULTURE LICENCE



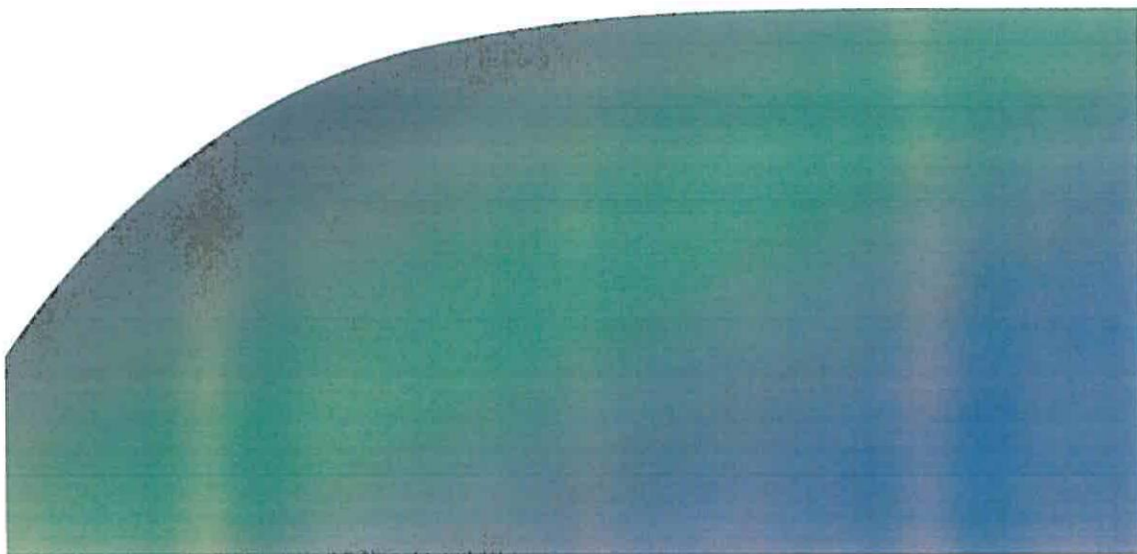


[www.agriculture.gov.ie](http://www.agriculture.gov.ie)

# MARINE FIN-FISH FARM INSPECTION REPORT

## MARINE ENGINEERING DIVISION

File No.	Date of Inspection	Prepared By
T06/202 AQ199	2/07/2015	MD & NOM



**DEPARTMENT OF AGRICULTURE FOOD AND THE MARINE**  
**INSPECTION CHECKLIST FOR MARINE FIN-FISH FARMS**

**NAME OF FARM:** Marine Harvest Ltd.

**INSPECTED BY:** Michael Doyle and Noel O'Murchu

**DATE:** 02/07/2015

**FILE NO:** Licence T06/202 AQ199

**SITE:** Deenish Is., Caherdaniel, Co.Kerry.

**LAND BASE:** Dinish Island, Castletownbere, Co.Cork.

Tel: 027 70216 Office Castletownbere. 086 8050501 John Power Manager.

**TIME:** 10.30am

**WIND FORCE** 3

**WIND DIRECTION:**

**SEA CONDITION:** Good

**TIME OF HIGH TIDE:**

**FARM PERSONNEL MET:**

**NAME:**

**STATUS:**

**RECORDS**

**Are Records of:**

Smolts bought on to the farm.  
 Amount of fish harvested.  
 Mortalities.

Good	Ave	Poor
	√	
	√	
	√	

**MANAGEMENT**

Are chemicals stored properly .....None Used.....Yes/No

Is food stored properly .....Yes/No

Is the Pier used

Public	Private
√	

Name of Pier .....Bealtra, Caherdanial.....

If Pier is public is its use causing an obstruction .....Yes/No

If Yes is obstruction

Major	Intermediate	Minor

Is there equipment/supplies on the shore .....Yes/No

If yes, is it stacked neatly .....Yes/No

Is there any litter or debris on the shore or public pier, that may have come from the farm .....Yes/No

Is there provision for litter collection and removal .....N/A

Are disinfection facilities readily accessible:- N/A

Footbath .....Yes/No

Handwash .....Yes/No

Wheelbath .....Yes/No

**CAGES AND STOCK:** (See "Other Comments" page 5)

TYPE	Quantity	Size	Depth (Net)	Licensed Stock. (Input quantity permitted)	Actual standing stock (numbers)	Fish size (grams)	Biomass. (tonnes)
Polar Circle	14	120m	10m	400000	735883	345	253.9
Feed Ship	1						

Checked by	
Visual Insp	Survey Instrument
Yes/No	Yes/No
	G.P.S.

Are cages in Licensed area.....Yes

Are cages configured as specified .....N/A.....Yes/No

Are the cages moored as specified .....N/A.....Yes/No

Are cages tidily arranged .....Yes/No

Main colour of structure .....Black .....

Visual impact of farm

Major	Intermediate	Minor
		√

Are navigation lights installed ..... Yes/No

Are navigation lights installed as specified ..... Yes/No

Are navigation lights working ..... Yes/No

Are navigation buoys installed as specified .....N/A.....Yes/No

Are Radar reflectors fitted ..... Yes/No

Are walkways non-slip ..... Yes/No

Are walkways of adequate width ..... Yes/No

\* If no give details:

Wear or fatigue on:

Mooring ropes

Shackles/Eyes

Joint/Hinges

Nets

Fouling on the nets

Major	Intermediate	Minor
		√
		N/A
		√
		√
		√

Are there top predator nets ..... Yes/No

Are there underwater predator nets ..... Yes/No

Is there a seal scarer ..... Yes/No



**SAFETY MEASURES:**

Do cages carry:

Life-belts (with lines) ..... Yes/No  
 Flares ..... Yes/No

**HARVESTING:**

How are fish Killed: N/A

**MORTALITIES:**

How are dead fish disposed of ..... Taken to College Proteins, Nobber, Co.Meath.

Did you observe this..... Invoices were not provided during inspection.

**WATER QUALITY:**

Is there any increase in the turbidity of the water Yes/No

Is there any visible trace of oil, fat or grease?  
 on the water or on the shoreline Yes/No

Is there any evidence of scum, froth or foam on the water Yes/No

Is there any litter or debris in the water Yes/No

**BOATS:**

List boats used on the farm:

TYPE	LENGTH	REG NO.
Steel Hull	11m	
Barge	16m	
Steel Hull	8m	
Polar Circle	8m	

Do boats used appear to be sea worthy and appropriate.....  
 to the site condition.

Did all persons seen at sea wear life-jackets?..... Yes

**OTHER COMMENTS:**

**Stocking Figures:**

Stocking records were provided following the inspection. In January 2015 there was 222,999 smolts with an average weight of 0.04kg in the site. At the end of May 2015 there was 738,458 fish with an average weight of 0.339kg in the site.

**REMEDIAL MEASURES REQUIRED:**

Licence conditions were amended in 31<sup>st</sup> October 2012, allowing for increased standing stock, for the period up to and including the 31<sup>st</sup> March 2015. From 01 April 2015 onwards, the number of smolts to be stocked at the site should not in any event exceed 400,000 and the licensed harvest tonnage of 500 tonnes (dead weight) should not be exceeded in any one calendar year (in accordance with Licence condition 2 (d) and 2 (e) respectively of the original licence). However, as above, the standing stock at the end of May 2015 was 738,458 fish, i.e. exceeding the licenced figure by 338,458 fish. This situation requires attention.

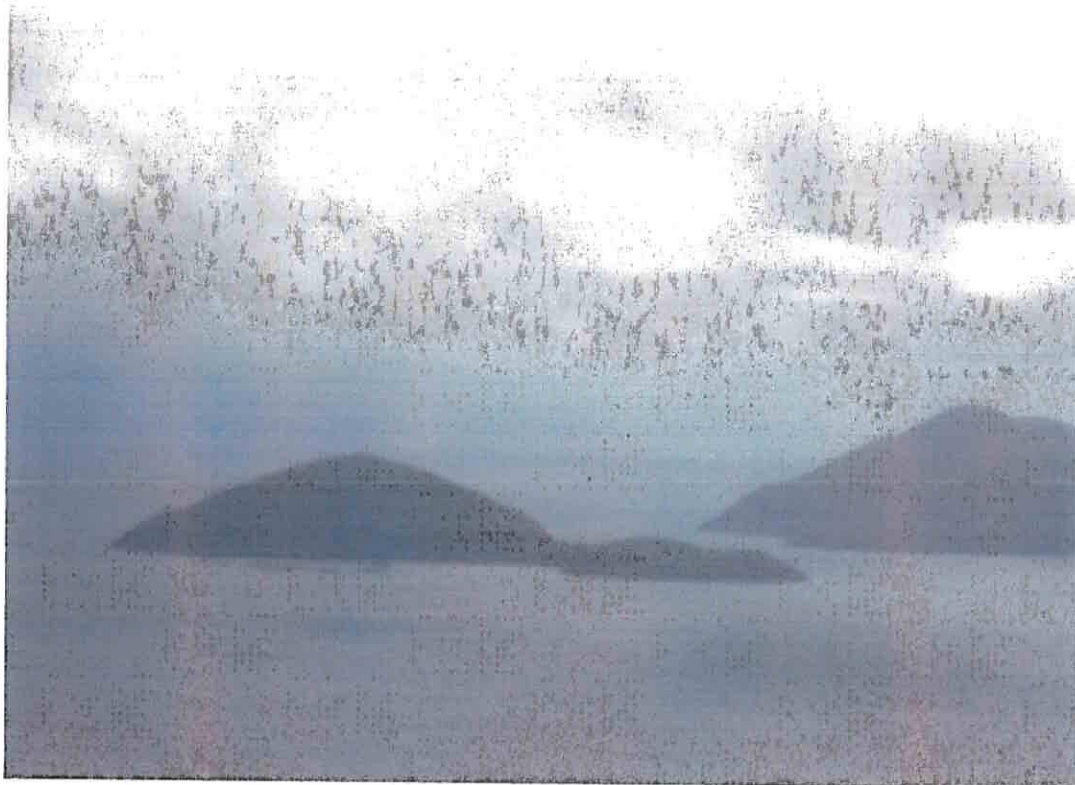
**Overall Assessment:**

Following the inspection, the site appears to be in a good state of maintenance. The cage superstructures looked in good repair and are within the licensed area.

Overall assessment however is unsatisfactory as the number of smolts inputted to the site in 2015 resulted in smolt numbers exceeding the licenced figure post 01 April 2015.

Deenish Site T06/202 AQ199





Showing location of cages at Deenish Island.



26



Department of  
**Agriculture,  
Food and the Marine**  
An Roinn  
**Talmhaíochta,  
Bia agus Mara**

Catherine McManus  
Marine Harvest Ireland  
Rinmore  
Ballylar P.O.  
Letterkenny  
Co Donegal  
F92 T677

**COPY**  
sent by registered post

06<sup>th</sup> January 2016

Dear Catherine,

Attached please find Engineering Reports dated 08<sup>th</sup> June 2015, 02<sup>nd</sup> July 2015, 17<sup>th</sup> November 2015 and 08<sup>th</sup> September 2015 for your sites, reference no: T5/233,T5/444D+E, T6/202,T10/54, T10/58/4 and T10/58/8.

Any remedial actions highlighted as a result of the inspections must be completed within 2 weeks of the date of this letter.

It is imperative that you inform this Department when you have completed these actions, which must be not later than 3 weeks after the date of this letter.

The Department will take very seriously any failure to immediately complete remedial actions highlighted. Failure to comply with the conditions of the aquaculture licence issued to you may result in revocation of that licence.

Yours sincerely,

Nicole O'Shea  
Aquaculture & Foreshore Management Division  
National Seafood Centre  
Clonakilty  
Co Cork  
P85 TX47



2c



Nicole O'Shea  
Aquaculture & Foreshore Licencing Division  
Department of Agriculture & the Marine  
National Seafood Centre  
Clonakilty  
Co. Cork.

29.01.2016

RINMORE

**Re. Site T6/202: Marine Engineering inspection on 02/07/15.**

Dear Nicole,

I refer to your letter dated January 6<sup>th</sup> 2016 regarding the remedial measures allegedly required arising from the engineering inspection of the Deenish sea site on July 2<sup>nd</sup>, 2015.

Under the circumstances I feel that we must point out that some of the terms attaching to the aquaculture licence for this site are to say the least ambiguous, and we would argue that it is actually impossible to interpret them with any degree of precision or reliability.

The licence refers to *smolt stocking* events not exceeding 400,000. The licence does not contain any condition concerning how many salmon, that are not smolts, may be kept on the site at any point in time. I would suggest that the Marine Institute, who are the minister's advisers on scientific and biological matters be consulted in terms of explaining the different stages of a salmon's lifecycle and in particular the very short-lived and distinct 'smolt' phase.

Marine Harvest Ireland had two separate silver salmon stocking inputs into this site during the period of interest, neither of which concerned fish at the 'smolt' stage in their life cycle. Further, neither of the stocking events involved fish transfers exceeding 400,000 fish. On that basis we strongly contend that we have not breached the licence term concerning *smolt stocking* and therefore no remedial action is required.

With regard to harvest volumes, It should be noted that no harvesting took place at this site thus the maximum harvest rate of 500 tonnes per annum was not exceeded. On that basis no remedial action is needed with regard to this issue.

It is also very important to point out that the benthic impact monitoring results for this site show clearly that there has been no overstocking and that no adverse biological impacts have occurred. The results show that MHI have operated the site responsibly and well within its 'biological carrying capacity'.

The confusing and biologically incorrect phraseology employed in this licence highlights the recurring drafting problem we have all encountered, whereby inconsistent, contradictory and technically meaningless terms and conditions have found their way into many of the salmon farming licences issued over the years.

Marine Harvest Ireland  Registered in Ireland as Comhlucht Iascaireachta Fanad Teoranta, VAT No: IE45307340: Registration No. 66929 Directors: Jan Feenstra, David Brennan	<small>OFFICE</small> Kindrum, Cashel P.O., Fanad. Letterkenny Co. Donegal, IRELAND F92 XD93	<small>PHONE</small> 00353 74 9192105	<small>FAX</small> [Address]
	<small>BRANCH</small> Rinmore, Ballylar P.O. Letterkenny Co. Donegal, IRELAND F92 T677	<small>EMAIL</small> catherine.mcmanus@marineharvest.com	

Both as an individual company and through our representative organisation we have repeatedly requested that Irish marine salmon licenses be brought into line with best international practices with regard to the control of stocking levels. The Minister for Agriculture, Food and the Marine, Simon Coveney TD issued a press release on December 5th 2011 to announce the new format for Aquaculture Licence templates. In this press release the Minister confirmed that one of the core changes to Aquaculture licences would be a *“Change from licensing by Annual Harvested Tonnage (i.e. the dead weight of fish harvested from a site in a calendar year measured in tonnes) to Standing Stock Biomass for Finfish (the weight of live fish on a site at any given time, measured in tonnes). Standing Stock Biomass is recognised internationally as the appropriate metric for assessing loading at an aquaculture production site and can be measured on a real time basis thus facilitating effective regulation and management of sites.”*

We welcomed this announcement at the time and we fully agree with the minister that maximum allowable biomass (MAB) is the only rational and enforceable way of regulating stocking on marine finfish sites. We look forward to continue working with the Department of Agriculture, Food and Marine (DAFM) with a view to establishing a logical and consistent regulatory framework for Irish aquaculture. In this particular instance we do not believe that we breached any of the licenced terms as they are written and thus we are of the view that no remedial actions are called for at this point in time.

With Regards



**Catherine McManus**

TECHNICAL MANAGER

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## **MED Review of Fish Farm Inspection Report**

**Deenish (Site T06-202 AQ Licence AQ 199)**

**MED Finfish inspection of 02 July 2015**

### **1.0**

This report refers to a marine fish farm inspection at Marine Harvest Ireland (MHI) site at Deenish Island Co. Kerry. The site was inspected by Marine Engineering Division (MED) in summer 2015.

The report is a review of the Inspection Report completed by MED following the farm inspection on 2 July 2015, and is prepared as a follow-up to a meeting held with MHI on 28 October 2015. At the meeting the firm took issue with the inspection report. The report also comments on issues raised in a letter from MHI, dated 29 January 2016, wherein the firm detailed their issues with regard to the inspection report.

For reference attachments are included as follows:

- MED Inspection Report following site inspection of 02 July 2015
- Aquaculture Licence No AQ 199
- MHI letter dated 29 January 2016
- e-mails from MHI dated 25 June 2015 and 20 July 2015 with stock records
- Marine Institute Movement Approval Notices relating to the Deenish Site

### **2.0 Relevant Licence Conditions**

The following relevant extracts from the licence (Aquaculture Licence AQ 199) are of note:

Condition 2(d) states:

*the stock of fish in the cages shall not exceed such quantity as may be specified by the Minister from time to time, the number of smolts to be stocked at the site should not in any event exceed 400,000. Licensed stocking densities are not to be exceeded and will be subject to inspection at any time by the Department of the Marine;*

Condition 2(e) states:

*The licensee shall not harvest more than 500 tonnes (dead weight) of fish in any one calendar year.*

### **3.0 Stock Numbers**

3.1 The inspection report noted that the stock number of smolts on site at the end of May 2015 was 735,883 (Table P3 of Inspection Report).

A pilot case stocking arrangement in place from 31 October 2012 ended on 31 March 2015. After this date the licensing arrangements reverted to the conditions set out in the original licence; the original licence conditions therefore represented the conditions (including stocking conditions) prevailing on the date of inspection (02 July 2015).

The inspection report noted that "From 01 April 2015 onwards, the number of smolts to be stocked at the site should not in any event exceed 400,000".

MHI Stock Records show a February 2015 opening count of 222,999 fish. A further 219,108 fish (of average weight 138g) were input to the site in February 2015 and a further 384,952 (of average weight 157g) were input in March 2015. The closing count at end of March 2015 and the opening count on 1 April 2015 was 759,144 fish (of average weight 157g).

(Note in the period above – 01 Feb 15 to 31 Mar 15 - a total of 67,915 were culls /mortalities).

It is clear that the number of smolts on site, both on 1 April 2015 (759,144) and at end of May (as per the Inspection Report - 735,883), are far in excess of the maximum 400,000 stated in the licence.

Note that above figures were supplied to MED by e-mail from MHI (attached) and verbally by the MHI operator in the case of the figure of 735,883 at the time of the site inspection

3.2 Review Finding in regard to stock numbers:

MED's finding, based on the fact that after 31 March 2015 the original conditions of the licence prevailed, is: *the number of smolts stocked at the site was in excess of 400,000*, in contravention of Condition 2(d).

### **4.0 Harvest Tonnage**

4.1 The inspection report does not give details in regard to harvest figures (no harvesting had taken place).

4.2 Review Finding in regard to Harvest Tonnage:

MED does not report a breach of licence conditions in regard to harvest tonnage in 2014 (as no fish were harvested out of the site in 2014). The report comments that while harvest tonnage for 2015 is estimated to exceed 500 tonnes based on stock figures to hand and projected stock figures to end of 2015 (or whenever harvesting takes place), harvest figures cannot be calculated until actual figures are available; and therefore, while highlighted as a concern, there is no breach of licensing conditions reported in the Inspection Report in regard to harvest tonnage.



## 5.0 Review Finding Summary

The original report found that a breach of licence condition 2(d) had occurred. MED stands over the accuracy of the Inspection Report in this case.

## 6.0 Additional Comments

6.1 MHI argue that smolts were input of to the site under the pilot arrangements referred to above and that because the input occurred in the period prior to 31 March 2015 there is no breach of the licence. MED comment in relation to this is that immediately following the pilot programme and thereafter numbers were recorded in excess of the licence conditions.

6.2 MHI argue in their letter dated 29 January 2016 that the fish were not in fact smolts (as referred to in the licence) and that therefore they are not in breach of condition 2(d). They suggest that advice be sought from the Marine Institute in regard to the difference between smolt and post-smolt/salmon stage. MED comment that this advice should be sought, as a technical / legal interpretation may be needed should any legal case be pursued in relation to the matter. MED have taken the view that all fish referred to can reasonably be regarded as smolts in the context of the licence in this instance.

6.3 With reference to MHI letter dated 29 January 2016, MED does not accord with many of the issues raised, particularly in regard to MHI's interpretation of the licence conditions. In this regard, for example, the MHI letter states that "The licence refers to smolt stocking events not exceeding 400,000." This is not the case. The licence states (see above) that "...the number of smolts to be stocked at the site should not in any event exceed 400,000." Also, MHI's interpretation of "in any event" appears to be "*in any [single] stocking event*"; while MED's reading of this in the context of the licence condition is meaning "*under any circumstances*".

6.4 While MED regards some of MHI's interpretations of the licence conditions, particularly as communicated in their letter of 29 January 2016 to be incorrect, MED recognises (but does not necessarily agree with) the case made by MHI regarding ambiguity in this particular instance. MED recognises that complexities were introduced by the pilot case that ended on 31 March 2015, that practicalities existed surrounding an immediate change back to the original licence conditions on 1 April 2015 and that complexities exist in regard to the timing of stock input. Nevertheless, MED stands over the inspection report as representing the factual position in respect of the licencing conditions.

6.6 MED suggests that that a follow up report relating to the harvesting aspects be completed following harvesting, which may possibly be towards the latter stage of 2016. The stock information in the inspection report for Deenish Island strongly suggests that high stock levels on site in mid-summer are likely to result in a breach of the licenced harvest limit for 2016.

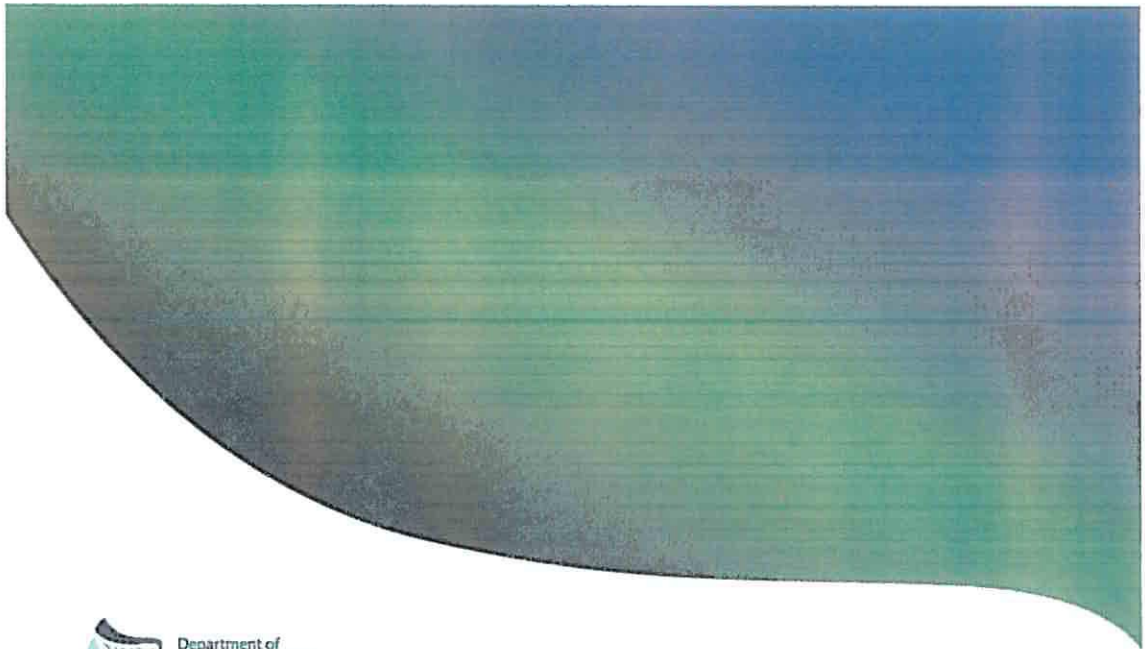
  
Tony O'Sullivan

MED Southern Region

18 February 2016

**MED Marine Finfish Inspection Report**



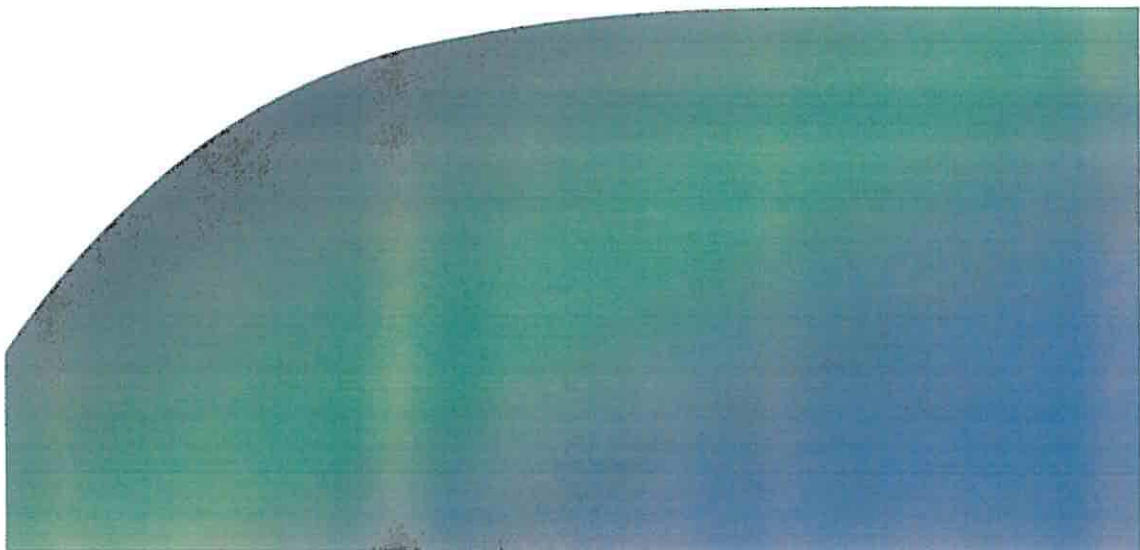


[www.agriculture.gov.ie](http://www.agriculture.gov.ie)

## MARINE FIN-FISH FARM INSPECTION REPORT

### MARINE ENGINEERING DIVISION

File No.	Date of Inspection	Prepared By
T06/202 AQ199	2/07/2015	MD & NOM



**DEPARTMENT OF AGRICULTURE FOOD AND THE MARINE**  
**INSPECTION CHECKLIST FOR MARINE FIN-FISH FARMS**

**NAME OF FARM:** Marine Harvest Ltd.

**INSPECTED BY:** Michael Doyle and Noel O'Murchu

**DATE:** 02/07/2015

**FILE NO:** Licence T06/202 AQ199

**SITE:** Deenish Is., Caherdaniel, Co.Kerry.

**LAND BASE:** Dinish Island, Castletownbere, Co.Cork.

Tel: 027 70216 Office Castletownbere. 086 8050501 John Power Manager.

**TIME:** 10.30am

**WIND FORCE** 3

**WIND DIRECTION:**

**SEA CONDITION:** Good

**TIME OF HIGH TIDE:**

**FARM PERSONNEL MET:**

**NAME:**

**STATUS:**

**RECORDS**

**Are Records of:**

Smolts bought on to the farm.  
 Amount of fish harvested.  
 Mortalities.

Good	Ave	Poor
	√	
	√	
	√	

**MANAGEMENT**

Are chemicals stored properly .....None Used.....Yes/No  
 Is food stored properly .....Yes/No

Is the Pier used

Public	Private
√	

Name of Pier .....Bealtra, Caherdanial.....

If Pier is public is its use causing an obstruction .....Yes/No

If Yes is obstruction

Major	Intermediate	Minor

Is there equipment/supplies on the shore .....Yes/No  
 If yes, is it stacked neatly .....Yes/No

Is there any litter or debris on the shore or public pier, that may have come from the farm .....Yes/No

Is there provision for litter collection and removal .....N/A

Are disinfection facilities readily accessible:- N/A

Footbath .....Yes/No

Handwash .....Yes/No

Wheelbath .....Yes/No

**CAGES AND STOCK:** (See "Other Comments" page 5)

TYPE	Quantity	Size	Depth (Net)	Licensed Stock. (Input quantity permitted)	Actual standing stock (numbers)	Fish size (grams)	Biomass. (tonnes)
Polar Circle	14	120m	10m	400000	735883	345	253.9
Feed Ship	1						

Checked by	
Visual Insp	Survey Instrument
Yes/No	Yes/No
	G.P.S.

Are cages in Licensed area.....Yes

Are cages configured as specified .....N/A.....Yes/No

Are the cages moored as specified .....N/A.....Yes/No

Are cages tidily arranged .....Yes/No

Main colour of structure .....Black .....

Visual impact of farm

Major	Intermediate	Minor
		√

Are navigation lights installed ..... Yes/No

Are navigation lights installed as specified ..... Yes/No

Are navigation lights working ..... Yes/No

Are navigation buoys installed as specified .....N/A.....Yes/No

Are Radar reflectors fitted ..... Yes/No

Are walkways non-slip ..... Yes/No

Are walkways of adequate width ..... Yes/No

\* If no give details:

Wear or fatigue on:

Mooring ropes

Shackles/Eyes

Joint/Hinges

Nets

Fouling on the nets

Major	Intermediate	Minor
		√
		N/A
		√
		√
		√

Are there top predator nets ..... Yes/No

Are there underwater predator nets ..... Yes/No

Is there a seal scarer ..... Yes/No



**SAFETY MEASURES:**

Do cages carry:

Life-belts (with lines) ..... Yes/No  
 Flares ..... Yes/No

**HARVESTING:**

How are fish Killed: N/A

**MORTALITIES:**

How are dead fish disposed of ..... Taken to College Proteins, Nobber, Co.Meath.

Did you observe this..... Invoices were not provided during inspection.

**WATER QUALITY:**

Is there any increase in the turbidity of the water Yes/No

Is there any visible trace of oil, fat or grease? Yes/No  
 on the water or on the shoreline

Is there any evidence of scum, froth or foam on the water Yes/No

Is there any litter or debris in the water Yes/No

**BOATS:**

List boats used on the farm:

TYPE	LENGTH	REG NO.
Steel Hull	11m	
Barge	16m	
Steel Hull	8m	
Polar Circle	8m	

Do boats used appear to be sea worthy and appropriate.....  
 to the site condition.

Did all persons seen at sea wear life-jackets?..... Yes

**OTHER COMMENTS:**

**Stocking Figures:**

Stocking records were provided following the inspection. In January 2015 there was 222,999 smolts with an average weight of 0.04kg in the site. At the end of May 2015 there was 738,458 fish with an average weight of 0.339kg in the site.

**REMEDIAL MEASURES REQUIRED:**

Licence conditions were amended in 31<sup>st</sup> October 2012, allowing for increased standing stock, for the period up to and including the 31<sup>st</sup> March 2015. From 01 April 2015 onwards, the number of smolts to be stocked at the site should not in any event exceed 400,000 and the licensed harvest tonnage of 500 tonnes (dead weight) should not be exceeded in any one calendar year (in accordance with Licence condition 2 (d) and 2 (e) respectively of the original licence). However, as above, the standing stock at the end of May 2015 was 738,458 fish, i.e. exceeding the licenced figure by 338,458 fish. This situation requires attention.

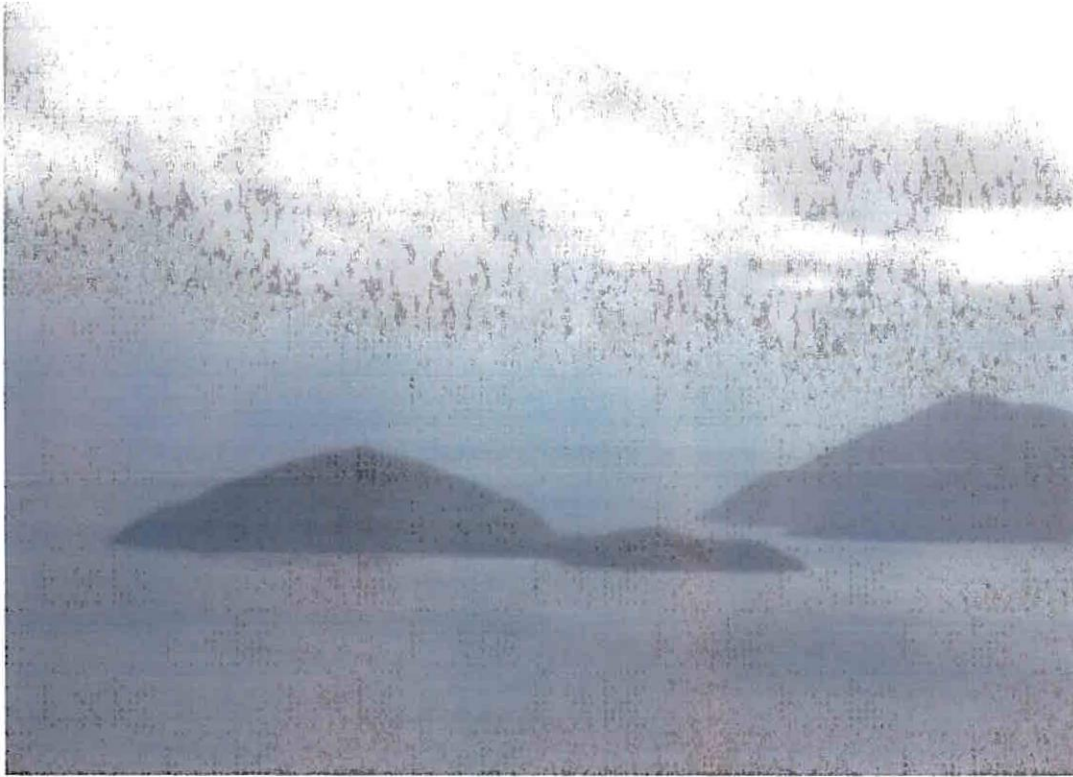
**Overall Assessment:**

Following the inspection, the site appears to be in a good state of maintenance. The cage superstructures looked in good repair and are within the licensed area.

Overall assessment however is unsatisfactory as the number of smolts inputted to the site in 2015 resulted in smolt numbers exceeding the licenced figure post 01 April 2015.

Deenish Site T06/202 AQ199





Showing location of cages at Deenish Island.



## **Aquaculture and Foreshore Licence**

T6/202


CERTIFICATION OF AMENDMENT  
OF  
AQUACULTURE LICENCE No. 199  
AND  
FORESHORE LICENCE No. 199

Dated the 31<sup>st</sup> of October, 2012

This is to certify that the above-mentioned licences referred to as "Deenish T6/202 AQ199" have been amended subject to the modification of the Aquaculture Licence specified in the Certification of Renewal dated the 4<sup>th</sup> of August 2004, with the approval of the Minister for Agriculture, Food and the Marine for the period up to and including the 31<sup>st</sup> of March 2015 subject to the special conditions thereof and subject to the provisions of the Fisheries (Amendment) Act 1997 (No 23) as amended.

The special conditions are set out in a letter from the Department of Agriculture, Fisheries and Food to Mr Jan Feenstra, Marine Harvest Ireland dated 1<sup>st</sup> April 2011 and is attached hereto.

Signed

  
Mark O'Connell,  
Chairman,  
Aquaculture Licence Appeals Board

Mr Jan Feenstra  
Marine Harvest Ireland  
Rinnmore  
Ballylar  
Letterkenny  
Co Donegal

1/4/11

John Deenish,  
Lead for GNS  
Department of  
Agriculture,  
Fisheries and  
Food

Our Ref: - Deenish T6/202 AQ199

1 April 2011

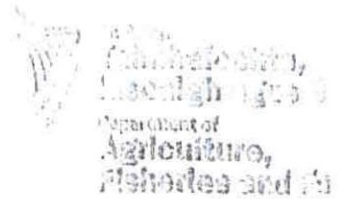
Dear Mr Feenstra,

I refer to your letter of 7<sup>th</sup> February 2011 requesting the Department to approve the company's request to change the permitted stocking arrangements at the Deenish site.

The Minister approved the amendment of the licence on 22 March, 2011, subject to the following "special conditions".

- That MHI only introduce smolts into Deenish and do not introduce any smolts into any of the other sites in their Southwest portfolio in 2011.
- In particular, that the Travara site, which may be defunct in any case, be kept on an extended fallow arrangement for the full duration of this pilot action (*i.e.* until 2013).
- That MHI carry out an additional benthic impact monitoring study to the usual pattern (in accordance with the protocol methodology), at their own expense, to check that the predictive model is correct at the mid point in the cycle.
- That MHI submit monthly stock reports, including all fish movements both within and to and from the site, of a standard and format agreed and determined by the agencies and DAFF Engineering Division to the Department to ensure that the pilot operation is proceeding as anticipated.
- That the company shall have available on demand by the Department, or its agents, records of all key site activities including; net inspections, preventative maintenance actions and that all required navigation marks are maintained in a good state of repair.
- That it be made clear to the company that this arrangement, if permitted, is strictly a one-off pilot for this site only and that any aspect of the stocking pattern would have to be considered, *inter alia*, in light of the outcome of the monitoring and the progress of the tripartite negotiation of overall licensing policy towards the use of 'artificial floating stock biomass' as a viable option in the management of aquaculture.

Yours faithfully,  
John Deenish



The Notice of Decision is attached.

Please be aware, however, that in accordance with Regulation 19 of S.I. No. 236/1998 - Aquaculture (Licence Applications) Regulations, 1998, the Minister is required to publish a notice of his decision "within 2 weeks after making the decision, in a newspaper circulating in the vicinity of the location of the proposed aquaculture". Any person aggrieved by the decision may, in accordance with Section 41 of the Fisheries (Amendment) Act, 1997, appeal against it in writing to the Aquaculture Licences Appeals Board, by completing the Notice of Appeal Application Form available from the Board. This appeal must be lodged within one month beginning on the date of the publication of the decision.

In the case that there is no appeal the licence will be issued to you as soon as practicable after the end of the appeal period.

Yours sincerely,

  
John A Kelly  
AFMD



CERTIFICATION OF RENEWAL  
OF  
AQUACULTURE LICENCE No.199  
AND  
FORESHORE LICENCE No.199

Dated 30 January 1995

This is to certify that the above-mentioned licences have been renewed, subject to the modification of the Aquaculture Licence specified below, with the approval of the Minister of State at the Department of Communications, Marine and Natural Resources, for the period up to and including 15 February 2007 subject to the terms and conditions thereof and subject to the provisions of the Fisheries (Amendment) Act, 1997 (No. 23), as amended.

Aquaculture Licence

- substitution for condition 2(l) of the following condition

- 2(l)(i) *The Licensee shall fallow the licensed area for at least 30 continuous days before restocking with fish of a different generation, in accordance with the requirements of the Department of Communications, Marine and Natural Resources (Protocol No. 5 Fallowing at Offshore Finfish Farms, as may be revised from time to time).*
- 2(l)(ii) *The Licensee shall undertake Benthic Monitoring of the licensed area in accordance with the detailed specifications of the Department of Communications, Marine and Natural Resources (Monitoring Protocol No. 1 for Offshore Finfish Farms - Benthic Monitoring, as may be revised from time to time) and promptly prepare and implement a Benthic Amelioration Plan if permitted parameters are breached.*
- 2(l)(iii) *The Licensee shall undertake Water Column Monitoring of the licensed area in accordance with the detailed specifications of the Department of Communications, Marine and Natural Resources (Monitoring Protocol No. 2 for Offshore Finfish Farms - Water Column Monitoring, as may be revised from time to time) and promptly take any required follow-up action in the light of the results of that monitoring.*
- 2(l)(iv) *The Licensee shall arrange for the treatment of fish against sea-lice and shall comply with the detailed specifications of the Department of Communications, Marine and Natural Resources (Monitoring Protocol No. 3 for Offshore Finfish Farms - Sea lice Monitoring and Control, as may be revised from time to time).*
- 2(l)(v) *The Licensee shall co-operate in the audit from time to time of its aquaculture operations and licensed area and facilities and premises in accordance with the detailed specifications of the Department of Communications, Marine and Natural Resources (Monitoring Protocol No. 4 for Offshore Finfish Farms - Audit of Operations, as may be revised from time to time)*

Signed: \_\_\_\_\_

A person authorised under Section 15 of the Minister and Secretaries Act, 1924, to authenticate the seal of the Minister for Communications, Marine and Natural Resources

Dated this 4 AUG 2004

CERTIFICATE OF ASSIGNMENT

OF  
AQUACULTURE LICENCES No's. AQ 198, AQ 199 AND AQ 299.

AND  
FORESHORE LICENCES No's AQ 198, AQ 199 AND AQ 299

This is to certify that the Licences referred to above have been assigned, with the approval of the Minister of State at the Department of Communications, Marine and Natural Resources, from:

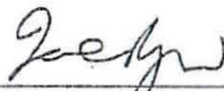
Murpet Fish Ltd.

to

Silver King Seafoods Limited  
c/o John Power  
Curryglass  
Waterfall  
Co. Cork

subject to the terms and conditions thereof .

Signed:



A person authorised under Section 15  
of the Ministers and Secretaries Act 1924,  
to authenticate the seal of the Minister for  
Communications, Marine and Natural  
Resources.

31 July 2004

VOL III

T6/202 - Deenish Island, Ballinskelligs Bay

*Certification of Renewal of Aquaculture Licence No. AQ 199*

*Dated 30 January, 1995*

*and Companion Foreshore Licence*

*Granted to*

Murpet Fish Company, Unit 2, Garvan Court, Main Street, Ballyboffey, Co Donegal

This is to certify that the above mentioned licences have been renewed with the approval of the Minister of State at the Department of the Marine and Natural Resources for the period up to and including 15 February, 2004 subject to the terms and conditions thereof and subject to the provisions of the Fisheries (Amendment) Act, 1997 (No. 23) and

(a) The Licensee shall undertake Benthic Monitoring of the licensed areas in accordance with the detailed specifications of the Department of the Marine and Natural Resources (Monitoring Protocol No. 1 for Offshore Finfish Farms - Benthic Monitoring, as may be revised from time to time) and promptly prepare and implement a Benthic Amelioration Plan if permitted parameters are breached.

(b) The Licensee shall undertake Water Column Monitoring of the licensed areas in accordance with the detailed specifications of the Department of the Marine and Natural Resources (Monitoring Protocol No. 2 for Offshore Finfish Farms - Water Column Monitoring, as may be revised from time to time) and promptly take any required follow-up action in the light of the results of that monitoring.

(c) The Licensee shall comply with the detailed specifications of the Department of the Marine and Natural Resources (Monitoring Protocol No. 3 for Offshore Finfish Farms - Sea Lice Monitoring and Control, as may be revised from time to time) for Sea Lice Monitoring and Control in all licensed areas of the Licensee.

(d) The Licensee shall co-operate in the Audit from time to time of its aquaculture operations and licensed areas and facilities and premises in accordance with the detailed specifications of the Department of the Marine and Natural Resources (Monitoring Protocol No. 4 for Offshore Finfish Farms - Audit of Operations, as may be revised from time to time).

Signed: 

A person authorised under Section 15 of the Minister and Secretaries Act, 1924, to authenticate the seal of the Minister for the Marine and Natural Resources.

8 March, 2001



FCL 199 ✓  
File copy

CERTIFICATION OF ASSIGNMENT

LICENCES Nos. FCL1, FCL11, FCL64, FCL77, FCL198, FCL199 and FCL299, GRANTED IN ACCORDANCE WITH SECTION 15 OF THE FISHERIES (CONSOLIDATION) ACT, 1959.

(deemed to be Aquaculture Licences under the Fisheries (Amendment) Act, 1997)


and

LICENCES NOS. FCL 198, FCL 199 AND FCL 299, GRANTED IN ACCORDANCE WITH SECTION 3 (1) OF THE FORESHORE ACT, 1933

This is to certify that the above mentioned licences have been assigned with the approval of the Minister of State at the Department of the Marine and Natural Resources, on behalf of the Minister for the Marine and Natural Resources, to **Murpet Fish Ltd., Fintra Road, Killybegs, Co Donegal** with effect from **15 November, 1999**, subject to the terms and conditions thereof.

By virtue of Section 75 of the Fisheries (Amendment) Act, 1997 (No. 23) the above mentioned licences under the Fisheries (Consolidation) Act, 1959 are deemed to be Aquaculture Licences under the Fisheries (Amendment) Act, 1997 and therefore shall be subject to the provisions of the last mentioned Act.

Signed:



A person authorised under Section 15 of the Minister and Secretaries Act, 1924, to authenticate the seal of the Minister for the Marine and Natural Resources.

Date: 15 November, 1999



# DEENISH

FCL 199 ✓

AGREEMENT made the 30th day of January, 1995.

1. The Minister for the Marine, (hereinafter referred to as "the Minister"), in exercise of the powers conferred on him by Section 15 of the Fisheries (Consolidation), Act, 1959, and the Fisheries (Transfer of Departmental Administration and Ministerial Functions) Order, 1977 (S.I. No. 30 of 1977), (as adapted by the Tourism, Fisheries and Forestry (Alteration of Name of Department and Title of Minister) Order, 1987 (S.I. No. 82 of 1987), hereby grants to Gaelic Seafoods (Ireland) Ltd., whose registered address is at Rusheenamanagh, Carna, Co. Galway (hereinafter referred to as "the Licensee"), at the place and in the waters delineated on the map annexed hereto and thereon coloured red (hereinafter referred to as "the fishery"), the exclusive right to
  - (a) perform all operations necessary for the culture of salmon in cages, details of which have been submitted to and approved by the Minister placed in that area east of Deenish Island in Ballinskelligs Bay, Co. Kerry, designated in the agreement dated the 30th day of January, 1995 and the map annexed thereto between the Licensee and the Minister;
  - (b) at any time of year to purchase, have in possession or sell salmon and salmon smolts, the acquisition of which has been approved by the Minister;
  - (c) at any time of year to take and have in possession salmon and salmon smolts within the confines of the area referred to at (a) above;
  - (d) for the management of the fishery, to have in possession and use nets, traps or other such devices as may be approved by the Minister for the taking of salmon as aforesaid.

2. This licence shall be subject to the following conditions:

- (a) no fish other than salmon shall be cultured or taken under the terms of this licence without the prior written permission of the Minister;
- (b) the Licensee shall make adequate arrangements to ensure that the cages shall not obstruct the passage of migratory fish and shall take all measures necessary to prevent the escape of salmon from the cages and shall carry out any instructions issued in this connection by the Minister;
- (c) the licensee shall ensure that all towing of cages for any reason to and from the fish farm site is carried out only with the prior notification to and approval of the Minister;
- (d) the stock of fish in the cages shall not exceed such quantity as may be specified by the Minister from time to time, the number of smolts to be stocked at the site should not in any event exceed 400,000. Licensed stocking densities are not to be exceeded and will be subject to inspection at any time by the Department of the Marine;
- (e) the Licensee shall not harvest more than 500 tonnes (dead weight) of salmon in any one calendar year.
- (f) all chemicals and antibiotics used in the fishery shall be used in accordance with instructions issued by the Minister from time to time;
- (g) the Licensee shall keep records of all chemicals and antibiotics with which the fish have been treated, including quantities and times of use;

- (h) The Licensee shall notify the Secretary, Department of the Marine, (Aquaculture Section), Leeson Lane, Dublin 2, and the Fisheries Research Centre (Fish Pathology Unit), Abbotstown, Castleknock, Dublin 15, within forty-eight hours of the suspected appearance of any disease in the fishery or of any abnormal losses or mortalities in the fishery and shall carry out any instructions issued by the Minister as a result of the notification including instructions relating to the treatment, disposal and destruction of diseased stocks;
- (i) disposal of all dead fish shall be in a manner acceptable to the local authority;
- (j) the Licensee shall notify the Secretary, Department of the Marine, (Aquaculture Section), Leeson Lane, Dublin 2, within twenty-four hours of any escapes of fish from the fishery and shall keep records of fish escaped, including numbers, types, origin and year classes and shall make these records available to the Secretary on request;
- (k) the Licensee shall furnish to the said Secretary at the said address such returns relating to the fishery as may be required by the Minister;
- (l) the Licensee shall carry out such monitoring as the Minister shall specify from time to time and the results of such monitoring shall be furnished to said Secretary;
- (m) the licensee shall ensure that water quality monitoring is continued for the duration of this licence in accordance with specifications laid down by the Minister, which may be modified from time to time, and results should be forwarded to the Fisheries Research Centre at agreed regular intervals;



- (n) the licensee shall, before the end of each year for the duration of this licence, forward to the Fisheries Research Centre, annual review/update of water chemistry and other environmental parameters to assess the impact of operations at the fish farm;
- (o) the licensee shall ensure that sea-lice densities are monitored regularly and that all warranted measures are taken to ensure that lice densities are minimised and the licensee shall comply with any instructions issued by the Minister in this regard;
- (p) live salmon and salmon smolts shall not be sold or disposed of to any person or in any way transferred outside the said fish farm save in accordance with the prior written permission of the Minister;
- (q) the licensee shall keep the Secretary, Department of the Marine advised of ongoing precautionary measures to deal with naturally occurring algal blooms in the area of the fish farm;
- (r) the fishery and any equipment, structure, thing or premises wherever situated, used in connection with operations carried on in the fishery shall be open for inspection at any time by an authorised person (within the meaning of section 292 of the Fisheries (Consolidation) Act, 1959 (No.14 of 1959) (as amended by the Fisheries Act, 1980) other than a private water keeper), a sea fisheries protection officer (within the meaning of section 220 of the Fisheries (Consolidation) Act, 1959) or any other person appointed in that regard by the Minister;



- (s) the Licensee shall give all reasonable assistance to an authorised person, a sea fisheries protection officer or any person duly appointed by the Minister, to enable the person or officer enter and inspect the fishery, equipment, structures, things or premises pursuant to sub-paragraph (r) of this paragraph;
- (t) the Licensee shall not use any substance or thing or do anything which has a deleterious effect on the fishery environment including the use of organotin based anti-foulants and shall make adequate arrangements for the hygienic and disease-free operation of the fishery and shall comply with any directions issued by the Minister from time to time in that regard;
- (u) the Licensee shall not carry out any operations authorised by this licence in the fishery in such a manner as to interfere unreasonably with fishing or navigation in the vicinity of the fishery and shall comply with any direction given to it in that regard by the Minister;
- (v) the Licensee shall make adequate provision for the removal and disposal of all waste from the fishery;
- (w) the Licensee shall indemnify and keep indemnified the State, the Minister, his officers, servants or agents against all actions, loss, damage, costs, expenses and any demands or claims howsoever arising in connection with the construction, maintenance or use of any structures, apparatus, equipment or other thing used in connection with the fishery or in the exercise of the rights granted under this licence and the Licensee shall take such steps as the Minister may specify in order to ensure compliance with this condition;

(x) the Licensee shall obtain the consent of the Minister to any proposed major change in the shareholding or control of the Licensee where such change substantially alters the identity of the Licensee;

(y) this licence shall remain in operation until the 15th day of February, 2001 subject to the payment of the fee prescribed by the Department of the Marine;

3. The Minister shall be at liberty at any time to revoke or amend this licence if he considers that it is in the public interest to do so or if he is satisfied that there has been a breach of any condition specified in the licence or that the fishery to which the licence relates is not being properly maintained. Any such revocation or amendment shall be subject to the provisions of section 15 of the Fisheries (Consolidation) Act, 1959.
4. This licence will remain subject to ongoing review in light of continued monitoring of, and research into, the two marine sites and neighbouring sea trout fisheries which may be undertaken by the Salmon Research Agency and/or the Fisheries Research Centre.
5. In the event of proven contra-indications for sea trout stocks causatively linked to the fish farming operations permitted under this licence, the Minister may exercise his discretion to take any necessary protective measures ranging from reduction in permitted production levels to revocation of the licence and harvesting of all stock.
6. The number given to the Licensee under this licence shall be FCL 199.
7. This licence is not transferable.

8. This Licence replaces the licence dated 15th day of February, 1991 between the Minister and Salmara Fisheries Ltd.

<u>PRESENT</u> when the Seal of Office	)	
of the MINISTER FOR THE MARINE	)	
was affixed and was authenticated	)	<u>David Flynn</u>
by the Signature of:	)	a person authorised
<u>David Flynn</u>	)	under section 15(1)
in the presence of:	)	of the Ministers and
WITNESS: <u>Beenadette Kieley</u>	)	Secretaries Act,
ADDRESS: <u>Department of the</u>	)	1924 to authenticate
<u>Marine, Leeson Lane, D2</u>	)	the Seal of the
OCCUPATION: <u>Civil Servant</u>	)	Minister.

I agree, on behalf of Gaelic Seafoods (Ireland) Ltd. to accept the terms and conditions of this licence.

Signed: [Signature]  
Date: September 14th 1995

Witness: [Signature]  
Address: [Address]  
[Address]  
Occupation: Personal Assistant

1 NO. SITE AT Deenish Island CO.Kerry

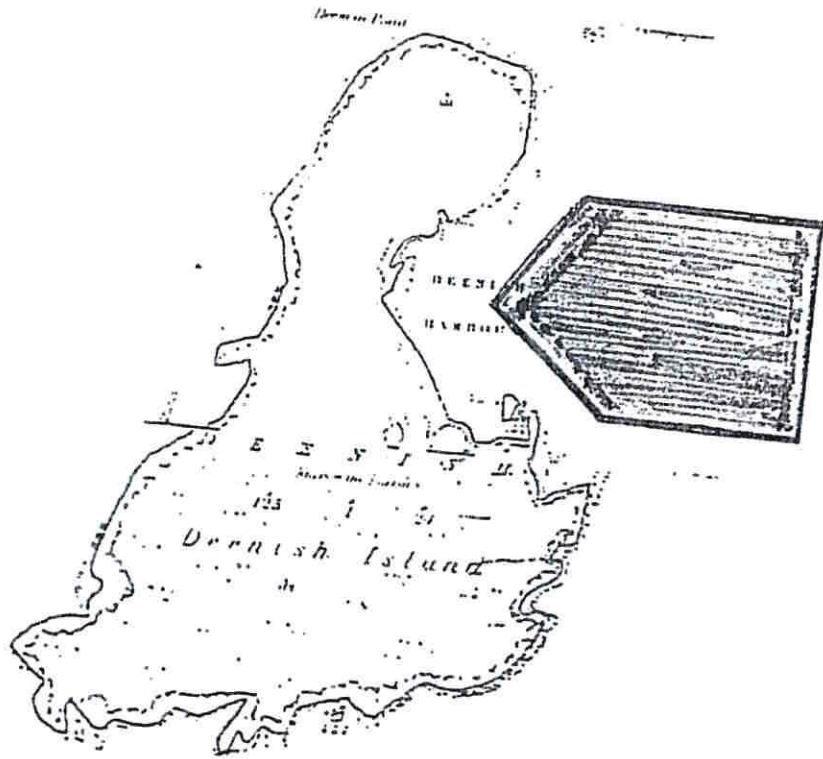
Co-ordinates & Area

Site T06/202 (14.4899 Ha)

The area seaward of the high water mark and enclosed by a line drawn from Irish National Grid Reference point

046920, 056280 to Irish National Grid Reference point  
047050, 056460 to Irish National Grid Reference point  
047400, 056460 to Irish National Grid Reference point  
047400, 056100 to Irish National Grid Reference point  
047100, 056100 to the first mentioned point.





DEPARTMENT OF THE MARINE  
Leeson Lane, Dublin, 2. Tel No.  
Engineering Section. Fisheries Division

BASED ON THE ORDNANCE SURVEY BY  
PERMISSION OF THE GOVERNMENT  
PERMIT No 4034  
COUNTY KERRY Scale No: 105

Dated 30th January, 1995

MINISTER FOR THE MARINE  
WITH  
GAELIC SEAFOODS (IRELAND)  
LIMITED

FISH CULTURE LICENCE

T6/202

CERTIFICATION OF RENEWAL  
OF  
AQUACULTURE LICENCE No.199  
AND  
FORESHORE LICENCE No.199

Dated 30 January 1995

This is to certify that the above-mentioned licences have been renewed, subject to the modification of the Aquaculture Licence specified below, with the approval of the Minister of State at the Department of Communications, Marine and Natural Resources, for the period up to and including 15 February 2007 subject to the terms and conditions thereof and subject to the provisions of the Fisheries (Amendment) Act, 1997 (No. 23), as amended.

Aquaculture Licence

- substitution for condition 2(l) of the following condition

- 2(l)(i) *The Licensee shall fallow the licensed area for at least 30 continuous days before restocking with fish of a different generation, in accordance with the requirements of the Department of Communications, Marine and Natural Resources (Protocol No. 5 Fallowing at Offshore Finfish Farms, as may be revised from time to time).*
- 2(l)(ii) *The Licensee shall undertake Benthic Monitoring of the licensed area in accordance with the detailed specifications of the Department of Communications, Marine and Natural Resources (Monitoring Protocol No. 1 for Offshore Finfish Farms - Benthic Monitoring, as may be revised from time to time) and promptly prepare and implement a Benthic Amelioration Plan if permitted parameters are breached.*
- 2(l)(iii) *The Licensee shall undertake Water Column Monitoring of the licensed area in accordance with the detailed specifications of the Department of Communications, Marine and Natural Resources (Monitoring Protocol No. 2 for Offshore Finfish Farms - Water Column Monitoring, as may be revised from time to time) and promptly take any required follow-up action in the light of the results of that monitoring.*
- 2(l)(iv) *The Licensee shall arrange for the treatment of fish against sea-lice and shall comply with the detailed specifications of the Department of Communications, Marine and Natural Resources (Monitoring Protocol No. 3 for Offshore Finfish Farms - Sea lice Monitoring and Control, as may be revised from time to time).*
- 2(l)(v) *The Licensee shall co-operate in the audit from time to time of its aquaculture operations and licensed area and facilities and premises in accordance with the detailed specifications of the Department of Communications, Marine and Natural Resources (Monitoring Protocol No. 4 for Offshore Finfish Farms - Audit of Operations, as may be revised from time to time)*

Signed: \_\_\_\_\_

A person authorised under Section 13 of the Minister and Secretaries Act, 1924, to authenticate the seal of the Minister for Communications, Marine and Natural Resources

Dated this 4<sup>th</sup> AUG 2004

76/202

Dated 30th day of January, 1995

MINISTER FOR THE MARINE

with

GAELIC SEAFOODS (IRELAND) LIMITED

FORESHORE LICENCE



T6/202  
FCL 199  
30/1/95

AGREEMENT made the 30th day of January, 1995 between the Minister for the Marine (hereinafter referred to as "the Minister"), of the one part and Gaelic Seafoods (Ireland) Ltd. whose registered address is at Rusheenamanagh, Carna, Co. Galway (hereinafter referred to as the "the Licensee") of the other part whereby the Minister in exercise of the powers vested in him by Section 3 (1) of the Foreshore Act, 1933 hereby grants onto the Licensee licence to use and occupy that part of the Foreshore east of Deenish Island in Ballinskelligs Bay, Co. Kerry, delineated on the map annexed hereto and thereon coloured red . the purpose of mooring six hexagonal Bridgestone cages and eight service cages for the cultivation of salmon on the terms and conditions following:

1. This licence shall remain in force until the 15th day of February, 2001 except as hereinafter provided.
2. The Licensee shall pay to the Minister through the Department of the Marine (Aquaculture Section), Leeson Lane, Dublin 2, the annual sum of £100 such payment to be made on the 15th day of February in every year during the continuance of this licence.
3. The Licensee shall use that part of the foreshore, the subject matter of this licence, for the mooring of fish cages as detailed above in connection with the cultivation of salmon and for no other purpose whatsoever. The number of cages specified herein shall not be exceeded.
4. The Licensee shall at all times during the continuance of this licence keep the said cages in a good and proper state of repair

and condition to the satisfaction of the Minister and ensure that they will not be injurious to navigation, the adjacent lands or the public interest.

5. The Licensee shall ensure that the licensed area and the area around the development shall be kept clear of all redundant structures, waste products or materials associated with the development.
6. The Licensee shall cause each cage to be fitted to the satisfaction of the Minister with a low intensity, battery powered, yellow coloured flashing light and a radar reflector for the safety of navigation during the hours of darkness and reduced visibility.
7. The Licensee shall comply with any directions which may be issued by the Minister from time to time in that regard.
8. The Licensee shall ensure that each cage shall bear the licence number FCL 199.
9. The Licensee shall fit adequate anti-predator netting on all cages and shall comply with any directions which may be issued by the Minister from time to time in that regard.
10. The licensee shall ensure that cage locations and configurations, and marking and lighting arrangements shall conform to licence

specifications as agreed with the Department of the Marine and the Marine Survey Office. Any changes for operational reasons at any time shall be approved in advance by the Minister.

11. The Licensee shall indemnify and keep indemnified the State, the Minister, their officers, agents and employees against all actions, loss, claims, damages, costs, expenses and demands arising in any manner whatsoever in connection with the construction, maintenance or use of the said cages or in the exercise of the permission hereby granted.
12. The Minister shall be at liberty at any time to terminate this licence by giving to the Licensee three weeks previous notice in writing ending on any day and upon determination of such notice the licence and permission hereby granted shall be deemed to be revoked and withdrawn without the liability for the payment of any compensation by the Minister to the Licensee.
13. The Licensee shall if so required by the Minister and, within three weeks after receipt of such notice or on determination of this licence from any other cause at its expense remove the said cages to the satisfaction of the Minister and if the Licensee refuses or fails to do so the Minister may cause the said cages to be removed and shall be entitled to recover from the Licensee as a simple contract debt in any court of competent jurisdiction all costs and expenses incurred by him in connection with the

removal and restoration, and the Licensee shall take such steps as the Minister may specify in order to secure compliance with this condition.

14. On site operations and related landbased activities including the use of piers are to be carried out with all possible circumspection and regard for other users and the environs.
15. The licensee shall keep the Secretary, Department of the Marine advised of ongoing and future arrangements reached with the Office of Public Works, local authorities or private owners concerning the use of piers and other local infrastructure;
16. In the event of the breach, non-performance or non-observance by the Licensee of any of the conditions herein contained the Minister may forthwith terminate this licence without prior notice to the Licensee.
17. Any notice to be given by the Minister may be transmitted through the Post Office addressed to the Licensee at its last known address.
18. This licence replaces Foreshore Licence dated 15th day of February, 1991 granted to Salmara Fisheries Ltd.

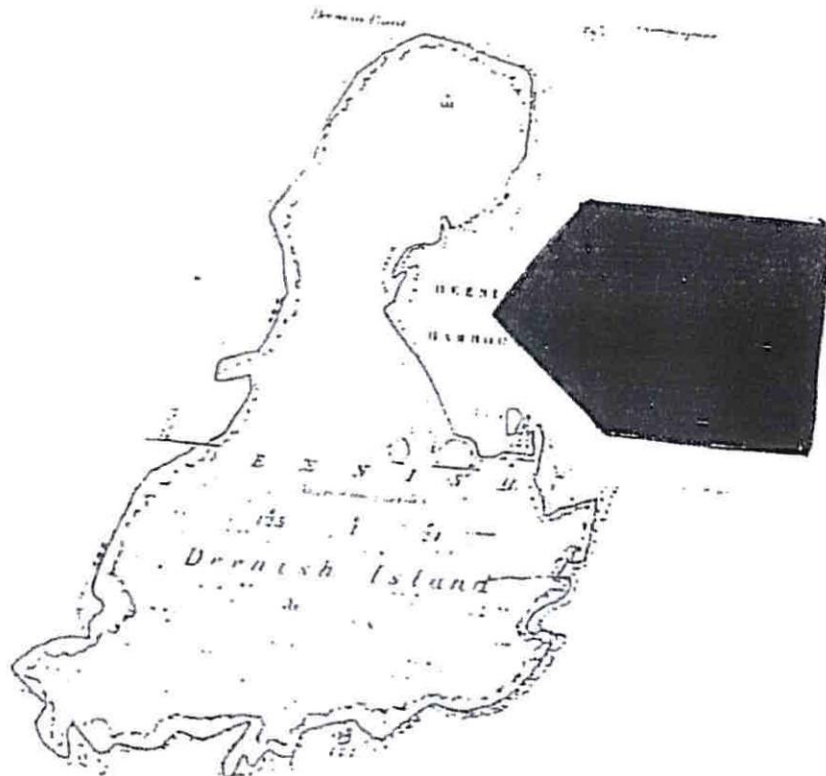


PRESENT when the Seal of Office )  
of the MINISTER FOR THE MARINE )  
was affixed and was authenticated )  
by the Signature of )  
David Glynn )  
in the presence of: )  
WITNESS: Bernadette Kiehl )  
ADDRESS: Department of the )  
Marine, Loeson Lane, D2 )  
OCCUPATION: Civil Servant )

SIGNED on behalf of Licensee )  
in the presence of: )  
WITNESS: Colin W. Johnson )  
ADDRESS: Colin W. Johnson )  
OCCUPATION: Personal Assistant )

David Glynn  
a person authorised  
under section 15(1)  
of the Ministers and  
Secretaries Act,  
1924 to authenticate  
the Seal of the  
Minister.

[Signature]  
Director



DEPARTMENT OF THE MARINE  
Leeson Lane, Dublin, 2. Tel No.  
Engineering Section. Fisheries Division

BASED ON THE ORDNANCE SURVEY BY  
PERMISSION OF THE GOVERNMENT  
PERMIT No 4004  
COUNTY KERRY Scale No: 105

**MHI letter dated 29 January 2016**



Nicole O'Shea  
 Aquaculture & Foreshore Licencing Division  
 Department of Agriculture & the Marine  
 National Seafood Centre  
 Clonakilty  
 Co. Cork.

29.01.2016

RINMORE

**Re. Site T6/202: Marine Engineering inspection on 02/07/15.**

Dear Nicole,

I refer to your letter dated January 6<sup>th</sup> 2016 regarding the remedial measures allegedly required arising from the engineering inspection of the Deenish sea site on July 2<sup>nd</sup>, 2015.

Under the circumstances I feel that we must point out that some of the terms attaching to the aquaculture licence for this site are to say the least ambiguous, and we would argue that it is actually impossible to interpret them with any degree of precision or reliability.

The licence refers to *smolt stocking* events not exceeding 400,000. The licence does not contain any condition concerning how many salmon, that are not smolts, may be kept on the site at any point in time. I would suggest that the Marine Institute, who are the minister's advisers on scientific and biological matters be consulted in terms of explaining the different stages of a salmon's lifecycle and in particular the very short-lived and distinct 'smolt' phase.

Marine Harvest Ireland had two separate silver salmon stocking inputs into this site during the period of interest, neither of which concerned fish at the 'smolt' stage in their life cycle. Further, neither of the stocking events involved fish transfers exceeding 400,000 fish. On that basis we strongly contend that we have not breached the licence term concerning *smolt stocking* and therefore no remedial action is required.

With regard to harvest volumes, It should be noted that no harvesting took place at this site thus the maximum harvest rate of 500 tonnes per annum was not exceeded. On that basis no remedial action is needed with regard to this issue.

It is also very important to point out that the benthic impact monitoring results for this site show clearly that there has been no overstocking and that no adverse biological impacts have occurred. The results show that MHI have operated the site responsibly and well within its 'biological carrying capacity'.

The confusing and biologically incorrect phraseology employed in this licence highlights the recurring drafting problem we have all encountered, whereby inconsistent, contradictory and technically meaningless terms and conditions have found their way into many of the salmon farming licences issued over the years.

Marine Harvest Ireland  Registered in Ireland as Comhlucht Iascaireachta Fanad Teoranta, VAT No: IE45307340: Registration No. 66929 Directors: Jan Feenstra, David Brennan	OFFICE Kindrum, Cashel P.O., Fanad. Letterkenny Co. Donegal, IRELAND F92 XD93	PHONE 00353 74 9192105	FAX [Address]
	RINMORE Rinmore, Ballylar P.O. Letterkenny Co. Donegal, IRELAND F92 T677	MAIL catherine.mcmanus@marineharvest.com	WEBSITE <a href="http://marineharvest.com">http://marineharvest.com</a> <a href="http://marineharvestireland.com">http://marineharvestireland.com</a>



Both as an individual company and through our representative organisation we have repeatedly requested that Irish marine salmon licenses be brought into line with best international practices with regard to the control of stocking levels. The Minister for Agriculture, Food and the Marine, Simon Coveney TD issued a press release on December 5th 2011 to announce the new format for Aquaculture Licence templates. In this press release the Minister confirmed that one of the core changes to Aquaculture licences would be a *“Change from licensing by Annual Harvested Tonnage (i.e. the dead weight of fish harvested from a site in a calendar year measured in tonnes) to Standing Stock Biomass for Finfish (the weight of live fish on a site at any given time, measured in tonnes). Standing Stock Biomass is recognised internationally as the appropriate metric for assessing loading at an aquaculture production site and can be measured on a real time basis thus facilitating effective regulation and management of sites.”*

We welcomed this announcement at the time and we fully agree with the minister that maximum allowable biomass (MAB) is the only rational and enforceable way of regulating stocking on marine finfish sites. We look forward to continue working with the Department of Agriculture, Food and Marine (DAFM) with a view to establishing a logical and consistent regulatory framework for Irish aquaculture. In this particular instance we do not believe that we breached any of the licenced terms as they are written and thus we are of the view that no remedial actions are called for at this point in time.

With Regards

*Catherine McManus.*

**Catherine McManus**

TECHNICAL MANAGER

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**e-mail from MHI including Stock Records**

## Dillon, Noel

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**From:** Power, John <John.Power@marineharvest.com>  
**Sent:** 25 June 2015 15:19  
**To:** OMurchu, Noel  
**Subject:** FW: Deenish site monthly stock  
**Attachments:** Document\_0008.pdf

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**From:** Power, John  
**Sent:** 11 June 2015 12:05  
**To:** 'noel.omuruchu@agriculture.gov.ie'  
**Subject:** Deenish site monthly stock

Hi Noel  
See attached the stock monthly for Deenish site.  
Thanks.

Best regards

**John Power**

South West Operations Manager  
MARINE HARVEST IRELAND

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Direct Line: +353 27 57402  
MOBILE: +353 86 8050501  
MAIL: [john.power@marineharvest.com](mailto:john.power@marineharvest.com)  
WEB: [www.marineharvestireland.com](http://www.marineharvestireland.com)

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OFFICE: Marine Harvest Ireland SW  
Castletownbere  
Beara  
Co Cork  
Ireland

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Filtered By	Filter	Grouped by	From date	End date
Operation	All	Project	2015-01-01	2015-01-31

Year	2015	Class	Project	Site	Mortality / Culls			Harvest	Transfer		Total	Closing		Feed			LCTD		Temp (°C)
					Count	%	#NUM!		Count	Pending		Count	Avg.	Weight	SFR	Bio FCR	Eco (D)	Count	
		Q1	SWDE	Deenish	224 226	1 227	#NUM!	0.547%	0		0	222 999	117	400	0.172	1.050	1.662	9.64	
<b>Total</b>					224 226	1 227	#NUM!	0.547%	0		0	222 999	117	400					





Monthly Summary - Feb'15

Filtered By		Filter	Grouped by		From date	End date					
Operation		All	Project		2015-02-01	2015-02-28					
Year	2015	Open Count	Mortality / Culls	Harvest	Transfer	Total	Closing	Weight	Feed	LCTD	Temp
Class	Project	Count	%	Count	Ponding	Count	Count	Avg.	SFR	Bio FCR	Eco (D)
Q1	SWDE	222 999	13.208%	29 453	219 108	0	412 654	138	1.054	1.050	1.633
		222 999	13.208%	29 453	219 108	0	412 654	138			8.89
<b>Total</b>											
<b>Grand Total</b>		222 999	13.208%	29 453	219 108	0	412 654	138	13 569		



Monthly Summary - Mar'15

Filtered By	Filter	Grouped by	From date	End date
Operation	All	Project	2015-03-01	2015-03-31

Year	Class	Project	Site	Open		Mortality / Culls		Harvest	Transfer		Closing		Feed			LCTD		Temp (°C)
				Count	Count	Count	%		Count	Pending	Count	Count	Avg.	Weight	SFR	Bio FCR	Eco (D)	
2015	Q1	SWDE	Deenish	412 654	38 462	9.321%	8.348%	0	384 952	0	759 144	157	30 625	1.100	1.051	1.414	9.05	
				412 654	38 462	9.321%	8.348%	0	384 952	0	759 144	157	30 625					

Grand Total				412 654	38 462	9.321%	8.348%	0	384 952	0	759 144	157	30 625				
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Monthly Summary - Apr '15

Filtered By	Filter	Grouped by	From date	End date
Operation	All	Project	2015-04-01	2015-04-30

Year	2015	Class	Project	Site	Open		Mortality / Culls		Harvest	Transfer		Total	Closing		Feed		LCTD		Temp (°C)
					Count	Count	Count	%		Count	Pending		Count	Count	Avg.	Weight	SFR	Bio FCR	
Q1	SWDE	Deenish	759 144	4 733	0.623%	8.919%	0	0	0	0	0	0	754 411	244	69 174	1.585	1 050	1 181	10.29
<b>Total</b>			<b>759 144</b>	<b>4 733</b>	<b>0.623%</b>	<b>8.919%</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>754 411</b>	<b>244</b>	<b>69 174</b>				

<b>Grand Total</b>			<b>759 144</b>	<b>4 733</b>	<b>0.623%</b>	<b>8.919%</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>754 411</b>	<b>244</b>	<b>69 174</b>				
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Monthly Summary - May'15

Filtered By	Filter	Grouped by	From date	End date
Operation	All	Project	2015-05-01	2015-05-31

Year	2015	Class	Project	Site	Open		Mortality / Culls		Harvest	Transfer		Total	Closing		Feed		LCTD		Temp (°C)
					Count	Count	Count	%		Count	Ponding		Count	Count	AVG.	Weight	SFR	Bio FCR	
		Q1	SWDE	Deenish	754 411	15 953	2.115%	10.845%	0	0	0	0	738 458	339	74 992	1.151	1.050	1.160	11.21
		<b>Total</b>			754 411	15 953	2.115%	10.845%	0	0	0	0	738 458	339	74 992				

<b>Grand Total</b>					754 411	15 953	2.115%	10.845%	0	0	0	0	738 458	339	74 992				
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**Marine Institute Fish Movement Approvals**

**From:** [FHU](#)  
**To:** [hugh.mcginley@marineharvest.com](mailto:hugh.mcginley@marineharvest.com)  
**Cc:** [FHU](#)  
**Subject:** Approval for Finfish Movement within Ireland  
**Date:** 19 December 2014 10:35:09

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**European Communities (Health of Aquaculture Animals and Products) Regulations 2008, S.I. No. 261 of 2008, as amended by S.I. No. 398 of 2010 and S.I. No. 430 of 2011**

**Movement Approval Notice**

**MOV-1036**

**Marine Harvest Ireland FHA-000025 (the 'Applicant')**

The Marine Institute in exercise of its powers under the European Communities (Health of Aquaculture Animals and Products) Regulations 2008 - 2011, and subject to the conditions set out below, confirms its approval of the following (the 'Movement'):

Origin of Finfish		Destination of Finfish	
Company Name: Marine Harvest Ireland		Company Name: Marine Harvest Ire (formally Silverking Seafoods Ltd)	
Site of Origin: Lough Altan		Site of Destination: Deenish Kerry	
• Date(s) of Movement: 19/12/2014 - 31/12/2014			
• Details of Transportation: Gripfisk Service AS Grip Transporter (WellBoat),			
Species	Quantity	Age	Average Weight
Atlantic salmon	400000 Number	11 Months	110 g

**Conditions**

1. The Movement shall be carried out in accordance with the details submitted to the Marine Institute, and with these conditions and the EC (Health of Aquaculture Animals and Products) Regulations 2008 - 2011 as may be amended from time to time.
2. This Movement Approval Notice is non-transferable. Any proposed change to the details of the Movement shall be notified to the Marine Institute for its prior approval.
3. The Applicant shall not be entitled solely by reason of the grant of this Movement Approval Notice to carry out the Movement. For the avoidance of doubt, this Movement Approval Notice does not authorise any Movement or the carrying on of any activity in a manner that does not comply with any legislation which may be applicable including, but not limited to:
  - a. EC (Health of Aquaculture Animals and Products) Regulations 2008 - 2011
  - b. Fisheries (Amendment) Act 1997, as amended, and relevant Regulations
  - c. EC (Quality of Shellfish Waters) Regulations 2006

d. EC (Food and Feed Hygiene) Regulations 2009, S.I. 432 of 2009, as amended

e. EC (Birds and Natural Habitats) Regulations 2011, S.I. 477 of 2011, as amended

4. The Marine Institute reserves the right to refuse or revoke approval on breach of any of these conditions or otherwise in accordance with S.I. 261/2008, as amended by S.I. No. 398 of 2010 and S.I. No. 430 of 2011.

**Issued By: Fish Health Unit    Dated:19/12/2014**

On behalf of the Marine Institute

Rinville, Oranmore,  
Co. Galway  
IRELAND

Tel: +353 (0)91 387 200  
Fax: +353 (0)91 387 201  
Email: [notification@marine.ie](mailto:notification@marine.ie)  
Website: [www.fishhealth.ie](http://www.fishhealth.ie)

Notes:

Please let us know if there are any changes to the details supplied.  
A copy of this email should be kept for your Fish Health Records

**From:** [FHU](#)  
**To:** [hugh.mcginley@marineharvest.com](mailto:hugh.mcginley@marineharvest.com)  
**Cc:** [FHU](#)  
**Subject:** Approval for Finfish Movement within Ireland  
**Date:** 26 February 2015 18:17:02

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**European Communities (Health of Aquaculture Animals and Products) Regulations 2008, S.I. No. 261 of 2008, as amended by S.I. No. 398 of 2010 and S.I. No. 430 of 2011**

**Movement Approval Notice**

**MOV-1113**

**Marine Harvest Ireland FHA-000024 (the 'Applicant')**

The Marine Institute in exercise of its powers under the European Communities (Health of Aquaculture Animals and Products) Regulations 2008 - 2011, and subject to the conditions set out below, confirms its approval of the following (the 'Movement'):

Origin of Finfish		Destination of Finfish	
Company Name: Marine Harvest Ireland		Company Name: Marine Harvest Ire (formally Silverking Seafoods Ltd)	
Site of Origin: Pettigo		Site of Destination: Deenish Kerry	
• Date(s) of Movement: 04/03/2015 - 26/03/2015			
• Details of Transportation: Gripfisk Service AS Grip Transporter (WellBoat),			
Species	Quantity	Age	Average Weight
Atlantic salmon	385000 Kg	12 Months	95 g

**Conditions**

1. The Movement shall be carried out in accordance with the details submitted to the Marine Institute, and with these conditions and the EC (Health of Aquaculture Animals and Products) Regulations 2008 - 2011 as may be amended from time to time.
2. This Movement Approval Notice is non-transferable. Any proposed change to the details of the Movement shall be notified to the Marine Institute for its prior approval.
3. The Applicant shall not be entitled solely by reason of the grant of this Movement Approval Notice to carry out the Movement. For the avoidance of doubt, this Movement Approval Notice does not authorise any Movement or the carrying on of any activity in a manner that does not comply with any legislation which may be applicable including, but not limited to:
  - a. EC (Health of Aquaculture Animals and Products) Regulations 2008 - 2011
  - b. Fisheries (Amendment) Act 1997, as amended, and relevant Regulations
  - c. EC (Quality of Shellfish Waters) Regulations 2006
  - d. EC (Food and Feed Hygiene) Regulations 2009, S.I. 432 of 2009, as amended



e. EC (Birds and Natural Habitats) Regulations 2011, S.I. 477 of 2011, as amended

4. The Marine Institute reserves the right to refuse or revoke approval on breach of any of these conditions or otherwise in accordance with S.I. 261/2008, as amended by S.I. No. 398 of 2010 and S.I. No. 430 of 2011.

**Issued By: Fish Health Unit    Dated:26/02/2015**

On behalf of the Marine Institute

Rinville, Oranmore,  
Co. Galway  
IRELAND

Tel: +353 (0)91 387 200  
Fax: +353 (0)91 387 201  
Email: [notification@marine.ie](mailto:notification@marine.ie)  
Website: [www.fishhealth.ie](http://www.fishhealth.ie)

Notes:

Please let us know if there are any changes to the details supplied.  
A copy of this email should be kept for your Fish Health Records

**From:** [FHU](#)  
**To:** [Sean.Begley@marineharvest.com](mailto:Sean.Begley@marineharvest.com)  
**Cc:** [FHU](#)  
**Subject:** Approval for Finfish Movement within Ireland  
**Date:** 21 May 2015 17:01:29

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**European Communities (Health of Aquaculture Animals and Products) Regulations 2008, S.I. No. 261 of 2008, as amended by S.I. No. 398 of 2010 and S.I. No. 430 of 2011**

**Movement Approval Notice**

**MOV-1255**

**Marine Harvest Ire (formally Silverking Seafoods Ltd) (the 'Applicant')**

The Marine Institute in exercise of its powers under the European Communities (Health of Aquaculture Animals and Products) Regulations 2008 - 2011, and subject to the conditions set out below, confirms its approval of the following (the 'Movement'):

Origin of Finfish		Destination of Finfish	
Company Name: Marine Harvest Ire (formally Silverking Seafoods Ltd)		Company Name: Marine Harvest Ireland	
Site of Origin: Inishfarnard		Site of Destination: Millstone Fanad Kindrum Donegal	
• Date(s) of Movement: 22/05/2015 - 22/05/2015			
• Details of Transportation: Gripfisk Service AS Grip Transporter (WellBoat),			
Species	Quantity	Age	Average Weight
Atlantic salmon	2000 Number	13 Months	4 Kg

**Conditions**

1. The Movement shall be carried out in accordance with the details submitted to the Marine Institute, and with these conditions and the EC (Health of Aquaculture Animals and Products) Regulations 2008 - 2011 as may be amended from time to time.
2. This Movement Approval Notice is non-transferable. Any proposed change to the details of the Movement shall be notified to the Marine Institute for its prior approval.
3. The Applicant shall not be entitled solely by reason of the grant of this Movement Approval Notice to carry out the Movement. For the avoidance of doubt, this Movement Approval Notice does not authorise any Movement or the carrying on of any activity in a manner that does not comply with any legislation which may be applicable including, but not limited to:
  - a. EC (Health of Aquaculture Animals and Products) Regulations 2008 - 2011
  - b. Fisheries (Amendment) Act 1997, as amended, and relevant Regulations
  - c. EC (Quality of Shellfish Waters) Regulations 2006

d. EC (Food and Feed Hygiene) Regulations 2009, S.I. 432 of 2009, as amended

e. EC (Birds and Natural Habitats) Regulations 2011, S.I. 477 of 2011, as amended

4. The Marine Institute reserves the right to refuse or revoke approval on breach of any of these conditions or otherwise in accordance with S.I. 261/2008, as amended by S.I. No. 398 of 2010 and S.I. No. 430 of 2011.

**Issued By: Fish Health Unit    Dated:21/05/2015**

On behalf of the Marine Institute

Rinville, Oranmore,  
Co. Galway  
IRELAND

Tel: +353 (0)91 387 200

Fax: +353 (0)91 387 201

Email: [notification@marine.ie](mailto:notification@marine.ie)

Website: [www.fishhealth.ie](http://www.fishhealth.ie)

Notes:

Please let us know if there are any changes to the details supplied.

A copy of this email should be kept for your Fish Health Records

**European Communities (Health of Aquaculture Animals and Products) Regulations 2008,  
S.I. No. 261 of 2008, as amended by S.I. No. 389 of 2010 and S.I. No. 430 of 2011**

**Movement Approval Notice**

Marine Harvest Ireland (the 'Applicant')

The Marine Institute in exercise of its powers under the European Communities (Health of Aquaculture Animals and Products) Regulations 2008 - 2011, and subject to the conditions set out below, confirms its approval of the following (the 'Movement'):

Date (s) of Movement	Name of Operator at Site of Origin	Details of Site of Origin	Name of Operator at Site of Destination	Details of Site of Destination	Species	Quantity	Age	Average Weight	Details of Transportation
29/11/14 - 06/12/2014	Marine Harvest Ireland, Castletownbere	Deenish FHA-000042	Marine Harvest Ireland, Castletownbere	Ahabeg FHA 550	Atlantic salmon	120,000 number	20 months	4.5 - 5.0 kg	Grip Transporter

**Conditions**

1. The Movement shall be carried out in accordance with the details submitted to the Marine Institute, and with these conditions and the EC (Health of Aquaculture Animals and Products) Regulations 2008 - 2011 as may be amended from time to time.
2. This Movement Approval Notice is non-transferable. Any proposed change to the details of the Movement shall be notified to the Marine Institute for its prior approval.
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  - a. EC (Health of Aquaculture Animals and Products) Regulations 2008 - 2011
  - b. Fisheries (Amendment) Act 1997, as amended, and relevant Regulations
  - c. EC (Quality of Shellfish Waters) Regulations 2006
  - d. EC (Food and Feed Hygiene) Regulations 2009, S.I. 432 of 2009, as amended
  - e. EC (Birds and Natural Habitats) Regulations 2011, S.I. 477 of 2011, as amended
4. The Marine Institute reserves the right to refuse or revoke approval on breach of any of these conditions or otherwise in accordance with S.I. 261/2008, as amended by S.I. No. 389 of 2010 and S.I. No. 430 of 2011.



Signed:

*Edysha Power*

Dated: 26<sup>th</sup> November 2014

**Fish Health Unit**

On behalf of the Marine Institute

Rinville, Oranmore,  
Co. Galway  
IRELAND

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Fax: +353 (0)91 387 201

Email: [notification@marine.ie](mailto:notification@marine.ie)

Website: [www.fishhealth.ie](http://www.fishhealth.ie)

**Notes:**

Please let us know if there are any changes to the details supplied and report any unexplained mortalities in the consignment to us immediately.

A copy of this Approval should be kept for your Fish Health Records.

**European Communities (Health of Aquaculture Animals and Products) Regulations 2008,  
S.I. No. 261 of 2008, as amended by S.I. No. 389 of 2010 and S.I. No. 430 of 2011**

**Movement Approval Notice**

Marine Harvest Ireland (the 'Applicant')

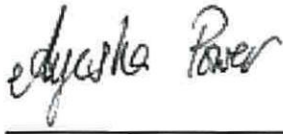
The Marine Institute in exercise of its powers under the European Communities (Health of Aquaculture Animals and Products) Regulations 2008 - 2011, and subject to the conditions set out below, confirms its approval of the following (the 'Movement'):

Date (s) of Movement	Name of Operator at Site of Origin	Details of Site of Origin	Name of Operator at Site of Destination	Details of Site of Destination	Species	Quantity	Age	Average Weight	Details of Transportation
15/10/2014 – 30/11/2014	Marine Harvest Ireland, Castletownbere	Deenish FHA- 000042	Marine Harvest Ireland, Castletownbere	Ahabeg FHA 550	Atlantic salmon	68,000	18 months	4.5 kg - 4.7 kg	Grip Transporter

**Conditions**

1. The Movement shall be carried out in accordance with the details submitted to the Marine Institute, and with these conditions and the EC (Health of Aquaculture Animals and Products) Regulations 2008 - 2011 as may be amended from time to time.
2. This Movement Approval Notice is non-transferable. Any proposed change to the details of the Movement shall be notified to the Marine Institute for its prior approval.
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  - a. EC (Health of Aquaculture Animals and Products) Regulations 2008 - 2011
  - b. Fisheries (Amendment) Act 1997, as amended, and relevant Regulations
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  - d. EC (Food and Feed Hygiene) Regulations 2009, S.I. 432 of 2009, as amended
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4. The Marine Institute reserves the right to refuse or revoke approval on breach of any of these conditions or otherwise in accordance with S.I. 261/2008, as amended by S.I. No. 389 of 2010 and S.I. No. 430 of 2011.

Signed:

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Dated: 14<sup>th</sup> October 2014

**Fish Health Unit**

On behalf of the Marine Institute

Rinville, Oranmore,  
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Website: [www.fishhealth.ie](http://www.fishhealth.ie)

**Notes:**

Please let us know if there are any changes to the details supplied and report any unexplained mortalities in the consignment to us immediately.

A copy of this Approval should be kept for your Fish Health Records.





**Meeting between the Department and Marine Harvest Ireland  
14<sup>th</sup> March 2016, 11:30am at Agriculture House, Kildare Street**

**SUMMARY REPORT**

---

**Present**

(Marine Harvest)

Catherine McManus, Technical and Quality Manager  
Pat Connors, Sales and Processing Director  
David Brennan, Financial Controller

(Department)

John Quinlan (AFMD)  
Kevin Hodnett (AFMD)  
Nicole O'Shea (AFMD)

Tony O'Sullivan (Marine Engineering Division)

Dr Dave Jackson (Marine Institute)

Joanne Gaffney (BIM)

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**1. Purpose of the Meeting**

The meeting was convened by the Department to afford the Company an opportunity to outline further its position on overstocking in respect of sites at Inishfarnard and Deenish.

**2. Inishfarnard**

The Department provided an overview of its position including the Engineering Report of 08/06/2015 which pointed to a total of 820,604 smolts inputted to the site in March 2014 which exceeds the permitted smolt stocking (400,000 smolts) by 420,604. The Report also pointed to a likely harvest from the site in excess of the permitted limit of 500 tonnes.

The Department noted the Company's response contained in its letter of 29/01/2016. The Company also made the following points at the meeting:

- The existing licences do not reflect the current reality of fish production.
- Production at the site represents best practice and no negative environmental effects have resulted from the stocking.
- The question of whether the fish inputted were actually smolts is a matter best decided by the Marine Institute as the Minister's advisors on biological and scientific matters.

The Company pointed towards its repeated request for a modernisation of licences to reflect current production techniques and they alluded to public comments by the Minister for the need for modern licences.

The Company interpreted the licence as 400,000 smolts per year. The Company emphasised that no environmental damage had occurred as a result of the stocking.

The Department pointed to the text of condition 2 (d) of the licence which stated:

*"the stock of fish in the cages shall not exceed such quantity as may be specified by the Minister from time to time, the number of smolts to be stocked at the site should not in any event exceed 400,000. Licensed stocking densities are not to be exceeded and will be subject to inspection at any time by the Department of the Marine;"*

It was the Department's view that the language was clear and unambiguous. The Department acknowledged that it was not aware of environmental damage resulting from the overstocking but while this was welcome it was not directly relevant to the issue at hand. It was the Department's view that the inputting of 820,604 smolts was a major breach of the licence condition above which could not be ignored.

BIM and MI were broadly of the view that licences needed to be updated to meet modern production techniques but neither agency would condone a breach of existing licence conditions.

In relation to condition 2 (e) which states:

*"the Licensee shall not harvest more than 500 tonnes (dead weight) of fish in any one calendar year."*

The Department asked what tonnage was harvested from the site. The Company stated that no fish were harvested from the site as the fish were moved to a well boat and were harvested on the boat. The Company indicated that more than 500 tonnes were harvested in this way. The Department noted that the Company did not consider the harvesting of these fish to be related to condition 2 (e) of the licence as the fish were moved to the well boat for slaughter. The Department was of the view that as the fish were removed from the site for the purpose of slaughter, condition 2 (e) applied to the process. As the Company confirmed that in excess of 500 tonnes were harvested the Department was of the view that the condition set out in 2 (e) of the licence had also been breached by the Company.

The Department emphasised that it wished to afford the Company every opportunity to set out a defence of its position and asked if it had anything whatsoever to add. The Company representatives indicated that they had nothing more to say.

### **3. Deenish**

The Department referred to the Inspection Report dated 02/07/2015 which indicated an input in excess of 700,000 smolts. The Department was conscious that the Pilot programme concerning measurement based on biomass had applied to this site up to 31/03/2015, however the input of smolts in early 2015 effectively meant that the smolt stock was in excess of 700,000 on 01/04/2015. This was in clear breach of condition 2 (d) which specified a maximum smolt stock of 400,000 (Condition 2 (d) is identical for Inishfarnard and Deenish sites)



In response the Company made the following points:

- The Environmental Report from the Company on the pilot case showed no negative environmental effects had occurred.
- The Company's interpretation of the licence did not preclude the stocking that occurred.

In response to specific questions from the Department the Company indicated that it did not dispute the figures cited in the Engineering Reports concerning smolt inputs for either Inishfarnard or Deenish.

The Department pointed out that the Company must have been aware that the input of smolts in early 2015 would have created the situation whereby licence condition 2 (d) was breached with effect from 01/04/2015. (i.e. after the pilot had ended on 31/03/2015.) The exceptionality which applied as part of the pilot case would in itself have alerted the Company to the normal conditions of the licence which applied after the pilot was concluded.

In relation to harvesting the Company said it could not state what tonnage would be harvested but in any event harvesting would not occur from the site as the fish would be removed in the same manner as Inishfarnard. The Department restated its position that it regarded removal of fish from the site for slaughter as representing harvesting from the site in accordance with condition 2 (e) of the licence.

The Department again pointed to the plain language contained in the licence and referred to legal advice obtained in 2010, which seemed to confirm that the plain reading of the licence made clear that 400,000 smolts was the maximum permitted under each licence. The situation regarding harvested tonnage was also equally clear.

The Department said that the seriousness of the situation should not be underestimated and asked the Company if it wished, in any way, to elaborate on its position. The Company representatives confirmed that they had nothing further to say.

**ENDS**





AQUACULTURE LICENCES APPEALS BOARD

FISHERIES (AMENDMENT) ACT 1997 (AS AMENDED AND SUBSTITUTED)

Appeal Reference Number: AP1-2011

DETERMINATION

**WHEREAS** appeals having been made to the Aquaculture Licences Appeals Board (hereinafter also referred to as "the Board") pursuant to section 40 of the Fisheries (Amendment) Act 1997 (as amended and substituted) by parties with the names **Salmon Watch Ireland, Inland Fisheries Ireland and Waterville Fisheries Development Group** (hereinafter referred to as "the Appellants") against the decision of the Minister for Agriculture, Food and the Marine to approve a temporary amendment of two years duration to Aquaculture Licence AQ 199, for the cultivation of salmon at Deenish Island, Ballinskelligs Bay, Co Kerry by Silver King Seafoods Limited (hereinafter referred to as "the Applicant"). (Department Reference T6/202, Board Reference AP1/2011).

**AND WHEREAS** the Board, having regard to the appeals and *inter alia* the provisions of the Fisheries (Amendment) Act 1997 (as amended and substituted) decided to determine the appeal by determining the application for the licence as if the application had been made to the Board in the first instance pursuant to section 40(4)(b) of the Fisheries (Amendment) Act 1997 (as amended and substituted).

**AND WHEREAS** the Board in considering the appeal took account of the objections contained in the appellants' files and the report of the Board's technical adviser and the matters set out at Section 61 of the Fisheries (Amendment) Act, 1997 (as amended and substituted). The Board also had the benefit of the Natura Impact Appropriate Assessment of the Deenish Island site which was conducted at the request of the Board.

**THE BOARD DETERMINED** at its meeting on the 31<sup>st</sup> of October, 2012 to GRANT a two-year amendment to Aquaculture Licence AQ199 which was assigned to Silver King Seafoods Limited, thereby permitting the cultivation of salmon at Deenish Island,

Ballinskelligs Bay, Co Kerry subject to the enforcement of the special conditions in the Schedule attached to said licence.

The Board, having carefully considered all of the evidence, reports, assessments and submissions, made this Determination for the following reasons:

- a) following a review of the Natura Impact Appropriate Assessment, the Board made a finding of no significant effects, within the meaning of the Birds Directive 2009\147\EC and the Habitats Directive 92\43\EEC;
- b) the Board believed the site under appeal was appropriate for the purpose intended by the Applicant;
- c) the proposed licence change would have an insignificant impact on the possible users of the area;
- d) the proposed licence change would not affect the statutory status of the area and in particular, would not be inconsistent with the Kerry Biodiversity and Heritage Plans 2008 - 2012;
- e) the proposed licence change would enhance employment security and generally benefit local economic activity;
- f) wild fisheries, natural habitat, flora and fauna populations in the area would not be affected in any significant way as long as effective controls and monitoring protocols were observed;
- g) the proposed change was consistent with best practice in the industry;
- h) environmental changes would be negligible following the proposed amendment to the licence; and,
- i) man-made heritage values in the area would not be affected following the envisaged change.

In summary – and taking all other available information into account – it would appear the amendment would pose an insignificant impact on the environment, statutory status and man-made heritage value of the area. Furthermore, the Board believes the proposed change would have positive effects on the economy in the surrounding area.



Mark O'Connell

Chairperson

For and on the behalf of the  
Aquaculture Licences Appeals Board

T6/202


CERTIFICATION OF AMENDMENT  
OF  
AQUACULTURE LICENCE No. 199  
AND  
FORESHORE LICENCE No. 199

Dated the 31<sup>st</sup> of October, 2012

This is to certify that the above-mentioned licences referred to as "Deenish T6/202 AQ199" have been amended subject to the modification of the Aquaculture Licence specified in the Certification of Renewal dated the 4<sup>th</sup> of August 2004, with the approval of the Minister for Agriculture, Food and the Marine for the period up to and including the 31<sup>st</sup> of March 2015 subject to the special conditions thereof and subject to the provisions of the Fisheries (Amendment) Act 1997 (No 23) as amended.

The special conditions are set out in a letter from the Department of Agriculture, Fisheries and Food to Mr Jan Feenstra, Marine Harvest Ireland dated 1<sup>st</sup> April 2011 and is attached hereto.

Signed

  
\_\_\_\_\_  
Mark O'Connell,  
Chairman,  
Aquaculture Licence Appeals Board



Mr Jan Feenstra  
Marine Harvest Ireland  
Rinmore  
Ballylar  
Letterkenny  
Co Donegal

Our Ref: - Deenish T6/202 AQ199

1 April 2011

Dear Mr Feenstra,

I refer to your letter of 7<sup>th</sup> February 2011 requesting the Department to approve the company's request to change the permitted stocking arrangements at the Deenish site.

The Minister approved the amendment of the licence on 22 March, 2011, subject to the following "special conditions".

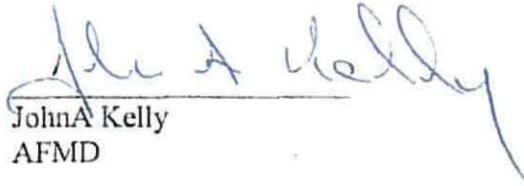
- That MHI only introduce smolts into Deenish and do not introduce any smolts into any of the other sites in their Southwest portfolio in 2011.
- In particular, that the Travara site, which may be defunct in any case, be kept on an extended fallow arrangement for the full duration of this pilot action (*i.e.* until 2013).
- That MHI carry out an additional benthic impact monitoring study to the usual pattern (in accordance with the protocol methodology), at their own expense, to check that the predictive model is correct at the mid point in the cycle.
- That MHI submit monthly stock reports, including all fish movements both within and to and from the site, of a standard and format agreed and determined by the agencies and DAFF Engineering Division to the Department to ensure that the pilot operation is proceeding as anticipated.
- That the company shall have available on demand by the Department, or its agents, records of all key site activities including; net inspections, preventative maintenance actions and that all required navigation marks are maintained in a good state of repair.
- That it be made clear to the company that this arrangement, if permitted, is strictly a once off pilot for this site only and that any repeat of the stocking pattern would have to be considered, *inter alia*, in light of the outcome of the monitoring and the progress of the implementation of overall licensing policy towards the use of 'maximum standing stock biomass' as a control point in licence terms and conditions
- That this pilot shall not be considered as a precedent in the context of the licence conditions attaching to any other site.

The Notice of Decision is attached.

Please be aware, however, that in accordance with Regulation 19 of S.I. No. 236/1998 – Aquaculture (Licence Applications) Regulations, 1998, the Minister is required to publish a notice of his decision “within 2 weeks after making the decision, in a newspaper circulating in the vicinity of the location of the proposed aquaculture”. Any person aggrieved by the decision may, in accordance with Section 41 of the Fisheries (Amendment) Act, 1997, appeal against it in writing to the Aquaculture Licences Appeals Board, by completing the Notice of Appeal Application Form available from the Board. This appeal must be lodged within one month beginning on the date of the publication of the decision.

In the case that there is no appeal the licence will be issued to you as soon as practicable after the end of the appeal period.

Yours sincerely,



John A Kelly  
AFMD

**FISHERIES (AMENDMENT) ACT, 1997 (No.23)**  
**NOTICE OF DECISION TO AMEND AN AQUACULTURE LICENCE**

**Reference Number:** T6/202

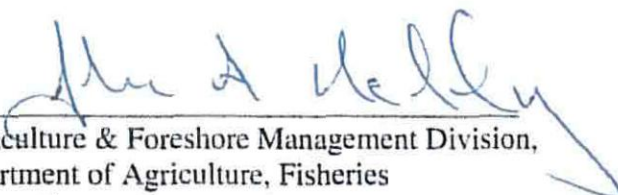
**Licensee:** Silver King Seafoods Limited  
c/o John Power  
Curryglass  
Waterfall  
Co Cork

**Aquaculture to which decision relates:** A temporary amendment of two years duration for the cultivation of salmon at Deenish Island, Ballinskelligs Bay, Co Kerry to facilitate a once-off pilot project involving the use of maximum standing stock biomass as a means of gauging and capping production capacity, subject to special conditions.

**Date of Decision:** 22 March 2011

**Amendment of Licence:** The amended licence will be issued as soon as possible after the end of the period of one month from the date of publication of a notice in a newspaper circulating in the vicinity of the proposed aquaculture if no appeal is made to the Aquaculture Licences Appeals Board within that period, under Section 40 of the Fisheries (Amendment) Act, 1997

**Signed:**

  
Aquaculture & Foreshore Management Division,  
Department of Agriculture, Fisheries  
And Food.







# Deenish 13S1 Stock Report

LICENCE REF. T6/202; AP1/2011  
20.01.2015

MARINE HARVEST ASA

Marine Harvest Ireland

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## Introduction

On October 31<sup>st</sup> 2012, Marine Harvest Ireland was granted a 2 year amendment to Aquaculture licence No. AQ199 which was assigned to Silverking Seafoods Ltd., permitting the cultivation of salmon at Deenish Island, Ballinskelligs Bay, co. Kerry, subject to the enforcement of special conditions.

Under the terms of this amended licence a crop of Fanad/Mowi strain of salmon smolts was moved from Altan Smolt Unit, Co. Donegal to Deenish in April 2013 and moved from the Deenish site for harvest by November 30<sup>th</sup> 2014.

This report summarises the Key performance indicators of this crop in addition to the assessed impact on the local marine benthos.

### Site Natural Features:

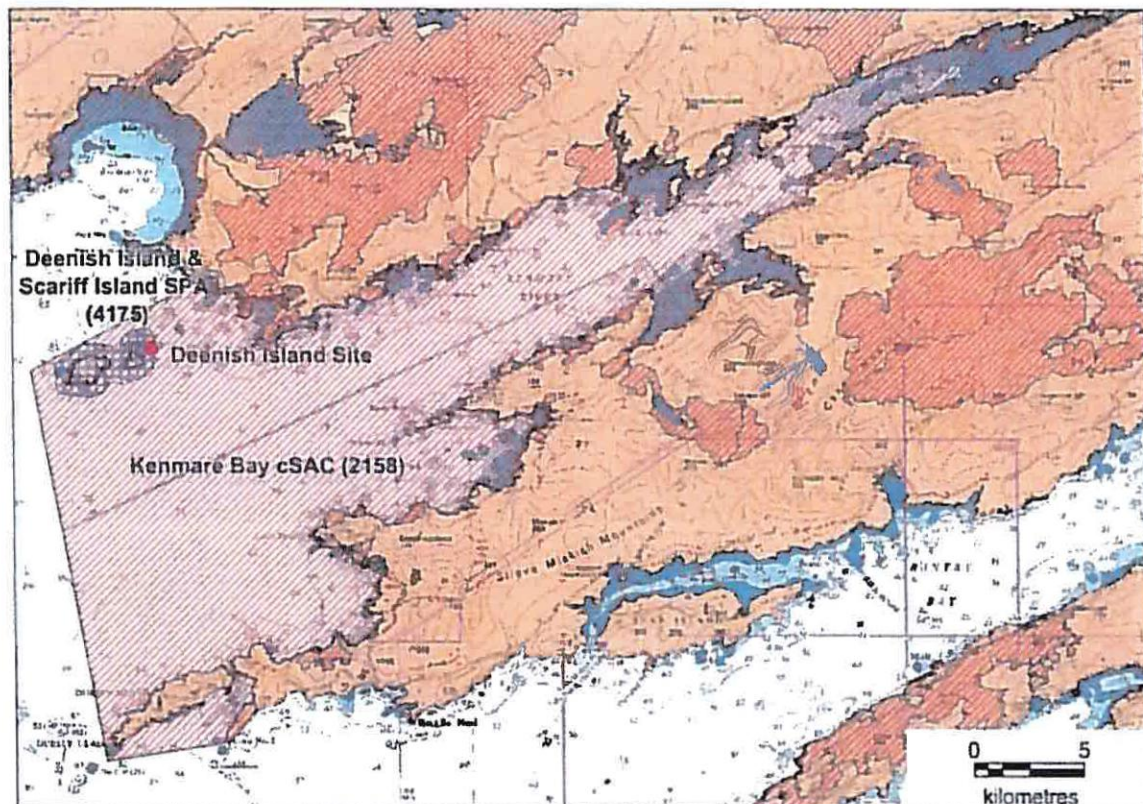


Figure 1: Map showing the locations of the relevant cSAC and SPA.





Kenmare Bay, Co. Kerry, is a long and narrow, south-west facing bay. It is a deep, drowned glacial valley and the bedrock is mainly Old Red Sandstone which forms reefs along the middle of the bay throughout its length. Exposure to prevailing winds and swells at the mouth diminishes towards the head of the bay. Numerous islands and inlets along the length of the bay provide further areas of additional shelter in which a variety of habitats and unusual communities occur.

Two Natura 2000 sites are of relevance for the Deenish site (see Figure 2.2). Deenish Island is located in the outer reaches of the Kenmare River cSAC (Site code: 002158) and the island forms part of the Deenish Island and Scariff Island SPA (Site code: 004175).

Kenmare River cSAC has a very wide range of marine communities from exposed coast to ultra-sheltered areas. The site contains three marine habitats listed on Annex I of the EU Habitats Directive, namely reefs, large shallow bay and caves. There is also an extremely high number of rare and notable marine species present (24) and some uncommon communities. Kenmare River is the only known site in Ireland for the northern sea-fan, *Swiftia pallida* and is the only known area where this species and the southern sea-fan *Eunicella verrucosa* co-occur. Midway along the south coast of Kenmare River, a series of sea caves stretch back into the cliff. They typically support encrusting sponges, ascidians and bryozoans.

Deenish Island and Scariff Island are small- to medium-sized islands situated between 5 and 7 km west of Lamb's Head off the Co. Kerry coast; they are thus very exposed to the force of the Atlantic Ocean. The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Fulmar, Manx Shearwater, Storm Petrel, Lesser Black-backed Gull and Arctic Tern. Scariff is the larger of the two. It is steep-sided all the way around and rises to a peak of 252m. The highest cliffs are on the south side. The island vegetation is a mix of maritime grassland, areas dominated by Bracken and heathy areas with Ling Heather. There are the ruins of a monastic settlement and a cottage in the north-east sector of the island. Deenish is less rugged than Scariff, and rises to 144m in its southern half; the northern half is lower and flatter. The vegetation is mostly grassland, with some heath occurring on the higher ground. Old fields are now overgrown with Bracken and brambles. The sea areas to 500m around the islands are included inside the SPA boundary to provide a 'rafting' area for shearwaters.

### Site Layout and equipment:

A total of 14 Aqualine plastic pens along with associated grid frame and moorings were laid out in a 3 x 5 grid pattern, within the licenced area. One pen was not stocked. A feed barge which also houses a small canteen and office was moored on the western site of the grid layout and in the lee of Deenish Island. Refer to the following sketch map. Fig. 2

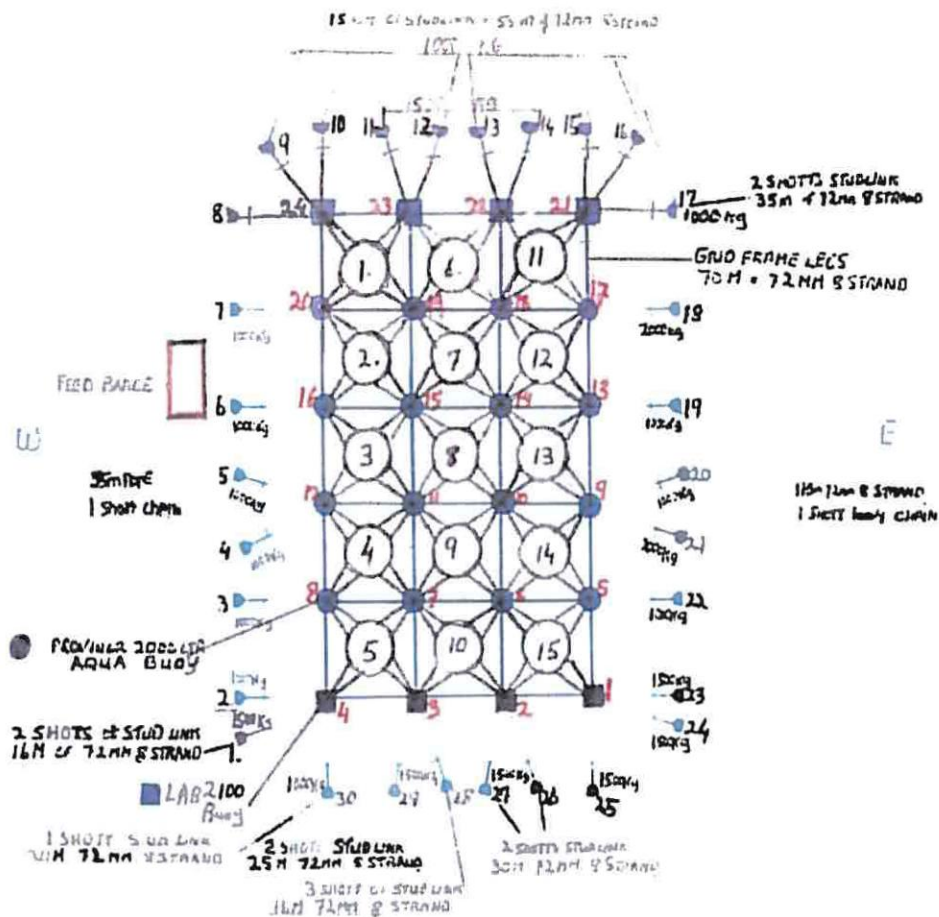


Figure 2: Site layout.

### Site Staffing:

The Deenish site was staffed by 8 staff including a site Manager. Additional sub aqua diving and mooring services was provided by an additional 5 staff employed or subcontracted by MHI. In addition, the site was serviced by engineers and electricians based in Castletownbere.

### Key Performance Indicators:

Stock Input	834,000 Fanad Mowi smolt
Total input biomass	49 tons
Total Harvest biomass	2,270 tons live weight (1,884 gutted weight)
Economic Feed Conversion Ratio (EFCR)	1.36
Biological Feed Conversion ratio (BFCR)	1.2





Relative Growth Index:	91.2%
Total mortality:	36.4%
Principal causes of mortality:	Jellyfish, harmful algal blooms and Amoebic Gill Damage.
Lice treatments	None
Escaped fish	None
Lost Time Injuries	None
AGD Freshwater baths	3
Superior quality Grade	93.5%
Ordinary Quality Grade	4.29%

### Sea Lice monitoring and control:

In accordance with MHI Sealice monitoring and control procedures and when weather conditions allowed, at least 10 fish were sampled weekly from each of a minimum of three pens on site. Sea lice counts were conducted up to the point of commencement of harvest thus counts cover a period of 80 weeks from April 2013 to November 2014. When average numbers of gravid lice reach 0.2 per fish or total lice numbers exceed 5, a treatment is required. For organic production, this is subject to permission from the organic certifying bodies.

However, in the case of Deenish 13S1 crop, sea lice levels remained below treatment trigger levels and thus did not require any lice removal treatments. Sea lice levels for the 13S1 crop are summarised on the following graph.

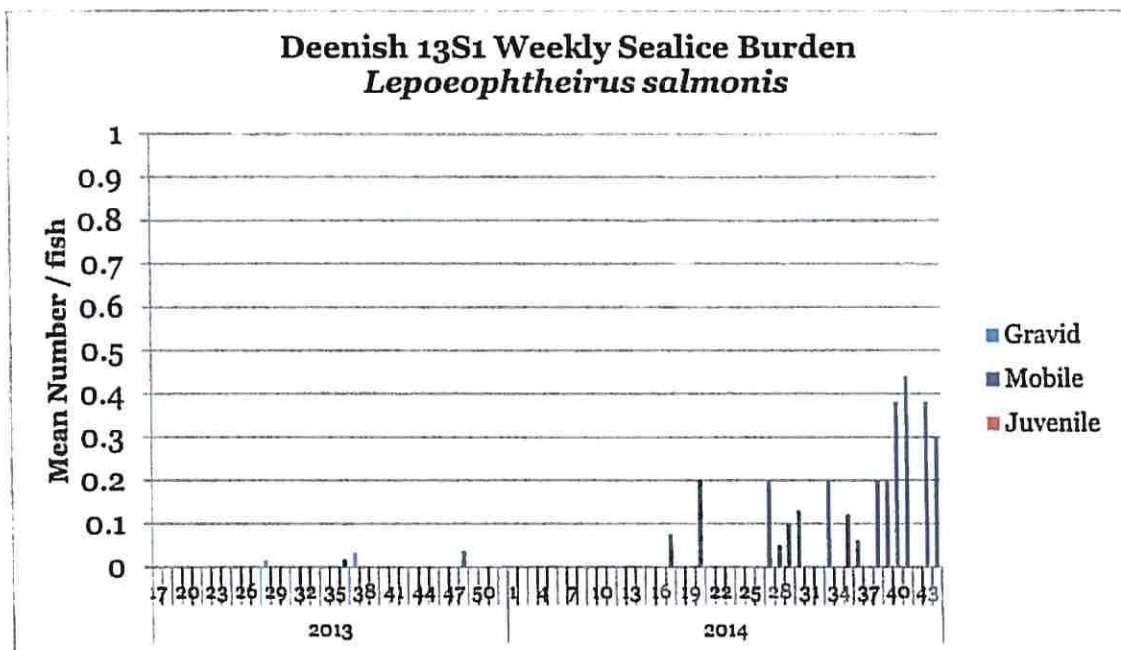


Fig. 3 Deenish Sea lice burden (all stages)



## Fish Health Management:

The health of the Deenish 13S1 fish was closely monitored and recorded at four levels:

1. Daily observations by the site manager and feeding operatives of fish behaviour during routine operations such as feeding and net changing. Any unusual behaviour was recorded on the daily feeding sheets and reported immediately to the Operations Manager and the Marine Fish Health Manager.
2. Professional divers examined the behaviour and general health of the fish on a regular basis. Diver observations and a breakdown of mortality numbers by likely cause of death were recorded on the 'Mortality Record' sheets.
3. The company veterinarian (Vet-Aqua International) carried out a total of 16 site visits. In addition to this all sites was visited at least monthly by the South West Fish Health Surveillance biologist. During visits, fish would be clinically examined for general behaviour, body condition and external abnormalities, by anaesthesia. Samples were screened for skin, gill and internal parasites and recent mortalities also post-mortemed for any unusual findings. Full laboratory support was provided by the designated veterinary practice.
4. The stock performance (e.g. feeding rate, mortality rates) were assessed at least once a week by the Production Manager for any indication of disease/abnormalities in the stock

## Benthic Monitoring and Impact:

During the 20 month production period, two benthic surveys were carried out on the Deenish site by Environmental consultants, Aquafact Ltd.

On 28<sup>th</sup> August 2013 a benthic survey was carried out on the Deenish site. The survey followed the DCMNR Level I monitoring protocols. The site was fallow for approximately three weeks before an onsite biomass production of 249.5 tonnes in the four month period prior to the survey. Mean current speed at the site is approximately 0.3ms<sup>-1</sup>.

The seabed was composed of a mix of sediment types with areas of fine-medium sand and areas of slightly coarser sand shell gravel mix as can be seen in the following images.





Figure 4: Sea bed images

The composition of sediments at each station can be seen in the sediment profile imagery (SPI) images with fine sand at the under pen station to a coarser shelly gravelly sand at the outer end of the transect. (Fig. 4). ARPD depths ranged from a minimum of 0.2cm (T1 Under, T1 Edge, T1 20m and T1 50m) to a maximum of >6.5cm (T1 100m). (Fig. 5).



Figure 5: ARPD depths

Organic carbon values ranged from 1.88 % (T2 50 m) to 7.08 % (T1 100 m) with the reference station recording a value of 1.56 %

In August 2014 Aquafact Environmental consultants carried out a DCMNR Level 2 survey with the addition of an Aquaculture Stewardship Council (ASC) standard survey as requested by MHI. This additional ASC survey was required in partial fulfilment of the second principle of the ASC Aquaculture Standard which is;

- *Principle 2: Conserve natural habitat, local biodiversity and ecosystem function*

The fulfilment of Criterion 1: of ASC Principle 2 - Benthic biodiversity and benthic effects was the purpose of this assessment.

At the time of the survey, the standing biomass on site was 2,067 tons. A total of 9 sample stations at the Deenish fish farm site on the 7th August 2014 were sampled for faunal and sediment analyses.

Redox potential values met the standard of  $>0$  mV at all stations except stations S5 and S2 (replicate A). Shannon Weiner diversity values met the standard of  $>3$  at 6 of the stations, with stations S1, S4 and S5 returning values below the standard. AMBI scores met the standard of  $\leq 3.3$  at 6 of the stations, with stations S1, S2 and S4 returning values  $>3.3$ . These 3 stations were closest to the pen and as expected were the most impacted and returned a disturbance classification of 'Moderately Disturbed'. The remaining stations were all classified as 'Slightly Disturbed' with the Reference station classified as 'Undisturbed'. Five of the 9 stations met the standard for numbers of non-pollution indicator species present at frequencies of  $\geq 100/m^2$ .

When compared to the 2012 and 2013 benthic surveys, results for this site indicate little habitat degradation is obvious beyond the edge station on both transects at the Deenish site. Results from previous years surveys of the seafloor beneath the Deenish Island pen blocks indicated little change year on year on and showed few obvious signs of impact. In general the surface appearance of the seafloor was devoid of any indication of the overlying pens beyond the immediate footprint of the pens.

### Water Column nutrient monitoring:

In accordance with Monitoring Protocol No. 2. for offshore finfish farms water column monitoring, water samples were collected at three points in the centre of the farm site and one control sample was collected at a distance from the site. Results are summarised in the following table;





Sample point	GPS location	DATE	WEEK	NO <sub>2</sub> ug/L	NO <sub>3</sub> ug/L	Phosphorous ug/L	TAN ug/l	Chlorophyll ug/L
1m below surface	Lat. 51-44-18 Long. 10-13-04	17-Dec-13	51	0.89	66.51	24.62	0.45	0.00
		10-Jan-14	2	1.17	85.52	18.33	3.58	0.00
		17-Feb-14	8	0.98	28.63	20.35	17.22	0.00
		06-Mar-14	10	1.56	19.53	20.35	5.71	0.17
Mid depth		17-Dec-13	51	1.74	73.03	24.62	0.0	0.00
		10-Jan-14	2	1.17	62.91	12.66	2.58	0.00
		17-Feb-14	8	1.27	34.63	20.35	5.71	0.00
		06-Mar-14	10	1.86	55.73	29.03	6.75	0.00
1m above seabed		17-Dec-13	51	1.45	66.38	29.95	0.45	0.00
		10-Jan-14	2	0.91	67.45	14.55	1.59	0.00
		17-Feb-14	8	0.98	35.47	18.18	8.84	0.00
		06-Mar-14	10	1.86	63.14	39.88	9.89	0.00
Control	Lat 51-44-90 Long 10-0-10	10-Jan-14	2	2.52	95.33	18.33	12.53	0.00
		17-Feb-14	8	1.06	74.64	12.42	5.82	0.00
		06-Mar-14	10	0.5	29.45	16.45	3.56	0.00

### Site Inspections and Certifications:

The 13S1 crop was reared under EU Organic rules in accordance with EC 710/2009 in addition to Naturland (German Private Label) and BioSuisse (Swiss) Organic aquaculture standards with certificates awarded after independent audit verification during 2013 and 2014. In addition the site was audited and awarded the Global GAP aquaculture standard.

The integrated Quality, Environmental and HES management systems for the site also audited by the NSAI under ISO 9001, ISO 14001 and OHSAS 18001 standards.

During November 2014, the first Aquaculture Stewardship Council aquaculture audit in the Irish Aquaculture industry was carried out on the Deenish 13S1 crop.

The Aquaculture Stewardship Council (ASC) sets an unprecedented standard for sustainable food production. This Salmon standard provides guidelines for responsible salmon farming which minimises negative impacts on the environment and enhances local communities. The ASC standard includes guidelines for the protection of the health and genetic integrity of wild populations, responsible use of resources, disease management, social responsibility, and community and stakeholder engagement are included to ensure compliance by aquaculture companies worldwide. The ASC certification decision for this site is expected in February 2015.

## Conclusions:

Concerning stock husbandry, management of sea lice and benthic impacts this pilot project worked very well. By stocking Deenish with one smolt input to grow out within a 21 month period with no additional stock inputs, this has allowed the effective control of sea lice without the use of any therapeutic interventions.

In addition, the environmental benthic surveys have shown no difference in impact compared to previous inputs and with an increased standing biomass in excess of 2,000 tons.

## Appendices:

<O:\Benthic Monitoring Marine\2014\JN1263 Deenish 2014 ASC Audit.pdf>  
<O:\Benthic Monitoring Marine\2014\JN1263 Deenish 2014 Audit.pdf>  
<O:\Benthic Monitoring Marine\2013\JN1208 Kenmare Bay 2013 Audit.pdf>  
<O:\Benthic Monitoring Marine\2012\JN1160 Kenmare Bay 2012 Audit.pdf>  
<I:\Aquaculture licenses\Deenish Aquaculture licenses\ALABDeenishDecision311012.pdf>  
<Deenish amendment 2011.pdf>  
<O:\Certifications 2014\Bio Suisse\Bio Suisse 2014 SW.pdf>  
<O:\Certifications 2014\COSORG\COSORG1029 MHI Deenish Cert 020715.pdf>  
<O:\Certifications 2014\Global GAP\GGAP Certificate MH Ireland 110614.pdf>  
<O:\Certifications 2014\Naturland\Naturland 2014 2015.pdf>  
<O:\Certifications 2014\ISO Certs\ISO 14001 cert exp 110116.pdf>  
<O:\Certifications 2014\ISO Certs\ISO 9001 cert exp 110116.pdf>



Department of  
**Agriculture,  
Food and the Marine**  
An Roinn  
**Talmhaíochta,  
Bia agus Mara**

Mr Jan Feenstra,  
Chief Executive Officer,  
Bradán Fanad Teoranta,  
Kindrum,  
Fanad,  
Letterkenny,  
Co Donegal.

27 March 2015

Aquaculture Licence No AQ 199 and Foreshore Licence FSL 199.  
Deenish. Ref: T6/202

Dear Mr Feenstra,

I refer to the amendment to the above licences granted by the Aquaculture Licence Appeals Board on 31<sup>st</sup> October 2012.

I am to remind and advise you that the amendment granted was for the period up to and including 31<sup>st</sup> March 2015 and that the licensee must from that date forward operate in full compliance with the original terms and conditions of the licence.

Marine Harvest Ireland is as you aware currently operating at this site under the provisions of Section 19A(4) of the Fisheries (Amendment) Act 1997, pending a determination on the renewal of the licence, currently under consideration. The existing terms and conditions of the licence must be adhered to in all respects pending this determination.

Section 19A(4) of the Fisheries (Amendment) Act states:

*"A licensee who has applied for the renewal or further renewal of an aquaculture licence shall, notwithstanding the expiration of the period for which the licence was granted or renewed but subject otherwise to the terms and conditions of the licence, be entitled to continue the aquaculture or operations in relation to aquaculture authorised by the licence pending the decision on the said application."*

Yours sincerely,

Kevin Hodnett  
Assistant Principal  
Department of Agriculture, Food and the Marine  
Aquaculture & Foreshore Management Division  
National Seafood Centre  
Clonakilty  
Co Cork.  
Tel 023/8859503





**OShea, Nicole**

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**From:** McManus, Catherine [Catherine.McManus@marineharvest.com]  
**Sent:** 24 February 2017 15:41  
**To:** OShea, Nicole  
**Cc:** Feenstra, Jan C  
**Subject:** RE: T6/202 - Deenish  
**Attachments:** Deenish Harvest DW 2016.pdf

Dear Nicole,

Please find attached details of all harvest batches from Deenish T6/202 in 2016. Note that no fish were harvested from Deenish stocks in 2015.

The contents of the attached harvest summary submitted to Department of Agriculture, Food and the Marine (the "Department") are confidential and commercially sensitive. The document is provided to the Department on a confidential basis, and on the understanding that they will remain confidential.

The information contained in the document submitted, in its entirety, constitutes commercially sensitive information, the disclosure of which would prejudice and adversely affect the interests of Marine Harvest Ireland.

If, pursuant to section 12 of the Freedom of Information Act 2014, Regulation 6 of the Access to Information on Environment Regulations 2007 – 2014 or otherwise, the Department receives any requests for disclosure of information contained in this document submitted by Marine Harvest Ireland the Department should refuse to grant the request on the basis that the contents of the document (as mentioned) are confidential and commercially sensitive and exempt from disclosure. Without prejudice to the foregoing, we ask that we are notified of such request and that we are consulted and our comments taken into account and we are given an opportunity to redact any and all information as we deem appropriate before any action is taken. We also ask that you notify us of any appeal to the Office of the Information Commissioner, the Commissioner for Environmental Information or any other decision-making / judicial body that arises from any such request.

Best regards

-----  
**Catherine McManus**

Technical Manager  
MARINE HARVEST IRELAND

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OFFICE: Rinmore, Ballylar P.O., Letterkenny  
Co. Donegal  
Ireland. F92 T677



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**From:** OShea, Nicole [<mailto:Nicole.OShea@agriculture.gov.ie>]  
**Sent:** 13 February 2017 15:15  
**To:** McManus, Catherine  
**Cc:** Quinlan, John; Hodnett, Kevin; Feenstra, Jan C  
**Subject:** T6/202 - Deenish

Dear Catherine,

This is further to previous correspondence and discussion in relation to the above site. In order to facilitate the cross references of records, you are requested please to forward information in relation to the above site for the years 2015 and 2016. The details sought are as follows:

- Date of each harvest
- The tonnage (dead weight) per harvest

You are requested please to forward these to me as soon as possible and in any event not later than Monday 27<sup>th</sup> February.

Yours Sincerely,

Nicole O'Shea  
Aquaculture & Foreshore Management Division  
Department of Agriculture, Food and the Marine  
National Seafood Centre,  
Clonakilty  
Co. Cork  
023 8859507

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Department of Agriculture, Food and the Marine

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An Roinn Talmhaíochta, Bia agus Mara

Tá an t-eolas san ríomhphost seo, agus in aon ceanglaín leis, faoi phribhléid agus faoi run agus le h-ghaigh an seolai amháin. D'fhéadadh ábhar an seoladh seo bheith faoi phribhléid profesúnta nó dlíthiúil. Mura túa an seolai a bhí beartaíthe leis an ríomhphost seo a fháil, tá cosc air, nó aon chuid de, a úsáid, a choipeáil, nó a scaoileadh. Má tháinig sé chugat da bharr dearmad, téigh i dteagmháil leis an seoltóir agus scríos an t-ábhar ó do ríomhaire le do thoil.

**DEENISH HARVEST DATA 2016**

Date	Batch	Pen No.	Dead WT Kg
02/10/2016	100211	15	51,964.39
04/10/2016	100218	15	54,757.43
05/10/2016	100215	15	54,743.00
06/10/2016	100221	15	26,545.06
06/10/2016	100224	7	10,017.57
09/10/2016	100227	3	56,081.94
10/10/2016	100228	3	51,183.49
12/10/2016	100231	3	56,441.96
13/10/2016	100237	1	51,816.48
16/10/2016	100239	1	40,539.95
17/10/2016	100242	1	52,596.24
18/10/2016	100244	10	40,644.31
18/10/2016	100249	1	6,987.52
19/10/2016	100246	10	50,326.73
20/10/2016	100248	10	48,992.78
24/10/2016	100253	10	50,262.43
25/10/2016	100255	13	41,802.40
26/10/2016	100257	13	43,698.64
27/10/2016	100259	13	42,139.83
13/12/2016	100345	5	34,406.39
14/12/2016	100346	5	26,587.00
15/12/2016	100348	5	37,599.17
18/12/2016	100350	5	48,880.30
19/12/2016	100352	5	32,308.56
19/12/2016	100355	13	17,732.27
20/12/2016	100353	13	48,242.40
21/12/2016	100354	13	31,609.12
<b>TOTAL</b>			<b>1,108,907.36</b>





Mr Jan Feenstra  
 Silver King Seafoods  
 Comhlucht Iascaireacta Fanad Teoranta (t/a Marine Harvest Ireland)  
 Fanad Fisheries  
 Kindrum  
 Fanad  
 Letterkenny  
 Co Donegal



Department of  
**Agriculture,  
 Food and the Marine**  
 An Roinn  
**Talmhaíochta,  
 Bia agus Mara**

**COPY**

sent by registered post

9<sup>th</sup> March 2017

Re: Aquaculture and Foreshore Licences for Silver King Seafoods Limited at a designated site east of Deenish Island in Ballinskelligs Bay, Co Kerry (T6/202)

Dear Mr Feenstra,

I am to refer to the above licences, which are now expired. I am also to refer to Section 19A(4) of the Fisheries (Amendment) Act 1997 (as amended), and to the Company's statutory entitlement to continue aquaculture operations subject to the conditions of the above-named expired licences.

I am to inform you that, pursuant to the provisions of Section 19A(4) of the Fisheries (Amendment) Act 1997 (as amended), the Minister may treat the Company's statutory entitlement to continue aquaculture operations as having ceased, should you breach the conditions of your expired licences pending the consideration of your application for renewal of those licences.

Condition No. 2(e) of the Aquaculture Licence ('the licence') for the culture of salmon in cages at a designated site east of Deenish Island in Ballinskelligs Bay, Co Kerry (T6/202) states:

*"the Licensee shall not harvest more than 500 tonnes (dead weight) of salmon in any one calendar year."*

The Department is in receipt of your Company's email dated 24<sup>th</sup> February 2017 which has advised that the total dead weight harvested for the above site in the calendar year ended 31<sup>st</sup> December 2016 was 1,108,907.36kg (1,108.91 tonnes) dead weight.


Condition 3 of the licence states:

*"The Minister shall be at liberty at any time to revoke or amend this licence if he considers that it is in the public interest to do so or if he is satisfied that there has been a breach of any condition specified in the licence or that the fishery to which the licence relates is not being properly maintained. Any such revocation or amendment shall be subject to the provisions of section 15 of the Fisheries (Consolidation) Act, 1959."*

I am to advise you that consideration is now being given to the possibility that your statutory entitlement to operate at the above site under the provisions of Section 19(A)4 of the Fisheries (Amendment) Act 1997 (as amended) may now have ceased, on account of the breach of a condition of the licence.

I am to inform you that the Minister shall consider any representations in relation to the proposed cessation of your statutory entitlement, and that said representations must be communicated within 28 days of the date of this notification if they are to be considered.

Yours Sincerely,



Kevin Hodnett

Assistant Principal Officer

Aquaculture & Foreshore Management Division

Department of Agriculture, Food and the Marine

National Seafood Centre

Clonakilty

Co Cork

69

Mr. Kevin Hodnett,  
Ass. Principal Officer,  
Aquaculture & Foreshore Management Div.  
Dept. of Agriculture, Food and the Marine,  
National Seafood Centre,  
County Cork.



**Marine Harvest Ireland**  
Rinmore, Foonad, Letterkenny, Co. Donegal  
Telephone: +353 (0) 74 9159071  
Fax: +353 (0) 74 9159077

3<sup>rd</sup> of April 2017.

Ref. Your correspondence dated 9<sup>th</sup> of March 2017 in relation to our licensed operation T6/202.

Dear Mr. Hodnett,

I refer to your letter dated 9 March 2017 and to your invitation to Marine Harvest Ireland ("MHI") the to make representations to the Department of Agriculture, Food and the Marines (the "Department") in relation to our statutory entitlement to continue operation of MHI's facility at Deenish and Licence T6 / 202 (the "Licence").

We have previously made representations about this site (letters dated 15 of June 2016 and 19 July 2016), and these letters remain relevant and should be read together with this letter.

MHI is pleased to confirm that there has not been any breach of the Licence as alleged. The environmental monitoring of the site demonstrates a most responsible and sustainable activity with no adverse effects on the local environment.

MHI is making these representations strictly without prejudice to the fact that MHI's statutory entitlement to operate cannot be treated by the Minister as having ceased because the legislation makes no such provision. Even if condition 3 of the Licence (which refers to defunct and now repealed legislation) were to have such a meaning, MHI is not in breach of the Licence. As the evidence demonstrates, the aquaculture operation at Deenish is being properly maintained with the application of best available techniques.

MHI relies on its constitutional property rights, which are protected by the statutory entitlement to operate conferred by section 19A(4) of the Fisheries (Amendment) Act 1997 (as amended) (the "1997 Act"). Silver King Seafoods Limited applied for a renewal of the Licence on 5 February 2007. Unfortunately, the decision in relation to this application is long delayed and is still awaited. Due to that delay, MHI has continued to engage in aquaculture at the Deenish site under the statutory entitlement afforded to it by section 19A(4) of the 1997 Act.

MHI would like to take this opportunity to submit that the decision in relation to this Licence should be made within a period of no more than six months from this date.

The Department will be aware that the parameters and terminology of the Licence are out of date when compared to best international practices. This is unfortunately the case with many aquaculture licences. For example, the Licence sets stocking limits by reference to "smolts", rather than "Maximum Allowable Biomass", despite the fact that Maximum Allowable Biomass is

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Directors: Jan Feenstra (Dutch), Pól Connors, David Brennan



internationally-recognised as the most appropriate standard metric of production and that the Minister issued a press release on 5 December 2011 clearly outlining the policy to implement a Maximum Allowable Biomass limit to salmon rearing operations.

We have enclosed an independent opinion on the wording of the Licence which has been prepared by Professor Randolph Richards, who is one of the world's leading experts on aquaculture. The Department will note that Professor Richards has concluded that the wording is:

*"...out of date, inappropriate and contrary to supporting best practices."*

## 1 Summary

The issue raised in your letter notes a harvest weight of 1,109 tonnes HOG in 2016 and draws attention to the condition 2(e) of the Licence:

*(e) the Licensee shall not harvest more than 500 tonnes (dead weight) of salmon in any one calendar year".*

MHI understands that this condition was originally included in the Licence because there was a concern about the practice and effects of blood-water during harvesting and the potential environmental implications. The Department, and the Marine Institute, will be aware that modern practices of harvesting have since changed to ensure that zero blood-water is spilled from a farm into its local environment.

In line with best practice and in accordance with condition 2(d) of the Licence, MHI operates a two-year gestation and transfer cycle at the Deenish facility. The practical outcome of this cycle is that salmon are transferred from the Deenish facility every second year only (ie, 2012, 2014, 2016, etc). In other years (ie, 2013, 2015, 2017), there is no transfer of salmon from the Deenish facility. The records submitted to the Department by MHI will verify this cycle.

In any event, MHI does not harvest salmon at Deenish. At the end of two-year gestation cycle, MHI transfers live salmon from Deenish to the quay at Castletownbere, where the harvesting of those salmon occurs.

Accordingly, there has been no breach of condition 2(e) of the Licence.

Without prejudice to that position, the Minister is obliged to adopt a holistic and purposive approach to interpreting compliance with the conditions of the Licence<sup>1</sup>. The purpose of this condition 2(e) is to minimise environmental impacts. MHI's practice, described above, minimises all impacts. The calendar timeframe outlined in the Licence is incompatible with the rearing cycle of a salmon whilst applying an "all in all out" production schedule as is recognised to be critical optimising the control of sea-lice (and recommended by the Marine Institute). There is surely an onus on the Department to encourage, if not insist on, the application of best available technology in the management and operation of aquaculture; specifically with the aim to minimise sea-lice.

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1. It has been recognised by the Irish courts that when considering the meaning of the language in a document that governs legal rights and obligations, including licences, the meaning of the words used must be considered in light of their context.



## 2 No breach of Licence and no impacts

MHI has engaged in aquaculture at the Deenish facility under the Licence since April 2010. You may be unaware that this Licence was previously (2001) operated in conjunction with a sister summer site licence (Travara) which was surrendered in anticipation of regularising this and other nearby licences – but this process fell apart during de-centralisation. There is abundant evidence that there have been no breaches and that the aquaculture operation is being properly maintained. By way of example only:

MHI carries out all testing required by the terms of the Licence, namely:

- Benthic Monitoring, in accordance with the specifications of the Department's *"Monitoring Protocol No 1 for Offshore Finfish Farms – Benthic Monitoring"*; and
- Water Column Monitoring in accordance with the specifications of the Department's *"Monitoring Protocol No 2 for Offshore Finfish Farms – Water Column Monitoring"*.

MHI also arranges for the management of sea-lice in accordance with the specifications of the Department's *"Monitoring Protocol No 3 for Offshore Finfish Farms – Sea-Lice Monitoring and Control"* and co-operates in the audit of its aquaculture operations in accordance with the specifications of the Department's *"Monitoring Protocol No 4 for Offshore Finfish Farms – Audit of Operations"*. The sea-lice control at this site has been exemplary with no trigger level exceedances noted by the experts, the Marine Institute, since Marine Harvest commenced operations at this site in April 2010

MHI has also attained the Aquaculture Stewardship Council's Certificate of Conformity for the Deenish facility (copy certificate dated 10 March 2015 and environmental survey carried out by Aquafact International Services Limited dated September 2016 enclosed).

The test results, audits and certification, which are all available to the Department, confirm that there have been no exceedances of limits caused by any of MHI's activities at the Deenish facility, including the transfer of salmon over 2016.

## 3 Public interest

MHI is Ireland's largest seafood company and employs 295 staff in remote communities. MHI utilises over 800 Irish suppliers for goods and services and, if one applies the Teagasc approved aquaculture multiplier of 2.27, it can be seen that the employment of approximately 1,000 persons is dependent on MHI's operations in Ireland. MHI's sales revenue for 2016 was €67 million with 83% of our fish being exported. MHI's taxes to the Irish exchequer in 2016 are estimated to be approximately €3.6 million. MHI also paid licence fees of €116,000 to the Department in 2016.

In light of the current deadlock being experienced in the existing aquaculture licensing system, MHI cannot understate the importance of being able to operate every facility for which it has permission in order to maintain our viability and levels of employment. Unlike our competing industries and sister companies in Scotland, the Faroe Isles and Norway, our production has shrunk over time and

continues to struggle for viability. Our processing plant was shut for January and February past, and for most months of the year we are not able to offer a 5 day working week to our 120 processing staff. Continuing our operation at this Deenish site is critical to MHI's overall viability and Ireland's attractiveness for further and new investment in aquaculture.

The government has commissioned a number of reports which have noted the potential of the Irish aquaculture industry. Those reports have set ambitious growth targets to develop the sector. At present, the aquaculture industry in Ireland is underperforming as a direct consequence of the inefficiencies within the current licensing system.

In this context MHI is most grateful to the Minister for having executed the Independent Aquaculture Licensing Review Group ("IALRG"), which is expected to report to the Minister in a month or so from now. We are hopeful that this group's findings will offer constructive and implementable measures to regularise our industry and bring it up to date. There must surely be a shared vision for an aquaculture industry that is fully compliant with up to date licences that are readily monitored in a transparent and sensible manner. To this end, MHI put in a very big and constructive effort to support this review as demonstrated by its submission. For your benefit we attach our submission to the Independent Review Group, in case you have thus far not had the benefit of our input.

Unless the Department is able to break through its deadlock and inability to update and grant licences in a reasonable and timely manner, this industry is doomed to fail – a concept that is surely contrary to government and the Department's policy on aquaculture. There is a view that these literal and so called technical breaches you continue to raise are a consequence of the Department's inability to take care of this industry and its needs – which includes a rational and transparent regulatory framework enabling best sustainable fish health and environmental management practices.

Any purported cessation of MHI's statutory entitlement to carry out aquaculture activities at the Deenish facility would be a disproportionate and unreasonable interference with MHI's property rights, and would not be in the public interest.

#### 4 Conclusion

In summary:

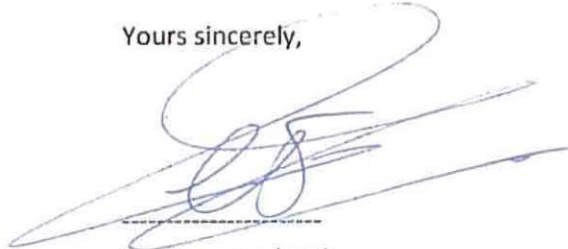
- MHI has not committed any breach of the terms and conditions of the Licence.
- The test results, monitoring reports and certification demonstrate the overall compliance of the operation.
- Without prejudice to the foregoing, the Minister does not have any entitlement to revoke the statutory entitlement conferred on MHI by section 19A(4) of the 1997 Act.

The alleged technical breaches identified by the Department ignore the scientific facts and requirements to operate a sustainable salmon farm in Ireland. This is a reflection of a defunct regulatory status which is not the fault of the industry, and so we plead with the Minister and his

Department to break through this unsatisfactory situation with the assistance of the IALRG and regularise matters, including licences such this as one. We look forward to continuing to work with the Department to bring about the necessary changes to the regulatory regime to make it fit for purpose while in the meantime maintaining the highest standards of environmental performance.

MHI trusts that the above addresses any concerns and hopes that this matter is now closed.

Yours sincerely,

A handwritten signature in blue ink, appearing to be 'J. Feenstra', written over a horizontal dashed line.

Jan Feenstra (MD)

Attachments:

Previous correspondence (15/06/16 and 19/07/16)  
Professor Randolph Richards expert opinion dated 29 November 2016 and resume  
Aquaculture Stewardship Council's Certificate of Conformity dated 10 March 2015  
Environmental Survey carried out by Aquafact International Services Limited, issued September 2016  
MHI submission to Independent Aquaculture Licensing Review Group







6b

Mr Kevin Hodnett,  
Assistant Principal,  
AFMD,  
National Seafood Centre,  
Clonakilty,  
County Cork.



**Marine Harvest Ireland**  
Rinnmore, Fanad, Letterkenny, Co. Donegal  
Telephone: +353 (0) 74 9159071  
Fax: +353 (0) 74 9159077

15<sup>th</sup> of June, 2016.

Ref. Your correspondence of June 23<sup>rd</sup> (site reference T6/202).

Dear Kevin,

I acknowledge receipt of your registered letter dated 23<sup>rd</sup> of June 2016 concerning our salmon farming site at Deenish, Co Cork (T6/202).

I note that your letter makes no reference to correspondence sent to Ms Nicole O'Shea of your department by our Catherine McManus dated the 1-6-16. In that correspondence Catherine set out a series of explanations demonstrating that MHI was not actually acting in breach of the licence terms and conditions attaching to T6/202. We find this omission surprising as we did set out a detailed and rational account of what led us, collectively, to the current position.

Notwithstanding this, and assuming that you continue to assert that MHI acted in breach with regard to the number of 'smolts' (despite our explanation of the meaningless nature of this colloquial and undefined term) stocked at the site on the date of the inspection by MED in July of 2015, I would make the following points;

- MHI asserts that the licence term attaching to T6/202 limiting the number of 'smolts' is anachronistic, legally and technically meaningless and its application is contrary to modern good salmon farming practice.
- The irrefutable evidence arising from the benthic impact monitoring programme is that the stocking levels at this site are and have been comfortably within the site's 'biological assimilative capacity'. Thus it is a matter of fact that no significant environmental damage has been visited on the state's foreshore by MHI's actions. Surely this demonstrates clearly and in a quantifiable fashion that the company has been acting within the spirit of the regulatory system and thereby securing the public interest.
- The department, armed with this data, can show any interested parties that it is effectively regulating the activity at the site and that it is ensuring the highest levels of environmental protection.

I am aware from our previous extensive discussions around salmon farm licensing generally that it is the view of the department that the minister's only available sanction in the event of a breach in the licence terms and conditions is licence revocation; regardless of the triviality or severity of the

alleged breach. Not having a tiered series of sanctions available to the minister is a gross flaw in the Act and it places the minister in a wholly unreasonable position, effectively pressurising him or her into taking actions which, in this instance, would result in egregious discrimination against MHI.

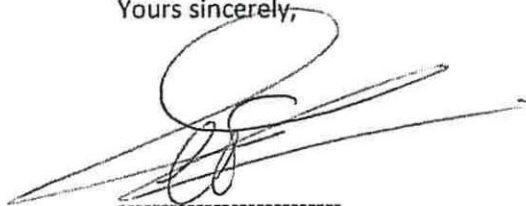
On that basis I note with horror your observation that '*...consideration is now being given to your continued entitlement to engage in aquaculture operations pursuant to Section 19(A)4 of the Fisheries Amendment Act...*'. To interfere with our entitlement to operate arising from what may be, at worst, a minor technical breach of what is an effectively meaningless licence condition would be a grossly disproportionate and unwarranted response. If the minister were to withdraw MHI's entitlement to operate at this location it would have catastrophic consequences for the company, the local economy and the industry in Ireland. If required, I am prepared, in confidence, to map out the financial and socio-economic consequences that would follow such an action being taken by the minister against MHI.

The 1997 Act does give the Minister the power to exercise discretion with regard to licence terms and conditions and we would strongly assert that this situation would merit the exercise of such discretion. We respectfully make this request as this unfortunate situation arises despite the longstanding acceptance by all associated with salmon aquaculture licensing in Ireland that the terms and conditions associated with control of stocking density are deeply flawed and have effectively become unworkable from either a practical or commercial standpoint. We did point this out in earlier correspondence of the 1.6.16 and cited the minister's own public acknowledgement of this flaw in the regime. Ireland is now out of step with every other salmon farming country in the world in this regard and an amendment to the current regime bringing in 'Maximum allowable Biomass' as the primary tool for stocking control is long overdue.

The duty to reform the regulatory regime lies squarely with the minister and on that basis the company should, in this instance, be allowed some leeway pending this necessary and long overdue system overhaul. Consequently, we make the case to the minister to exercise the discretionary powers granted to him under the act so that MHI should not suffer any undue interference with its entitlement to operate at this site arising from this unfortunate situation.

MHI wishes to make it clear that it is fully committed to compliance with all of the appropriate regulations pertaining to our sector and above all to ensure that its operations are not impacting in any significant way on the receiving environment. We look forward to continuing to work with DAFM to bring about the necessary changes to the regulatory regime to make it fit for purpose whilst maintaining the highest standards of environmental performance.

Yours sincerely,

A handwritten signature in black ink, appearing to be 'Jan CE Feenstra', written over a horizontal dashed line. The signature is stylized and somewhat cursive.

Jan CE Feenstra (MD)



60

Mr Kevin Hodnett,  
Assistant Principal,  
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19<sup>th</sup> of July, 2016.

Ref. Supplementary information to our correspondence of July 15<sup>th</sup> concerning our sites at Deenish and Inishfarnard.

Dear Kevin,

Following our meeting last Thursday with the minister and officials from DAFM, we have reviewed our correspondence in light of the information imparted to us at that meeting and we feel it necessary to submit some further supplementary correspondence before the statutory time for response elapses.

As we have pointed out in our previous correspondence some of the terms and conditions attaching to our licences are now anachronistic and deeply counter to the original intention of the legislation governing our sector. It is the responsibility of the state and the department to take the necessary steps to keep the regulatory regime updated so that companies such as ourselves can carry out our business without being forced into impossible situations whereby we simply cannot operate without incurring the accusation of being in breach of certain inimical terms and conditions contained within the same aquaculture licence.

Given the economic importance of our activities to the localities in which we operate and the clearly demonstrable fact that we are not having any significant adverse environmental impact, there is a heavy burden of liability on the Minister and the department to maintain, and if necessary from time to time overhaul the regulatory regime so that the licence holders can operate without being forced into impossible situations never envisaged by the original legislation. That is the situation we currently find ourselves in; it is effectively impossible for us to operate, even at a minimal level without seeming to fall foul of the contradictory terms and conditions attaching to our hopelessly outmoded licences.

It thus came as a crushing disappointment to us to be told at our meeting on Thursday that the vital review of the licensing system promised in Food Wise 2025 had not been acted upon as yet. We noted that the minister stated that 'he hoped' to have the process started by the end of the year. This leaves us to have to try to carry on under the current impossible circumstances. We do not for a moment lay any blame on the Minister's shoulders as he has only just started in his new role but the delay in tackling this problem is reminiscent of the delays which led to the state being prosecuted by the EU in 1997 for failure to overhaul the licensing system to bring it into compliance with Natura 2000. The repercussions of that failure have dogged the sector ever since and are still stymying

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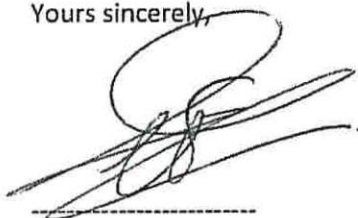
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Registered Office: Rinmore, Faoad, Letterkenny, Co. Donegal.  
Directors: Jan Breenstra (Dutch), Pat Connors, David Brennan

development to this day. This current delay in initiating the vital review committed to in Food Wise 2025 is further evidence of ongoing failure on the part of the state and the department to fulfil its obligations to its licence holders.

On the basis that the minister, to his credit, has decided to finally initiate the long overdue review of the system we contend that no action or sanction of any kind should be taken against our company with regard to the alleged breaches in the contradictory licence terms and conditions at our sites until such time as the review has been completed and our reasonable actions in running our operations in accordance with good practice in modern salmon farming can be seen through a modern regulatory lens. Otherwise we run the risk of being sanctioned in a manner that is utterly contrary to the original intention of the legislation.

Thank you again for your interest and attention.

Yours sincerely,

A handwritten signature in black ink, appearing to be 'Jan CE Feenstra', written over a horizontal dashed line. The signature is stylized and somewhat cursive.

Jan CE Feenstra (MD)



**PROFESSOR R.H. RICHARDS.** C.B.E., M.A., Vet.M.B., Ph.D., C.Biol., F.S.B., F.R.S.M., M.R.C.V.S., F.R.Ag.S., F.R.S.E.

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November 29, 2016

**ISSUES CONCERNING SITE LICENSING AT  
MARINE HARVEST IRELAND**

**Abstract**

A short review of a sample of salmon aquaculture licences held by MHI in the south west of Ireland concludes that their wording is out of date, inappropriate and contrary to supporting best practices. Using terms such as ‘growers’ and ‘smolts’ is confusing and erroneous in biological terms. It is recommended that a MAB (Maximum Allowable Biomass) should be the key parameter to limit production on all salmon production sites as is the International Standard. The MAB relates directly to the EIS (Environmental Impact Statement) and environmental loading as well as the annual benthic monitoring, while enabling market led production. Licences should promote “all in all out” and fallowing between generations of stock as opposed to being scheduled to a calendar timeframe that is unrelated to the production cycles. It is further recommended that a young industry such as aquaculture benefits from regular reviews and modifications between the regulator and licensees, as is practised in Scotland and Norway.

**Historical Perspective**

The licensing of Fish Farming Sites in the marine environment has been carried out by Government Agencies since the early days of salmon farming in the 1970s. Norway pioneered these developments and initially licensed farm sites according to the allowable surface area of the ocean to be covered by pen structures. No account was taken of total numbers of fish to be stocked into the sea or total biomass to be present at a site at any one time. At that time, farmers chose to maximise production by increasing the depth of the nets being used. Significant problems were experienced with disease, in particular the bacterial disease furunculosis and the parasitic disease caused by sea lice infection. A mortality rate in excess of 50% was often experienced, causing farmers to double the number of fish stocked in anticipation of such high mortality. This often led to very high stocking densities being used, resulting, especially in inshore sites with poor water circulation, in significant deterioration of the benthic and water column quality. Subsequent control of numbers stocked or tonnage produced was used in order to avoid environmental deterioration and the risk of disease development.

It was also common practice to use inshore, protected sites to stock fish from the freshwater environment in the first year and subsequently transfer the partially grown stock to other less-protected sites for their second and even third year of sea production. The industry in both Ireland and Scotland consisted of a large number of smaller companies, usually operating independently in the same bays or bodies of water. There was little coordination of husbandry procedures such as treatment for sea lice and, as a result, disease agents often circulated around sites in the same bay. Disease control became very problematical.

### **Development of Code of Good Practice**

An outbreak of the exotic notifiable disease Infectious Salmon Anaemia in Scotland in May 1998, which resulted in the slaughter of large numbers of fish, led to the establishment of the Joint Government / Industry Working Group on Infectious Salmon Anaemia, the purpose of which was to identify the measures required to prevent or minimise the impact of further outbreaks of ISA. The conclusions of the group are presented in document number ISBN 0 7480 8950 0. Available literature on the topic was assessed and epidemiological modelling used to produce a risk assessment of husbandry procedures in use at that time and provide recommendations as to future husbandry practice. This work also formed the basis of the current Code of Good Practice for Scottish Finfish Aquaculture.

The application of the principles outlined has also drastically reduced the spread of other disease conditions and forms the basis of international salmon production methodology.

### **Key principles of the Code of Good Practice**

- A general presumption against seawater to seawater movement. This may occur, exceptionally, followed the application of a documented risk assessment.
- Delineation of management areas, defined hydrologically, where ideally, all sites in a management area are controlled by a single company. If more than one company is present, a management agreement should be in place to ensure the coordination of procedures such as sea lice treatment and fallowing.
- The stocking of sites with fish from a single source, or if that proves impossible, a restricted number of sources.
- Well boat movements are also a source of transfer of infection and 'bus-stop' deliveries going from site to site are discouraged unless sites are managed by the same entity and even then, only when fish are stocked into appropriately fallowed sites.
- The use of site-specific equipment and staff and, if equipment or staff have to be shared between sites, the use of approved disinfection procedures.
- Agreed methods for monitoring and recording of sea lice numbers.

All the above have resulted in the licensing of sites being based on MAB (Maximum Allowable Biomass), established in Scotland through modelling of environmental parameters by the Scottish Environmental Protection Agency (SEPA). Ongoing monitoring takes place to ensure that the effects predicted by the model are not exceeded and involves a mixture of monitoring being carried by experts employed the aquaculture company and also by SEPA. Permissions may be adjusted according to the monitoring results. As seawater to seawater movements are



considered particularly risky, an input of fish from freshwater to a marine site usually remains at that site until harvest, unlike the earlier systems used.

### **Interaction between the aquaculture industry and government**

Scotland provides an excellent example of the development of a working relationship between government and industry regarding aquaculture.

A formal government/ industry working group was established at the time of the first outbreak of Infectious Salmon Anaemia. The group involved experts from the aquaculture industry, government health officials, academics, and other interested parties such as SEPA. The group met regularly and eventually produced an agreed detailed report and recommendations which formed the basis of the current Code of Good Practice for Scottish Finfish Aquaculture, which is regularly updated.

This was seen to be a very successful way of promoting interaction between government and industry and was followed by the Ministerial Working Group on Aquaculture which has met regularly and convenes subgroups as necessary to evaluate issues of interest or concern. This group has contributed significantly to the development of aquaculture legislation in Scotland, and particularly the Aquaculture and Fisheries (Scotland) Acts of 2007 and 2013, and the Aquatic Animal Health (Scotland) Regulations 2009. The latest Working Group to be established is the Scottish Government/Industry Working Group on Integrated Sea Lice Management in 2016.

In addition, representatives of the SSPO meet regularly (approximately monthly) with scientific staff at Marine Scotland in Aberdeen to review current issues and ensure that officials are aware of industry developments.

### **Licences currently held by Marine Harvest Ireland Ltd.**

I have been provided with historical details of licences currently held by Marine Harvest Ireland, specifically licences 198 (Inishfarnard), 199 (Deenish), and 444 D & E (Bantry Bay). The licences were originally issued to Gaelic Seafoods and subsequently transferred to Murpet, then to Silver King and eventually to Marine Harvest Ireland. Earlier licences were held by the Electricity Supply Board.

Initial terms of the licences generally included :-

- The farming of only salmon or trout.
- Allowance of passage of migratory fish and no interference with fishing or navigation.
- Chemicals and antibiotics to be controlled and recorded.
- Notification of the presence of disease or any abnormal losses.
- Disposal of dead fish according to local authority requirements.
- Application of 30 day fallowing periods.
- Notification of escapes.
- Details of benthic and water quality monitoring to be reported and reviewed.
- Details of sea lice monitoring and control.
- Sale or disposal only to be carried out with written permission of the authorities.
- Ongoing precautionary measures against algal blooms.



### Smolt Numbers and Tonnage

I note that the licences also contain details of allowable stocking in terms of either smolt numbers and/or grower production in tonnage terms in a calendar year and these figures are those allowed in the licences in 1995 and have not subsequently been modified. This takes no account of the accepted methodology of single year class stocking at a site which depends on fish remaining at the site from original input to final harvest. As explained earlier, the use of seawater to seawater movement is considered very high risk – it will increase the risk of disease spread and will also considerably stress the fish, leading to increased likelihood of disease development. I believe that the practice of rearing of stock from transfer to harvest has been carried out at these sites since before Marine Harvest Ireland acquired them, in keeping with industry norms. Should the Maximum Allowable Biomass approach be taken, following practice elsewhere, the number of smolts to be transferred from freshwater would be determined by the producer based on expected harvest weight and anticipated mortality rate during the ongrowing phase at sea. A margin of error would be applied in case of unexpected losses, and if survival was higher than expected, harvest of fish earlier than expected could be undertaken in order to remain within the consented limits. Initial stocking would be based on expected market requirements and should the market change, earlier harvest could again be undertaken. The key issue is the requirement to remain within the consented maximum biomass at any time in order to avoid any possible environmental degradation.

I am not sufficiently acquainted with the marketing plans of Marine Harvest Ireland to know of their market requirements but harvesting at 4.5 kilos bodyweight with an average loss of 25% stock in the saltwater phase would be a reasonable industry average, suggesting that approximately 300 smolts would be required to be transferred from freshwater for each tonne of eventual production. This would tend to equate to the numbers of fish stocked in relation to eventual biomass at sites 444D and 444E, where 2000 tonnes would be reared at each site from an initial stocking of 600,000 fish.

The eventual tonnage produced from stocking 400,000 fish at sites 198 and 199 would be approximately 1350 tonnes, not 500 tonnes and so in this case, there is little correlation between smolt numbers and expected tonnage. Sites with as little as 500 tonnes capacity would not be justified financially in terms of the costs of boats, staff and shore support and even the 1350 tonnage seems undersized considering the very open and exposed location of these sites.

I also believe that the terminology used in the licences is confusing and erroneous in biological terms. The definition of a smolt applies only to a fish in freshwater which has adapted to allow it to be transferred to saltwater through changes in gills and kidney. The basic changes include the development of 'chloride cells' in the gills to allow active transport of sodium and chloride ions out of the gill and changes in the glomerulus of the kidney which lead to a decreased glomerular filtration rate and decreased urine production. The fish are recognised by aquaculturists and fisheries biologists by the silvered appearance of the skin and testing is carried out to determine whether fish to be transferred are capable of adapting to the saltwater environment. Fish in saltwater should all be considered as 'salmon' or 'growers'. It could be that the use of 'smolts' was meant to indicate the number of smolts to be transferred from fresh water, but at sites 444D and 444E, there is no meaningful relationship between numbers of smolts consented and tonnage consented. As there is no certain means of establishing the final



tonnage that will result from stocking with a given number of smolts, then allowable biomass is a much more meaningful measure. The maximum allowable biomass (MAB) would also be relevant to stocking biomass at any time in the cycle in the sea, whereas total tonnage allowed may be interpreted as a total maximum tonnage to be produced in a calendar year rather than that being held at any point in time. This is the current state of the licences at sites 198 and 199 which stipulate tonnage on a calendar year basis and take no account of the total harvest taking place in year 2 in the sea.

The MAB can be calculated for each site by using the environmental impact statements submitted by the aquaculture producers to the authorities as part of the licence requirements.

### Fallowing

It is also important to remember that the period of time that fish would be expected to remain at an individual site would be close to two years and would then result in triggering the fallow process. This does not equate to annual fallowing as is possibly suggested in the current licences, which would result in movement of fish at sea, producing considerable stress and the increased risk of disease development.

There is an increasing tendency to use heat and light control in hatcheries in order to produce larger smolts and thus reduce the timescale of the marine phase of production.

My personal opinion would be that it is necessary to modify the licences to allow stocking to be based on Maximum Allowable Biomass and allow fallowing to be carried out at the end of the production cycle, as is practised in other countries. Synchronous fallowing should also be undertaken in an individual management area.



Professor Randolph Richards.

**PROFESSOR R.H. RICHARDS.** C.B.E., M.A., Vet.M.B., Ph.D., C.Biol., F.S.B., F.R.S.M.,  
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November 29, 2016

Professor Randolph H. Richards.  
Expertise in Aquaculture and links to Irish Aquaculture.

Please see the attached curriculum vitae for further details.

I qualified as a veterinary surgeon from the University of Cambridge in 1972 and have worked at the Institute of Aquaculture at Stirling University since 1973 until the present time. I carried out a PhD on Fish Disease between 1973 and 1979, was the deputy-director of the Unit of Aquatic Pathobiology and then the Institute of Aquaculture between 1976 and 1996 and was the Director of the Institute of Aquaculture between 1996 and 2009.

My work has concentrated on international aquaculture development and particularly disease control, both as an academic running major multinational projects and training large numbers of Masters and PhD students, but also working in very close association with the developing aquaculture industry. A particular interest was the development of disease diagnostic services for the industry and advising industry associations.

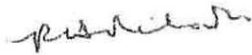
In Scotland, I have acted as Research Director of the Scottish Salmon Growers Association between 1986 and 1989 and since 1989 have been the Veterinary Adviser of the Scottish Salmon Growers Association. I have also been Director of a number of Aquaculture companies.

In the Irish context, I worked closely with a large number of Irish Aquaculture companies such as Fanad and the Electricity Supply Board, particularly during the 1980s and was a board member of the Disease Committee of the Irish Aquaculture Association. I also acted as a Director of Aquahatch (Ireland) Ltd and was Director of the Salmon Fisheries Disease Diagnostic Services (Irish Aquaculture Association). During this period, I also held regular meetings with NADCORP (the National Development Organisation). I also have particularly strong links with the Aquaculture Insurance Industry and have been involved in the investigation of many insurance claims in Ireland.

[Type text]

I have been a member or chair of many government/industry working groups in the UK and Europe and of particular relevance to Ireland, I was rapporteur to the DG Fish working group on EU regulations on organic aquaculture.

My experience and expertise have been recognised with the award of many honours, of particular note being the award of the CBE in the Queen's birthday honours list for services to veterinary science and the Aquaculture Today award for personal contribution to global aquaculture, both in 2008; the Award for Excellence in European aquaculture from FEAP (Federation of European Aquaculture Producers) in 2009; and the award of the Royal College of Veterinary Surgeons Queen's Medal in 2016 for outstanding contribution to aquaculture.



Professor Randolph Richards





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# CERTIFICATE OF CONFORMITY

This is to certify that the aquaculture operation of:

## Marine Harvest Ireland

Site: Deenish Farm Site

Head Office: Rinmore, Ballylar, Letterkenny, Co. Donegal

*Has been evaluated by SAI GLOBAL Assurance, ASI Accreditation Code ASC-ACC-006, and found to comply with the requirements of the Aquaculture Stewardship Council (ASC):*

### ASC Salmon Standard Version 1.0 June 2012

*For the following Scope:*

#### Production of Atlantic Salmon

*Point at which certified products may enter a Chain of Custody:*

**Where salmon is entering harvest and processing line directly.**

*For the full list of product groups covered please refer to: <http://www.asc-aqua.org/finalfarmauditreports>*

Certificate No: ASC-SAI-005 (Issue 0.0)

Certificate Issue Date: 10<sup>th</sup> March 2015

Certificate Expiry Date: 9<sup>th</sup> March 2018



Aquaculture  
Stewardship  
Council

Signed on behalf of SAI Global Assurance:

Mr Bill Paterson, General Manager

The validity of this certificate shall be verified on <http://www.asc-aqua.org/finalfarmauditreports>

*This certificate itself does not constitute evidence that a particular product supplied by the certificate holder is ASC-certified. Products offered, shipped or sold by the certificate holder can only be considered covered by the scope of this certificate when the required ASC claim is clearly stated on invoices and shipping documents. The certificate shall remain the property of SAI Global, and the certificate and all copies or reproductions of the certificate shall be returned or destroyed if requested by SAI Global.*



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# AQUAFAC



On behalf of

Marine Harvest Ireland

Issued September 2016

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## Executive Summary

AQUAFACT surveyed nine stations at a salmon aquaculture site operated by Marine Harvest Ireland Ltd. off Deenish Island on the 20<sup>th</sup> of July 2016. The survey was part of the Aquaculture Stewardship Council certification scheme followed by Marine Harvest Ireland Ltd. More specifically, the survey assessed the benthic environment to determine if the requirements for Criterion 2.1 'Benthic biodiversity and benthic effects' were met at the time of the survey in 2016. Station layout took into consideration a standard Allowable Zone of Effect (AZE) of 30 m around the fish holding pens.

The requirement for Indicator 2.1.1 (redox potential >0 mV at 2 cm sediment depth) was met at the stations outside the AZE where it could be measured using a redox probe (ASC- 6, ASC-8, ASC-9). The coarseness of the substratum did not allow measurement with the probe at the other stations. Although supporting sediment profile images (SPI) showed low penetration, visual observation clearly suggested that the minimum redox depths of 2cm were achieved at all stations outside the AZE as required. The requirement for Indicator 2.1.2 was met at all stations outside the AZE using the AMBI score (AMBI scores  $\leq 3.3$ ). All stations yielded sufficient numbers of non-pollution indicator species at frequencies of  $\geq 100/m^2$  (or equally high to the reference site if natural abundance is lower than this level) and, thus, the requirements for Indicator 2.1.3 were achieved.

The ASC Standard for Criterion 2.1 Biodiversity and benthic effects was met for Indicators 2.1.1 and 2.1.2 and consequently the results of the benthic audit indicate that the Deenish site is in compliance with the benthic requirements of the Aquaculture Stewardship Council certification scheme.

Table 1.1 summarises the results for each station.



**Table 1** ASC benthic survey summary results, Deenish finfish site, Kenmare Bay.

	<b>Position relative to AZE</b>	<b>Redox (mV) Sample A</b>	<b>Redox (mV) Sample B</b>	<b>AMBI Score</b>	<b>No. of non-pollution indicators</b>
S1	Inside	N/A	N/A	3.51	10
S2	Inside	N/A	N/A	4.68	14
S3	Outside	N/A	N/A	2.93	18
S4	Inside	-0.03	N/A	3.27	9
S5	Inside	75	N/A	3.02	18
S6	Outside	34	N/A	3.02	14
S7	Inside	120	N/A	1.74	15
S8	Outside	72	665	1.83	7
S9 REF	Outside	660	975	1.70	24

## 1. Introduction

This report documents the environmental conditions of the seabed at a Marine Harvest Ireland finfish (Atlantic salmon *Salmo salar*) aquaculture site in Kenmare Bay, Co. Kerry recorded during SCUBA surveys undertaken by AQUAFACT on 20<sup>th</sup> July 2016 (Figure 1).

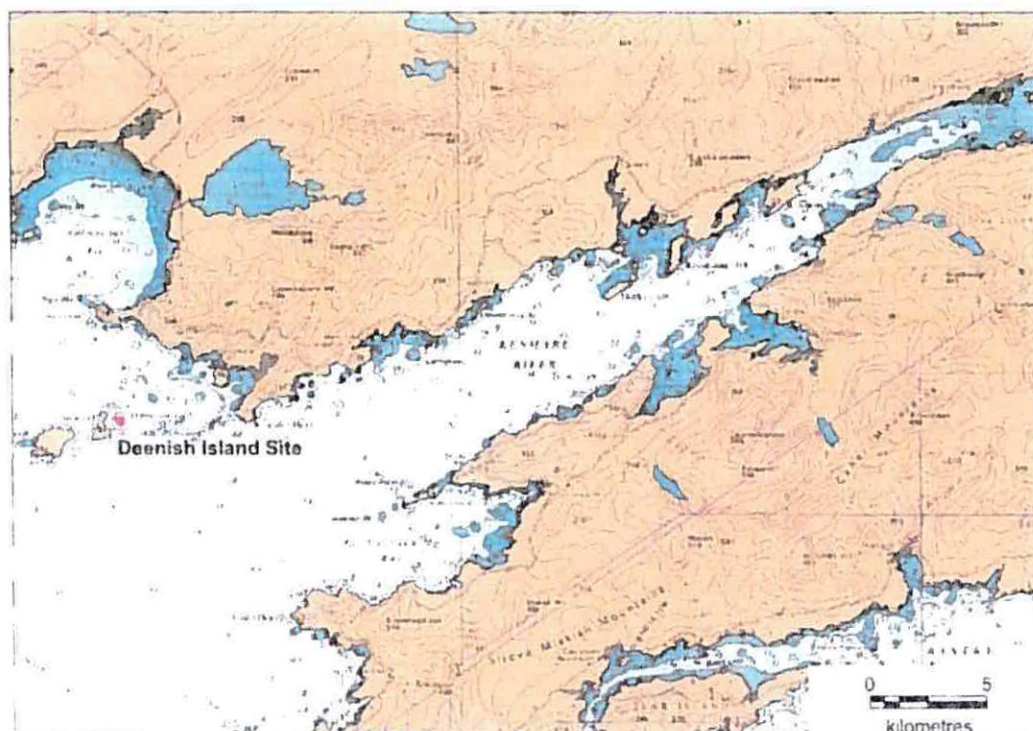


Figure 1 Map showing the location of the aquaculture site off Deenish Island (Kenmare Bay) surveyed by AQUAFACT on 20<sup>th</sup> July 2016 by AQUAFACT Ltd. as part of the ASC audit and certification system.

### 1.1. *The Aquaculture Stewardship Council (ASC) Salmon Standard*

The aim of the ASC Salmon Standard is to minimise the potential negative effects of salmon aquaculture on the environment and society, while permitting the salmon farming industry to remain economically viable. Although the ASC Salmon Standard will be applicable at the farm level, it will also help protect

and maintain ecosystem function and ecosystem services in salmon producing areas, with the recognition that aquaculture operations are not solely responsible for total ecosystem health.

The ASC Salmon Standard is defined by eight principles:

1. Principle: Comply with all applicable national laws and local regulations
2. Principle: Conserve natural habitat, local biodiversity and ecosystem function
3. Principle: Protect the health and genetic integrity of wild populations
4. Principle: Use resources in an environmentally efficient and responsible manner
5. Principle: Manage disease and parasites in an environmentally responsible manner
6. Principle: Develop and operate farms in a socially responsible manner
7. Principle: Be a good neighbour and conscientious citizen
8. Principle: Standards for the suppliers of smolt

The second principle consists of five criteria and the fulfilment of Criterion 2.1 'Benthic biodiversity and benthic effects' was the purpose of the benthic surveys conducted by AQUAFACT Ltd. The findings of the assessment are presented and discussed in this report.

## **1.2. Basis of the Standard**

There is a concern in finfish pen aquaculture that waste organic material falling from the suspended pens would accumulate on the sea or lake bed, especially when it consists of soft sediment (*e.g.* silt). Although this fine organic waste may constitute a potential food source for natural filter feeding and deposit feeding fauna living in the sediment, it could also lead to an undesired change in species composition and biodiversity. As the organic waste accumulates it decays, potentially rendering the deeper layers of the sediment anaerobic, which in turn can eliminate naturally occurring species, particularly those regarded as sensitive to pollution or organic enrichment. In addition, the lack of oxygen could result in the generation of hydrogen sulphide (H<sub>2</sub>S), which is also toxic to marine organisms. The chemical condition in the sediment is regarded as 'reduced' due to the deficiency in oxygen as measured by its redox potential. The presence of H<sub>2</sub>S can also be visually detected by the presence of layers of black (reduced) sediment and the smell of rotten eggs when such sediment is returned to the surface.



There are two potential chemical indicators of the low oxygen (*i.e.* reduced conditions), namely the redox potential and the sulphide concentration. In addition, changes in the natural benthic community can indicate the overall impact on the benthic environment caused by the accumulation of organic material from the finfish pens, conditions which are to be avoided. Therefore, the four Indicators under Criterion 2.1 (Benthic biodiversity and benthic effects) are aimed at measuring the extent to which any organic material originating from the pen culture is causing changes to the sea bed communities. Nonetheless, it should be noted that such anaerobic conditions can occur naturally or may be due to other causes beyond the farm and, consequently, any potential impacts from the fish farm operations would need to be assessed in relation to the existing reference conditions outside the farm area.

The four indicators used to assess Criterion 2.1 are discussed in the following subsections.

#### **1.2.1. Indicator 2.1.1 Redox Potential**

The redox potential or sulphide levels in the sediment outside of the Allowable Zone of Effect (AZE) must be measured. The redox potential values give an indication of the degradation of sediment conditions due to decomposition of excess organic material which can come from the pens above. As the decomposition progresses oxygen becomes progressively scarce in the water within the sediment, which can become anaerobic. Anaerobic bacteria continue the process creating progressively reduced conditions leading to an 'oxygen debt' and, ultimately, acidic conditions in the sediment. These conditions are indicated by the redox potential which is to be measured in duplicate at nine stations (giving 18 analyses). The acceptable Standard is  $>0\text{mV}$  at 2.0 cm below the sediment surface. Sediment profile images are also taken to assess the apparent redox potential discontinuity (ARPD) for comparison. There is a general agreement of a high concordance between apparent redox depths taken using SPI and redox potential values (Diaz and Trefry, 2006).

#### **1.2.2. Indicator 2.1.2 Faunal Index Score**

Four options of faunal indicators can be used in the ACS Standard, all based on the relative numbers of animals for each species from a measured area expressed per  $\text{m}^2$ . Two faunal index scores (out of the total of four suggested by the ASC Guidelines) were chosen for this assessment: the **Shannon Weiner Index** and the **AZTI marine biotic index (AMBI)**. Both of these indices are calculated using the faunal



abundance data returned from the duplicate sampling at the same nine sites used for the calculation of the redox potential.

The **Shannon-Weiner Index** is regarded as diversity index. It is a relatively simple index because the taxa do not have to be named, just separated and counted. When plotted on a ranked basis with the first taxon (*i.e.* species, genus) being the commonest, a steep fall in the numbers for the remaining taxa and a low number of taxa would indicate low benthic diversity, usually associated with impacted conditions. A lower decrease in the number of individuals per taxon and with a wider range of species indicates a more diverse community, a concept usually associated with a more 'healthy' community. The standard requires Shannon Weiner index values above 3.

The **AZTI marine biotic index (AMBI)** was developed to indicate disturbance by organic enrichment and it is a measure of the overall pollution sensitivity of a benthic assemblage (Muxika *et al.*, 2005). Taxa (generally identify to species or genus) are assigned to one of five ecological sensitivity groups (from disturbance-sensitive to pollution-tolerant or opportunistic), the AMBI being subsequently calculated as a weighted average of the sensitivity scores. Assemblages with a high proportion of sensitive taxa are indicative of areas with low levels of disturbance, whilst sites dominated by opportunistic taxa could reflect impacted areas. The ASC Standard requires the AMBI score to be 3.3 or below.

#### **1.2.3. Indicator 2.1.3 Macrofaunal Taxa**

Taxa regarded having a frequency greater than 100 individuals per m<sup>2</sup> (or equally high to the reference site if natural abundance is lower than this level) should be identified. Amongst these the standard states that there should be at least two or more taxa which are not pollution indicators (non-pollution indicator species are those species which are sensitive to, indifferent to and tolerant of organic enrichment, *i.e.* AMBI Groups I, II and III; see Borja *et al.*, 2000).

#### **1.2.4. Indicator 2.1.4 Definition of Site-Specific AZE**

At the commencement of the Standard the 30m AZE was a pragmatic working estimate. It is anticipated that within the first three years of the standard a more exact, site specific assessment will be made,

which will take into account a number of factors such as current and wind that will enable this to be done more exactly. This has been the case for the site operated by Marine Harvest Ireland Ltd. at Roanearragh, Co. Cork, where a site-specific AZE (AZE) has been calculated (RPS, 2016). The AZE was determined using Gaussian distribution models based on the corner co-ordinates of the site, site configuration and its hydrodynamic characteristics. With regards to the Deenish site, the 30 m AZE was used during the 2016 assessment.

## 2. Sampling Procedure & Processing

### 2.1. Site description and conservation status

The site surveyed on July 2016 was located off Deenish Island, in Kenmare Bay, southwest Ireland. Kenmare Bay, Co. Kerry, is a long and narrow, south-west facing bay. It is a deep, drowned glacial valley and the bedrock forms reefs along the middle of the bay throughout its length. Exposure to prevailing winds and swells at the mouth diminishes towards the head of the bay while numerous islands and inlets provide further areas of additional shelter.

Deenish Island is part of two Natura 2000 sites, namely the Kenmare River cSAC (Site code: 002158) and the Deenish Island and Scariff Island SPA (Site code: 004175).

The diversity of environmental conditions, from exposed to ultra-sheltered, that characterises Kenmare River cSAC results in the presence of a wide range of marine habitats including three listed on Annex I of the EU Habitats Directive, namely reefs, large shallow bay and caves. According to the cSAC site synopsis (available from [www.npws.ie](http://www.npws.ie)) Kenmare Bay is host to a high number of rare and notable marine species present (24) and some uncommon communities. The Kenmare River cSAC is the only known site in Ireland for the northern sea-fan, *Swiftia pallida* and is the only known area where this species and the southern sea-fan *Eunicella verrucosa* co-occur. Midway along the south coast of Kenmare River, a series of sea caves stretch back into the cliff, typically supporting a diversity of epifauna including encrusting sponges, ascidians and bryozoans.

Deenish Island and Scariff Island are small to medium size islands situated between 5 and 7 km west of Lamb's Head off the Co. Kerry coast and thus very exposed to the force of the Atlantic Ocean. The site is a Special Protection Area (SPA) under the E.U. Birds Directive due to its special conservation interest for

seabirds including fulmar, Manx shearwater, storm petrel, lesser black-backed gull and Arctic tern. Scariff is the larger of the two islands, with very steep sides rising to a peak of 252 m with the highest cliffs located on the south side. Deenish is less rugged than Scariff, and rises to 144 m in its southern half; the northern half being lower and flatter. The vegetation is mostly grassland, with some heath occurring on the higher ground. Old fields are now overgrown with bracken and bramble. The sea areas within a 500m radius of both islands are included inside the SPA boundary to provide a 'rafting' area for shearwaters.

## 2.2. Benthic survey

Survey work took place on the 20<sup>th</sup> of July 2016. The dive at the Deenish Island site was conducted at a maximum depth of 21 m. Pen layouts at the time of survey and benthic grab stations are displayed in Figure 2. Table 2 shows the dGPS coordinates of the sampling stations. Duplicate samples were collected at each of the nine quantitative benthic station. Sampling was carried out near peak pen biomass of the production cycle.

The sampling regime was conducted as follows:

- Two stations were sampled at the edge of the pen (Stations ASC-1 and ASC-4);
- Three stations were sampled inside the AZE; Stations ASC-2, ASC-7 and ASC-5, due to the rocky nature of the southern side of the site, Station ASC-7 was located to the side of the site rather than the south end (see Figure 2) ;
- Three stations were sampled in the same arrangement as above but at a distance of 20m outside the AZE (Stations ASC-3, ASC-6 and ASC-8);
- The Reference station (Station ASC-9) was located *ca.* 200m to the north west of the pen. This reference station was well outside the AZE and of similar benthic conditions as those stations outside the pen edges.

A 0.025 m<sup>2</sup> van Veen grab was used to collect the duplicate benthic samples from each station. A redox probe with a platinum ring indicator attached to a portable pH/Redox meter (calibrated in mV along with a silver/silver chloride reference electrode) was used to measure the redox potential of each sediment sampled retrieved by the grab. However, the coarse nature of the seafloor at the Deenish site (cobble and gravel) was not suitable for readings with the probe at all stations. Thus, for a number of



stations, the redox depth could only be determined by means of *in situ* visual observations and the Sediment Profile Imagery (SPI). Details of the SPI can be seen in Appendix 1. SPI is one of the methods recommended by the Irish Department of Agriculture, Fisheries and Food and Irish Marine Institute to determine the apparent redox potential depth (aRPD) as part of their fish farm benthic monitoring protocols (DAFF, 2008).

Each grab sample was washed through a 1 mm mesh sieve, stained with Rhodamine dye, fixed with 10% buffered formalin. Upon return to the laboratory all samples were then sorted under a microscope (x 10 magnification) into four main groups: Polychaeta, Mollusca, Crustacea and others (e.g. echinoderms, nematodes, nemertean, cnidarians and other lesser phyla) and preserved in 70% ethanol. The taxa were then identified to species level where possible. All names were checked against the World Register of Marine Species (WoRMS; <http://www.marinespecies.org/>).



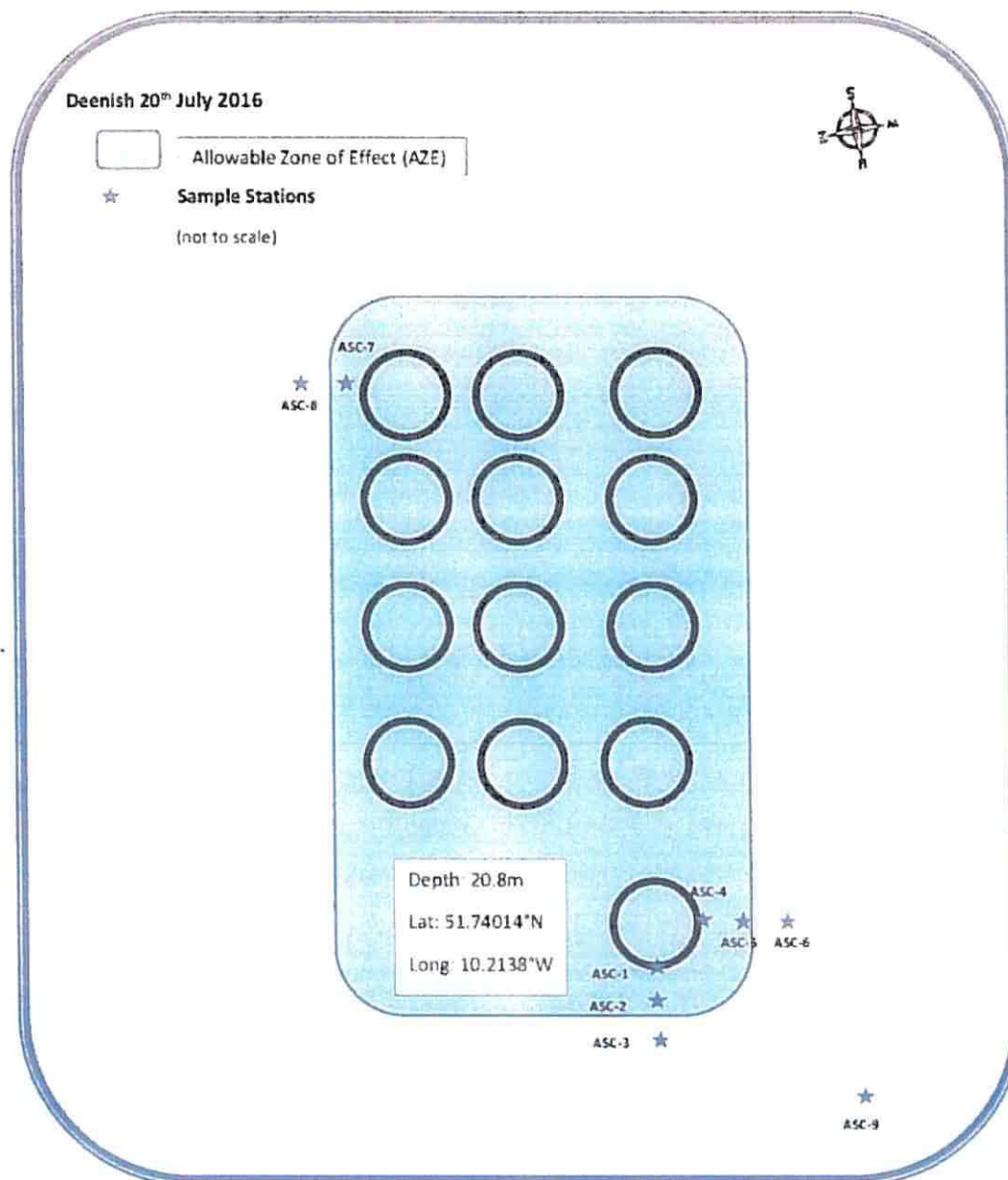


Figure 2 Schematic drawing showing salmon holding pens layout, the AZE and the stations sampled during the 20<sup>th</sup> July 2016 ASC benthic monitoring survey at the Deenish Island finfish aquaculture site operated by Marine Harvest Ireland Ltd. in Kenmare Bay. The drawing is only indicative and it is not to scale.

**Table 2** Coordinates for stations sampled at the Deenish Island finfish aquaculture site operated by Marine Harvest Ireland Ltd. in Deenish Island, Kenmare Bay.

Station	Latitude	Longitude	Distance from cage edge (m)
1	51.74039°N	10.21311°W	0
2	51.74062°N	10.21305°W	20
3	51.74089°N	10.21302°W	50
4	51.74016°N	10.21316°W	0
5	51.74011°N	10.21350°W	10
6	51.74007°N	10.21393°W	50
7	51.74007°N	10.21025°W	20
8	51.73822°N	10.20978°W	50
9	51.74149°N	10.21315°W	150

### 2.3. Data Analysis

The faunal replicates for each station were combined and the numbers of individuals for each taxa adjusted to densities (individuals per m<sup>2</sup>) by dividing them by 0.05 (representing the 0.05 m<sup>2</sup> of seafloor sampled by the Van Veen grabs). A data matrix of all the faunal density data was compiled for the univariate and multivariate statistical analyses carried out using PRIMER<sup>®</sup> (Plymouth Routines in Multivariate Ecological Research).

A suite of diversity indices were calculated on the combined replicate data for each sampling station using the DIVERSE package in Primer, including:

- Total abundance of individuals (N);
- Total number of taxa (S);
- Margalef's species richness index (d):

$$d = \frac{S - 1}{\log_2 N}$$

- Shannon-Wiener diversity index (H')

$$H' = - \sum_{i=1}^S p_i (\log_e p_i)$$

where  $p_i$  is the proportion of the total count accounted for by the  $i^{\text{th}}$  taxa

- Pielou's Evenness index (J):

$$J = \frac{H'(\text{observed})}{H'_{\text{max}}}$$

where  $H'_{\text{max}}$  is the maximum possible diversity which could be achieved if all species were equally abundant ( $= \log_e S$ ). Evenness is a measure of how evenly the individuals are distributed among different species, *i.e.* benthic assemblages with low evenness are dominated by few taxa while assemblages of high evenness are characterized by similar numbers of individuals in each taxa recorded.

PRIMER (Clarke and Gorley, 2006) was used to carry out multivariate analyses on the station-by-station faunal data. Data was truncated to eliminate spurious results and ease the ecological interpretation of multivariate analyses results, *e.g.* indeterminate nemertean (e.g. A, B, etc) were merged into one taxa Nemertea indeterminate, while species such as harpacticoids were removed since they are easily missed during the sorting process and are usually associated with drift algae adding undesired variance to the data. All species abundance matrix was fourth root transformed to down-weight the importance of several abundant taxa and thus allow the mid-range and rarer species to play a part in the similarity calculation. The transformed data matrix was used to prepare a Bray-Curtis similarity matrix, also in PRIMER, prior to the classification and cluster analysis. The aim of the cluster analysis was to find 'natural groupings' of samples, *i.e.* samples within a group that are more similar to each other, than they are similar to samples in different groups (Clarke and Gorley, 2006). The PRIMER® program CLUSTER carried out this analysis by successively fusing the samples into groups and the groups into larger clusters, beginning with the highest mutual similarities then gradually reducing the similarity level at which groups are formed. The result was represented graphically in a dendrogram, the x-axis representing the full set of samples and the y-axis representing similarity levels at which two or more groups are joined.

The CLUSTER routine, also in PRIMER, was set to include a series of 'similarity profile' (SIMPROF) permutation tests to provide statistical evidence of significant clusters between samples which are *a priori* unstructured. SIMPROF performs tests at every node of a completed dendrogram to assess if the group being sub-divided has statistically significant internal structure. The test results are displayed in a colour convention on the dendrogram plot (samples connected by red lines cannot be differentiated at the 5% significance level).



The Bray-Curtis similarity matrix was also subjected to a non-metric multi-dimensional scaling (nMDS) algorithm using the PRIMER program MDS. This routine produces an ordination whereby the placement of samples reflects the similarity of their biological communities (Clarke and Gorley, 2006). The stress values of an nMDS give an indication of how well the multi-dimensional similarity matrix is represented by the two-dimensional plot. They are calculated by comparing the interpoint distances in the similarity matrix with the corresponding interpoint distances on the 2-d plot. Perfect or near perfect matches are rare, especially in the absence of a single overriding forcing factor such as an organic enrichment gradient. Stress values increase not only with the reducing dimensionality (lack of clear forcing structure), but also with increasing quantity of data (it is a sum of the squares type regression coefficient). The reliability of the nMDS plots is based on the stress values obtained (Clarke and Gorley, 2006), whereby:

- Stress value < 0.05: Excellent representation of the data with no prospect of misinterpretation;
- Stress value < 0.10: Good representation, no real prospect of misinterpretation of overall structure, but very fine detail may be misleading in compact subgroups;
- Stress value < 0.20: This provides a useful 2-d picture, but detail may be misinterpreted particularly nearing 0.20;
- Stress value 0.20 to 0.30: This should be viewed with scepticism, particularly in the upper part of the range, and discarded for a small to moderate number of points such as < 50;
- Stress values > 0.30: The data points are close to being randomly distributed in the 2-d ordination and not representative of the underlying similarity matrix.

AZTI Marine Biotic Index (AMBI) scores were calculated using AZTI's AMBI programme (<http://ambi.azti.es/>). Each taxon was assigned to one of five possible ecological sensitivity groups (from disturbance sensitive to pollution tolerant or opportunistic species) and the AMBI was calculated as a weighted average of the sensitivity scores. Assemblages with high proportions of sensitive taxa (Type I) are indicative of areas with low levels of disturbance, whilst sites dominated by opportunistic taxa reflect impacted areas. The AMBI was developed to indicate disturbance by organic enrichment (Muxika *et al.*, 2005). The identification of non pollution indicator taxa (Indicator 2.1.3) was undertaken following the latest AMBI species sensitivity group assignment (November 2014; available from <http://ambi.azti.es/>).



### 3. Results

#### 3.1. Redox Potential

Seafloor sediment consisted of gravel and coarse sand covered by a thin layer of silt under and near the aquaculture cages. Station ASC-6 (20 m outside the AZE, in a perpendicular direction to the prevalent current) was dominated by coarse sand. Diver SPI prism penetration was very poor due to the coarse nature of the seafloor. Therefore, if not clearly visible, the ARPD was considered to be deeper than the maximum penetration achieved by the SPI camera .

Redox potential values outside of the AZE were above 0 mV at 2 cm sediment depth in all sediment samples where the probe was operable (stations ASC-4 to ASC-9; Table 1).

The photographs of the profiled seafloor (Figures 3 to 5) showed well sorted sediment (gravel) with undefined ARPD but overall prevailing oxygenated conditions at most stations including the distant reference station ASC-9. Slightly reduced sediment (grey in colour) was only visible at Station ASC-6, where coarse sand was the dominant size fraction. Mean ARPD depths ranged from more than 1.76 cm (Station ASC-4; Figure 4) to more than 7.80 cm (Station 9; Figure 5). These results indicate that, on 20<sup>th</sup> July 2016, the requirements of the ASC standard for Indicator 2.1.1 were met at the Deenish site in 2016.

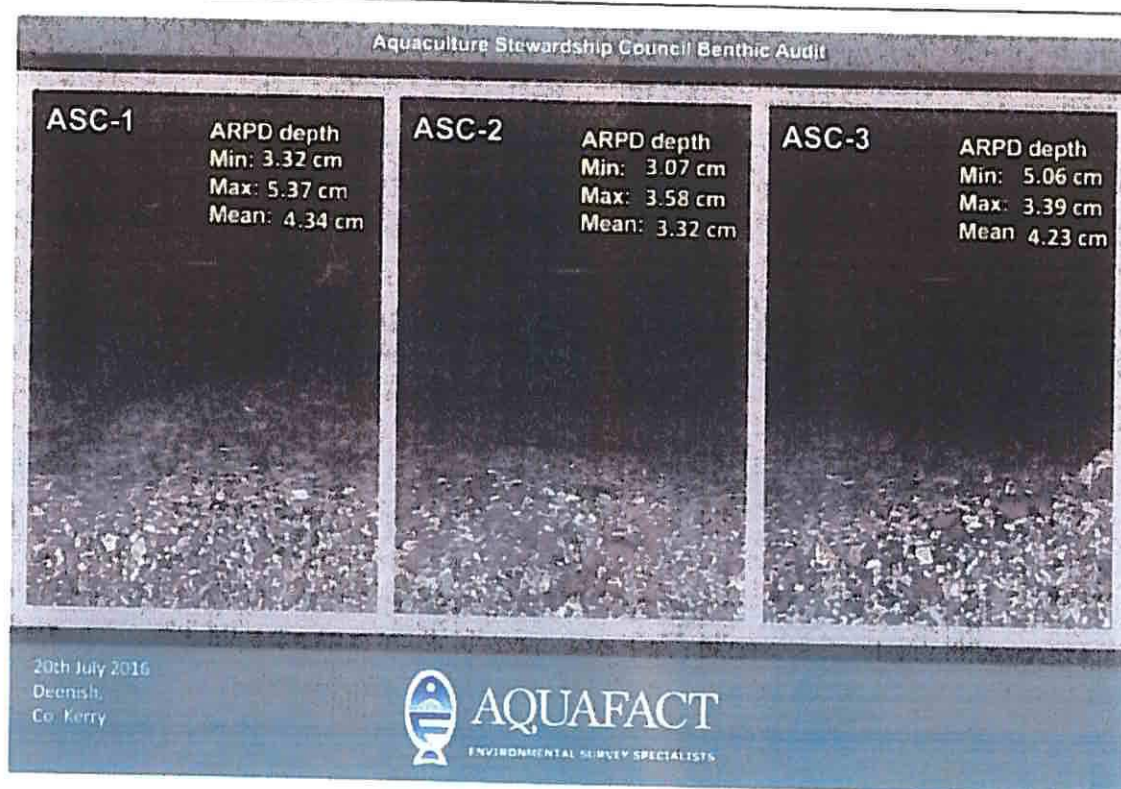
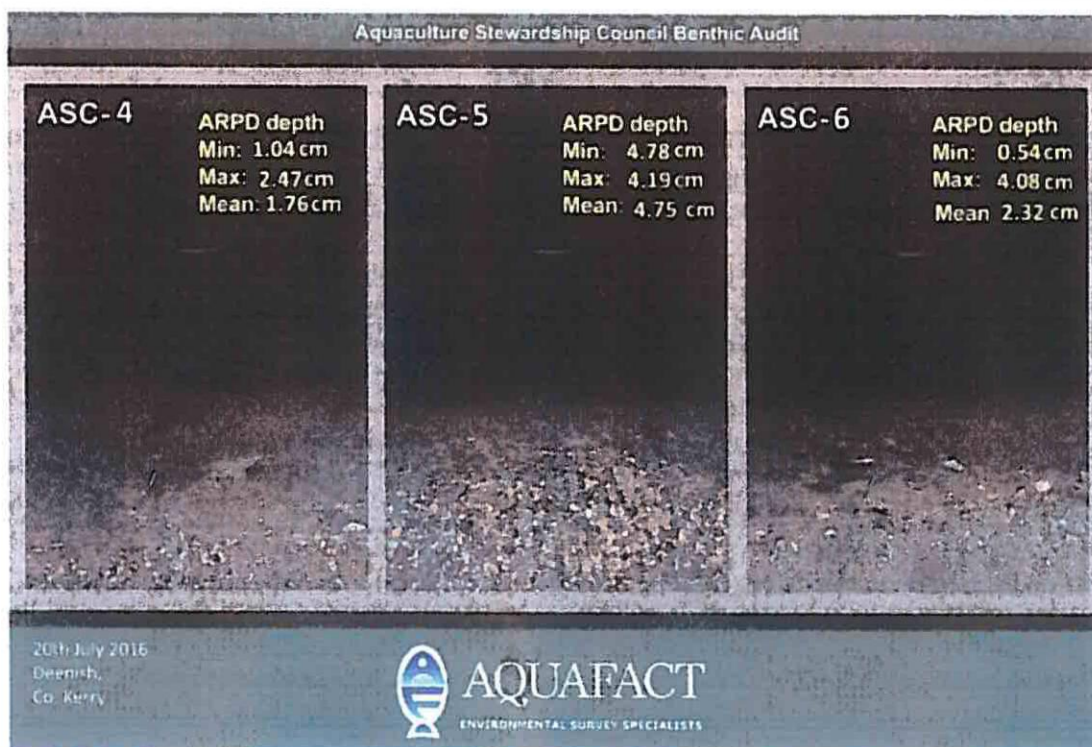
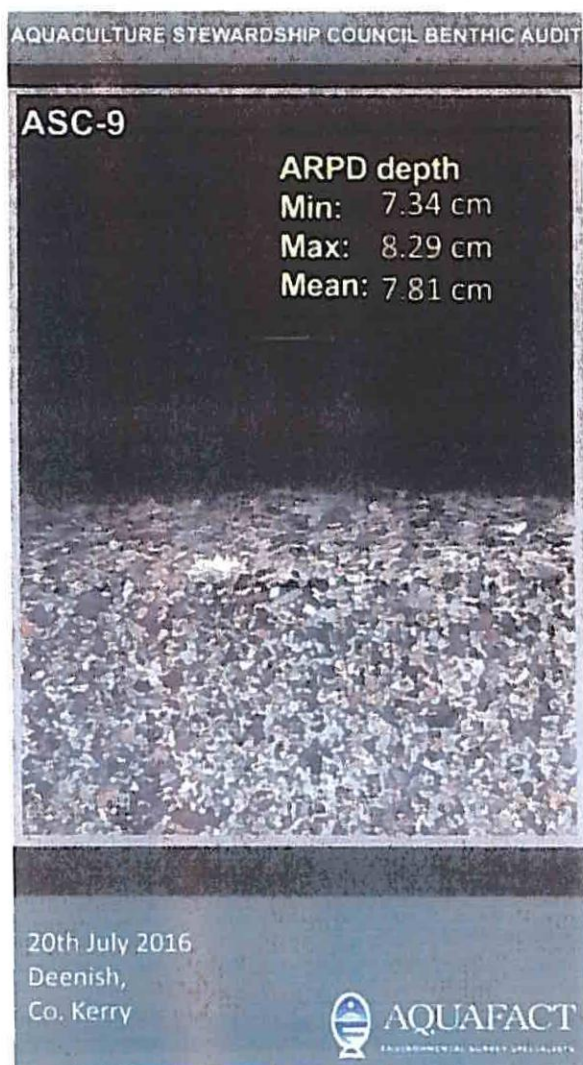


Figure 3 SPI images and corresponding ARPD depths from Stations ASC-1 to ASC-3. Deenish Island finfish aquaculture site, Kenmare Bay, surveyed on 20<sup>th</sup> July 2016.



**Figure 4** Diver SPI images and corresponding ARPD depths from Stations ASC-4 to ASC-6. Deenish Island finfish aquaculture site, Kenmare Bay, surveyed on 20<sup>th</sup> July 2016.





**Figure 5** Diver SPI image and corresponding ARPD depths at Station ASC-9 (Reference station), Deenish Island finfish aquaculture site, Kenmare Bay, surveyed on 20<sup>th</sup> July 2016.

### 3.1.1. Benthic Macrofaunal Analysis

The taxonomic identification of the benthic samples collected at the Deenish fish farm site yielded a total of 186 taxa before data truncation. The taxa identified were ascribed to 8 phyla, namely: Mollusca (40), Annelida (81), Arthropoda (43), Echinodermata (14), Porifera (1), Cnidaria (1), Nemertea (2), Nematoda (1), and Chordata (2). Of the 186 taxa present, 138 were identified to species level, the



remaining 48 being juveniles or partially damaged specimens and thus impossible to identify to the lowest possible taxonomic level. A complete listing of the taxa abundance is provided in Appendix 2.

### 3.1.1.1. Univariate Analysis (including Shannon Weiner Diversity Index)

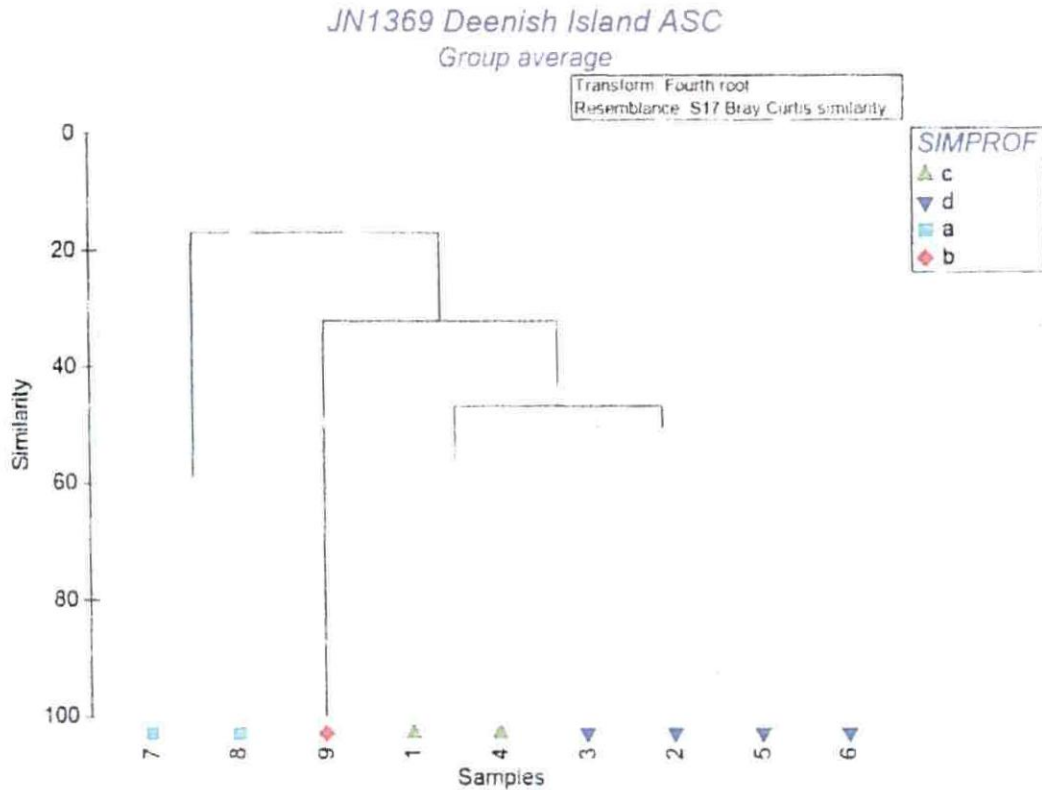
Univariate statistical analyses were carried out on the faunal abundance data for each station sampled, *i.e.* merging replicates A and B. All abundances were expressed as individuals per m<sup>2</sup> for each taxa. Taxon numbers ranged from 32 (Station ASC-1) to 70 (Station ASC-9). Numbers of individuals ranged from 2,740 (Station ASC-5) to 294,900 (Station ASC-5). Margalef's richness (d) ranged from 2.61 (Station ASC-1) to 7.02 (Station ASC-9). Pielou's evenness (J) ranged from 0.07 (Station ASC-5) to 0.88 (Station ASC-8). Shannon Weiner diversity (H') ranged from 0.28 (Station ASC-5) to 3.37 (Station ASC-8). Benthic diversity was variable, with the richest stations located along the most distant transect (ASC-8) and the reference station (ASC-9). Only those stations (ASC-8 and ASC-9) conformed to the Shannon-Wiener faunal Index score outside the AZE required to comply with the requirements for Indicator 2.1.2 (*i.e.* H' > 3, see Table 3). Shannon-Wiener Index values were very low at all other stations outside the AZE (ASC-3 and ASC-6) and in all cases under the ASC requirement (Table 3).

**Table 3** Results of the DIVERSE analyses conducted in Primer showing number of taxa (S), Total number of individuals (N) and diversity indices calculated from grab samples collated on 20<sup>th</sup> July 2016 in the vicinity of the finfish aquaculture site operated by Marine Harvest Ireland at Deenish Island, Co. Kerry. \* Indicates (also in bold) non conformance with the ASC requirement for Indicator 2.1.2 (Shannon-Wiener Index)

Station	No. Taxa (S)	No. Individuals (N)	Richness (d)	Evenness (J)	Shannon Weiner Diversity (H')
ASC-1	32	145900	2.61	0.27	0.94
ASC-2	42	31760	3.96	0.47	1.76
<b>ASC-3</b>	49	24440	4.75	0.43	<b>1.69*</b>
ASC-4	33	203100	2.62	0.16	0.56
ASC-5	56	294900	4.37	0.07	0.28
ASC-6	42	83360	3.62	0.13	<b>0.50*</b>
ASC-7	48	3420	5.78	0.86	3.33
ASC-8	46	2740	5.68	0.88	3.37
ASC-9	70	18600	7.02	0.76	3.23

### 3.1.1.2. Multivariate analysis

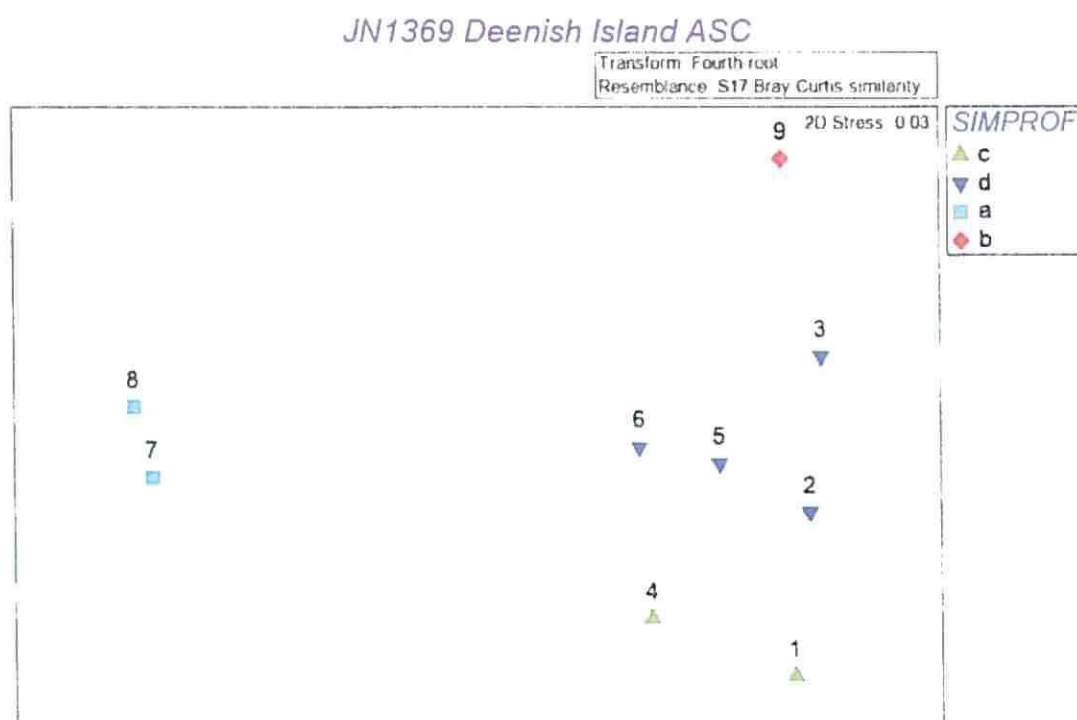
CLUSTER and SIMPROF analyses revealed four statistically significant groupings between the nine stations (Figure 6): Group a (Stations ASC-7 and ASC-8); Group b (Station ASC-9); Group c (Station ASC-1, and ASC-4); and Group d (Stations ASC-2, ASC-3, ASC-5 and ASC-6).



**Figure 6** Multivariate dendrogram calculated using the CLUSTER routine in Primer. Benthic stations sampled at the finfish aquaculture site operated by Marine Harvest Ireland in Deenish Island, 20<sup>th</sup> July 2016. Three significant groupings (at the 0.05 cut-off point) were identified by SIMPROF analysis. The stations joined by red lines could not be statistically differentiated from each other.

The stress value of the MDS plot (Figure 7) was 0.03 suggesting a very good representation of the data, with no real prospect for misinterpretation of the results. The SIMPROF groupings could be, to some extent, discerned in the MDS diagram, e.g. the faunal communities from Stations ASC-7 and 8 (furthest cage, see Figure 2) and ASC-9 (Reference Station) distinctively separated from those recorded in the remaining stations. Stations belonging to Group d were clearly clustered indicating similarity in the faunal composition. The relative distance between Station ASC-3 (within the AZE) and those stations

forming Group c can be interpreted as a somewhat distinct separation in the characterizing communities between both groups. Stations ASC-1 and ASC-4 (Edge of cage were relatively distant from each other in the MDS plot suggesting distinct faunal communities (significantly separated according to the results of the SIMPROF tests which assign those stations to Group d).



**Figure 7** Multi-Dimensional Scaling (MDS) plot for faunal data collated from sediment samples collated at the finfish aquaculture site operated by Marine Harvest Ireland in Deenish Island, 20<sup>th</sup> July 2016.

#### Multivariate faunal assemblages (SIMPROF groupings)

**Group a** contained two stations joining at a 58.84% similarity: Stations ASC-7 (10 m within the AZE on the furthest cage to the north of the site) and ASC-8 (outside the AZE, also on the furthest cage to the north). This group contained 67 taxa comprising 6,160 individuals (totals extrapolated to individuals per m<sup>2</sup>). In total eleven taxa accounted for just over 50% of the within-group similarity: Nematodes (760 individuals/m<sup>2</sup>, 6.06% contribution to SIMPER similarity), *Spiophanes bombyx* (450 ind/m<sup>2</sup>, 5.23% cont.), *Perioculodes longimanus* (440 ind/m<sup>2</sup>, 5.23% cont.), *Fabulina fabula* (460 ind/m<sup>2</sup>, 5.23% cont.), *Magelona filiformis* (260 ind/m<sup>2</sup>, 4.60% cont.), *Tubificoides amplivasatus* (180 ind/m<sup>2</sup>, 4.16% cont.), *Dosinia* sp. (240 ind/m<sup>2</sup>, 4.16% cont.), Edwardsiidae (140 ind/m<sup>2</sup>, 3.87% cont.), *Capitella* sp. complex (140



ind/m<sup>2</sup>, 3.87% cont.), *Pseudocuma simile* (180 ind/m<sup>2</sup>, 3.87%) and *Chamelea striatula* (440 ind/m<sup>2</sup>, 3.87% cont.)

Although Group a included some pollution indicating taxa (e.g. *Tubificoides amplivasatus*, *Capitella* sp.) most of this assemblage was defined by taxa sensitive (e.g. *Dosinia* sp. *C. striatula*, *M. filiformis*), indifferent (*P. simile*, Edwardsiidae) or tolerant to organic enrichment (nematodes, *S. bombyx*) according to the classification of Borja *et al.* (2000).

**Group b** consisted solely of Station ASC-9 (chosen as representative of ambient conditions), joining all other groups (bar Group a) at a 32.01% similarity level. This group contained 76 taxa comprising 18,609 individuals (totals extrapolated to individuals per m<sup>2</sup>). Ten taxa accounted for over 60% of the total faunal abundance: Nematoda dominated with 3,960 individuals representing 21.28% of the total macroinvertebrate abundance. The polychaete *Sphaerosyllis bulbosa* (1,880 ind/m<sup>2</sup>, 10.10%), *Phaloe inornata* (1,200 ind/m<sup>2</sup>, 6.45%), the amphipod *Animocera docus semiserratus* (960 ind/m<sup>2</sup>, 5.15%), brittlestars *Ophiocomina nigra* (960 ind/m<sup>2</sup>, 5.16%), bivalve *Gari tellinella* (780 ind/m<sup>2</sup>, 4.19%), the amphipod *Leptocheirus hirsutimanus* (720 ind/m<sup>2</sup>, 3.87%), the polychaete *Harmothoe* sp. (580 ind/m<sup>2</sup>, 3.12%) and the brittlestar *Amphipholis squamata* (580 ind/m<sup>2</sup>, 3.12%).

The vast majority of the dominant taxa for this group were non-pollution indicators and most can be regarded as sensitive to organic loads normally present in unimpacted scenarios. Such taxa included: those sensitive to organic enrichment (Group I), e.g. *A. semiserratus*, *O. nigra*, *G. tellinella*, and *A. squamata*; indifferent to organic enrichment (Group II) *S. bulbosa* and Group III types tolerant to organic enrichment, e.g. *L. hirsutimanus*.

**Group c** (formed by Stations ASC-1 and ASC-4, within the AZE at parallel and perpendicular directions to the prevalent currents) joined **Group d** at 46.8% similarity. Average within-group SIMPER similarity for this group was 55.88%. In total 51 taxa and 349,000 ind/m<sup>2</sup> were recorded at these two stations. Six taxa contributed to over 70% of the multivariate within-group similarity: nematodes (288,300 ind/m<sup>2</sup>, 24.63%), *M. fuliginosus* (36,700 ind/m<sup>2</sup>, 15.31%), *Capitella* sp. complex (5,540 ind/m<sup>2</sup>, 9.52%), *Mediomastus fragilis* (5,360 ind/m<sup>2</sup>, 8.41%), Mytilids (2,800 ind/m<sup>2</sup>, 6.74%) and *Tubificoides benedii* (3,080 ind/m<sup>2</sup>, 5.43%). This assemblage, found in close proximity to the cages, was typically species-poor and dominated by highly abundant pollution indicators (Group V) such as *M. fuliginosus*, capitellids (*Capitella* sp.) and oligochaetes (*T. benedii*), or taxa tolerant to organic enrichment (Nematoda, Mytilids, *M. fragilis* sp.).



**Group d** was the assemblage found at stations ASC-2, ASC-3, ASC-5 and ASC-6 (within and outwith the AZE in the southernmost cage, both at right angle and longitudinally in relation to the prevalent current. Within-group SIMPER similarity was 53.70%. This group contained a total of 97 taxa and a cumulative density of 434,460 individuals/m<sup>2</sup>.

Ten taxa contributed to over 50% of the total SIMPER similarity across the constituting stations, namely: Nematoda (380,480 ind/m<sup>2</sup>, 12.75% cont.), *M. fragilis* (7,580 ind/m<sup>2</sup>, 6.51% cont.), *M. fuliginosus* (5,120 ind/m<sup>2</sup>, 6.32%), *Capitella* sp. (19,520 ind/m<sup>2</sup>, 5.33%), *Eteone longa/flava* (1,740 ind/m<sup>2</sup>, 4.58%), *P. inornata* (980 ind/m<sup>2</sup>, 4.31%), *G. lapidum* (960 ind/m<sup>2</sup>, 4.15%), *Aonides oxycephala* (620 ind/m<sup>2</sup>, 4.04%), *T. benedii* (1,940 ind/m<sup>2</sup>, 3.40%), and *Psamathe fusca* (380 ind/m<sup>2</sup>, 3.16%).

The assemblage represented by Group d was dominated by a combination of opportunistic taxa usually regarded as indicative of organic enrichment (*M. fuliginosus*, *Capitella* sp., *T. benedii*) and taxa tolerant or indifferent to such enriched conditions (Nematoda, *M. fragilis*, *E. longa/flava*, *A. oxycephala*, *P. fusca*, *G. lapidum*).

#### 3.1.1.3. AMBI Index and Total Number of Macroinvertebrate Taxa

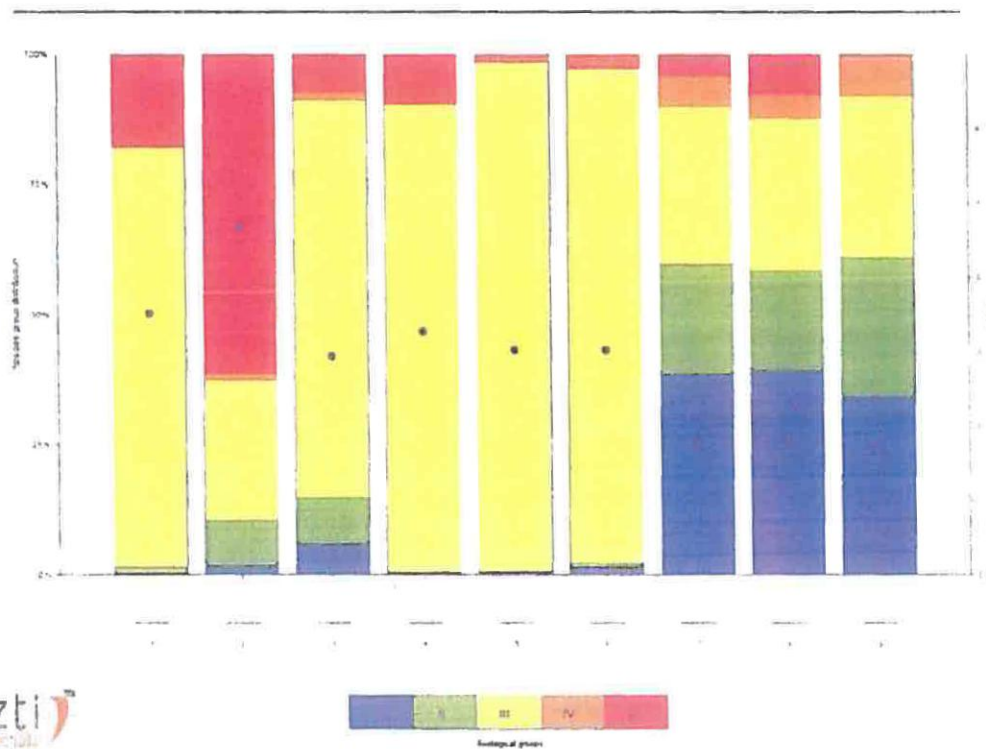
AMBI scores ranged from 1.70 (Station ASC-9, reference station) to 4.68 (Station ASC-2, within the AZE, southwest corner along the main current direction). All the stations outside the AZE (Stations ASC-3, ASC-6, ASC-8 and the reference station ASC-9) had AMBI index scores of less than 3.3 and thus complied with the requirements for Indicator 2.1.2 (Criterion 2.1). Most stations surveyed were classified as 'slightly disturbed' following the AMBI score classification (see Table 4, Figure 8 and Appendix 3). The exception were stations ASC-1 and ASC-2 which were classified as 'moderately disturbed'.

**Table 4** AMBI Scores and equivalent disturbance classification at nine sampling stations sampled in the vicinity of the finfish operations off Deenish Island, Kenmare Bay on 20<sup>th</sup> July 2016. \* denotes stations outside AZE.

Station	AMBI Score	Disturbance Classification
ASC-1	3.51	Moderately disturbed
ASC-2	4.68	Moderately disturbed
ASC-3	2.93*	Slightly disturbed
ASC-4	3.27	Slightly disturbed
ASC-5	3.02	Slightly disturbed
ASC-6	3.02*	Slightly disturbed

Station	AMBI Score	Disturbance Classification
ASC-7	1.74	Slightly disturbed
ASC-8	1.83*	Slightly disturbed
ASC-9 REF	1.70*	Slightly disturbed

Station Distribution



**Figure 8** Histogram showing the percentage contribution of Groups I to V (Groups IV and V are regarded as pollution indicators) to the infaunal assemblage recorded at the stations sampled in the vicinity of the Deenish Island finfish aquaculture operations on 20<sup>th</sup> July 2016. AMBI scores for each site are also represented.

Table 5 and Appendix 4 show the non-pollution indicator species (AMBI groups I to III, Borja *et al.*, 2000) recorded in densities greater than 100 individuals/m<sup>2</sup> (or equally high to the reference site ASC-9 if natural abundance is lower than the requirement). At all stations, inside and outside the AZE, the minimum number of two highly abundant taxa that are not pollution indicators was achieved. Therefore, the requirements for Indicator 2.1.3 were met at the Deenish site in 2016.

**Table 5** Non-pollution indicator taxa ( $\geq 100/m^2$  or equally high to reference) per station obtained from macroinvertebrate faunal data collated at nine sampling stations sampled in the vicinity of the Deenish Island finfish operations in Kenmare Bay, 20<sup>th</sup> July 2016. \* denotes less than 100 non-pollution indicators per  $m^2$  recorded but densities of those taxa equivalent (or higher) than those recorded in the reference station ASC-9. Groups were assigned following the latest AMBI species list (November 2014; available from <http://ambi.azti.es>).

Station	No. Non Pollution Indicator taxa	Non Pollution Indicator taxa and density
ASC-1	10	<p>NEMATODA (110,380 ind/<math>m^2</math>)  <i>Mediomastus fragilis</i> (3,860 ind/<math>m^2</math>)            MYTILIDAE (2,180 ind/<math>m^2</math>)  <i>Spirobranchus spp.</i> (1,440 ind/<math>m^2</math>)  <i>Mytilus edulis</i> (480 ind/<math>m^2</math>)  <i>Aonides oxycephala</i> (240 ind/<math>m^2</math>)  <i>Atelecyclus rotundatus</i> (240 ind/<math>m^2</math>)  <i>Tritia incrassata</i> (120 ind/<math>m^2</math>)            SPIONIDAE (40 ind/<math>m^2</math> Reference is 40/<math>m^2</math>)  <i>Pisidia longicornis</i> (20 ind/<math>m^2</math> Reference is 20/<math>m^2</math>)</p>
ASC-2	14	<p>NEMATODA (5,300 ind/<math>m^2</math>)  <i>Spirobranchus spp.</i> (2,340 ind/<math>m^2</math>)  <i>Phyllodoce mucosa</i> (880 ind/<math>m^2</math>)  <i>Mediomastus fragilis</i> (800 ind/<math>m^2</math>)  <i>Eteone longa/flava</i> aggregate (740 ind/<math>m^2</math>)  <i>Psamathe fusca</i> (220 ind/<math>m^2</math>)  <i>Aonides oxycephala</i> (140 ind/<math>m^2</math>)  <i>Leptochiton cancellatus</i> (140 ind/<math>m^2</math>)            MYTILIDAE (120 ind/<math>m^2</math>)  <i>Glycera lapidum</i> (120 ind/<math>m^2</math>)  <i>Photis longicaudata</i> (120 ind/<math>m^2</math>)            NEMERTEA (100 ind/<math>m^2</math>)  <i>Tritia incrassata</i> (20 ind/<math>m^2</math> Reference is 20/<math>m^2</math>)  <i>Anapagurus hyndmani</i> (20 ind/<math>m^2</math> Reference is 20/<math>m^2</math>)</p>
ASC-3	18	<p>NEMATODA (16,220 ind/<math>m^2</math>)  <i>Pisione remota</i> (880 ind/<math>m^2</math>)  <i>Mediomastus fragilis</i> (780 ind/<math>m^2</math>)  <i>Sphaerosyllis bulbosa</i> (720 ind/<math>m^2</math>)  <i>Eteone longa/flava</i> aggregate (620 ind/<math>m^2</math>)  <i>Kurtiella bidentata</i> (480 ind/<math>m^2</math>)  <i>Glycera lapidum</i> (440 ind/<math>m^2</math>)  <i>Protodorvillea kefersteini</i> (240 ind/<math>m^2</math>)  <i>Syllis garciai</i> (200 ind/<math>m^2</math>)</p>



Station	No. Non Pollution Indicator taxa	Non Pollution Indicator taxa and density
		<i>Aonides oxycephala</i> (160 ind/m <sup>2</sup> ) <i>Malmgrenia</i> sp. (100 ind/m <sup>2</sup> ) <i>Syllis pontxioi</i> (100 ind/m <sup>2</sup> ) <i>Glycera</i> sp. (80 ind/m <sup>2</sup> Reference is 60/m <sup>2</sup> ) SPIONIDAE (80 ind/m <sup>2</sup> Reference is 40/m <sup>2</sup> ) <i>Euspira nitida</i> (80 ind/m <sup>2</sup> Reference is 20/m <sup>2</sup> ) <i>Schistomeringos neglecta</i> (40 ind/m <sup>2</sup> Reference is 40/m <sup>2</sup> ) <i>Anapagurus hyndmani</i> (20 ind/m <sup>2</sup> Reference is 20/m <sup>2</sup> ) <i>Caecum glabrum</i> (20 ind/m <sup>2</sup> Reference is 20/m <sup>2</sup> )
ASC-4	9	NEMATODA (177,920 ind/m <sup>2</sup> ) <i>Mediomastus fragilis</i> (1,500 ind/m <sup>2</sup> ) <i>Photis longicaudata</i> (840 ind/m <sup>2</sup> ) <i>Eteone longa/flava</i> aggregate (740 ind/m <sup>2</sup> ) <i>Phyllodoce mucosa</i> (740 ind/m <sup>2</sup> ) MYTILIDAE (620 ind/m <sup>2</sup> ) SPIONIDAE (300 ind/m <sup>2</sup> ) <i>Psamathe fusca</i> (140 ind/m <sup>2</sup> ) <i>Anapagurus hyndmani</i> (100 ind/m <sup>2</sup> )
ASC-5	18	NEMATODA (282,400 ind/m <sup>2</sup> ) <i>Mediomastus fragilis</i> (4,280 ind/m <sup>2</sup> ) <i>Photis longicaudata</i> (560 ind/m <sup>2</sup> ) <i>Eteone longa/flava</i> aggregate (240 ind/m <sup>2</sup> ) SPIONIDAE (180 ind/m <sup>2</sup> ) <i>Harmothoe</i> sp. (180 ind/m <sup>2</sup> ) <i>Glycera lapidum</i> (160 ind/m <sup>2</sup> ) <i>Anapagurus hyndmani</i> (140 ind/m <sup>2</sup> ) <i>Glycera</i> sp. (140 ind/m <sup>2</sup> ) <i>Pholoe baltica</i> (140 ind/m <sup>2</sup> ) MYTILIDAE (120 ind/m <sup>2</sup> ) <i>Aonides oxycephala</i> (120 ind/m <sup>2</sup> ) <i>Spirobranchus</i> spp. (120 ind/m <sup>2</sup> ) <i>Kurtiella bidentata</i> (100 ind/m <sup>2</sup> ) <i>Cheirocratus</i> sp. (100 ind/m <sup>2</sup> ) <i>Clausinella fasciata</i> (40 ind/m <sup>2</sup> Reference is 20/m <sup>2</sup> ) <i>Phyllodoce mucosa</i> (20 ind/m <sup>2</sup> Reference is 20/m <sup>2</sup> ) <i>Pisidia longicornis</i> (20 ind/m <sup>2</sup> Reference is 20/m <sup>2</sup> )
ASC-6	14	NEMATODA (76,560 ind/m <sup>2</sup> ) <i>Mediomastus fragilis</i> (1,720 ind/m <sup>2</sup> )



Station	No. Non Pollution Indicator taxa	Non Pollution Indicator taxa and density
ASC-6 (cont'd)	14	<p><i>Photis longicaudata</i> (640 ind/m<sup>2</sup>)  <i>Glycera lapidum</i> (240 ind/m<sup>2</sup>)  <i>Aonides oxycephala</i> (200 ind/m<sup>2</sup>)  <i>Eteone longa/flava</i> aggregate (140 ind/m<sup>2</sup>)  <i>Abra alba</i> (120 ind/m<sup>2</sup>)  <i>Iphinoe serrata</i> (120 ind/m<sup>2</sup>)  <i>Harmothoe</i> sp. (100 ind/m<sup>2</sup>)  <i>Cheirocratus</i> sp. (80 ind/m<sup>2</sup> Reference is 20/m<sup>2</sup>)  <i>Timoclea ovata</i> (80 ind/m<sup>2</sup> Reference is 40/m<sup>2</sup>)  <i>Anapagurus hyndmani</i> (40 ind/m<sup>2</sup> Reference is 20/m<sup>2</sup>)  <i>Clausinella fasciata</i> (20 ind/m<sup>2</sup> Reference is 20/m<sup>2</sup>)  <i>Tritia incrustata</i> (20 ind/m<sup>2</sup> Reference is 20/m<sup>2</sup>)</p>
ASC-7	15	<p><i>Chamelea striatula</i> (380 ind/m<sup>2</sup>)  NEMATODA (360 ind/m<sup>2</sup>)  <i>Fabulina fabula</i> (260 ind/m<sup>2</sup>)  <i>Perioculodes longimanus</i> (240 ind/m<sup>2</sup>)  <i>Spiophanes bombyx</i> (9200 ind/m<sup>2</sup>)  <i>Dosinia</i> sp. (160 ind/m<sup>2</sup>)  <i>Abra alba</i> (140 ind/m<sup>2</sup>)  <i>Magelona filiformis</i> (120 ind/m<sup>2</sup>)  <i>Pseudocuma (Pseudocuma) simile</i> (120 ind/m<sup>2</sup>)  <i>Pariambus typicus</i> (100 ind/m<sup>2</sup>)  SPIONIDAE (80 ind/m<sup>2</sup> Reference is 40/m<sup>2</sup>)  EDWARDSIIDAE (80 ind/m<sup>2</sup> Reference is 60/m<sup>2</sup>)  <i>Pisidia longicornis</i> (40 ind/m<sup>2</sup> Reference is 20/m<sup>2</sup>)  <i>Mediomastus fragilis</i> (20 ind/m<sup>2</sup> Reference is 20/m<sup>2</sup>)  <i>Phyllodoce mucosa</i> (20 ind/m<sup>2</sup> Reference is 20/m<sup>2</sup>)</p>
ASC-8	7	<p>NEMATODA (400 ind/m<sup>2</sup>)  <i>Spiophanes bombyx</i> (260 ind/m<sup>2</sup>)  <i>Fabulina fabula</i> (200 ind/m<sup>2</sup>)  <i>Perioculodes longimanus</i> (200 ind/m<sup>2</sup>)  <i>Magelona filiformis</i> (140 ind/m<sup>2</sup>)  EDWARDSIIDAE (60 ind/m<sup>2</sup> Reference is 60/m<sup>2</sup>)  SPIONIDAE (40 ind/m<sup>2</sup> Reference is 420/m<sup>2</sup>)</p>
ASC-9 REF	24	<p>NEMATODA (4,000 ind/m<sup>2</sup>)  <i>Sphaerosyllis bulbosa</i> (1,880 ind/m<sup>2</sup>)  <i>Animoceradocus semiserratus</i> (960 ind/m<sup>2</sup>)  <i>Ophiocomina nigra</i> (960 ind/m<sup>2</sup>)</p>

Station	No. Non Pollution Indicator taxa	Non Pollution Indicator taxa and density
ASC-9 REF (cont's)	24	<i>Gari tellinella</i> (9780 ind/m <sup>2</sup> ) <i>Leptocheirus hirsutimanus</i> (720 ind/m <sup>2</sup> ) <i>Harmothoe</i> sp. (580 ind/m <sup>22</sup> ) <i>Amphipholis squamata</i> (580 ind/m <sup>2</sup> ) <i>Skenea serpuloides</i> (460 ind/m <sup>2</sup> ) <i>Kurtiella bidentata</i> (440 ind/m <sup>2</sup> ) VENERIDAE (400 ind/m <sup>2</sup> ) AMPHIURIDAE (400 ind/m <sup>2</sup> ) <i>Leptochiton cancellatus</i> (380 ind/m <sup>2</sup> ) <i>Eunice norvegica</i> (320 ind/m <sup>2</sup> ) <i>Spirobranchus</i> spp. (280 ind/m <sup>2</sup> ) <i>Protodorvillea kefersteini</i> (220 ind/m <sup>2</sup> ) <i>Malmgrenia ljunmani</i> (220 ind/m <sup>2</sup> ) <i>Pisione remota</i> (200 ind/m <sup>2</sup> ) <i>Liljeborgia pallida</i> (200 ind/m <sup>22</sup> ) <i>Glycera lapidum</i> (180 ind/m <sup>2</sup> ) <i>Trypanosyllis coeliaca</i> (180 ind/m <sup>2</sup> ) <i>Polygordius</i> sp. (180 ind/m <sup>2</sup> ) MYTILIDAE (140 ind/m <sup>2</sup> ) AORIDAE (100 ind/m <sup>2</sup> )

## 4. Discussion

The survey carried out at the Deenish Island-out site on the 20<sup>th</sup> of July 2016 involved grab sampling at nine stations following ASC guidance. The aim of the survey was to assess compliance with ASC Criterion 2.1 'Benthic biodiversity and benthic habitats'. More specifically, two stations were selected at the edge of the pen located to the southwest of the site, three within the AZE along set transects and three outside the AZE along the same transects. In addition, one distant reference station was selected to document baseline seafloor conditions (Figure 2). GPS coordinates for the sampling stations were taken at the time of the survey as stipulated by the ASC guidance manual (v. 1.0 – 14 February 2013) and these are shown in Table 2. Duplicate faunal samples were collected at each station and several diversity indices derived upon completion of the taxonomic analysis of the samples, namely the AZTI Marine Biotic Index (AMBI) and Shannon-Wiener index for Indicator 2.1.2. The number of macrofaunal taxa that are not pollution indicators was also estimated to confirm if the requirements for Indicator 2.1.3 were met. A Redox probe was used to measure redox potential (mV) in the sediment retrieved by the small (0.025 m<sup>2</sup>) Van Veen grab used. However, it was not possible to obtain a reading in all stations due to the coarseness of the sediment. In addition, probe measurements were supported by assessments using a diver-operated Sediment Profile Imagery (SPI) unit. This SPI survey was carried out only at seven of the nine stations investigated by means of grab sampling (Stations 1-6 and Station 9).

At all stations sampled outside the AZE where a probe value was obtained, redox potential was positive (>0 mV) within the first 2 cm of the seafloor, thus complying with the ASC requirement for Indicator 2.1.1. For the remaining stations outside the AZE (ASC-3 and ASC-6) supporting SPI photographs showed a well oxygenated, coarse seafloor with relatively deep apparent redox discontinuity layers (deeper than the actual penetration achieved by the SPI prism). The seafloor had an overall healthy, oxygenated appearance with few apparent signs of impact.

Two indices were used to determine compliance with the requirements for Indicator 2.1.2: the Shannon-Wiener index (H') and the AMBI scores. The requirement is for the one out of a possible total of four indices to indicate good to high ecological quality outside the AZE. The ASC requirement is for H' to be equal to or in excess of 3 outside the AZE. Such threshold was achieved at all stations sampled outside the AZE (ASC-6, ASC-8 and ASC-9) with the exception of Station ASC-3. Nonetheless, the requirements



for Indicator 2.1.2 can be regarded as satisfied based on the AMBI scores being less than 3.3 at all stations outside the AZE, as required by the ASC Standard.

Multivariate SIMPER analysis showed four distinct faunal assemblages. The assemblages found at the stations upstream from the main current direction (ASC-7, ASC-8 and at the reference station (ASC-9) were dominated by taxa sensitive or indifferent to pollution. The area downstream of the main current direction (ASC-1 to ASC-3) and at right angles (ASC-4 to ASC-6), inside and outside of the AZE, were mostly dominated by a combination of first and second degree opportunistic taxa and taxa indifferent or tolerant to impact. The presence of nematodes and other taxa tolerant of organic enrichment resulted in a classification of 'slightly disturbed' being assigned to all stations, including stations ASC-9 (which was selected as representative of baseline conditions). The presence of first and second order opportunistic taxa at Stations ASC-1 and ASC-2 (within the AZE, downstream of the prevalent current) resulted in a classification of 'moderately disturbed' for those stations.

Finally, the requirement for Indicator 2.1.3 for numbers of non-pollution indicator species was amply met at all stations. The requirement is for more than two of such taxa being highly abundant (*i.e.* present at frequencies of  $\geq 100$  individuals/m<sup>2</sup> or as high or higher than the reference site if natural abundance is lower than this level). Those numbers were achieved at all stations, with numbers of such taxa considerably exceeding the minimum required to satisfy the requirements for Indicator 2.1.3.

In summary, in relation to Criteria 2.1 for the assessment of the ASC Standard at the Deenish Island aquaculture site in 2016:

- Based on the appearance of the sediment and the depth of the ARPD calculated from SPI, the requirement for Indicator 2.1.1 (redox potential) was met.
- The requirement for Indicator 2.1.2 was met based on the AMBI Scores being equal to or less than 3.3 at those stations outside the AZE.
- The requirement for Indicator 2.1.3 ( $\geq 2$  highly abundant not-pollution indicator taxa) was met at all sediment stations within the AZE.



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## 5. References

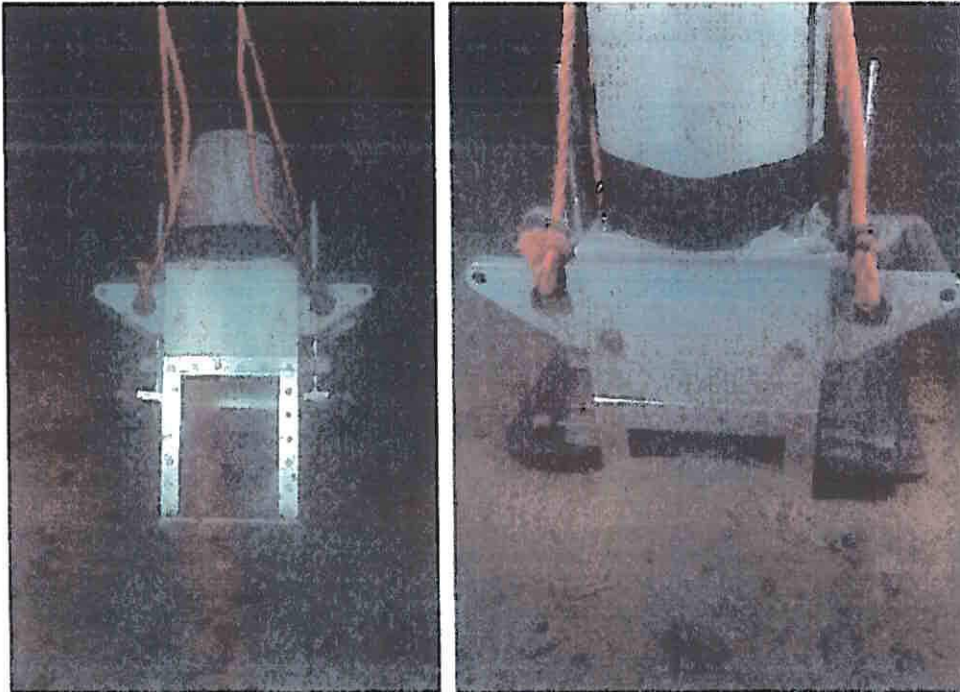
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## **Appendix 1**

### **Sediment Profile Imagery (SPI)**

Sediment Profile Images (SPI) were acquired using a diver-deployed sediment profile imaging camera system at a number of the ASI stations as a comparison to redox potential measurements with the redox probe. This system is comprised of a digital SLR camera in a water-tight pressure vessel that is mounted above a prism that penetrates the upper 25 cm of sediment (Appendix 1 - Figure 1). The sediment profile is viewed through a plexiglass window. Its image is reflected to the camera lens via a plane mirror. Illumination is provided by an internally-mounted strobe.

The diver depresses the unit into the seafloor and manually triggers the camera. This process is repeated at each station investigated. The prism unit is filled with distilled water – thus ambient water clarity is never a limiting factor in image quality.



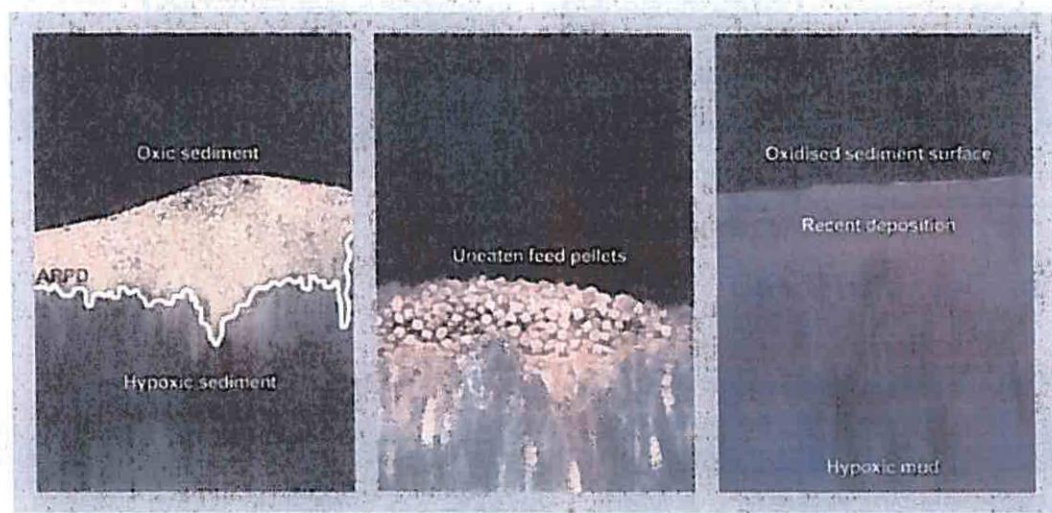
**Appendix 1 – Figure 19.** Diver operated Sediment Profile Imaging camera. The left-hand image gives a view of the camera at the sediment surface. The right-hand image shows the SPI camera when inserted into the sediment.

A great deal of information about benthic processes is available from sediment profile images. Measurable parameters, many of which are calculated directly by image analysis, include physical/chemical parameters (*i.e.* sediment type measured as grain size major mode, prism penetration depth providing a relative indication of sediment shear strength, sediment surface relief, condition of mud clasts, redox potential discontinuity depth and degree of contrast, sediment gas voids) and

biological parameters (*i.e.* infaunal successional stage of a well documented successional paradigm for soft marine sediments (see Pearson and Rosenberg, 1978), degree of sediment reworking, dominant faunal type, epifauna and infauna, depth of faunal activity, presence of microbial aggregations).

For the purposes of the current survey the primary feature of interest is the depth of oxygen penetration into the sediments in the vicinity of the finfish pens (as required by the regulations by the Department of Agriculture, Fisheries and Food, 2008 (DAFF, 2008). In this case the apparent redox potential discontinuity or ARPD depth is measured. Features of particular interest that may be gleaned from SPI images taken in sediments in the vicinity of finfish pens include the presence of:

- uneaten feed pellets (and depth of this material)
- faecal casts
- and depth of shell gravel deposits
- of gas voids in the sediment (Appendix 1 – Figure 2)



Appendix 1 – Figure 2. Typical sediment profile images with examples of features.



## **Appendix 2**

**Faunal Species List recorded in duplicate grab samples collected in the vicinity of the Deerish Island finfish aquaculture site, Kenmare Bay.**

**20<sup>th</sup> July 2016**

JN1369 Deenish Island ASC

Howson &  
Picton  
(1997)<sup>1</sup>  
Inventory

Station	1	2	3	4	5	6	7	8	9
PORIFERA	C	1	0	0	0	0	0	0	0
CALCAREA	C	2	0	0	0	0	0	0	0
LEUCOSOLENIDA	C	49	0	0	0	0	0	0	0
Sycettidae	C	126	0	0	0	0	0	0	0
Sycon ciliatum	C	133	0	0	0	0	0	0	20
CNIDARIA	D	1	0	0	0	0	0	0	0
ANTHOZOA	D	583	0	0	0	0	0	0	0
HEXACORALLIA	D	627	0	0	0	0	0	0	0
ACTINIARIA	D	662	0	0	0	0	0	0	0
Edwardsiidae	D	759	0	0	0	0	0	0	0
Edwardsiidae indet.	D	759	0	0	0	0	80	60	60
NEMATODA	HD	1	0	0	0	0	0	0	0
Nematoda indet.	HD	1	110380	5300	16220	177920	282400	76560	3960
NEMERTEA	G	1	0	0	0	0	0	0	0
Nemertea indet.	G	1	0	0	0	0	0	40	40
Nemertea sp A	G	1	0	100	0	20	0	20	20
Cerebratulus sp.	G	39	20	0	0	0	0	20	20
Cerebratulus sp. (partial/damaged)	G	39	0	0	0	0	0	0	20

<sup>1</sup> Howson, C. M. & Picton, B. E. (1997) The species directory of the marine fauna and flora of the British Isles and surrounding seas *Ulster Museum Publication*, 276. *The Ulster Museum, Belfast, UK. ISBN 0-948150-06-8* vi, 508 (+ cd-rom) pp

JN1369 Deenish Island ASC

Hovvson &  
Pictou  
(1997)<sup>1</sup>  
Inventory

Station		1	2	3	4	5	6	7	8	9
<b>ANNELIDA</b>	P	1	0	0	0	0	0	0	0	0
<b>SIPUNCULA</b>	N	1	0	0	0	0	0	0	0	0
Sipuncula indet.	N	1	0	0	0	0	0	0	0	20
<b>GOLFIGIIDA</b>	N	10	0	0	0	0	0	0	0	0
<b>Golfingidae</b>	N	11	0	0	0	0	0	0	0	0
Golfingia vulgaris vulgaris	N	17	0	0	0	0	0	0	0	0
<b>POLYCHAETA</b>	P	2	0	0	0	0	0	0	0	0
<b>PHYLLODOCIDA</b>	P	3	0	0	0	0	0	0	0	0
<b>Pisisionidae</b>	P		0	0	0	0	0	0	0	0
Pisione remota	P	15	0	0	0	880	0	0	0	200
<b>Polynoidea</b>	P	25	0	0	0	0	0	0	0	0
Polynoidea indet.	P	25	0	0	0	60	100	0	0	360
Malmgrenia sp.		0	0	100	0	0	0	0	0	20
Malmgrenia ijungmani	P	66	0	0	0	0	0	0	0	220
Harmothoe sp.	P	50	0	0	0	180	100	0	20	580
<b>Pholoidae</b>		0	0	0	0	0	0	0	0	0
Pholoe inornata	P	92	40	160	200	200	180	0	0	1200
Pholoe baltica (sensu Petersen)	P	95	60	60	0	140	0	0	0	0
<b>Sigalionidae</b>		0	0	0	0	0	0	0	0	0
Sthenelais sp.	P	106	0	0	20	0	0	0	0	0

JN1369 Deenish Island ASC

Howson &  
Pickett  
(1997)<sup>1</sup>  
Inventory

Station	1	2	3	4	5	6	7	8	9
<b>Phyllocodiidae</b>	P	114	0	0	0	0	0	0	0
Phyllocodiidae indet.	P	114	60	0	60	40	20	0	180
Eteone longa/flava aggregate	P	118	0	740	620	740	240	140	0
Phyllococe mucosa	P	145	0	880	0	740	20	0	20
Eulalia aurea	P	151	60	0	0	20	0	0	0
Paranaitis kosteriensis	P	176	0	0	0	0	0	0	20
<b>Glyceridae</b>	P	254	0	0	0	0	0	0	0
Glycera sp. (partial/damaged)	P	255	0	60	80	0	140	0	40
Glycera sp. (juv)	P	255	0	0	0	0	0	0	20
Glycera alba	P	256	0	0	0	0	0	0	40
Glycera lapidum	P	260	0	120	440	0	160	240	180
Glycera tridactyla	P	265	0	0	0	0	0	0	0
<b>Goniadidae</b>	P	266	0	0	0	0	0	0	0
Goniada maculata	P	271	0	0	0	0	20	0	0
<b>Sphaerodoridae</b>	P	277	0	0	0	0	0	0	0
Ephesiella abyssorum	P	282	0	0	0	0	0	0	40
Sphaerodorum gracilis	P	291	0	0	0	0	0	0	20
<b>Hesionidae</b>	P	293	0	0	0	0	0	0	0
Hesionidae indet. (partial/damaged)	P	293	0	20	0	0	0	40	60
Psamathe fusca	P	305	40	220	60	140	40	60	0



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Howson &  
Picton  
(1997)  
Inventory

Station	1	2	3	4	5	6	7	8	9
<b>Syllidae</b>									
	P	0	0	0	0	0	0	0	0
		346							
Syllidae indet. (partial/damaged)	P	0	0	0	0	0	0	0	60
		346							
Syllis cornuta		0	40	0	0	0	0	0	0
Trypanosyllis coeliaca	P	0	40	0	20	0	0	0	180
		362							
Syllis armillaris		0	20	0	0	0	0	0	0
Syllis pontxioi		0	100	0	0	0	0	0	20
Syllis garciai		0	200	0	0	0	0	0	0
Sphaerosyllis bulbosa	P	0	720	0	20	0	0	0	1880
		425							
Myrianida sp.	P	0	0	20	0	0	0	0	0
		434							
Myrianida edwardsi	P	0	0	0	0	0	0	0	20
		438							
<b>Nereididae</b>									
	P	0	0	0	0	0	0	0	0
		458							
Nereididae indet. (juv.)	P	20	0	40	0	0	0	0	40
		458							
<b>Nephtyidae</b>									
	P	0	0	0	0	0	0	0	0
		490							
Nephtys sp. (juv)	P	0	0	0	0	0	0	20	0
		494							
Nephtys hombergii	P	0	0	0	0	0	20	0	0
		499							
<b>EUNICIDA</b>									
	P	0	0	0	0	0	0	0	0
		536							
<b>Eunicidae</b>									
	P	0	0	0	0	0	0	0	0
		539							
Aponuphis bilineata	P	0	0	0	0	0	20	0	0
		557							
Eunice norvegica	P	0	0	0	20	0	20	0	320
		557							
Lysidice unicornis	P	0	0	0	0	0	0	0	20
		568							

JN1369 Deenish Island ASC

Howson &  
Pieton  
(1997)<sup>1</sup>  
Inventory

Station	code	1	2	3	4	5	6	7	8	9
<b>Lumbrineridae</b>	P	569	0	0	0	0	0	0	0	0
Lumbrineris cf cingulata	P	0	0	0	0	20	40	0	0	0
Lumbrineris cingulata/aniara	P	0	0	0	0	0	0	0	20	0
<b>Dorvilleidae</b>	P	598	0	0	0	0	0	0	0	0
Protodorvillea kefersteini	P	638	0	240	0	60	20	0	0	220
Schistomeringos neglecta	P	642	0	40	0	0	0	0	0	40
<b>ORBINIIDA</b>	P	654	0	0	0	0	0	0	0	0
<b>SPIONIDA</b>	P	707	0	0	0	0	0	0	0	0
<b>Paraonidae</b>	P	674	0	0	0	0	0	0	0	0
Paradoneis lyra	P	699	0	60	0	0	20	0	20	0
<b>Spionidae</b>	P	720	0	0	0	0	0	0	0	0
Spionidae indet.	P	720	40	80	300	180	0	80	40	40
Aonides oxycephala	P	722	240	160	0	120	200	0	0	0
Malacoceros fuliginosus	P	737	20220	920	16480	1460	600	0	0	0
Prionospio sp.	P	763	0	0	0	0	20	0	0	0
Prionospio sp. (partial/damaged)	P	763	0	0	0	0	0	20	40	0
Spiophanes bombyx	P	794	0	0	0	0	0	200	260	0
<b>Magelonidae</b>	P	802	0	0	0	0	0	0	0	0
Magelona alleni	P	804	0	0	0	0	0	20	0	0
Magelona filiformis	P	805	0	0	0	0	0	120	140	0



JN1369 Deenish Island ASC

Howson &  
Pieton  
(1997)  
Inventory

Station	code	1	2	3	4	5	6	7	8	9
<b>Polygordiidae</b>		0	0	0	0	0	0	0	0	0
Polygordius sp.	P 1062	0	0	40	0	0	0	0	0	0
Polygordius sp. (partial/damaged)	P 1062	0	0	0	0	0	0	0	0	180
<b>OWENIID</b>										
Oweniidae	P 1089	0	0	0	0	0	0	0	0	0
Owenia borealis	P 1090	0	0	0	0	0	0	0	0	0
<b>TEREBELLIDA</b>										
Terebellidae	P 1099	0	0	0	0	0	0	20	20	0
Pectinariidae	P 1100	0	0	0	0	0	0	0	0	0
Pectinariidae indet. (juv)	P 1100	0	0	0	0	0	0	40	40	0
Amphictene auricoma	P 1102	0	0	0	0	0	0	0	20	0
Lagis koreni	P 1107	0	0	0	40	0	0	20	0	0
<b>Ampharetidae</b>										
Ampharete sp. (partial/damaged)	P 1133	0	0	0	0	0	0	0	20	0
<b>Terebellidae</b>										
Polycirrus sp.	P 1179	0	0	0	0	0	0	0	0	0
Polycirrus sp. (partial/damaged)	P 1235	0	0	180	0	0	0	0	0	0
<b>Serpulidae</b>										
Serpulidae indet. (partial/damaged)	P 1324	0	0	0	0	0	0	0	0	80
Hydroides norvegica	P 1334	0	40	0	0	0	0	0	0	0
Spirobranchus sp.	P 1339	380	460	40	0	20	0	0	0	0





JN1369 Deenish Island ASC

Howson &  
Pickett  
(1997)  
Inventory

Station	code	1	2	3	4	5	6	7	8	9
<b>Urothoidea</b>	S	245	0	0	0	0	0	0	0	0
Urothoe elegans	S	248	0	0	0	0	0	0	20	0
<b>Lysianassidae</b>	S	271	0	0	0	0	0	0	0	0
Acidostoma obesum	S	272	0	0	0	20	0	0	0	40
<b>Liljeborgiidae</b>	S	394	0	0	0	0	0	0	0	0
Liljeborgia pallida	S	397	0	0	0	0	0	0	0	200
<b>Atyidae</b>										
Nototropis guttatus	S	411	20	0	0	0	0	0	0	0
Nototropis vedlomensis	S	413	0	0	0	0	0	0	0	0
<b>Ampeliscidae</b>	S	422	0	0	0	0	0	0	20	0
Ampelisca sp. (partial/damaged)	S	423	0	0	0	0	0	20	0	0
Ampelisca sp. (juv)	S	423	0	0	0	0	0	0	20	0
Ampelisca brevicornis	S	427	0	0	0	0	20	20	0	0
<b>Pontoporeiidae</b>	S	450	0	0	0	0	0	0	0	0
Bathyporeia sp. (juv)	S	451	0	0	0	0	0	0	0	0
Bathyporeia sp. (partial/damaged)	S	451	0	0	0	0	0	0	20	0
Bathyporeia tenuipes	S	459	0	0	0	0	0	20	0	0
<b>Melitidae</b>	S	495	0	0	0	0	0	0	0	0
Melitidae indet.	S	495	0	20	0	20	0	0	0	0
Animocera doc semiserratus	S	502	0	0	0	20	0	0	0	960

JN1369 Deenish Island ASC

Howson &  
Picton  
(1997)<sup>1</sup>  
Inventory

Station	1	2	3	4	5	6	7	8	9
<i>Cheirocratus</i> sp.	S	503	0	0	100	80	0	0	20
<i>Gammarella fucicola</i>	S	514	0	0	60	80	0	0	0
<b>Isaetidae</b>		0	0	0	0	0	0	0	0
<i>Gammaropsis lobata</i>	S	540	0	20	120	20	0	0	380
<b>Photidae</b>		0	0	0	0	0	0	0	0
<i>Photis longicaudata</i>	S	552	0	120	840	640	0	0	0
<b>Ischyroceridae</b>		0	0	0	0	0	0	0	0
<i>Jassa</i> sp.	S	558	0	20	0	0	0	0	0
<i>Jassa falcata</i>	S	568	0	0	0	0	0	0	0
<i>Jassa falcata</i>	S	569	0	0	0	0	0	0	0
<i>Jassa herdmanni</i>	S	577	0	20	0	0	0	0	0
<b>Aoridae</b>		0	0	0	0	0	0	0	0
<i>Aoridae</i> (partial/damaged)	S	577	0	0	0	0	0	0	100
<i>Leptocheirus hirsutimanus</i>	S	588	0	0	0	0	0	0	720
<b>Caprellidae</b>		0	0	0	0	0	0	0	0
<i>Caprella</i> sp.	S	639	0	0	0	0	0	0	0
<i>Caprella</i> sp.	S	640	40	0	0	0	0	0	0
<i>Pariambus typicus</i>	S	652	0	0	0	0	100	0	0
<b>ISOPODA</b>		0	0	0	0	0	0	0	0
<i>Sphaeromatidae</i>	S	790	0	0	0	0	0	0	0
<i>Sphaeromatidae</i>	S	857	0	0	0	0	0	0	0
<i>Cymodoce truncata</i>	S	863	20	0	0	0	0	0	0
<i>Dynamene bidentata</i>	S	0	0	20	0	0	0	0	0









JN1369 Deenish Island ASC

Howson &  
Pictou  
(1997)<sup>1</sup>  
Inventory

Station	1	2	3	4	5	6	7	8	9
Retusa umbilicata	W	1083	0	0	0	0	20	0	0
<b>PELECYPODA</b>	W	1560	0	0	0	0	0	0	0
<b>MYTILOIDA</b>	W	1689	0	0	0	0	0	0	0
<b>Mytilidae</b>	W	1691	0	0	0	0	0	0	0
Mytilidae indet. (juv.)	W	1691	2180	620	120	20	0	0	140
Mytilus edulis	W	1695	480	0	40	0	0	0	0
<b>VENEROIDA</b>	W	1815	0	0	0	0	0	0	0
<b>Montacutidae</b>	W	1888	0	0	0	0	0	0	0
Kurtiella bidentata	W	1906	0	20	100	40	40	0	440
<b>Astartidae</b>	W	1921	0	0	0	0	0	0	0
Goodallia triangularis	W	1929	0	0	20	0	0	0	60
<b>Cardiidae</b>	W	1938	0	0	0	0	0	0	0
Acanthocardia echinata	W	1943	0	0	0	0	20	40	0
Parvicardium pinnulatum	W	1951	0	0	0	20	0	0	0
Laevicardium crassum	W	1959	20	0	0	0	0	0	0
<b>Pharidae</b>	W	1995	0	0	0	0	0	0	0
Phaxas pellucidus	W	2006	0	0	0	0	0	60	0
<b>Tellinidae</b>	W	2008	0	0	0	0	0	0	0
Tellinidae indet. (juv.)	W	2008	0	20	0	0	0	0	0
Fabulina fabula	W	2019	0	0	0	0	260	200	0

JN1369 Deenish Island ASC

Howson &  
Pieton  
(1997)<sup>1</sup>  
Inventory

Station	code	1	2	3	4	5	6	7	8	9
Moerella donacina	W 2021	0	0	0	0	0	20	0	0	0
Asbjorsenia pygmaea	W 2023	0	0	40	0	0	0	0	0	0
<b>Psammobiidae</b>										
Gari sp. (juv)	W 2042	0	0	0	0	0	0	0	0	0
Gari tellinella	W 2044	0	0	0	0	0	0	0	0	20
Gari fervensis	W 2049	0	0	60	0	40	60	0	0	780
<b>Semelidae</b>										
Abra alba	W 2057	0	0	0	0	0	0	0	0	0
Veneridae	W 2059	0	0	0	20	0	120	140	20	0
Veneridae indet. (juv.)	W 2086	0	0	0	0	0	0	0	0	0
Chamelea striatula	W 2086	0	0	40	0	80	0	0	60	400
Clausinella fasciata	W 2100	0	0	0	0	0	20	380	60	0
Timoclea ovata	W 2104	0	20	0	0	20	80	0	0	20
Dosinia sp.	W 2126	0	0	0	0	0	0	160	0	0
Dosinia sp. (juv)	W 2126	0	0	0	0	0	0	0	80	0
<b>MYOIDA</b>										
<b>PHOLADOMYOIDA</b>										
<b>Thraciidae</b>										
Thracia sp. (juv.)	W 2220	0	0	0	0	0	0	0	0	0
Thracia phaseolina	W 2226	0	0	0	0	0	0	0	0	0
	W 2228	0	20	80	0	20	0	0	0	0
	W 2231	0	0	0	0	0	0	60	0	0



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Howson &  
Picton  
(1997)<sup>1</sup>  
Inventory

Station	code	1	2	3	4	5	6	7	8	9
<b>ECHINODERMATA</b>	ZB	1	0	0	0	0	0	0	0	0
<b>ASTEROIDEA</b>	ZB	18	0	0	0	0	0	0	0	0
<b>Astropectinidae</b>	ZB	24	0	0	0	0	0	0	0	0
Astropecten irregularis	ZB	26	0	0	0	0	0	0	20	0
<b>Asteroidea</b>				0	0	0	0	0	0	0
Asteroidea (juv)	ZB	18	20	0	0	0	0	0	0	60
<b>OPHIUROIDEA</b>	ZB	105	0	0	0	0	0	0	0	0
<b>OPHIURIDA</b>	ZB	121	0	0	0	0	0	0	0	0
<b>Ophiotrichidae</b>	ZB	122	0	0	0	0	0	0	0	0
Ophiotrix fragilis	ZB	124	0	0	0	0	0	0	0	40
<b>Ophiocomidae</b>	ZB	126	0	0	0	0	0	0	0	0
Ophiocomina nigra	ZB	128	0	0	0	0	0	0	0	0
Ophiocomina nigra (juv)	ZB	128	0	0	0	0	0	0	0	960
<b>Amphiuridae</b>	ZB	148	0	0	0	0	0	0	0	0
Amphiuridae indet. (damaged)	ZB	148	0	60	20	20	0	80	20	300
Amphiuridae indet. (juv)	ZB	148	0	0	0	0	0	0	20	100
Acrocnida brachiata	ZB	151	0	0	0	0	0	20	40	0
Amphipholis squamata	ZB	161	0	0	0	0	40	0	20	580
<b>Ophiuridae</b>	ZB	165	0	0	0	0	0	0	0	0
Ophiura sp. (juv.)	ZB	166	0	0	0	20	0	0	0	0

JN1369 Deenish Island ASC

Howson &  
Pickett  
(1997)<sup>1</sup>  
Inventory

Station	1	2	3	4	5	6	7	8	9
<b>ECHINOIDEA</b>									
ZB	181	0	0	0	0	0	0	0	0
<b>Echinidae</b>									
ZB	194	0	0	0	0	0	0	0	0
<b>Echinocyamus pusillus</b>									
ZB	212	0	20	0	40	20	0	0	0
<b>Loveniidae</b>									
ZB	221	0	0	0	0	0	0	0	0
<b>Echinocardium sp.</b>									
ZB	222	0	0	20	0	0	20	0	0
<b>Echinocardium sp. (juv)</b>									
ZB	222	0	0	0	0	0	0	40	0
<b>CHORDATA</b>									
	0	0	0	0	0	0	0	0	0
<b>TUNICATA</b>									
ZD	1	0	0	0	0	0	0	0	0
<b>ASCIDIACEA</b>									
ZD	2	0	0	0	0	0	0	0	0
<b>PHLEBOBRANCHIA</b>									
ZD	67	0	0	0	0	0	0	0	0
<b>Asciella sp. (partial/damaged)</b>									
ZD	83	0	0	0	0	0	0	0	40
<b>LEPTOCARDII</b>									
	0	0	0	0	0	0	0	0	0
<b>Branchistomidae</b>									
	0	0	0	0	0	0	0	0	0
<b>Branchiostoma lanceolatum</b>									
	0	0	20	0	0	0	0	0	0

**Appendix 3**

**AMBI Scores**

**Grab sampling stations surveyed at Deenish Island finfish aquaculture site,  
Kenmare Bay, Co. Kerry.**

**20<sup>th</sup> July 2016**

Station 1  
(1 replicate)

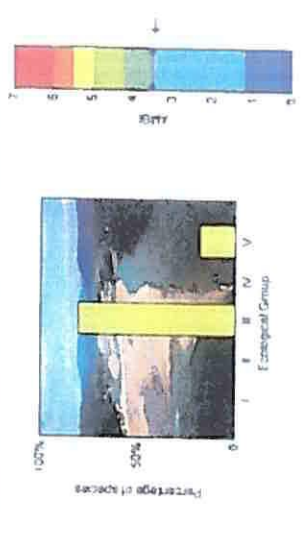
AMBI 3.513

Disturbance level: Moderately disturbed

Station Reports

Local Station: Total Population: 145900.0

Population	Taxa
110300.0	REMATOGA (R)
20.0	Cerebrifera sp. (R)
40.0	Phidippus (N)
50.0	Problematia (I)
60.0	PHYLLIDOCIDAE (Not assigned)
60.0	Cubia aurea (N)
40.0	Isopoda fusca (R)
20.0	SPINICOLA (Not assigned)
40.0	SPINICOLA (R)
20220.0	Murchiea (Not assigned) (S)
40.0	CERATOPUS (N)
3000.0	Cerberia sp. (N)
2850.0	Metamastus fracticus (R)



Replicates

Ecological groups

Station

Next Sum

Replicate Report

Rep	ST	AMBI	AMBI	BT	Disturbance Classification			
1	0.5	1.2	80.6	0.1	10.0	3.513	3	Moderately disturbed





Station 2 (1 Replicate)

4 680

Moderately disturbed

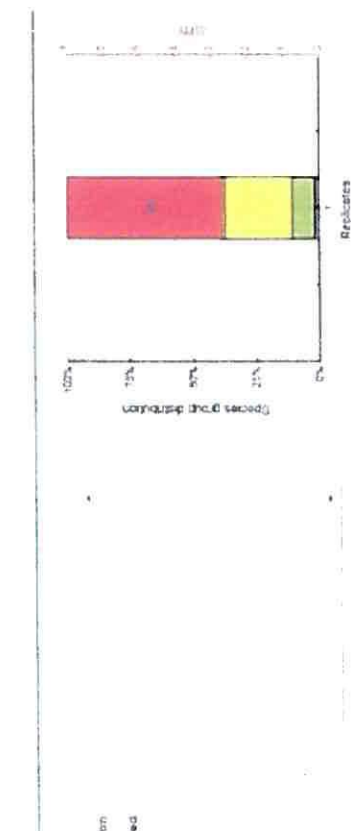
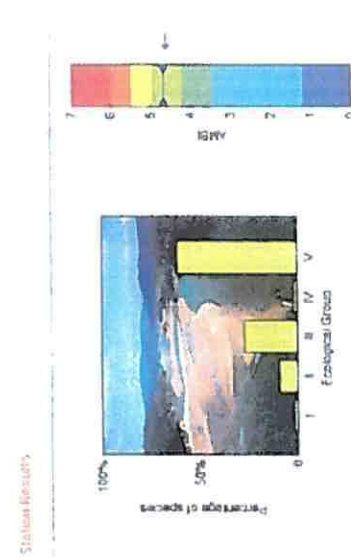
Total Population: 31760.0

Indexed Population: 31400.0

% Not assigned: 1.1

Number of taxa: 42

Taxa	Population
HELIOTIS (B)	530.0
HELIOTIS (B)	100.0
Hemiteles sp. (B)	20.0
Hemiteles sp. (B)	442.0
Phaenocarpa (B)	50.0
Phaenocarpa (B)	740.0
Elysius (B)	800.0
Physodes mucosa (B)	60.0
Dytiscus sp. (B)	120.0
Dytiscus (B)	20.0
RE-SYNALAE (Not assigned)	220.0
Psammis fusca (B)	40.0
Trypanoxena coacta (B)	20.0
Solenopsis (B)	20.0
RE-SYNALAE (Not assigned)	20.0



Replicate Details

Rep	SI	SII	SIV	SW	AMBI	BI	Disturbance Classification
1	1.7	0.8	26.7	1.4	61.8	4.680	Moderately disturbed

Back Sum

Station



Station 3 (1 replicate)

7.934

2

Slightly disturbed

Station Results



Population	Taxa
18220.0	NEMATODA (P)
20.0	Golfigia vulgaris (I)
200.0	Panopsis nemata (I)
50.0	POLYICEDAE (Not assigned)
100.0	Melospirina sp (I)
100.0	Phaeo nemata (IV)
50.0	Phaeo baltica (I)
20.0	PHYLLOCOCEAE (Not assigned)
620.0	Eleonora brya (I)
80.0	Glycysia sp (I)
440.0	Glycysia lapidum (I)
60.0	Pezomachus fasciatus (I)
40.0	Syris crenata (I)
20.0	Syris armata (I)

Total Population: 74440.0

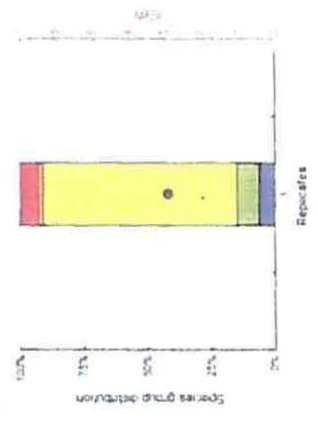
Indexed Population: 74200.0

% Not assigned: 1.0

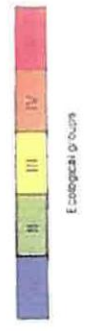
Number of taxa: 49

Replicate Details

Rep.	SI	SIII	SIIV	SIIV	AMBI	BI	Disturbance Classification
1	5.9	8.9	76.4	1.4	7.4	2.934	2 Slightly disturbed



Back Sum.



Station 4  
(1 replicate)

AMBI 3.271

Disturbance Classification: Slightly disturbed

AMBI 3.271

2

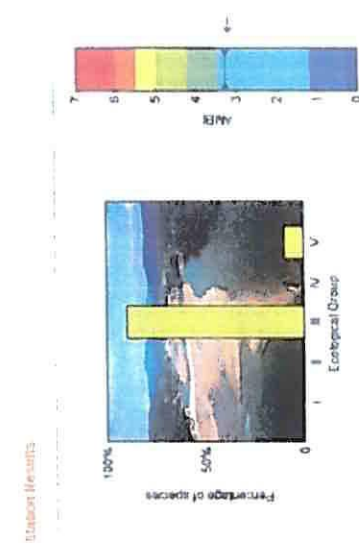
Disturbance Classification: Slightly disturbed

Soil Infaunal Bioturbation

Population Taxa

Total Population:	203100.0
Indicated Population:	202980.0
% Not assigned:	0.1
Number of taxa:	33

177920.0	HELIANTHA (E)
20.0	HELIANTHA (E)
200.0	Phaeo nemata (M)
29.0	Strenicola sp. (E)
60.0	PHYLLOCCOLAE (Not assigned)
740.0	Stenomacrus (E)
740.0	Phylobocae mucosae (E)
20.0	Lumbricid (E)
140.0	Psammobryozoa (E)
20.0	Myrmeleonidae (E)
40.0	HYMENOPTERA (Not assigned)
300.0	SPONGIARIA (E)
10400.0	Isotomidae (E)
60.0	CARPATULIDAE (E)

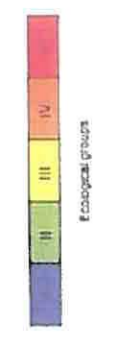


Replicate Details

Rep	SI	SII	SIII	SIV	SV	AMBI	SI	Disturbance Classification
1	0.0	0.0	0.0	0.3	9.6	3.271	2	Slightly disturbed



Dist. Sum

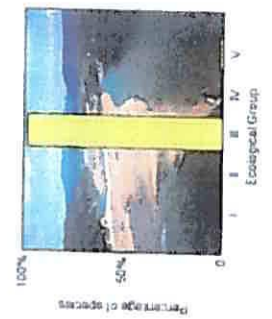


Station 6  
(1 replicate)

3.027  
2  
Slightly disturbed

Disturbance Classification

Station Results



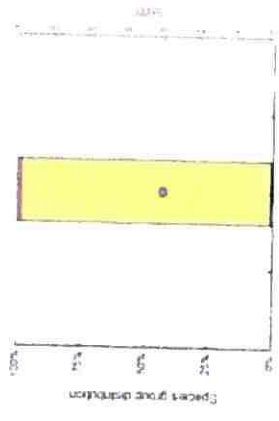
Top Bottom Results

	Population	Taxa
Total Population:	294900.0	282450.0
Indexed Population:	294020.0	MEIA:TDCA (R) 120.0 POLY:HOODE (Not assigned) 100.0 Mammals sp. (S) 200.0 Probe namata (V) 40.0 Probe namata (V) 40.0 Phyll:COCCDAE (Not assigned) 20.0 Pisere langi (R) 20.0 Phy:dece nausta (S) 100.0 Chyera sp. (F) 100.0 Cycora lapidum (S) 20.0 Gonada inuolida (I) 40.0 Pisere langi (R) 20.0 Trachomya caudata (R) 20.0 Scleractinia tubicola (I)
% Not assigned:	0.1	
Number of taxa:	58	

Total station

Replicate Results

Rep.	VI	III	III	IV	IV	ANBI	BE	Disturbance Classification
1	0.5	0.3	97.6	0.1	1.6	3.027	2	Slightly disturbed



Back Sum

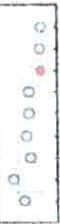


Station

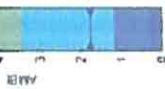
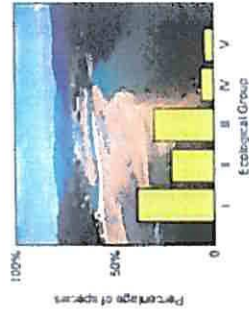
Replicate







Station Results



Total Population

3420.0

Indexed Population:

3370.0

% Not assigned:

2.9

Number of taxa:

43

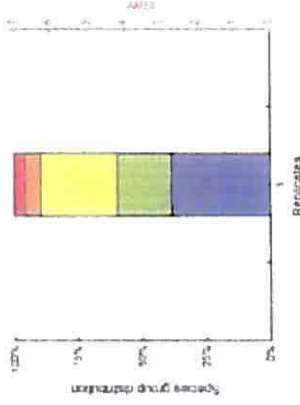
Taxa

Population	Taxa
20.0	EDWARDSIACEAE (I)
300.0	REMIATODA (II)
20.0	Ceratomyxidae (II)
20.0	PHYLLIDOCIDAE (Not assigned)
20.0	Etocina longa (II)
20.0	Phyllopora mucosa (II)
20.0	Gyocera trichocyla (I)
20.0	Hepityia hombergi (I)
20.0	Amphipha bilineata (I)
20.0	Eusira norvegica (I)
80.0	SPONDIAE (II)
20.0	Protosella sp. (Not assigned)
200.0	Scopimenes domitys (II)
20.0	Mastocella albilii (II)

Total station

Replicate Results

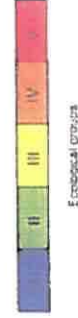
Rep.	VI	III	IV	AV	AMBI	BI	Disturbance Classification
1	28.5	21.1	30.1	6.0	4.2	1.744	2 Slightly disturbed



Back Sum.



Stations



Station II  
(1 replicate)

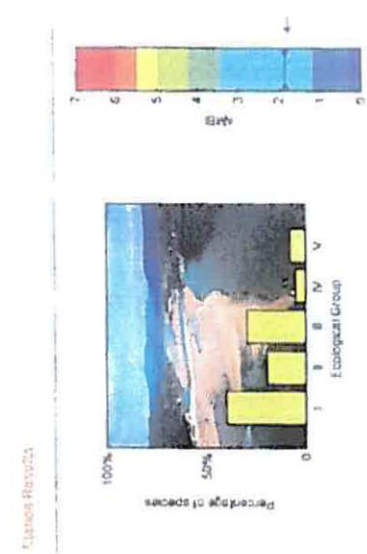
0 0 0 0 0 0 0 0 0 0

ADP 1.835

Disturbance Measurement

2

Slightly disturbed



Total station

Population	Taxa
600	EDWARDSIACE (6)
400	HELIOTIDAE (8)
200	Psilodora sp. (1)
200	Parasita isocrenata (1)
400	Cyanea lila (IV)
200	Cyanea tridactyla (1)
200	Neolhya sp. (1)
200	Amoreira cupata (8)
200	Parasita lya (6)
400	PROTHIACE (8)
400	Phacops sp. (Not assigned)
200	Cyanea lila (1)
100	Myriophora (1)
400	CEPHELOIDAE (IV)

Total Population: 27400

Indexed Population: 26000

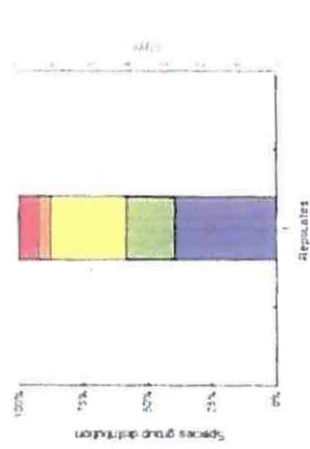
% Not assigned: 5.1

Number of taxa: 46

Replicate Details

Rep: VI VII VIII XIV XV

ADP	DI	Disturbance Classification
1.397	19.2	29.2
6.6	7.7	1.836
		2
		Slightly disturbed



Basin Sum

Ecological groups

Station 9  
(1 replicate)

1,700

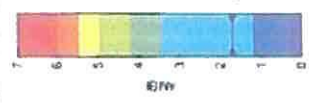
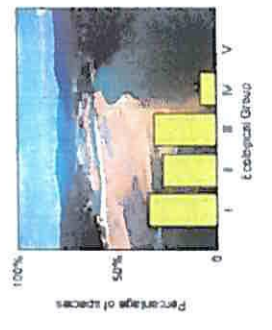
2

Disturbance Classification  
Slightly disturbed

Station Headers

Soft Bottom Deposits

Total Station

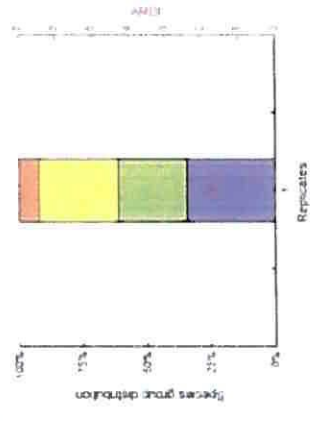


Total Population:	18600.0
Indesed Population:	17720.0
% Not assigned:	4.7
Number of taxa:	70

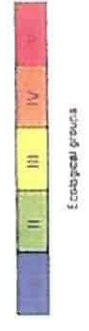
Population	Taxa
20.0	Synon claskan (Not assigned)
60.0	EDVIANDSEDAE (B)
4500.0	MEMATODA (B)
20.0	MEMBERTEA (B)
40.0	Cerebrulus sp (B)
20.0	SPUNCILLA (T)
200.0	Psione remola (T)
300.0	POLYTHOIDEAE (Not assigned)
20.0	Isaligera sp (T)
20.0	Isaligera longicauda (T)
500.0	Isaligera sp (T)
100.0	Probe nemoda (T)
100.0	PRYLOCOCCAE (Not assigned)
20.0	PRYLOCOCCAE (Not assigned)

Replicate Details

Rep	SI	AI	AIII	ATV	AV	ABDI	BI	Disturbance Classification
1	36.1	27.0	20.5	1.6	0.5	1.700	2	Slightly disturbed



Back Sum



#### **Appendix 4**

**AMBI groupings for fauna recorded in duplicate grab samples collected at  
Deenish Island, Kenmare Bay, Co. Kerry.**

**20<sup>th</sup> July 2016**



Group I (NPI)
Group II (NPI)
Group III (NPI)
Group IV (PI)
Group V (PI)

Blank (Not assigned)

Station 1	Density
NEMATODA	110380
Malacoceros fuliginosus	20220
Mediomastus fragilis	3860
Capitella sp. complex	3080
Tubificoides benedii	2820
MYTILIDAE	2180
Spirobranchus spp.	1440
Mytilus edulis	480
Aonides oxycephala	240
Atelecyclus rotundatus	240
Tritia incrassata	120
SPIONIDAE	40
Pisidia longicornis	20

Station 2	Density
Capitella sp. complex	16500
NEMATODA	5300
Spirobranchus spp.	2340
Malacoceros fuliginosus	2140
Phyllodoce mucosa	880
Mediomastus fragilis	800
Eteone longa/flava aggregate	740
Pholoe inornata	440
Psamathe fusca	220
Tubificoides benedii	200
Aonides oxycephala	140
Leptochiton cancellatus	140
MYTILIDAE	120
Glycera lapidum	120
Photis longicaudata	120

NEMERTEA	100
Glycera sp.	60
Tritia incrassata	20
Anapagurus hyndmani	20

Station 3	Density
NEMATODA	16220
Malacoceros fuliginosus	920
Pisone remota	880
Mediomastus fragilis	780
ENCHYTRAEIDAE	720
Sphaerosyllis bulbosa	720
Eteone longa/flava aggregate	620
Kurtiella bidentata	480
Glycera lapidum	440
Protodorvillea kefersteini	240
Syllis garciai	200
Polycirrus sp.	180
Pholoe inornata	160
Aonides oxycephala	160
Malmgrenia sp.	100
Syllis pontxioi	100
Glycera sp.	80
SPIONIDAE	80
Euspira nitida	80
Schistomeringos neglecta	40
Anapagurus hyndmani	20
Gaecum glabrum	20

Station 4	Density
NEMATODA	177920
Malacoceros fuliginosus	16180
Capitella sp. complex	2450
Mediomastus fragilis	1500
Photis longicaudata	840
Eteone longa/flava aggregate	740
Phyllodoce mucosa	740
MYTILIDAE	620
SPIONIDAE	300

Tubificoides denegati	260
Pholoe inornata	200
Cauleriella alata	180
Psamathe fusca	140
Anapagurus hyndmani	100

Station 5	Density
NEMATODA	282400
Mediomastus fragilis	4280
Tubificoides bered	1620
Malacoceros fuliginosus	1460
Capitella sp. complex	1180
Photis longicaudata	560
Eteone longa/flava aggregate	240
Pholoe inornata	200
ENCHYTRAEIDAE	200
SPIONIDAE	180
Harmothoe sp.	180
Glycera lapidum	160
Anapagurus hyndmani	140
Glycera sp.	140
Pholoe baltica	140
MYTILIDAE	120
Aonides oxycephala	120
Spirobranchus spp.	120
Kurtiella bidentata	100
Cheirouratus sp.	100
Clausinella fasciata	40
Phyllodoce mucosa	20
Pisidia longicornis	20

Station 6	Density
NEMATODA	76560
Mediomastus fragilis	1720
Capitella sp. complex	1400
Photis longicaudata	640
Malacoceros fuliginosus	600
Glycera lapidum	240
Cauleriella alata	220
Aonides oxycephala	200
Pholoe inornata	180

Eteone longa/flava aggregate	140
Abra alba	120
Iphinoe serrata	120
Harmothoe sp.	100
Cheirocratus sp.	80
Timoclea ovata	80
Anapagurus hyndmani	40
Clausinella fasciata	20
NEMERTEA	20
Tritia incrassata	20

Station 7	Density
Chamelea striatula	380
NEMATODA	360
Fabulina fabula	260
Perioculodes longimanus	240
Spiophanes bombyx	200
Chaetozone christeis	180
Dosinia sp.	160
Abra alba	140
Magelona filiformis	120
Pseudocuma (Pseudocuma) simile	120
Pariambus typicus	100
SPIONIDAE	80
EDWARDSIIDAE	80
Pisidia longicornis	40
Mediomastus fragilis	20
Phyllodoce mucosa	20

Station 8	Density
NEMATODA	400
Spiophanes bombyx	260
Fabulina fabula	200
Perioculodes longimanus	200
Magelona filiformis	140
Tubificoides amplivasatus	100
EDWARDSIIDAE	60
SPIONIDAE	40
Station 9	Density
NEMATODA	4000



Sphaerosyllis bulbosa	1880
Pholoe inornata	1200
Animoceradocus semiserratus	960
Ophiocomina nigra	960
Gari tellinella	780
Leptocheirus hirsutimanus	720
Harmothoe sp.	580
Amphipholis squamata	580
Skenea serpuloides	460
Kurtiella bidentata	440
VENERIDAE	400
AMPHIURIDAE	400
Leptochiton cancellatus	380
Eunice norvegica	320
Spirobranchus spp.	280
Protodorvillea kefersteini	220
Malmgrenia ljunmani	220
Pisione remota	200
Liljeborgia pallida	200
Glycera lapidum	180
Trypanosyllis coeliaca	180
Polygordius sp.	180
MYTILIDAE	140
Polycirrus sp.	140
AORIDAE	100





(69)

Matheson

**MARINE HARVEST IRELAND ("MHI")  
SUBMISSION TO THE INDEPENDENT AQUACULTURE LICENSING REVIEW GROUP**

**LEGAL ANALYSIS BY MATHESON ON BEHALF OF MHI**

**9 FEBRUARY 2017**

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## Introduction and summary

### A. Purpose

This submission provides a legal analysis that demonstrates that it is legally possible to implement MHI's recommendations to modernise the aquaculture licensing process within the existing legislative framework. In some instances, we suggest minor amendments to the secondary regulations. This approach has been adopted as MHI is concerned that a full overhaul of the existing legislative framework could cause further delays to progressing licence applications for a strategically important industry in which the licensing system has reached a state of near paralysis.

### B. Format

Each section of the submission:

- identifies the road block(s) which exist in a specific area of the aquaculture licensing regime
- provides an analysis of the relevant area(s) of the existing legislative framework
- explains how MHI's recommendations can be implemented within the existing legislative framework.

### C. Summary of Issues and Recommendations

Section	Road Block(s)	Solution(s)
1	<ul style="list-style-type: none"> <li>▪ The conditions attached to aquaculture licenses are overly-prescriptive and require modernisation. Production limits based on annual tonnage, which is an inflexible and outdated metric, continue to be imposed.</li> <li>▪ The usual life of an aquaculture licence is disproportionately short at 10 years.</li> <li>▪ The same divisions of the Department of Agriculture, Food and the Marine (the "Department") are responsible for the licensing application and regulation functions.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Simplify the format of aquaculture licences by cross-referring to technical guidance documents in place of prescriptive technical conditions, and use Maximum Allowable Biomass as the metric of production in line with best practice internationally.</li> <li>▪ Aquaculture licences should be granted for a 20 year period, as is permitted by the existing legislative framework and in accordance with the other environmental licensing regimes in Ireland.</li> <li>▪ Allocate responsibility for the licensing application function and regulation functions to separate divisions of the Department.</li> </ul>
2	<ul style="list-style-type: none"> <li>▪ There are lengthy delays in determining applications for aquaculture licences.</li> <li>▪ Applicants are not kept informed of the progress of their licence applications.</li> <li>▪ Revised decision dates are not being</li> </ul>	<ul style="list-style-type: none"> <li>▪ Section 13 of the Fisheries (Amendment) Act 1997 (the "1997 Act") should be commenced as a matter of urgency. This section provides that the Minister shall endeavour to determine an application for an aquaculture licence within four months</li> </ul>



Section	Road Block(s)	Solution(s)
	<p>provided at the first stage of the process.</p> <ul style="list-style-type: none"> <li>▪ The statutory and public consultation periods are being run consecutively.</li> </ul>	<p>from the date on which all requirements for filing the application have been complied with.</p> <ul style="list-style-type: none"> <li>▪ The Minister should issue a policy directive<sup>1</sup> that the Aquaculture Licensing Appeals Board ("ALAB") should inform the applicant, in writing, of not only the revised date for the determination of an appeal but also the reasons for the delay, each time a revised, extended timeframe is set for the determination of an appeal.</li> <li>▪ The statutory and public consultation periods should be run concurrently.</li> </ul>
3	<ul style="list-style-type: none"> <li>▪ Repeated and excessive requests for information by the licensing authority<sup>2</sup>, often for information that is not within the direct expertise or statutory remit of the licensing authority.</li> </ul>	<ul style="list-style-type: none"> <li>▪ The Minister could issue a policy directive which (i) places reasonable parameters on the entitlement of the licensing authority to request further information and on the type of information it can seek; and (ii) provides that the licensing authority is only permitted to seek further information from an applicant on one occasion only.</li> <li>▪ The Minister could issue a policy directive which allows for pre-application consultations with potential applicants in order to clarify the information which the licensing authority will require to consider the application to ensure that the applicant submits all of necessary information.</li> </ul>
4	<ul style="list-style-type: none"> <li>▪ There are missed opportunities to streamline the application process without legislative change, for example, by way of policy directives issued by the Minister.</li> </ul>	<ul style="list-style-type: none"> <li>▪ The Minister could issue policy directives to streamline the application process. These policy directives could provide, for example, technical guidance, address the time frame for decision-making and format of aquaculture licences.</li> </ul>
5	<ul style="list-style-type: none"> <li>▪ The Aquaculture (Licence Application) Regulations 1998 (as amended) (the</li> </ul>	<ul style="list-style-type: none"> <li>▪ The 1998 Regulations could be amended in line with EU law to provide that an EIS</li> </ul>

1. As permitted by section 62 of the 1997 Act

2. Defined by section 3 of the Fisheries (Amendment) Act 1997 (as amended) (the "1997 Act") as

"(a) the Minister,

(b) an officer to whom functions have been delegated under section 21(1) by the Minister, or

(c) the Aquaculture Licences Appeals Board."



Section	Road Block(s)	Solution(s)
	<p>"1998 Regulations") require the submission of an Environmental Impact Statement ("EIS") more often than is required by European legislation or case law.</p>	<p>only needs to be submitted with an application for the renewal of an aquaculture licence where there would be a significant adverse change to the environmental effects cause by the change to the licensed activity.</p>
6	<ul style="list-style-type: none"> <li>▪ The refusal of the licensing authority to carry out Appropriate Assessment based on generic conservation objectives when no site specific conservation objectives have been set.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Appropriate Assessment can be carried out using generic conservation objectives when no site specific conservation objectives have been set. This process is undertaken in other licensing spheres in Ireland.</li> </ul>
7	<ul style="list-style-type: none"> <li>▪ The funding and resource constraint within the licensing authority.</li> </ul>	<ul style="list-style-type: none"> <li>▪ The Minister could increase the licensing fees for certain categories of aquaculture licence or activities of certain degrees of magnitude or consider the use of scaled fees in order to increase the funding available to the licensing authority.</li> </ul>
8	<ul style="list-style-type: none"> <li>▪ The absolute requirement to obtain a foreshore licence, even for the temporary placement of water pipe or other temporary equipment.</li> </ul>	<ul style="list-style-type: none"> <li>▪ The Minister could automatically issue a written permission to carry out a trivial activity on the foreshore at the same time that the licensing authority grants an aquaculture licence.</li> <li>▪ The General Scheme of Maritime Area and Foreshore (Amendment) Bill 2013 offers an opportunity to combine the aquaculture and foreshore licensing regimes into a single process and allow for the placement of temporary equipment on the foreshore to be permitted by the terms of an aquaculture licence.</li> </ul>

## 1 Licence Conditions, Period and Functions

### 1.1 Road blocks: (i) licence conditions and period; (ii) responsibility for licensing and compliance functions

#### (i) Licence Conditions and Period

A person is not permitted to engage in aquaculture without holding an aquaculture licence<sup>3</sup>. A holder of an aquaculture licence is obliged to comply with the conditions of the licence. The Minister may revoke an aquaculture licence if satisfied that there has been a breach of a condition specified in a licence<sup>4</sup>.

Three of MHI's key concerns regarding current licence conditions are:

- **Overly prescriptive conditions regarding process and methodology:** Aquaculture licences in their current form, contain extensive prescriptive conditions<sup>5</sup>, which do not allow for improvements in technology. Thus, even improvements aimed at lowering environmental impact cannot be made without licence change. Changes to a licence require a formal amendment that is subject to a protracted process. For example, an aquaculture licence can dictate the time of year at which the licence holder is required to harvest its stocks. This licence condition is not compatible with the production process, as the production process is not aligned with the annual cycle. The holder of an aquaculture licence could find itself subject to enforcement action for technical breach of licence if the licence-holder updated the method of carrying out an activity to have a lesser environmental impact. By contrast, licences issued by the EPA are granted subject to the over-arching requirement that:

*"...at all times BAT [Best Available Technique] must be considered in the management and operation of the activity."*

Also, aquaculture activity may not only be subject to aquaculture licensing but can also be covered by a wider regulatory framework. For example, a licence holder may be required to obtain planning permission to construct a facility and may require a waste water discharge licence to operate. An overly-prescriptive aquaculture licence can cause difficulty for a licence holder if it obliges the licence holder to comply with a prescriptive technical standard that is different to that imposed by another permit.

- **Use of limits based on annual tonnage:** The licensing authority continues to issue finfish aquaculture licences which measure the limit of production capacity by reference to an annual maximum production limit (eg, harvested annual tonnage) as opposed to standing stock biomass (the weight of live fish on a site at any given time). We understand that an annual tonnage limit is an inflexible and outdated metric which requires an operator to tread a delicate

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3. Section 6 of the 1997 Act. The licensing process is dealt with elsewhere in this document.

4. Section 68(1) of the 1997 Act

5. For example, specifying a particular technical process or methodology.



balance in stock management. An operator may be forced to transfer stock to another site, before it reaches a particular point in its development, to avoid a technical breach of a strict annual production limit. These issues are addressed further in section 5.3 of this submission.

- **Typical life time of 10 years for a licence:** Aquaculture licences are regularly granted for a limited period of 10 years, rather than the 20 years allowed by legislation<sup>6</sup>. In many other Irish industry sectors, operating life is either unlimited (such as for facilities licensed by the Environmental Protection Agency) or limited to 20 to 25 years unless further extended (in the case of wind farms). Environmental licences that require an Environmental Impact Assessment (“EIA”) must be assessed on the basis of whole-of-lifetime effects, ie, from commissioning and construction through to operation and decommissioning<sup>7</sup>. This type of analysis (which is undertaken for aquaculture licences that require EIA) fully supports long-term 20-year licences in line with the requirements of European environmental law. The relatively short term of aquaculture licences is disproportionate to the administrative and regulatory burden imposed on operators when applying for the licence. It is inconsistent with other industries and Irish environmental practice that aquaculture licensing is subject to such unnecessarily short licence lives.

(ii) Licensing Application and Compliance Functions

Unlike other environmental licensing regimes in Ireland<sup>8</sup>, we understand that the same departmental divisions are responsible for both the licensing and compliance functions for aquaculture. We are instructed that the concentration of responsibility for these functions can lead to a reduction in the availability of expertise necessary for the efficient turn-around of licence applications.

We understand that aquaculture licensing is administered through the Aquaculture and Foreshore Management Division (“AFMD”) of the Department. AFMD is responsible for the licensing and regulation of aquaculture. The Marine Engineering Division (“MED”) and the Marine Institute (“MI”) work with AFMD and provide support functions in relation to aquaculture. We understand that the current practice is that MI advises on the biological / scientific aspects of licence applications and renewals and that MED provides the functions of reviewing and examining aquaculture licence applications and environmental impact statements (“EIS”), carrying out site inspections and producing reports on licence compliance.<sup>9</sup> MED is also involved in assessing, reviewing and providing technical advice on foreshore licence and lease applications in respect of aquaculture. We are instructed that the resources of AFMD and MED are heavily focused on the compliance function.

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6. Under section 15(2) of the 1997 Act a licence can have a life of up to 20 years.

7. EPA, *Guidelines on the information to be contained in Environmental Impact Statements* (2002).

8. For example, the Integrated Pollution Control (“IPC”) Licence system under the Environmental Protection Agency Acts 1992 – 2013

9. See Chapter 4 – Seafood of the Structure of Department available here – <https://www.agriculture.gov.ie/aboutus/briefingforministers2016/>

The arrangement where the same divisions of the Department have responsibility for the licensing and compliance functions is relatively unusual in our experience. For example, the Environmental Protection Agency (the "EPA") has overall responsibility for the application and compliance functions of a number of licensing regimes<sup>10</sup>. However, the EPA's functions are divided between five different offices<sup>11</sup>. The Office of Environmental Sustainability is responsible for the licensing application function and the Office of Environmental Enforcement is responsible for the licensing compliance function.

## 1.2 What changes should be made?

### (i) Licence Format and Period

There is no prescribed mandatory format for aquaculture licences under legislation, though template licences have been published<sup>12</sup>. The format of an aquaculture licence should be simplified by including cross-references to appendices or technical guidance documents in place of imposing extensive technical conditions. This approach would give the flexibility to update the technical requirements of the activity on an ongoing basis by updating the guidance without having to amend the letter of the licence directly by way of formal amendment.

The production parameters stated in an aquaculture licence should be quantified in terms of Standing Stock Biomass. In a press release by the Minister on 5 December 2011 to announce the launch of new aquaculture licence templates,<sup>13</sup> it was expressly acknowledged that:

*"Standing Stock Biomass is internationally recognised as the appropriate metric for assessing loading at an aquaculture production site and can be measured on a real time basis thus facilitating effective regulation and management of sites".*

Maximum Allowable Biomass should be adopted as the standard metric of production in all aquaculture licences. This approach would align the Irish licensing regime with the Scottish and Norwegian aquaculture licensing regimes, both of which use 'maximum standing biomass' as the measurement of the limit of production capacity.

Aquaculture licences should be granted for a period of 20 years as standard, as permitted by the legislation<sup>14</sup>. As suggested above, the introduction of flexibility to update technical requirements on an ongoing basis throughout the life of a licence should provide comfort to the authority in granting a licence for the 20 year term.

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10. For example, the IPC and the Waste Water Discharge licensing systems.

11. EPA organisation chart available here – <http://www.epa.ie/about/orq/>

12. Section 7(1) of the 1997 Act provides that the licensing authority may licence a person to carry on aquaculture on such terms as it thinks fit and specifies in the licence. Subsection (3) provides a non-exhaustive list of conditions to which an aquaculture licence may be subject.

13. Press release available here - [http://www.agriculture.gov.ie/press/pressreleases/2011/december/title\\_59997\\_en.html](http://www.agriculture.gov.ie/press/pressreleases/2011/december/title_59997_en.html)

14. Section 15(2) of the 1997 Act



(ii) Licensing Application and Compliance Functions

There is no legal barrier to the Minister separating the licensing and compliance functions through internal reorganisation of the Department.

## 2 Timeline for Decision-Making

### 2.1 Road block: protracted timeframe for determining aquaculture licence applications

Delay in decision-making is a key roadblock. Licence applications can take many years to progress.<sup>15</sup>

The lack of a coherent time objective for determining applications and the lack of transparency in the current process is aggravating the delay.

During the process, (particularly the first stage), the applicant and interested parties are often left in the dark as to the progress of the application and are not given reasons for delay nor a revised decision date.

The European Commission (the "Commission") issued a Communication for the sustainable development of EU aquaculture<sup>16</sup> in which the Commission noted that authorisation procedures in several Member States can take around two to three years to complete. The Commission invited Member States to reduce time for licensing and other authorisations to one month by the end of 2015<sup>17</sup> provided EU environmental legislation is adhered to.

There are mechanisms within the current legislative framework that can address the objective to minimise delay as set out below.

### 2.2 The legal framework

In common with many environmental licensing regimes, the timelines for decision-making in the 1997 Act are not a strict cut-off point. There are helpful objectives, when backed with transparency of communication, and can assist in structuring the approach. The timelines are:

- Section 13 of the 1997 Act provides that the Minister shall endeavour to determine an application for an aquaculture licence within four months from the date on which all requirements for filing the application have been complied with. However, this section of the 1997 Act has not yet been commenced. Thus, this section will have no legislative force until brought into effect by commencement order (in the form of a regulation) passed by the Minister. The provision of the 1997 Act that sets a time limit for the Minister to determine an application (when commenced) will allow the Minister to extend the four month timeframe where it appears to the Minister that it will not be possible to determine an application within this timeframe. Where the Minister

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<sup>15</sup> The case of *Deerland Construction Ltd v The Aquaculture Licences Appeals Board & Anor* [2008] IEHC 289 demonstrated that the process of issuing an aquaculture licence took five years. Lett and Company Limited applied for an aquaculture licence in October 1996. The licence was granted in October 2001. The delay in processing the application did not form part of this case.

<sup>16</sup> Communication from the Commission to the European Parliament, the Council, the European and Social Committee and the Committee of the Regions, A strategy for the sustainable development of European aquaculture, 29 April 2013, available here - <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52013DC0229&from=EN>

<sup>17</sup> At page 5 the Communication notes "*The Commission has proposed an Action Plan to support entrepreneurship in Europe. The Action plan invites the Member States to reduce time for licensing and other authorisations necessary to start a business activity to one month by the end of 2015 provided that requirements of EU environmental legislation are met. As a first step, a comprehensive mapping and screening exercise needs to be performed*".

decides to extend the timeframe for an application, the Minister must issue a written notice to the applicant and any other person who has made submissions, setting out the reasons why the application will not be determined within the four month timeframe. The Minister must also specify a revised date in the written notice before which it is intended to determine the application.

- The provision of the 1997 Act<sup>18</sup> which requires ALAB to endeavour to determine an appeal within four months of the date of receipt of the notice of appeal has been commenced. This provision allows ALAB to extend the period for determining an appeal but requires ALAB to issue a notice to the parties to the appeal which (i) confirms the extension; (ii) gives the reasons for the extension; and (iii) specifies the date by which ALAB intends to determine the appeal. ALAB is obliged to endeavour to determine the appeal by the revised date set in such a notice. The 1997 Act does not specify what ALAB is required to do when the appeal is not determined by the revised date. However, we understand that ALAB notifies the applicant of any revised date for the determination of the appeal, but does not give reasons for the delay.

The legislation<sup>19</sup> also provides for public and statutory consultation periods. The legislation is silent on whether the consultation periods should be run consecutively or concurrently. The current practice is to run the consultation periods consecutively (first the statutory consultation and then the public consultation). This practice contributes to the delays experienced in the determination of aquaculture licence applications. We understand that the practice appears to be based on a concern that compliance with the Aarhus Convention<sup>20</sup> ("Aarhus") (which mandates public participation in decision-making and access to justice in environmental matters) cannot be achieved unless the public has an opportunity to consider the submissions of the statutory bodies. It has been held by both the High Court (in a judgment dealing with aquaculture licensing)<sup>21</sup> and the Court of Appeal<sup>22</sup> that Aarhus only forms part of Irish domestic law insofar as it has either (a) been incorporated into Irish law through the passing of legislation by the Oireachtas; or (b) been incorporated into European law that is of direct effect in Ireland (either by way of implementing Irish legislation or effluxion of time). Aarhus does not mandate anywhere that the consultation periods must be consecutive, and this type of provision cannot be implied into Irish law from a general concern about compliance with Aarhus. Other environmental licensing regimes<sup>23</sup> allow for notice periods for statutory bodies and the public to run concurrently.

### 2.3 What is the legal risk for the licensing authorities and the process if the current delays continue?

The current aquaculture licensing process, in which applicants experience significant delays, is at risk of being successfully challenged by court action. An expedient and transparent

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18. Section 56 of the 1997 Act

19. Regulations 9 and 10 of the 1998 Regulations

20. The UNECE Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters.

21. *Waterville Fisheries Development Limited v Aquaculture Licenses Appeals Board (No 3)* [2014] IEHC 522

22. *McCoy & Anor v Shillelagh Quarries Ltd & Ors* [2015] IECA 28

23. For example, the planning regime under the Planning Acts 2000 – 2016 (the "Planning Acts")



timeline will enhance the legitimacy of the aquaculture licensing process and reduce the risk of a court challenge.

The reason for this legal risk is that the courts have repeatedly held in other statutory contexts that an applicant is entitled to a decision one way or another within a reasonable time.<sup>24</sup> What might be a reasonable time depends on the circumstances of each case, including the nature of the decision sought, the particularities of the applicant's position, the impact the delay may have and also the conduct of the administrative decision maker in dealing with such applications, together with any explanation for the time taken<sup>25</sup>.

The courts have granted orders compelling a decision-maker to reach an administrative decision in instances where the applicant has experienced excessive and unjustifiable delay.

In 2016, the High Court, in *Mohammed Ahsan v Minister for Justice and Equality*<sup>26</sup>, granted an order compelling the Minister to make a decision on the applications of the applicants<sup>27</sup> for non-national family members of EU citizens, one way or the other, within six weeks of the court order. The Minister for Justice argued that the court was not entitled to make an order requiring a decision to be made as this would equate to a direction to the Minister for Justice as to how (already limited) resources should be allocated. It was also argued that such an order would cut across the level of investigation required into each application. The court rejected these arguments and held that it was not trespassing on the Minister for Justice's remit by requiring a decision to be taken within a set timeframe, given the excessive and unjustifiable delay. In the *Ahsan* case, the judge pointed out that if the delay had been only a couple of months, and if there was a stated timeframe provided to the court for the commencement of the examination of the visa applications, then some margin of appreciation might have been afforded to the Minister for Justice. However, in the absence of any projected timeframe, the question of resources and other factors raised by the Minister for Justice were not sufficient to outweigh the applicants' rights. The open-ended timeframe for processing the visa applications was a factor in the court's decision to find against the Minister for Justice.

Parallels can be drawn between the manner of processing applications under the visa scheme in the *Ahsan* case and the current aquaculture licensing process. The *Ahsan* judgment illustrates that in instances of excessive and unreasonable delay in the making of an administrative decision, an aggrieved applicant may obtain relief from the court in the form of an order compelling the relevant body to make a decision. The *Ahsan* case also shows that a decision-making body is less vulnerable to court action where it adheres to a stated timeframe, even where this timeframe is extended, provided the delay is justified and the applicant is kept informed of the projected timeframe.

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24. For example, *Point Exhibition Co. Ltd v The Revenue Commissioners* [1993] 2 IR 551

25. *Nearing v Minister for Justice* [2010] 4 IR 211

26. [2016] IEHC 691

27. The applicants had been variously advised by the visa centre that the timeframe for determination of the applications would range from 8 to 12 to 16 weeks. These periods expired without any decision having been made on any of the applications. The applicants were not further advised of the projected timeframe. The judicial review proceedings were heard in July 2016, approximately one year after their applications were submitted.



An applicant may also be awarded damages where it can be shown that the decision-maker's delay in reaching the decision has interfered with a fundamental right<sup>28</sup>, such as the right to property and to earn a livelihood in the context of aquaculture licensing.

#### 2.4 What changes should be made within the current legal framework to address the delays and lack of transparency?

The appropriate use of the timeframe provisions in the 1997 Act should impose some structure on the application process by ensuring that the licensing authority endeavours to make aquaculture licence determinations in accordance within an expedient and transparent timeframe. The framework set out in the 1997 Act allows for necessary flexibility by permitting the Minister to extend the timeframe, where appropriate. The requirement for the Minister to give written reasons for extending the timeframe for determining an application also ensures transparency.

The purpose of the timeframe provisions within the 1997 Act precisely aligns with the objectives of the independent review, ie, the delivery of licence determinations in a timely manner and enhanced transparency in the licensing process. We propose that the Independent Aquaculture Licensing Review Group should recommend that the timeframe provisions of the 1997 Act for the determination of a licence application by the Minister be commenced as a matter of urgency, by way of a regulation issued by the Minister.

When it is not possible to determine an appeal within four months, ALAB is required by the 1997 Act to issue a notice to the parties to the appeal which (i) confirms the extension; (ii) gives the reasons for the extension; and (iii) specifies the date by which ALAB intends to determine the appeal. We understand that ALAB does issue a notification to the parties to an appeal on each occasion that an extension is required. However, we are instructed that those notifications do not give the reasons for which the extension is required. The Independent Review Group could recommend that the Minister issue a policy directive<sup>29</sup> which requires ALAB to provide the parties to an appeal with the reasons for which an extension of time is required on every occasion that a notification that an extension of time is required is issued. This practice would increase transparency by ensuring that the applicant is at least kept informed of the progress and prospective determination of the appeal and also allow the applicant to assist ALAB, for example by submitting information which ALAB might require to determine the application.

The application process could also be made more efficient by running both the statutory and public consultation periods concurrently and the Minister could issue a policy directive to that effect.

Once it is clear that there is in place "*an orderly, rational and fair system for dealing with [aquaculture licence] applications*", the court would no longer have any reason to infer any

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28. In *O'Donoghue v The Legal Aid Board* [2004] IEHC 413, the High Court made an award of damages for breach of constitutional rights in favour of the plaintiff where she had experienced significant delay with her application for legal aid. Damages were awarded regardless of the fact that the decision-making body had eventually granted the plaintiff's application prior to the proceedings.

29. As permitted by section 62 of 1997 Act

illegality in the conduct of the licensing authority unless some specific wrong doing or default is demonstrated in a particular case<sup>30</sup>.

A stated timeframe for the determination of licence applications, together with a practice of keeping the applicant informed on the progress of the application and the reasons for any delay, are necessary elements for an '*orderly, rational and fair system*' for dealing with applications. Adherence to the timeframe and transparency provisions by the licensing authority will enhance the overall legitimacy of the aquaculture licensing process and reduce the likelihood of the process being challenged in the courts.

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30. *Nearing v Minister for Justice* [2010] 4 IR 211, para 25, per Cooke J.

### **3 Requests for Information During the Application Process**

#### **3.1 Road block: excessive requests for information**

As set out by MHI in its submission, the current practice of the licensing authority when determining aquaculture licence applications can be to make repeated requests for a wide range of information from an applicant. The information sought can concern matters which are not within the direct expertise of the licensing authority such as:

- Property rights and arrangements for access / rights of way; or
- Other matters which the licensing authority is not required to take account of when determining an application for an aquaculture licence<sup>31</sup>.

The type of additional information which is sought from an applicant can also differ from application to application. We are instructed that it appears to depend on subjective approaches as to how certain matters (for example, the visual impact of an aquaculture facility or passage of wild fish) should be addressed.

#### **3.2 What powers does the licensing authority have to request information from an applicant?**

Applications for an aquaculture licence must comply with the regulations set down by the Minister<sup>32</sup>. The application must be made on an application form approved by the Minister<sup>33</sup> and be accompanied by a number of specified documents<sup>34</sup>. The application form was most recently revised in June 2016<sup>35</sup>. There is a check-list of documents which must be included with the application form. The Minister is entitled to (i) require an applicant to furnish further information which may be reasonably required to allow an application be considered or (ii) produce any evidence which may be reasonably required to verify any information given in relation to the application<sup>36</sup>.

ALAB is also entitled to require a party, or other person who has made a submission to an appeal, to submit such documents, particulars or other information which it considers necessary for it to determine the appeal<sup>37</sup>.

#### **3.3 How do other statutory application processes operate?**

The application process under the Planning Acts operates in some similar respects to the aquaculture licensing process. Under the Planning Acts, a person who wishes to carry out development is obliged to obtain permission<sup>38</sup>, either from the relevant local authority or An

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31. The matters which the Licensing Authority shall take account of are listed in section 61 of the 1997 Act

32. The 1998 Regulations

33. Regulation 4(1) of the 1998 Regulations

34. These documents are listed in regulation 4(3) of the 1998 Regulations

35. Available at <https://www.agriculture.gov.ie/seafood/aquacultureforeshoremanagement/formsdownloads/>

36. Regulation 7 of the 1998 Regulations

37. Section 47 of the 1997 Act

38. Section 32 of the Planning Acts



Bord Pleanála ("ABP"). As with applications for aquaculture licences, regulations<sup>39</sup> have been made to govern the application process<sup>40</sup> and the documents which must accompany an application are specified<sup>41</sup> in those regulations.

The planning legislation<sup>42</sup> permits a potential applicant to enter into consultations with the relevant planning authority to discuss the proposed development and receive advice from the planning authority regarding the proposed application. A purpose of this consultation process is to ensure, as far as possible, that the applicant submits all of the information which the planning authority will require to consider the application.

Once an application is made, the planning authority is entitled to require an applicant to (i) submit any further information which the authority considers necessary to enable it to deal with the application or (ii) produce any evidence which may be reasonably required to verify any information given in relation to the application<sup>43</sup>. This approach is similar to the entitlement of the Minister under the 1997 Act. However, a planning authority, which has requested further information from an applicant, may not require that applicant to submit any further information or evidence unless it is necessary to clarify matters in the applicant's response to the planning authority's original request for further information<sup>44</sup>.

If an appeal is brought to ABP then ABP is entitled to require any party, or person who has made a submission to an appeal, to submit such documents, particulars or other information which ABP considers necessary to determine the appeal<sup>45</sup>.

It has been recognised by the courts<sup>46</sup> that a request for further information by a planning authority must be limited to planning matters which are relevant to the application. As a matter of practice, neither local authorities nor ABP generally require applicants to submit detailed information relating to property rights or arrangements for access / rights of way or other matters outside of their direct expertise and direct statutory remit. This information is not considered necessary because a planning permission, like an aquaculture licence, does not confer any property right on an applicant to actually carry out the development. The purpose of the planning permission or aquaculture licence is to consider the appropriateness of the development in environmental or other terms.

### 3.4 How should the powers of the licensing authority to request information be used?

Regulation 7 of the 1998 Regulations allows the Minister to seek further information from an applicant for an aquaculture licence. However, it is expressly stated that the Minister should only seek such information as is reasonably required to enable the application to be

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39. Under section 33 of the Planning Acts

40. SI 600 of 2001 – the Planning and Development Regulations 2001 (as amended) (the "2001 Regulations")

41. Regulation 22 of the 2001 Regulations

42. Section 247 of the Planning Acts

43. Regulation 33(1) of the 2001 Regulations

44. Regulation 33(2) of the 2001 Regulations

45. Section 132 of the 2000 Act

46. *Illium Properties Limited v Dublin City Council* [2004] IEHC 327



considered or verify any particulars or information given by the applicant in relation to the application. Equally, section 47 of the 1997 Act limits ALAB's entitlement to require the production of documents, particulars or other information to those that are necessary to determine an appeal.

The information which the Minister has deemed necessary for the licensing authority to have in order to consider the matters set out in section 61 of the 1997 Act is set out in regulation 4 of the 1998 Regulations, regulation 4 of the European Communities (Control of Dangerous Substances in Aquaculture) Regulations 2008 and is listed in the aquaculture licence application form.

It is implicit in both regulation 7 of the 1998 Regulations and section 47 of the 1997 Act that any further information requested from an applicant should be solely for the purposes of allowing the licensing authority to take account of the matters listed in section 61 of the 1997 Act. The current wide-ranging use of the powers under regulation 7 of the 1998 Regulations and section 47 of the 1997 Act to make repeated requests for information could reasonably be curtailed without in any way affecting the necessary scrutiny under Irish or European environmental legislation.

In line with the planning regime<sup>47</sup>, the licensing authority should endeavour to request further information from an applicant on one occasion only, unless otherwise justified. A subsequent request for further information should only be permitted if it is necessary to clarify matters in the applicant's response to the licensing authority's original request for further information. This efficiency in the application process could be achieved by the Minister issuing a policy directive that places reasonable parameters on the entitlement of the licensing authority to request further information and on the type of information it could seek. The Minister could also amend the powers of the Minister to seek information in regulation 7 of the 1998 Regulations using a statutory instrument.

As with the planning regime, the introduction of a pre-application consultation process could assist an applicant with submitting all of the information which the licensing authority will require to consider the application. The Minister could issue a policy directive which provides for this consultation process to be made available by the licensing authority to potential applicants.

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47. Regulation 33 of the 2001 Regulations

## 4 Policy Directives by the Minister

### 4.1 Road block: missed opportunities to streamline the process without legislative change

MHI has identified a number of areas of the aquaculture licensing process which do not function efficiently.

The Minister has the power to issue policy directives which could address those areas. MHI believes that this approach would result in a more streamlined application and decision-making process.

### 4.2 What powers does the Minister have to direct the licensing process?

Under section 62 of the 1997 Act, the Minister may issue such general directives as to policy in relation to aquaculture as he or she considers necessary. The licensing authority must, in performing its functions, have regard to any such directives. Such policy directives could provide useful guidance to applicants for, and holders of, aquaculture licences and the licensing authority itself for the licencing process. This is a common practice. The Supreme Court stated in *McCarron v Kearney*<sup>48</sup> that:

*"It would be wrong to preclude a decision-maker from formulating guidelines by reference to which he makes it clear that he will make his decisions. It would be inimical to good administration and to consistency in decision-making to oblige all decision-makers to treat each decision entirely on its own, without reference to previous decisions or criteria designed to serve the public interest."*

Accordingly, it is possible for the Minister to clarify the approach to be taken when considering an application for an aquaculture licence<sup>49</sup> by issuing a policy directive.

To date, the Minister has not issued any policy directives under section 62 of the 1997 Act. The Minister has issued policy directives under section 3(2) of the Fisheries (Amendment) Act 2003 (as amended by the Sea-Fishers and Maritime Jurisdiction Act 2006) (the "2003 Act")<sup>50</sup>.

### 4.3 What types of policy directives could the Minister give?

Based on the analysis in this submission we summarise below three options for policy directives. There may of course be other initiatives that would benefit from being encompassed in policy directives as the Minister determines to be appropriate

#### (a) *Technical guidance*

MHI believes that it would be helpful for the Minister to issue policy directives as to certain technical matters. This type of guidance is given in other environmental licensing regimes. For example, under the IPC licensing regime, which is administered by the EPA, the EPA issues technical guidance notes. The guidance notes set out, for example, the best available technique for performing various

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48. [2010] IESC 28

49. These matters to which the licensing authority shall have regard are listed in section 61 of the 1997 Act.

50. A full list of the Policy Directives issued under section 3(2) of the 2003 Act is available at <http://www.agriculture.gov.ie/seafood/sea fisheriesadministration/fishingboatlicencing/>



industrial activities. The EPA considers applications for IPC licences in light of these guidance notes. The guidance can evolve over time as technology improves.

As with the IPC regime, the Department could issue technical guidance documents. The Minister could then issue a policy directive that all applications for aquaculture licences be assessed by reference to the technical guidance documents. The existence of such guidance documents and policy directives could provide useful guidance for applicants and the licensing authority and reduce the perceived need for the licensing authority to consider an applicant's scientific material from "first principles" every time it receives an application.

(b) *Time frame for decision-making*

The Independent Review Group could recommend that the Minister issue a policy directive<sup>51</sup> which requires ALAB, when notifying the parties to an appeal that an extension of time is required, to give the reasons for which the extension. This practice would increase transparency and also allow the applicant to assist ALAB, for example by anticipating information which ALAB might require to determine the application in light of the reasons given for the delay.

(c) *Terms of aquaculture licences*

New aquaculture licensing templates were announced in a press release issued by the Minister on 5 December 2011<sup>52</sup>. The new templates provide for Standing Stock Biomass to be used as the measurement for the limit of production capacity at a finfish aquaculture site. However, the licensing authority is continuing to issue finfish aquaculture licences which measure the limit of production capacity by reference to an annual maximum production limit (eg harvested annual tonnage).

The Minister could issue a policy directive that all future aquaculture licences issued by the licensing authority are in the same format as the new licence templates, use Standing Stock Biomass as the measurement of the limit of production capacity and do not dictate the time of year at which stocks must be harvested. This type of policy directive must be considered by the licensing authority and is thus a more effective mechanism to set policy than a press release. This type of licence would put the Irish licensing regime on an even footing with the Scottish and Norwegian aquaculture licensing regimes, both of which use 'Maximum Standing Biomass' as the measurement of the limit of production capacity.

(d) *Other policy directives*

Other Ministerial policy directives are suggested at the relevant points throughout this submission.

These types of Ministerial policy directive may benefit from a short prior consultation before issue, but the process should not be delayed by any such consultation. Indeed the

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51. As permitted by section 62 of 1997 Act

52. Press release available at - [http://www.agriculture.gov.ie/press/pressreleases/2011/december/title.59997\\_en.html](http://www.agriculture.gov.ie/press/pressreleases/2011/december/title.59997_en.html)

consultation for this independent review would be more than adequate to inform a number of policy directives.



## 5 Environmental Impact Statements

### 5.1 Road block: The requirement to submit an environmental impact statement with licence renewal applications

The 1998 Regulations require the submission of an EIS and the carrying out of an EIA more often than is required by the European Environmental Impact Assessment Directive<sup>53</sup> or the case law of the European Court of Justice ("ECJ").

There is a lack of engagement between the licensing authority and the applicant prior to the submission of an EIS, despite the 1997 Act making provision for engagement on the EIS aspect of an application prior to submission of the application.

### 5.2 What do the licensing regulations currently require?

Under the 1998 Regulations, a renewal of a licence is treated the same way as an initial application for a licence<sup>54</sup>. An application for a renewal of an aquaculture licence must be made in accordance with the regulations<sup>55</sup>. Applications for certain aquaculture licences<sup>56</sup>, for example a seawater salmonid breeding installation (other than for trial or research purposes where the output would not exceed 50 tonnes), must be accompanied by a full EIS and are subjected to a full EIA and this requirement applies to the renewal of those licences, even if there are no significant environmental changes on renewal.

### 5.3 Are the current requirements necessary under European and Irish law?

The 1998 Regulations require EIS and EIA to be carried out as part of almost every renewal application (except for very limited circumstances). We are not aware of any other environmental licensing regime or industry which requires repeated submissions of EIS and carrying out of EIA if the project has not significantly changed.

The European Environmental Impact Assessment Directive only requires the submission of an EIS where there has been a significant adverse change to the environmental effects caused by the EPA licensed activity. Section 13 of Annex II of the Directive provides that an EIA is required for:

*"[a]ny change or extension of project [that required EIA], already authorised, executed or in the process of being executed which may have significant adverse effects on the environment..."*

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53. Directive 2011 / 92 / EU of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment, as implemented by various Irish legislative provisions (full list available at <http://www.housing.gov.ie/sites/default/files/migrated-files/en/Legislation/DevelopmentandHousing/Planning/FileDownload%2C33203%2Cen.pdf>), as amended by Directive 2014 / 52 / EU of the European Parliament and of the Council of 16 April 2014 on the assessment of the effects of certain public and private projects on the environment.

54. Regulation 1 of the 1998 Regulations

55. Regulation 4 of the 1998 Regulations

56. Specified in regulation 5(1) of the 1998 Regulations

Where there has been a change or extension in the aquaculture activity, whether that change is significant enough to warrant an EIS must be considered in accordance with the relevant criteria. Guidance issued by the EPA defines a 'significant impact', in the context of an EIS, as

*"[a]n impact which, by its character, magnitude, duration or intensity alters a sensitive aspect of the environment".*

Under the planning legislation, the relevant test for whether a change in a development already authorised will require an EIS is as follows:

*"[a]ny change or extension of development already authorised, executed or in the process of being executed ... which would:- ...*

*result in an increase in size greater than –*

*- 25 per cent, or*

*- an amount equal to 50 per cent of the appropriate threshold,*

*whichever is the greater."*<sup>57</sup>

Whilst aquaculture licences must currently be renewed from time to time<sup>58</sup>, if there have been no significant environmental changes then the European Environmental Impact Assessment Directive does not require an EIS and EIA upon renewal of the aquaculture licence.

In line with the European Environmental Impact Assessment Directive, an EIS should only be required upon renewal if there has been a significant change sufficient to warrant an EIS. Accordingly, it is clear that the current requirements to submit an EIS as part of a renewal application under the 1998 Regulations, is neither necessary nor required under European law.

#### **5.4 How can the environmental impact statement requirements be streamlined?**

The 1998 Regulations have already been amended once to slightly restrict the circumstances in which an EIS must be submitted<sup>59</sup>.

The Minister could amend the 1998 Regulations further, in line with the requirements of the European Environmental Impact Assessment Directive and the Irish implementing legislation, to provide that an EIS only needs to be submitted with an application for the renewal of an aquaculture licence if there would be a significant adverse change to the environmental effects caused by the change to the licensed activity or using the same types of thresholds as in the planning legislation.

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57. Section 13, Schedule 5 (Part 2), Planning and Development Regulations 2001, SI No 600/2001 (as amended).

58. As the maximum duration of a licence is 20 years – section 15(2) of the 1997 Act

59. The insertion of regulation 4A into the 1998 Regulations by regulation 4 of the European Union (Environmental Impact Assessment) (Aquaculture) Regulations 2012



## 6 Natura Impact Statements

### 6.1 Road block: the Natura Impact Statement and Appropriate Assessment when no detailed conservation objectives have been set for the site

The Natura Impact Statement ("NIS") and Appropriate Assessment process is a separate process to EIS and EIA. The NIS and appropriate assessment process is undertaken under the EU Habitats Directive. The overall aim of the Habitats Directive<sup>60</sup> is to maintain or restore the favourable conservation status of habitats and species of community interest for which a site has been designated as a Natura 2000 site (sometimes called a European Site).

The licensing authority, when considering an application for an aquaculture licence (either a new licence or renewal) is obliged to conduct screening to ascertain whether the licensing authority must undertake an appropriate assessment under the Habitats Directive. If Appropriate Assessment is required, an applicant is obliged to submit a Natura Impact Statement. The June 2016 licence application guidance notes<sup>61</sup> state that an NIS should be included in applications for Marine Finfish Licences located within or adjacent to Natura 2000 sites.

The conservation objectives for Natura 2000 sites (ie, SACs<sup>62</sup> and SPAs<sup>63</sup>, being sites within the Natura 2000 network) are determined under Article 4 of the Habitats Directive. Conservation objectives for SACs and SPAs must be set for the habitats and species for which the sites are selected<sup>64</sup>. The objectives are intended to ensure that the relevant habitats and species present on a site are maintained in a favourable condition/conservation status. These objectives are used when carrying out appropriate assessments for projects that might impact on these sites.

The National Parks and Wildlife Service (the "NPWS") website states that a *"process is underway for setting detailed site-specific conservation objectives for these habitats and*

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60. Council Directive 92 / 42 / EU, as amended by Council Directive 97 / 62 / EC, Regulation (EC) No 1882 / 2003, Council Directive 2006 / 105 / EC and as amended by Act of Accession of Austria, Sweden and Finland (adapted by Council Decision 95/1/EC, Euratom, ECSC), Act concerning the conditions of accession of the Czech Republic, the Republic of Estonia, the Republic of Cyprus, the Republic of Latvia, the Republic of Lithuania, the Republic of Hungary, the Republic of Malta, the Republic of Poland, the Republic of Slovenia and the Slovak Republic and the adjustments to the Treaties on which the European Union is founded and as amended by the Corrigendum to that Directive) (the "**Habitats Directive**")

61. Available at <https://www.agriculture.gov.ie/media/migration/seafood/aquacultureforeshoremanagement/formsdownloads/Aquacultureappguidelines0616.pdf>

62. A Special Area of Conservation ("**SAC**") is defined in regulation 2 of the 2011 Regulations, which were implemented with the stated purpose of giving effect to the Habitats Directive and Directive 2009 / 147 / EC (the "**Birds Directive**"), as:

*"a site of Community importance designated by a Member State pursuant to Article 4(4) of the Habitats Directive through a statutory, administrative or contractual act, or any combination thereof, where the necessary conservation measures are applied for the maintenance or restoration, at a favourable conservation status, of either or both the natural habitats and the populations of the species for which the site is designated."*

63. A Special Protection Area ("**SPA**") is defined in regulation 2 of the 2011 Regulations as:

*"an area classified pursuant to Article 4(1) or 4(2) of the Birds Directive as a special protection area."*

64. <https://www.npws.ie/protected-sites/conservation-management-planning>

*species*" and provides a list of sites that have detailed conservation objectives. Site specific conservation objectives aim to define favourable conservation conditions for these habitats or species at the site level.

The NPWS website notes that generic conservation objectives have been compiled for the remaining Natura 2000 sites. These objectives are available to download<sup>65</sup>.

In the context of aquaculture licensing, the licensing authority raises questions for an applicant who is required to submit an NIS when no site-specific "conservation objectives" have been set for a Natura 2000 site.

We are instructed that, in aquaculture licensing, the licensing authority may refuse to undertake an Appropriate Assessment based on the generic objectives. We understand that this approach is based on an interpretation of the decision of the ECJ in *Commission v Ireland*<sup>66</sup>, namely that it is not possible to carry out an Appropriate Assessment of a Natura 2000 Site until site-specific conservation objectives have been set. This process has led to lengthy delays as the process of setting detailed site-specific objectives has taken many years.

This approach is contrary to that taken by other environmental licensing authorities in Ireland, which use the generic objectives if no site-specific objectives are available.

## 6.2 What does the legislation require in terms of conservation objectives?

The legislation<sup>67</sup> provides that a screening for Appropriate Assessment must take place in respect of a "plan or project" to assess whether it is likely to have a significant effect on a European Site. The guidance note<sup>68</sup> on Appropriate Assessment which was issued by the Department of Environment, Heritage and Local Government (now the Department of Housing, Planning, Community and Local Government) (revised on 11 February 2010) states that:

*"...existing plans and projects that are modified or undergo new or periodic consents or authorisations, are captured by Appropriate Assessment requirements."*

The application for an aquaculture licence (either a new licence or a renewal), constitutes a project for the purposes of the 2011 Regulations and is therefore subject to screening to assess whether it is likely to have a significant effect on a European Site.

The Minister, or ALAB, in carrying out its screening can require the submission of an NIS by the applicant<sup>69</sup>.

Regulation 16 of the 2011 Regulations provides that a public authority<sup>70</sup>:

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65. Further information available here - <https://www.npws.ie/protected-sites/conservation-management-planning>
  66. Case C-418 / 04
  67. The 2011 Regulations
  68. Available here - [https://www.npws.ie/sites/default/files/publications/pdf/NPWS\\_2009\\_AA\\_Guidance.pdf](https://www.npws.ie/sites/default/files/publications/pdf/NPWS_2009_AA_Guidance.pdf)
  69. As provided for by regulation 42(3)(a) of the 2011 Regulations



*"...shall give consent for a plan or project...only after having determined that the plan or project shall not adversely affect the integrity of a European Site."*

An NIS is defined<sup>71</sup> as:

*"...a report comprising the scientific examination of a plan or project and the relevant European Site or European Sites, to identify and characterise any possible implications of the plan or project individually or in combination with other plans or projects in view of the conservation objectives of the site or sites, and any further information, including, but not limited to, any plans, maps or drawings, scientific information or data required to enable the carrying out of an Appropriate Assessment."* (emphasis added)

"Conservation objectives" are defined<sup>72</sup> as:

*"...in relation to a European Site, means the maintenance and restoration of the habitat and species in respect of which the site has been identified as a European Site at favourable conservation status or their restoration to favourable conservation status, and shall include such particular objectives as the Minister may from time to time establish for those purposes under Regulation 26."* (emphasis added)

### 6.3 Can generic objectives be used for the purposes of NIS and Appropriate Assessment?

It is clear that an NIS must be prepared: "...in view of the conservation objectives of the site or sites" and the Appropriate Assessment must be based on those objectives. Where detailed site-specific objectives have been established by the NPWS, those objectives must be used.

However, based on a reasonable interpretation of European law and on the Irish legislative definition of conservation objectives if there are no detailed site-specific objectives for the relevant site, then we do not believe that there is any legal bar to using the generic objectives. The definition of "conservation objectives" makes it clear that the objectives "include" (but are not limited to) any particular objectives, but the generic objectives meet the legislative definition and requirements.

By way of back-up to this position, the generic objectives are used by environmental regulators in the Appropriate Assessment process for other industries in Ireland, apart from aquaculture licensing. The guidance issued by the Commission<sup>73</sup> regarding aquaculture provides that:

*"If no specific conservation objectives have been set then it can be taken that the conservation objective is to prevent further deterioration of the site and its target features from the time it was included in the Natura 2000 network."*

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70. As defined in regulation 2 of the 2011 Regulations, which includes the Minister and ALAB

71. In regulation 2 of the 2011 Regulations

72. In regulation 2 of the 2011 Regulations

73. "Guidance on Aquaculture and Natura 2000 – Sustainable aquaculture activities in the context of the Natura 2000 Network" - European Commission – 2012, available here - <http://ec.europa.eu/environment/nature/natura2000/management/docs/Aqua-N2000%20guide.pdf>

Accordingly, it appears to be acceptable for an NIS and Appropriate Assessment to be carried out by reference to generic conservation objectives, which are available for all Natura 2000 sites. Aquaculture licensing should not be held up by delays in setting detailed site-specific objectives for Natura 2000 sites.

## 7 Licence Fees and Funding Structure

### 7.1 Road block: perceived funding or resource constraint with the licensing authority

In many environmental licensing regimes the objectives of the licensing authority, interested parties and of the industry to achieve prompt decision-making can be met by difficulties of a lack of funding or resources for the licensing authority to process applications.

Section 64 of the 1997 Act permits the Minister to set fees for aquaculture licence applications and renewals. The fees are set out in Fees Regulations<sup>74</sup> and vary from approximately €63 to approximately €635. Obviously, these levels of fee bear no relation to the resources in processing the licensing applications. Section 64(3) of the 1997 Act states that: "*Every fee received by the Minister under this section shall be paid into, and be disposed of for the benefit of, the Exchequer in such manner as the Minister for Finance shall direct.*"

In considering the funding of an environmental licensing regime, questions arise as to:

- whether it is appropriate to alter the licence fees and to direct that those fees be used for the benefit of the aquaculture licensing process, to ensure prompt, robust decision-making?
- whether it is appropriate for strategic or other complex projects to be levied with a higher licence fee that better reflects the cost of processing the licence in return for prompt, robust decision-making?

### 7.2 How have other licensing regimes adapted their fees?

In the planning regime, in 2006, the application fees for certain strategic infrastructure projects were raised. Those increased fees are directed to the costs of processing the application. In that regime, the applicant pays an additional amount if the cost of processing the application is greater than the application fee. If the cost of processing the application is less than the application fee a refund of the unused amount is paid to the applicant. This change in licensing fees was combined with setting an objective of decision-making to within 18 weeks of the date of receiving the public submissions (which is generally approximately seven weeks from the date of publication of the notice of application). That 18-week objective is often, though not always, met.

While the levels of fees are high, and are not suggested here, the costs incurred by both applicants and licensing authorities in processes where applications take a number of years can greatly increase over time. For example, during a multi-year process, regulation moves on and applications may need to be reassessed imposing costs on the applicant, interested observers and on the licensing authority.

It is open to the Minister under section 64 of the 1997 Act to increase the licensing fees for certain categories of aquaculture licence or for activities of certain degrees of magnitude. Scaled fees could also be applied, as the EPA does for small and large activities. However, if the industry was to be levied with such fee increases, in order to achieve fairness of approach, the fees would have to be directed to fund the application process and be accompanied by measurable improvements in processing time.

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74. The Aquaculture (Licence Application and Fees) Regulations 1998



## 8 Foreshore and Aquaculture Licensing

### 8.1 Road block: the requirement to obtain a foreshore licence

Under the Foreshore Acts 1933 – 2014 (the “**Foreshore Acts**”) a lease or a licence must be obtained from the Minister for works undertaken on the foreshore which are deemed to be any function in respect of an activity which is wholly or primarily for the use, development or support of aquaculture. In aquaculture, the type of activity which takes place on the foreshore can involve the placement of permanent equipment, such as anchors or navigational buoys, or the placement of temporary equipment, for example, a water pipe<sup>75</sup>, on the foreshore. The perceived requirement that the operator of an aquaculture facility must obtain a separate foreshore licence for placement of any equipment, even a temporary freshwater pipe, creates an additional administrative burden. The imposition of this requirement by the authority is not required by the legislation and causes further unnecessary expense and delay in the operation of aquaculture facilities.

### 8.2 The solution

#### Short Term

Section 3(3) of the Foreshore Acts allows the Minister to grant a foreshore licence by way of written permission where the licence is trivial in character. It is clearly the case that the placement of temporary equipment on the foreshore, for example running a water pipe to a boat, is trivial and accordingly there is no requirement for the holder of an aquaculture licence holder to apply for, and obtain, a full foreshore licence for this type of activity. The Independent Licensing Review Group could recommend that the Minister automatically issue the written permission referred to in section 3(3) of the Foreshore Acts at the same time as the granting of an aquaculture licence by the licensing authority.

#### Long Term

The General Scheme of Maritime Area and Foreshore (Amendment) Bill 2013 (the “**2013 Bill**”) proposes to combine the planning permission and foreshore licensing regimes.

Given that the Minister is responsible for issuing foreshore licences to the operators of aquaculture facilities, it would be more efficient for any conditions pertaining to aquaculture, that are currently dealt with by foreshore licensing, to be addressed in the aquaculture licence itself. The 2013 Bill is an opportunity for the necessary legislative framework to combine the aquaculture and foreshore licensing regimes into a single process to be put in place or, at the very least, for provision to be made for the placement of temporary equipment on the foreshore to be permitted under the terms of an aquaculture licence alone.

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75. In the same way that a farmer might run a water hose across a public road from one field to another on a temporary basis.





**TAB 7**

**LEGAL ADVICE**

**REDACTED**





## 00228-17: T6/202 - Deenish Submission to Minister

<b>To:</b> Minister	<b>Author:</b> John Quinlan
<b>Status:</b> Completed	<b>Owner:</b> Quinlan, John
<b>Purpose:</b> For Decision	<b>Reviewers:</b> Beamish, Cecil
<b>Division/Office:</b> Coastal Zone Management	
<b>Decision By:</b>	

### Final Comment

Minister agrees that meeting with Legal Division and others should go ahead and further submission is made containing recommendation on specific course of action.

### Action Required

For Ministerial Decision. NOTE: In view of the size of the submission a hard copy with supporting documentation has also been submitted.

### Executive Summary

The purpose of the submission is to update the Minister on developments relating to the harvesting of salmon by Marine Harvest Ireland in excess of what is permitted under the terms of the Aquaculture Licence at the above site. Condition 2(e) of the licence states that: "*the Licensee shall not harvest more than 500 tonnes (dead weight) of salmon in any one calendar year*" but in the year 2016 the operator harvested 1108.91 tonnes of salmon from the site which represented an excess of 121.78% over the permitted tonnage under the licence conditions.

And to recommend:

- (a) That the Minister determines that Condition 2(e) of the applicable aquaculture licence which sets out the harvest limits has been breached by the operator.

(b) That the Minister treat as discontinued the entitlement of Silver King Seafoods Ltd. (Subsidiary Company of Marine Harvest Ireland) to continue aquaculture operations under the provisions of Section 19(A)4 of the 1997 Fisheries (Amendment) Act.

## Comments


- (30/11/2017 09:55:59) Aidan ODriscoll: The papers in this submission are quite detailed and complex. The recommendation (see "next steps") is that these issues be further examined with legal division and others. I propose to go ahead with this meeting to develop a specific recommendation for action. I am therefore forwarding this submission at this stage for the Minister's information and an indication of whether he wishes to meet to discuss the case at this time or to await the outcome of the meeting referred to above.
- (17/11/2017 12:16:34) Cecil Beamish: Hard Copy file to follow for ease of reference
- (17/11/2017 12:13:29) Cecil Beamish: Secretary General, This file relates to a salmon farm in Ballinskelligs Bay, Caherdaniel, Co. Kerry operated by a subsidiary of Marine Harvest Ireland under licence from the Minister. The issue The core point at issue is that the licence contains a condition that: "the licence shall not harvest more than 500 tonnes (dead weight) of salmon in any one calendar year." Records submitted by the company suggest that 1108.91 tonnes were produced on this site in 2016. This core fact is not contested. The matter is however complicated by the fact that the licence which was granted in 1997 has, on plain reading, expired in February 2007 simply by the effluxion of time. However, this is not the case. Section 19(A) 4 of the 1997 Act provides that: "a licensee who has applied for renewal or further renewal of an aquaculture licence shall notwithstanding the expiration of the period for which the licence was granted or renewed but subject otherwise to the terms and conditions of the licence be entitled to continue the aquaculture or operations in relation to aquaculture authorised by the licence pending a decision on the said application." It is on the basis of Section 19(A) 4 that the firm currently operates and that requires it operate subject to the terms and conditions of the licence. The legal contention,

[REDACTED]

[REDACTED] in short, the firm is subject to the 500 tonne per annum production limit, by virtue of its licence. If the Minister were to determine that the terms and conditions of the old licence are not respected it is contended in the submission beneath and in the legal advice given that the effect automatically would be that the firm's statutory entitlement to continue farming at the site would cease, effectively closing the enterprise at that farm. While this is the perceived consequence it would undoubtedly be tested. The Submission The issues addressed in this file must be considered within the legal framework applicable and taking account of the specificities of the case and the Legal Advice available (Tab 7). Mr. Quinlan's submission below is well presented and laid out. It traverses the issues in relation to this matter and should be read fully in conjunction with the following and with the other documentation on file. The Aquaculture legislation does not provide for graduated sanctions and there are limited options available to the Minister, as set out in Mr. Quinlan's submission. In this case, the core issue is that the proposed consequence of determining that a breach occurred in relation to this specific licence condition is to cease all activity on this farm. Mr. Quinlan's extensive submission recommends that the Minister determine that the harvest limit in the licence has been breached and that the Minister treat as discontinued the entitlement of the company to continue aquaculture operations at the site. Key issues around this course of action that



will undoubtedly be tested and fall for consideration in determining this course of action are reasonableness, public interest and proportionality and in the following I will endeavour to tease these out a little further to inform further any decision which falls to be made in this case. The Company's defence The company's defence to the matter relies on a variety of arguments which are all on file and examined legally in the file and in the submission. Firstly, the company would like the licence in this respect to be something other than it is and this does not seem to me to be pertinent. The company seeks to look behind conditions of the licence and speculate as to what might have been intended and construct a defence on that basis. That does not seem valid. The company argues that the licence is "out of date" in terms of parameters and terminology. The company points out that it applied for renewal in 2007 and then seeks to argue that the old licence should operate on different parameters informed by modern aquaculture thinking. The delay in determining the renewal application is understandably frustrating to all concerned, including the State side. The delay is due to the fact that the firm operates in a Natura 2000 site and following the ECJ judgement against Ireland in 2007, no determination can be made in a Natura 2000 site until multi-year biological data was gathered on the site. scientific conservation interests were determined for the site by NPWS, a detailed appropriate assessment is carried out on the site and only then can the licensing process move forward to determination in respect of any aquaculture operations in this Natura 2000 site. At this point the multi year scientific data has been collected, the scientific interests to be protected in Kenmare Bay have been identified and the appropriate assessment for Kenmare Bay has been completed. However, as this is a salmon farming operation EU law requires that an EIS is carried out by the operator. An EIS for this site is currently awaited from the company. In short consideration of a licence renewal is on going, in the way that it must proceed under EU and National law and in accordance with the process agreed with the EU Commission following the ECJ Judgement. Notwithstanding the delay in determining the renewal, this matter must be considered under the terms of the old licence under which the firm operates. Those Terms and Conditions must be respected it is contended to maintain the Statutory entitlement under Section 19(A) 4 which provides the basis on which the firm continues to operate. The other defences raised by the company are addressed in Mr. Quinlan's submission and in the Legal Advices (Tab 7). A consistent defence stated by the company is that, because the fish taken for harvest from the site were killed elsewhere, then no harvest actually occurred on site and hence no harvest limit applies or was breached. The fish taken from the site were not moved to other sites for on growing, but instead were moved for immediate slaughter and processing. The fish removed were "harvestable", were removed from the site for "harvest" and were "harvested", hence it is hard to see how this defence could stand up. In summary, on the face of it, it does appear that a quantity in excess of the harvest limit was "harvested" from the site in 2016. The issue is what is the appropriate thing to do in the circumstances and this is more complicated. Mr. Quinlan's submission argues for treating as discontinued the right to operate. In effect, the logic is that by determining the breach the Statutory entitlement to continue operating under Section 19 (A) 4. This is a strong punitive result arising from the determination of a breach in one instance, which effectively closes the operation at this site. Some Legal Considerations The following legal considerations, in addition to those set out in Mr Quinlan's submission which should be read in conjunction, should be borne in mind in weighing up the appropriate course of action in this matter. The legal advice on file (Tab 7)





[REDACTED]  
[REDACTED] Mr Quinlan's submission sets out reasons why it would be in the public interest to take such action. Marine Harvest Ireland argued that no environmental damage was done by the level of production on the site and the Department has no evidence to refute this. Marine Harvest Ireland's other public interest arguments relate to the viability of the firm and the employment it creates (Tab 6A). The legal advice on file (Tab 7) states that :

[REDACTED] AB

[REDACTED] The legal advice above [REDACTED]

[REDACTED] Those seem to be advised as the key tests to be considered in deciding whether or not to take a decision whose effect is to discontinue the right to operate. The concluding legal advice (Tab 7) is that :

[REDACTED]

[REDACTED] Marine Harvest Ireland have already strongly contested the merits of the tonnage limit arguing that it was outdated and did not represent modern regulatory practices. The licence at issue here was amended by the Minister and confirmed by ALAB in 2012 for a trial period to early 2015 to allow for a different control provision, based on Maximum Allowable Biomass. In effect, the Minister removed the 500 tonne limit for a Trial period and replaced it with a different type of limit based on biomass. That trial adjustment to the licence ended on 31/03/2015. Thus while production in 2016 was governed by the 500 tonne limit condition Marine Harvest argue that the maximum production limitation was changed for a period by the Minister and they will undoubtedly argue that this strengthens their contention that the condition is outdated. The company have submitted expert evidence supporting this view. Undoubtedly, this approach will be employed to test the "reasonableness" of any decision that the licence term was breached and the "proportionality" of thereby removing the right to continue aquaculture operations on the site. Those arguments coupled with the lack of State evidence of environmental damage caused by the increased level of production will undoubtedly be used to test if any action taken meets the "public interest" test. Whilst the trial licence approach, based on maximum allowable biomass, came to an end and the tonnage limit was in place in 2016, the mere fact that the Minister allowed this to be "tried" at this site and supported the general merits of an approach based on a biomass limit, will be used by the company to argue against the "public interest" being served by taking action which results in discontinuance of the enterprise at this site based on a breach of the tonnage limit. These tests and potential vulnerabilities in relation to the reasonableness and public interest must be weighed against the reasons stated in the underlying submission and in deciding whether or not to take the action recommended in the submission beneath and much of this resolves to legal advice and legal argument. Amendment of Licence It is worth considering separately the question of amending the Licence, which is not an alternative to punitive action but is worthy of consideration on its own merits. Section 19 of the submission addresses the question of whether or not the Minister can amend the licence. [REDACTED]

[REDACTED] However the Minister can make an amendment to the



licence "if it is in not being properly maintained", but it must be "in the public interest to do so." One of the dimensions of this matter is that the apparent breach of the production limit for 2016 was detected by the Department in late February 2017, when the company forwarded its harvest records for the site. Harvesting had gone on progressively day by day according to the company records on file from the start of October 2016 to the end of December. The 500 tonnes limit would have been breached according to the Harvest records by mid October. Determining any injurious environmental impact would have required inspections in the October - December period but as the harvest figures did not have to be reported in real time, the type of determination was not facilitated. It could be argued that an amendment of the licence which required real time harvest notification or pre-notification would be in the public interest, to allow any volume breach to be detected contemporaneous with the fish being in the water so as address the issue immediately and carry out any necessary investigations into possible injurious environmental impact. Such a determination would assist the Minister moving quickly, in weighing any action in the public interest and in defending any such action when taken. The issue of making an amendment to the company's licence as set out above is an issue which might also be considered by the Minister. Next Steps Mr. Quinlan's submission covers the issues and consideration of those issues and should be read in full. That submission makes one recommendation which is to determine that the company breached the licence and that as a consequence their right to continue operations under Section 19(A) 4 is removed by virtue of the breach. On the face of it this is a logical summation of the position. However given its consequences in terms of ceasing the legal right to operate at all on this farm the legal advice is [REDACTED]

[REDACTED] A separate matter that arises is whether or not there is some public interest merit in amending the licence in respect of reporting pre-reporting harvest tonnages. Such an amendment could not be seen as punitive or a sanction in relation to a breach. Rather such a course of action would be in the public interest to allow better real time environmental assessment of such a future breach. As a next step and as any course of action is strongly framed within a judgement and weighing of the legal issues and considerations, I would recommend that a further meeting might be advisable involving the head of legal services, yourself and the relevant other officials involved. It would be a matter for the Minister as to whether or not he would wish to be a party to any such meeting to hear and tease out the issues. In any event, the meeting would, I suggest be necessary before the file is finally considered by the Minister for decision. \_\_\_\_\_ C Beamish 17/11/2017

- (01/11/2017 10:55:33) John Quinlan: The attached submission and supporting documentation is comprehensive in nature and contains a clear recommendation. Due to the size of the submission a hard copy has also been forwarded.

## Detailed Information

**Recommendation to treat as discontinued the entitlement of Silverking Seafoods Ltd (Subsidiary Company of Marine Harvest Ireland) to continue aquaculture operations under the provisions of Section 19(A)4 of the 1997 Fisheries (Amendment) Act**

**(T6/202 - Deenish)**

**Submission to the Minister**

**From: John Quinlan, Principal Officer, Aquaculture & Foreshore Management Division.**

**To: 1) Dr Beamish, Assistant Secretary**

**2) Secretary General**

**3) Runaí Aire**

**Date: 1<sup>st</sup> November 2017**

**1. Purpose of the Submission**

The purpose of the submission is to update the Minister on developments relating to the harvesting of salmon by Marine Harvest Ireland in excess of what is permitted under the terms of the Aquaculture Licence at the above site. Condition 2(e) of the licence states that: *"the Licensee shall not harvest more than 500 tonnes (dead weight) of salmon in any one calendar*



year" but in the year 2016 the operator harvested **1108.91 tonnes** of salmon from the site which represented an excess of **121.78%** over the permitted tonnage under the licence conditions.

And to recommend:

(a) That the Minister determines that Condition 2(e) of the applicable aquaculture licence which sets out the harvest limits has been breached by the operator.

(b) That the Minister treat as discontinued the entitlement of Silver King Seafoods Ltd. (Subsidiary Company of Marine Harvest Ireland) to continue aquaculture operations under the provisions of Section 19(A)4 of the 1997 Fisheries (Amendment) Act.

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## 2. Background

The licence in question (T6 202) was held by Silver King Seafoods Limited, a wholly owned subsidiary of Marine Harvest Ireland. The licence expired on 15<sup>th</sup> February 2007 and as a renewal application has been received by the Department, the relevant aquaculture activity is governed under the provisions of Section 19(A)4 under the 1997 Fisheries (Amendment) Act which states:

*"A licensee who has applied for the renewal or further renewal of an aquaculture licence shall, notwithstanding the expiration of the period for which the licence was granted or renewed but subject otherwise to the terms and conditions of the licence, be entitled to continue the aquaculture or operations in relation to aquaculture authorised by the licence pending the decision on the said application."*

The Aquaculture & Foreshore Management Division (AFMD) has, on foot of inspections conducted at the site by the Marine Engineering Division, given detailed consideration to possible breaches of aquaculture licence conditions by the Company.

This submission and the recommendation contained therein is based on harvested tonnage in excess of the permitted cap. **The figures in question have been supplied by the operator.**

The full text of the licence is attached at **TAB 1.**

### **3. Temporary amendment to the Aquaculture Licence granted in October 2012 (Pilot Project)**

The company applied for a temporary amendment of the Aquaculture Licence in 2011 so as to facilitate a once-off pilot project involving the use of maximum standing stock biomass as a means of gauging and capping production capacity rather than tonnage. The temporary amendment was granted by the Aquaculture Licences Appeals Board (ALAB) on 31<sup>st</sup> October 2012. This temporary amendment ceased on 31<sup>st</sup> March 2015 and the Company received a written reminder to this effect on 27<sup>th</sup> March 2015. A condition of this amendment was that it *"is strictly a once off pilot for this site only and that any repeat of the stocking pattern would have to be considered, inter alia, in light of the outcome of the monitoring and the progress of the implementation of overall licensing policy towards the use of "maximum standing stock biomass" as a control point in licence terms and conditions"*.

### **4. Harvesting in excess of maximum permitted under the terms and conditions of the Aquaculture Licence**

(Now operating however under the provisions of Section 19(A)4 of the 1997 Fisheries Amendment Act)

The key points in relation to the temporary amendment which facilitated the pilot project are:

1. The amendment was time bound and expired on **31<sup>st</sup> March 2015.**
2. Marine Harvest Ireland were written to on **27<sup>th</sup> March 2015** and were reminded of the expiry of the amendment.
3. The Marine Harvest Ireland report on the Pilot Study dated **20<sup>th</sup> January 2015** acknowledged that the amendment was for two years duration.

Details of the conditions of the Pilot Study, Communications and Reports are attached at **TAB 3a-c**.

#### **5. Engineering Reports and Company response of 29<sup>th</sup> January 2016**

The Department's Marine Engineering Division (MED) carried out an inspection at the site on the 2<sup>nd</sup> July 2015. The MED Report advised of an excess stock of smolts in the order of 84% and also referred to the permitted harvest limit of 500 tonnes (dead weight) in a year.

The Engineering Report was forwarded to the Company on 6<sup>th</sup> January 2016. The Company was advised that remedial actions necessary on foot of the Engineering Report should be completed within 2 weeks of the letter that issued. On 29<sup>th</sup> January 2016 the Company responded and raised the following key points:

1. The company queried the accuracy of the MED Report in respect of the type of fish stocked (smolts v salmon).
2. The Company stated that no harvest had taken place at the site (in 2015)
3. The Company stated there had been no exceedance of the maximum harvest allowable.

The Engineering Report is attached at **TAB 2a**.

#### **6. Meeting with the Company 14<sup>th</sup> March 2016**

The Department convened a meeting with the Company on 14<sup>th</sup> March 2016. The purpose of the meeting was to afford the Company an opportunity to outline further its position on overstocking in respect of Deenish and also another site at Inishfarnard which has been the subject of a separate submission. At the meeting the Department provided an overview of its position, including the Engineering Report of 2<sup>nd</sup> July 2015 and the fact that the Pilot



Programme concerning measurement based on biomass had ended on 31<sup>st</sup> March 2015. The Department noted the Company's response contained in its letter of 29<sup>th</sup> January 2016.

At the meeting the Company said it could not state what tonnage would be harvested but in any event harvesting would not occur from the site as the fish would be removed in the same manner as Innisfarnard. The Department restated its position that it regarded removal of fish from the site for slaughter as representing harvesting from the site in accordance with condition 2 (e) of the licence.

A copy of the Company's letter of 29<sup>th</sup> January 2016 is attached at **TAB 2c**.

The Summary Report of the meeting is attached at **TAB 2e**.

#### 7. Harvest Data for 2016

In response to a request from the Department, Marine Harvest Ireland supplied harvest data for 2016 on 24<sup>th</sup> February 2017 and also confirmed that there had been no harvest in 2015. The details are as follows:

- Total Harvest (Dead Weight) for 2016 was **1108.91 tonnes**.
- The harvest figure is **121.78%** in excess of what is permitted under licence condition No. 2(e).
- 2016 harvest took place between 2<sup>nd</sup> October 2016 and 21<sup>st</sup> December 2016.
- Based on the available prices for organic certified salmon during the period in question there can be little doubt that the unauthorised excess harvesting resulted in substantial commercial benefits for the operation.



Email communication in relation to the harvest data is attached at **TAB 4**.

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**Consideration of termination of statutory entitlement to operate pursuant to Section 19(A)  
4 of the 1997 Fisheries (Amendment) Act**

**8. Department's Letter of 9<sup>th</sup> March 2017**

On 9<sup>th</sup> March 2017 the Department wrote to the Company advising it that consideration was being given to the termination of the Company's statutory entitlement to continue aquaculture operations at the Deenish site pursuant to Section 19(A)4 of the 1997 Fisheries (Amendment) Act. The breach of licence Condition 2(e) which sets out the maximum harvest levels was cited as the reason for this action. The company was afforded 28 days in which to make representations to the Minister in relation to the proposed cessation of its statutory entitlement.

The full text of the Department's letter of 9<sup>th</sup> March 2017 is attached at **TAB 5**.

**9. Company response dated 3<sup>rd</sup> April 2017**

The Company wrote to the Department on 3<sup>rd</sup> April 2017 in response to the Department's letter of 9<sup>th</sup> March 2017. The following are the key issues raised by the company in their response:

1. **That previous representations made to the Department in relation to the Deenish site "remain relevant"**
2. **That there has been no breach of the Licence conditions or consequential environmental impacts.**
3. **That the legislation does not provide for the revocation of the company's statutory entitlement to operate and that the Company relies on its constitutional property rights to operate under the provisions of Section 19(A)4 of the 1997 Fisheries Amendment Act.**
4. **That the "parameters and terminology of the Licence are out of date when compared to best international practises"**
5. **That revocation of the Company's statutory entitlement to continue aquaculture operations at the Deenish site pursuant to Section 19(A)4 of the 1997 Fisheries (Amendment) Act would not be in the public interest.**

The letter also included the following attachments:

- **Previous correspondence (15/06/16) and 19/07/16)**
- **Professor Randolph Richards' "expert opinion" dated 29 November 2016 and resume**
- **Aquaculture Stewardship Council's Certificate of Conformity dated 10 March 2015**
- **Environmental Survey carried out by Aquafact International Services Limited, issued September 2016**
- **MHI Submission to Independent Aquaculture Licensing Review Group**

The full content of the Company's letter together with the attachments have been fully reviewed by the Division and also referred to the Department's Legal Services Division for consideration and advice.

Company letter and attachments are attached at **TAB 6a-g**.

#### **10. Consideration of the Representations made by the Company (letter of 3<sup>rd</sup> April 2017)**

Aquaculture Licences are issued by the Department subject to the provisions of the 1997 Fisheries (Amendment) Act, the 1933 Foreshore Act (where appropriate) and applicable EU legislation, including the EU Birds and Habitats Directive and the EU Directive on Public

Participation and Decision Making (Aarhus Convention). Licensing decisions must be taken in accordance with legislation. The licence in question states:

*"the Licensee shall not harvest more than 500 tonnes (dead weight) of salmon in any one calendar year"*

The Division has considered each of the points raised by the Company in its letter of 3<sup>rd</sup> April 2017.

A copy of the letter of 3<sup>rd</sup> April 2017 is attached at **TAB 6a**.

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Arguments put forward by the Company

11. *That previous representations made to the Department in relation to the Deenish site "remain relevant"*

The previous representations referred to by the operator consist of two letters dated 15<sup>th</sup> June and 19<sup>th</sup> July 2016 (the letter dated 15<sup>th</sup> June 2016 was in fact incorrectly dated by the operator and should read 15<sup>th</sup> July 2016). Both letters were received subsequent to a letter issued by the Department dated 23<sup>rd</sup> June where the company was advised that the Department was giving consideration to the withdrawal of the Company's statutory entitlement to continue aquaculture operations at the Deenish site pursuant to Section 19(A)4 of the 1997 Fisheries (Amendment) Act on foot of a breach of Licence Condition 2(d) which sets out the maximum smolt stocking levels.



**Letter of 15<sup>th</sup> July 2016.**

This letter sets out a series of general complaints concerning the licensing system. The following points were raised in the letter:

- *"MHI asserts that the licence term attaching to T6/202 limiting the number of 'smolts' is anachronistic, legally and technically meaningless and its application is contrary to modern good salmon farming practice.*
- *The irrefutable evidence arising from the benthic impact monitoring programme is that the stocking levels at this site are and have been comfortably within the site's 'biological assimilative capacity'. Thus it is a matter of fact that no significant environmental damage has been visited on the state's foreshore by MHI's actions. Surely this demonstrates clearly and in a quantifiable fashion that the company has been acting within the spirit of the regulatory system and thereby securing the public interest.*
- *The department, armed with this data, can show any interested parties that it is effectively regulating the activity at the site and that it is ensuring the highest levels of environmental protection."*

The licence condition referred to above by the company is in relation to smolt stocking levels and does not form part of the matters under consideration in this submission. The issue of benthic impacts was also subsequently raised by the company in their letter of 3<sup>rd</sup> April 2017 and is considered separately below. The data referred to by the company is also addressed separately below.

A copy of the letter of 15<sup>th</sup> June 2016 is attached at TAB 6b.

**Letter of 19<sup>th</sup> July 2016.**

The advice of the Department's Legal Services Division in respect of this particular letter is as follows:



Accordingly this letter does not form any part of the consideration of the matters that arise in this submission.



A copy of the letter of 19<sup>th</sup> July 2016 is attached at **TAB 6c**.

LSD advice is attached at **TAB 7**.

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**12. *That there has been no breach of the Licence conditions or consequential environmental impacts***

Marine Harvest Ireland raises two separate but inter-linked issues in its letter of 3<sup>rd</sup> April 2017. Essentially they argue that:

1. There has been no breach of the license condition in relation to harvest limits (Condition 2(e)).
2. That there have been no negative environmental impacts.

The text of Licence Condition 2(e) is unambiguous. the Licensee is not permitted to harvest more than "**500 tonnes (dead weight) of salmon in any one calendar year**".

There is no dispute in relation to the quantum of the harvest in 2016. Marine Harvest Ireland in its email of 24<sup>th</sup> February 2017 has advised that the Dead Weight Harvest for 2016 was 1,108,907.36 Kgs (1108.91 tonnes). This harvest figure is 121.78% in excess of what is permitted under licence condition 2(e).

The company goes on to argue that, as it "**transfers live salmon from Deenish to the quay at Castletownbere, where the harvesting of this salmon occurs**" there is consequently no breach of the licence. It ignores the fact that Licence Condition 2(e) refers only to harvest and is not specific on location. In any event it is clear that the fish are removed from the Deenish site for the purpose of slaughter and therefore Deenish is a harvest site. There is no reasonable basis for the Company's argument in relation to this aspect. If the Marine Harvest argument was to be accepted, it would effectively render all harvest limits at all Aquaculture sites as redundant and

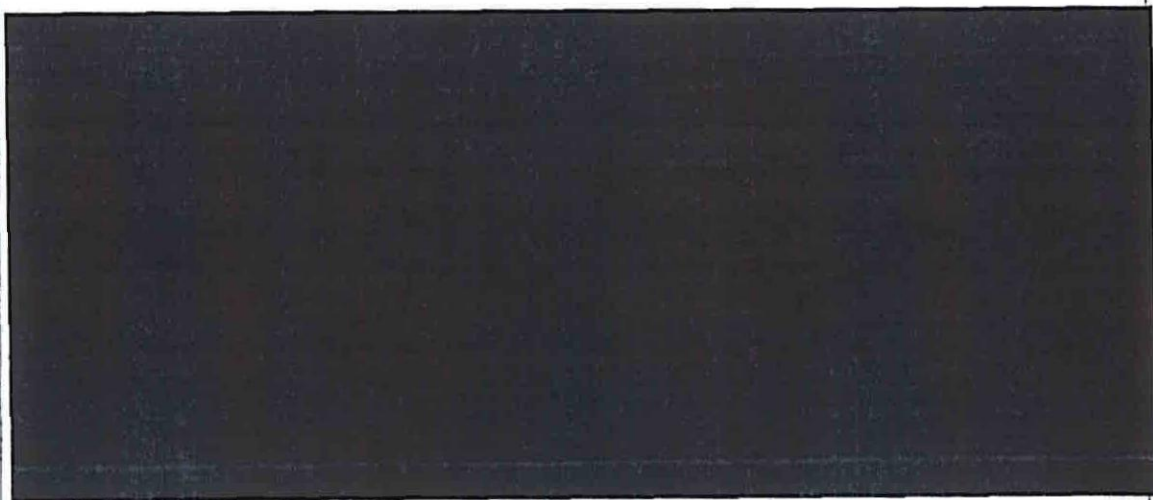
entitle operators to effectively produce and harvest without restriction by simply stating that they had removed the stock from site and harvested (effectively slaughtered) elsewhere.

It is also worth noting that the Company did not apply for or obtain a Fish Movement Order from the Marine Institute which would be the case if the fish were being moved for further on-growing. It is a requirement on all operators to notify the Marine Institute in advance where fish are moved for 'on-growing'. The company did not in this case apply for a Fish Movement Order and it is clear that any movement from the site was to harvest/slaughter.

The Company has argued that there has been no negative/adverse environmental impact arising from their breach of Condition 2(e) of the licence.

It is axiomatic that an increase of 121% in the stock harvested from the site must increase the effluent discharge from the site. The extent to which this increase in effluent discharge is significant is open to argument, however, it is not open to the Company to interpret the licence conditions any way it wishes.

Legal Services Division provided the following advice in relation to the Company's argument:



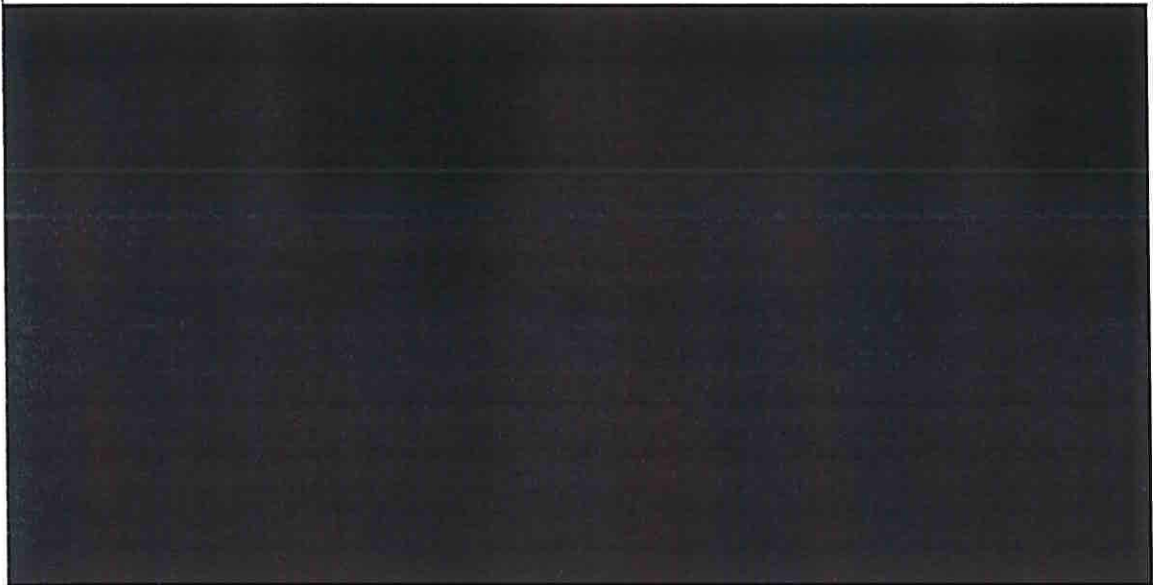
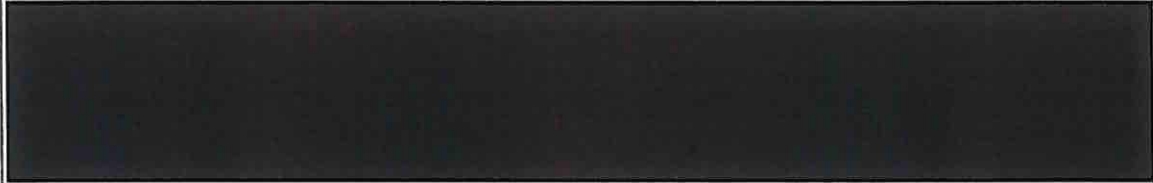
Copy of email correspondence of 24<sup>th</sup> February 2017 is attached at TAB 4.

The full text of the legal advice is attached at TAB 7.

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**13. That the legislation does not provide for the revocation of the company's statutory entitlement to operate and that the Company relies on its constitutional property rights to operate under the provisions of Section 19(A)4 of the 1997 Fisheries Amendment Act**

The Department's Legal Services Division has examined the argument made by the Company and has concluded that:



The full advice of Legal Services Division is attached at **TAB 7** and specific attention is drawn to Section 5-18 inclusive.



**14. That the "parameters and terminology of the Licence are out of date when compared to best international practises"**


The Company has stated that *"the parameters and terminology of the Licence are out of date when compared to best international practise"* and also that *"the Licence sets stocking limits by reference to "smolts", rather than 'Maximum Allowable Biomass', despite the fact Maximum Allowable Biomass is internationally-recognised as the most appropriate standard metric of production and that the Minister issued a press release on 5 December 2011 clearly outlining the policy to implement a Maximum Allowable Biomass limit to salmon rearing operations"*.

In support of its position the Company commissioned a report by an industry professional which is attached. Not surprisingly, the report is also of the view that the wording of the licence is out of date and contrary to supporting best practices.

Even if the Department accepted this view, which it does not, the relevant facts in respect of the licence are as follows:

- The licence held by the company sets out clearly the terms and conditions attaching to that licence.
- The company was fully aware of the terms and conditions of the licence.
- The company had sought and obtained a temporary amendment to the licence which allowed it to operate on revised terms and conditions for the duration only of the pilot study.
- The company was notified and fully aware of the expiry of the temporary amendment to the licence with effect from 31<sup>st</sup> March 2015.

In addition to the above, Legal Services Division has advised as follows:





The use of Maximum Allowable Biomass (MAB) as a measure for capping production has yet to be implemented by the Department and will require scientific, technical and possibly legal input before implementation. The application of MAB to licences is likely to represent a material change to each licence and therefore will require both public and statutory consultation as well as the submission of an Environmental Impact Statement. The obvious time for such a transition is therefore when licence renewal is under consideration. In the meantime the current mechanism for capping production is of general application throughout the industry and unilateral departure by one operator would inject huge levels of uncertainty into the overall system in addition to being unlawful. Prior to transitioning to MAB the Department will need to assess every renewal application with a view to ensuring that production levels are properly transitioned from the existing calculation methods over to MAB. It should be clear therefore that the transition to MAB will be a significant operation for the Department and relevant agencies.

For all of these reasons the argument put forward by the Company is not sustainable and is rejected in full.

A copy of the report is attached at **TAB 6d**.

The full text of the legal advice is attached at **TAB 7**.

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**15. *That revocation of the Company's statutory entitlement to continue aquaculture operations at the Deenish site pursuant to Section 19(A)4 of the 1997 Fisheries (Amendment) Act would not be in the public interest***

The public interest argument is of particular interest and relevance in relation to this case. The Company has adduced a number of technical and quasi legal arguments in support of its case but it can be argued that the most important consideration is the public interest. This Company is by far the largest producer of organic finfish in the country. The Company has substantial technical, administrative and managerial resources available to it in order to manage its production and also the licences which underpin that production. Because of its dominant role in the industry the Company has a close working relationship with the Licensing Division

through a series of Coordination meetings. The Company is fully aware of the terms and conditions of all licences held or operated by them. Furthermore, on all relevant occasions the Department has underlined the importance of compliance with the regulatory regime operated by the State. There is absolutely no doubt whatsoever that the Company has been and continues to be fully aware of the importance of compliance with licence conditions. In its letter of 3<sup>rd</sup> April 2017 the Company has emphasised the employment it creates and the revenue it generates from its operation and also states as follows:

***"In light of the current deadlock being experienced in the existing aquaculture licensing system, MHI cannot understate the importance of being able to operate every facility for which it has permission in order to maintain our viability and levels of employment."***

Of course the problem is that the Company has not only operated "*.....every facility for which it has permission.....*" but has exceeded the permission it has under the terms and conditions of its licence and that is the core issue.

Advice from Legal Services Division in respect of the "public interest" argument put forward by the Company indicates that the Minister's consideration of relevant issues should include the following:

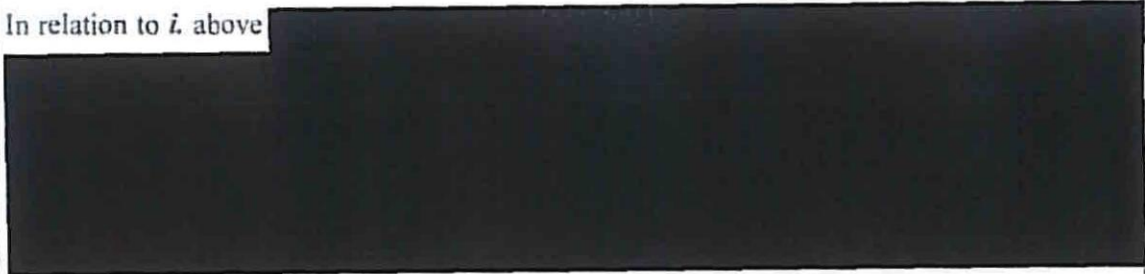
*i.*



*ii.*



In relation to *i.* above





In relation to *ii*



There are further public interest considerations beyond those raised by the Company. The actions by the Company if allowed to go unchecked could place in jeopardy the ongoing acceptance by the EU Commission that the licensing of aquaculture is being carried out by the State in compliance with the ECJ judgement against Ireland of 2007. Anything which would cause the Commission to review its position would have very serious implications for the industry as a whole and the employment generated thereby.

The setting of a cap on production and the enforcement of same is clearly in the public interest in respect of all operators. The specific reasons applicable to this case include the following:

1. An increase of 121% in the stock harvested from the site must increase the effluent discharge from the site. The extent of the discharge is open to argument. However it is not open to the Company to interpret the licence conditions any way it wishes.
2. Enforcement of the licence conditions by the Department serves, inter alia, to uphold the integrity of the State's regulatory regime in respect of food production from the marine environment.
3. The maintenance and development of Ireland's food exports is clearly dependent upon the acceptance by the general public and the authorities in other jurisdictions of the certitude attached to Ireland's regulatory regime.
4. Failure or perceived failure by the Department to enforce licence conditions will inevitably provide an incentive for further non-compliance by this operator and perhaps by others.
5. Failure to enforce licence conditions by the Department would amount to a de facto anti-competitiveness measure as it affords a major commercial advantage to the operator that is non compliant.
6. The current iteration of the Department's Mission Statement states:

*"Serving the government and people of Ireland by leading, developing and regulating the agri-food sector, protecting public health and optimising social, economic and environmental benefits."*



The explicit reference to regulation underscores not only the Department's commitment to carrying out this function but also acts as a recognition of the liabilities associated with non enforcement.

The final argument must be that the Company is aware of the terms and conditions of the licence it holds and must conduct its affairs in accordance with the law.

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**16. Attachments appended to the company's letter of 3<sup>rd</sup> April 2017**

The following documents were appended to the Company's letter of 3<sup>rd</sup> April 2017:

- Previous correspondence (15/06/16) and 19/07/16)
- Professor Randolph Richards expert opinion dated 29 November 2016 and résumé
- Aquaculture Stewardship Council's Certificate of Conformity dated 10 March 2015
- Environmental Survey carried out by Aquafact International Services Limited, issued September 2016
- MHI Submission to Independent Aquaculture Licensing Review Group.

All of these documents have been given the fullest consideration by the Division in the preparation of this submission.

The documents are attached at **TAB 6b-g**.

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**17. Actions for consideration on foot of a breach of the Licence condition No 2(e) by Marine Harvest Ireland.**

The following are the available options identified by the Division:

1. Do Nothing
2. Seek to amend the licence
3. Treat the entitlement of Silver King Seafoods Ltd (Subsidiary Company of Marine Harvest Ireland) to continue aquaculture operations as discontinued, under the provisions of Section 19(A)4 of the 1997 Fisheries (Amendment) Act.

The Division has given detailed consideration to each of these options and has sought and obtained extensive legal advice from the Department's Legal Services Division in relation to the legislative options available. The three options are discussed in detail below.

**18. Do Nothing**

The Department has an obligation to implement the State's aquaculture licensing regime in an impartial manner in accordance with the provisions of the applicable legislation. Aquaculture and Foreshore Management Division has, within the resources available to it, sought to monitor and police compliance with the terms of all aquaculture and foreshore licences issued. The 1997 Fisheries (Amendment) Act does not provide for an extensive suite of sanctions, short of revocation, to be used in line with the seriousness of the breach of licence condition No 2(e).

As set out above, the Company has brought forward a number of arguments in support of its position and the Department's response to these has also been set out. The total tonnage harvested in 2016 is **not in dispute and the Division is in fact relying on the harvest data provided by the Company**. There can be no doubt that harvesting 121% in excess of what is permitted under the licence condition 2(e) represents a very serious breach. This breach occurred notwithstanding the Department's clearly stated position in relation to harvest limits as set out at its meeting with the Company earlier that same year on 14<sup>th</sup> March 2016 and the expiry on 31<sup>st</sup> March 2015 of the temporary amendment to the Aquaculture Licence.

An additional issue in this case is the statutory entitlement to operate which applies given that operations are subject to Section 19(A)4 of the 1997 Fisheries (Amendment) Act (see Section 2 above). Section 19(A)4 is the means by which most of Ireland's aquaculture industry (shellfish and finfish) has continued to function while the "Appropriate Assessment" procedure has been





State's regulatory regime in respect of Marine Aquaculture is implemented inadequately. The EU Commission has twice opened a Pilot Case against the State in respect of sea lice controls, for example. For its part the Department has always provided robust responses to these assertions and has successfully defended the regulatory regime. To that extent, dealing vigorously with significant breaches of licence conditions constitutes no more than the discharge of both regulatory and developmental responsibilities which must be a crucial consideration, in the public interest.

The representations made by the Company to the Minister on foot of the Department's letter of 9<sup>th</sup> March 2017 have been carefully considered by the Division as set out above. In relation to the breach of Licence Condition 2(e) the company has argued that as it *"transfers live salmon from Deenish to the quay at Castletownbere, where the harvesting of this salmon occurs"* that there is no breach of the licence. There is as already set out, no reasonable basis for the Company's argument in relation to this aspect. The legislation, and the upholding of same, is clearly in the public interest of all aquaculture operators. The Company has availed of an enhanced bilateral communication facility with the Department's Licensing Division due to its overwhelming prominence in the industry. This took the form of regular scheduled bilateral coordination meetings with agreed detailed agendas. This group has met on at least 20 occasions and it would be fair to say that the Department has emphasised the need to comply with licence conditions at all times during these meetings. The operator, by virtue of its dominant role in the industry, its administrative and technical resources and its participation in the Coordination Group meetings is acutely aware of the importance the Department attaches to compliance with legislation.

It should also be noted that a number of Parliamentary Questions have been received in respect of this and related cases. In all the circumstances, it is clear that to do nothing is not an option which is desirable or, indeed, available in any meaningful way to the Department in this case. Furthermore it is considered that action such as a letter of admonishment to the company will be tantamount to doing nothing and will be seen as such by the company, by other stakeholders and by the general public. This would seriously undermine the integrity of the regulatory process.

A "do nothing" option cannot therefore be recommended.

A copy of the legal advice is attached at **TAB 7**.

See copy of Department's letter attached at **TAB 5**.

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#### **19. Amendment of the Aquaculture Licence**

Although the recommendation in this submission is that the Minister withdraw the entitlement enjoyed by Silver King Seafoods Limited (Subsidiary Company of Marine Harvest Ireland) to continue aquaculture operations under Section 19(A)4 of the 1997 Fisheries (Amendment) it should be noted that Condition No 3 of the Aquaculture Licence provides for an amendment to the licence where the Minister considers that it is in the public interest to do so or if he is satisfied that there has been a breach of any condition specified in the licence.

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**Condition No 3.**

*"The Minister shall be at liberty at any time to revoke or amend this licence if he considers that it is in the public interest to do so or if he is satisfied that there has been a breach of any condition specified in the licence or that the fishery to which the licence relates is not being properly maintained. Any such revocation or amendment shall be subject to the provisions of Section 15 of the Fisheries (Consolidation) Act 1959"*

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**Legislation**

Sections 68 and 70 of the 1997 Fisheries (Amendment) Act are the relevant provisions dealing with any amendments to the licence that might be considered in this case. The Division previously received the advice of Legal Services Division in relation to the possible amendment of aquaculture licence conditions where the operator is operating under the provisions of Section 19(a)4 of the 1997 Fisheries Amendment Act. The Division was advised that [REDACTED]

[REDACTED]

[REDACTED]



The legal advice goes on

[Redacted]

[Redacted]

Having considered the applicability of the 1997 Fisheries (Amendment) Act to a possible amendment on foot of the breach of the licence conditions the legal advice as set out below

[Redacted]

[Redacted]

-  
-  
**Licence Condition regarding amendment**

Condition No 3 of the Aquaculture Licence quoted above does however set out the circumstances in which the Minister may amend the aquaculture licence:

*"there has been a breach of any condition specified in the licence or that the fishery to which the licence relates is not being properly maintained".*

The advice goes on to state however that

It should be noted also that any decision to amend the aquaculture licence will be subject to all the legislative requirements of Section 68 of the Act together with subsequent Public and Statutory consultation processes, appeal processes etc and that the outcome of such processes cannot be prejudged.

Copy of relevant Legal advice attached at **TAB 7**.

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**Conclusion**

Given that the Minister is precluded from amending the licence in any fashion that could be seen as punitive it is difficult to see how any amendment to the conditions of the Aquaculture Licence (now operation under the provisions of Section 19(A)4 of the 1997 Fisheries (Amendment) Act) could be seen as any form of sanction against the company for the breach of Condition 2(e) of the licence (which sets out the maximum harvest limit under the terms and conditions of the licence).

The 1997 Fisheries (Amendment) Act does not permit the amendment of a licence as a sanction against the licensee but Condition 3 of the licence does provide for an amendment of the licence where the Minister is satisfied that there has been a breach of any condition specified in the licence. Any such amendment is however subject to the legislation. An amendment in this particular case is simply not viable as it cannot be by way of punitive sanction. Since there is no other reason to amend the licence other than as some sort of punitive sanction this course of action is not viable.

Amendment of the licence is therefore not recommended in the circumstances.

**20. Withdrawal of the entitlement to continue aquaculture operations under the provisions of Section 19(A)4 of the 1997 Fisheries (Amendment) Act**

As will be seen above, amendment of the licence is not recommended in this case for reasons of clear public interest. What remains therefore, is the option of treating as discontinued the statutory entitlement to engage in aquaculture operations provided for by Section 19(A)4 of the 1997 Act. There is no doubt that withdrawal of the consent to operate will have the effect of extinguishing the Company's activity in relation to this site. It should be noted however, that the Company's application for renewal of the licence will still be operative and will be processed in the normal way.

Withdrawal by the Department of the Company's entitlement to continue operations is proportionate to the breach of the applicable licence condition (excess production by 121%) for all of the reasons set out heretofore in this submission and, while it will undoubtedly impact the commercial interests of the operator it is unlikely to have a catastrophic impact having regard to the overall size of the Company and the wide scale of its operations.

It is considered that withdrawal of the entitlement to continue aquaculture operations under the provisions of Section 19(A)4 of the 1997 Fisheries (Amendment) Act, is not only appropriate in this case given all of the circumstances, but also necessary in view of the seriousness of the breach in question having regard to the following:

1. The extent of the breach of Condition 2(e) which sets the harvest limits, (121% excess) resulting in a significant commercial gain for the Company.
2. The fact that the breach of the licence condition took place in circumstances where the Company was fully aware of the limits set by the specific condition of the licence governing harvest tonnage.

**21. Recommendation**

Having regard to all of the above, it is recommended:

1. That the Minister determine that a breach of Condition 2(e) of the applicable aquaculture licence has occurred as described above.

2. That the Minister treat the statutory entitlement of Silver King Seafoods Ltd (Subsidiary Company of Marine Harvest Ireland) to continue aquaculture operations under the provisions of Section 19(A)4 of the 1997 Fisheries (Amendment) Act as discontinued for the following reason:

Breach of condition 2(e) of the applicable aquaculture licence which states:

*"the Licensee shall not harvest more than 500 tonnes (dead weight) of salmon in any one calendar year"*

Submitted please for approval.

John Quinlan

Principal Officer

Aquaculture and Foreshore Management Division

## Related Submissions

There are no related Submissions.



## User Details

### Users with access to Submission

Quinlan, John  
 Beamish, Cecil  
 Sub Sec Gens Office  
 eSub Ministers Office

### Read receipt list

Quinlan, John  
 BTSSP-SC  
 Beamish, Cecil  
 Smith, Ann  
 Ball, Siobhan  
 ODriscoll, Aidan  
 Waldron, Ultan  
 Lennox, Graham

## Action Logs

**Created:** 01/11/2017 10:36:47: Submission created by John Quinlan

**Sent For Review:** 01/11/2017 10:58:54: Submission sent to Cecil Beamish for review by John Quinlan

**Sent to the Secretary General:** 17/11/2017 12:17:01: Submission sent to Secretary General for review by Cecil Beamish

**Sent to the Minister:** 30/11/2017 09:56:00: Submission sent to Minister for review by Aidan ODriscoll

**Reason:** The papers in this submission are quite detailed and complex. The recommendation (see "next steps") is that these issues be further examined with legal division and others. I propose to go ahead with this meeting to develop a specific recommendation for action. I am therefore forwarding this submission at this stage for the Minister's information and an indication of whether he wishes to meet to discuss the case at this time or to await the outcome of the meeting referred to above.

**Completed:** 30/11/2017 17:30:15: Submission completed by Graham Lennox on behalf of the Minister

**Reason:** Minister agrees that meeting with Legal Division and others should go ahead and further submission is made containing recommendation on specific course of action.



## Submission AGR 00228-17: T6/202 - Deenish Submission to Minister

TO: Minister  
STATUS: Completed  
PURPOSE: For Decision  
DIVISION: Coastal Zone Management  
DECISION BY:

AUTHOR: Quinlan, John  
OWNER: Quinlan, John  
REVIEWERS: Beamish, Cecil

### Final comment

Minister agrees that meeting with Legal Division and others should go ahead and further submission is made containing recommendation on specific course of action.

### Action required

For Ministerial Decision. NOTE: In view of the size of the submission a hard copy with supporting documentation has also been submitted.

### Executive summary

The purpose of the submission is to update the Minister on developments relating to the harvesting of salmon by Marine Harvest Ireland in excess of what is permitted under the terms of the Aquaculture Licence at the above site. Condition 2(e) of the licence states that: "***the Licensee shall not harvest more than 500 tonnes (dead weight) of salmon in any one calendar year***" but in the year 2016 the operator harvested 1108.91 tonnes of salmon from the site which represented an excess of 121.78% over the permitted tonnage under the licence conditions.

And to recommend:

- (a) That the Minister determines that Condition 2(e) of the applicable aquaculture licence which sets out the harvest limits has been breached by the operator.
  
- (b) That the Minister treat as discontinued the entitlement of Silver King Seafoods Ltd. (Subsidiary Company of Marine Harvest Ireland) to continue aquaculture operations under the provisions of Section 19(A)4 of the 1997 Fisheries (Amendment) Act.

### Detailed information

**Recommendation to treat as discontinued the entitlement of Silverking Seafoods Ltd (Subsidiary Company of Marine Harvest Ireland) to continue aquaculture operations under the provisions of Section 19(A)4 of the 1997 Fisheries (Amendment) Act**

(T6/202 - Deenish)

Submission to the Minister

From: John Quinlan, Principal Officer, Aquaculture & Foreshore Management Division.

To: 1) Dr Beamish, Assistant Secretary

2) Secretary General

3) Runáí Aire

Date: 1<sup>st</sup> November 2017

## 1. Purpose of the Submission

The purpose of the submission is to update the Minister on developments relating to the harvesting of salmon by Marine Harvest Ireland in excess of what is permitted under the terms of the Aquaculture Licence at the above site. Condition 2(e) of the licence states that: "***the Licensee shall not harvest more than 500 tonnes (dead weight) of salmon in any one calendar year***" but in the year 2016 the operator harvested **1108.91 tonnes** of salmon from the site which represented an excess of **121.78%** over the permitted tonnage under the licence conditions.

And to recommend:

(a) That the Minister determines that Condition 2(e) of the applicable aquaculture licence which sets out the harvest limits has been breached by the operator.

(b) That the Minister treat as discontinued the entitlement of Silver King Seafoods Ltd. (Subsidiary Company of Marine Harvest Ireland) to continue aquaculture operations under the provisions of Section 19(A)4 of the 1997 Fisheries (Amendment) Act.

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## 2. Background

The licence in question (T6/202) was held by Silver King Seafoods Limited, a wholly owned subsidiary of Marine Harvest Ireland. The licence expired on 15<sup>th</sup> February 2007 and as a renewal application has been received by the Department, the relevant aquaculture activity is governed under the provisions of Section 19(A)4 under the 1997 Fisheries (Amendment) Act which states:

***"A licensee who has applied for the renewal or further renewal of an aquaculture licence shall, notwithstanding the expiration of the period for which the licence was granted or renewed but subject otherwise to the terms and conditions of the licence, be entitled to continue the aquaculture or operations in relation to aquaculture authorised by the licence pending the decision on the said application."***



The Aquaculture & Foreshore Management Division (AFMD) has, on foot of inspections conducted at the site by the Marine Engineering Division, given detailed consideration to possible breaches of aquaculture licence conditions by the Company.

This submission and the recommendation contained therein is based on harvested tonnage in excess of the permitted cap. **The figures in question have been supplied by the operator.**

The full text of the licence is attached at **TAB 1**.

### **3. Temporary amendment to the Aquaculture Licence granted in October 2012 (Pilot Project)**

The company applied for a temporary amendment of the Aquaculture Licence in 2011 so as to facilitate a once-off pilot project involving the use of maximum standing stock biomass as a means of gauging and capping production capacity rather than tonnage. The temporary amendment was granted by the Aquaculture Licences Appeals Board (ALAB) on 31<sup>st</sup> October 2012. This temporary amendment ceased on 31<sup>st</sup> March 2015 and the Company received a written reminder to this effect on 27<sup>th</sup> March 2015. A condition of this amendment was that it ***"is strictly a once off pilot for this site only and that any repeat of the stocking pattern would have to be considered, inter alia, in light of the outcome of the monitoring and the progress of the implementation of overall licensing policy towards the use of "maximum standing stock biomass" as a control point in licence terms and conditions"***.

### **4. Harvesting in excess of maximum permitted under the terms and conditions of the Aquaculture Licence**

(Now operating however under the provisions of Section 19(A)4 of the 1997 Fisheries Amendment Act)

The key points in relation to the temporary amendment which facilitated the pilot project are:

1. The amendment was time bound and expired on **31<sup>st</sup> March 2015**.
2. Marine Harvest Ireland were written to on **27<sup>th</sup> March 2015** and were reminded of the expiry of the amendment.
3. The Marine Harvest Ireland report on the Pilot Study dated **20<sup>th</sup> January 2015** acknowledged that the amendment was for two years duration.

Details of the conditions of the Pilot Study, Communications and Reports are attached at **TAB 3a-c**.

### **5. Engineering Reports and Company response of 29<sup>th</sup> January 2016**

The Department's Marine Engineering Division (MED) carried out an inspection at the site on the 2<sup>nd</sup> July 2015. The MED Report advised of an excess stock of smolts in the order of 84% and also referred to the permitted harvest limit of 500 tonnes (dead weight) in a year.

The Engineering Report was forwarded to the Company on 6<sup>th</sup> January 2016. The Company was advised that remedial actions necessary on foot of the Engineering Report should be completed within 2 weeks of the letter that issued. On 29<sup>th</sup> January 2016 the Company responded and raised the following key points:

1. The company queried the accuracy of the MED Report in respect of the type of fish stocked (smolts v salmon).
2. The Company stated that no harvest had taken place at the site (in 2015)
3. The Company stated there had been no exceedance of the maximum harvest allowable.

The Engineering Report is attached at **TAB 2a**.

#### **6. Meeting with the Company 14<sup>th</sup> March 2016**

The Department convened a meeting with the Company on 14<sup>th</sup> March 2016. The purpose of the meeting was to afford the Company an opportunity to outline further its position on overstocking in respect of Deenish and also another site at Inishfarnard which has been the subject of a separate submission. At the meeting the Department provided an overview of its position, including the Engineering Report of 2<sup>nd</sup> July 2015 and the fact that the Pilot Programme concerning measurement based on biomass had ended on 31<sup>st</sup> March 2015. The Department noted the Company's response contained in its letter of 29<sup>th</sup> January 2016.

At the meeting the Company said it could not state what tonnage would be harvested but in any event harvesting would not occur from the site as the fish would be removed in the same manner as Innisfarnard. The Department restated its position that it regarded removal of fish from the site for slaughter as representing harvesting from the site in accordance with condition 2 (e) of the licence.

A copy of the Company's letter of 29<sup>th</sup> January 2016 is attached at **TAB 2c**.

The Summary Report of the meeting is attached at **TAB 2e**.

#### **7. Harvest Data for 2016**

In response to a request from the Department, Marine Harvest Ireland supplied harvest data for 2016 on 24<sup>th</sup> February 2017 and also confirmed that there had been no harvest in 2015. The details are as follows:

- Total Harvest (Dead Weight) for 2016 was **1108.91 tonnes**.
- The harvest figure is **121.78%** in excess of what is permitted under licence condition No. 2(e).
- 2016 harvest took place between 2<sup>nd</sup> October 2016 and 21<sup>st</sup> December 2016.
- Based on the available prices for organic certified salmon during the period in question there can be little doubt that the unauthorised excess harvesting resulted in substantial commercial benefits for the operation.

Email communication in relation to the harvest data is attached at **TAB 4**.

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**Consideration of termination of statutory entitlement to operate pursuant to Section 19(A)4 of the 1997 Fisheries (Amendment) Act**

**8. Department's Letter of 9<sup>th</sup> March 2017**

On 9<sup>th</sup> March 2017 the Department wrote to the Company advising it that consideration was being given to the termination of the Company's statutory entitlement to continue aquaculture operations at the Deenish site pursuant to Section 19(A)4 of the 1997 Fisheries (Amendment) Act. The breach of licence Condition 2(e) which sets out the maximum harvest levels was cited as the reason for this action. The company was afforded 28 days in which to make representations to the Minister in relation to the proposed cessation of its statutory entitlement.

The full text of the Department's letter of 9<sup>th</sup> March 2017 is attached at **TAB 5**.

**9. Company response dated 3<sup>rd</sup> April 2017**

The Company wrote to the Department on 3<sup>rd</sup> April 2017 in response to the Department's letter of 9<sup>th</sup> March 2017. The following are the key issues raised by the company in their response:

1. **That previous representations made to the Department in relation to the Deenish site "remain relevant"**
2. **That there has been no breach of the Licence conditions or consequential environmental impacts.**
3. **That the legislation does not provide for the revocation of the company's statutory entitlement to operate and that the Company relies on its constitutional property rights to operate under the provisions of Section 19(A)4 of the 1997 Fisheries Amendment Act.**
4. **That the "parameters and terminology of the Licence are out of date when compared to best international practises"**
5. **That revocation of the Company's statutory entitlement to continue aquaculture operations at the Deenish site pursuant to Section 19(A)4 of the 1997 Fisheries (Amendment) Act would not be in the public interest.**

The letter also included the following attachments:

- **Previous correspondence (15/06/16) and 19/07/16)**
- **Professor Randolph Richards' "expert opinion" dated 29 November 2016 and resume**
- **Aquaculture Stewardship Council's Certificate of Conformity dated 10 March 2015**
- **Environmental Survey carried out by Aquafact International Services Limited, issued September 2016**
- **MHI Submission to Independent Aquaculture Licensing Review Group**

The full content of the Company's letter together with the attachments have been fully reviewed by the Division and also referred to the Department's Legal Services Division for consideration and advice.

Company letter and attachments are attached at **TAB 6a-g**.



#### 10. Consideration of the Representations made by the Company (letter of 3<sup>rd</sup> April 2017)

Aquaculture Licences are issued by the Department subject to the provisions of the 1997 Fisheries (Amendment) Act, the 1933 Foreshore Act (where appropriate) and applicable EU legislation, including the EU Birds and Habitats Directive and the EU Directive on Public Participation and Decision Making (Aarhus Convention). Licensing decisions must be taken in accordance with legislation. The licence in question states:

***"the Licensee shall not harvest more than 500 tonnes (dead weight) of salmon in any one calendar year"***

The Division has considered each of the points raised by the Company in its letter of 3<sup>rd</sup> April 2017.

A copy of the letter of 3<sup>rd</sup> April 2017 is attached at TAB 6a.

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#### Arguments put forward by the Company

#### 11. *That previous representations made to the Department in relation to the Deenish site "remain relevant"*

The previous representations referred to by the operator consist of two letters dated 15<sup>th</sup> June and 19<sup>th</sup> July 2016 (the letter dated 15<sup>th</sup> June 2016 was in fact incorrectly dated by the operator and should read 15<sup>th</sup> July 2016). Both letters were received subsequent to a letter issued by the Department dated 23<sup>rd</sup> June where the company was advised that the Department was giving consideration to the withdrawal of the Company's statutory entitlement to continue aquaculture operations at the Deenish site pursuant to Section 19(A)4 of the 1997 Fisheries (Amendment) Act on foot of a breach of Licence Condition 2(d) which sets out the maximum smolt stocking levels.

#### Letter of 15<sup>th</sup> July 2016.

This letter sets out a series of general complaints concerning the licensing system. The following points were raised in the letter:

- ***"MHI asserts that the licence term attaching to T6/202 limiting the number of 'smolts' is anachronistic, legally and technically meaningless and its application is contrary to modern good salmon farming practice.***
- ***The irrefutable evidence arising from the benthic impact monitoring programme is that the stocking levels at this site are and have been comfortably within the site's 'biological assimilative capacity'. Thus it is a matter of fact that no significant environmental damage has been visited on the state's foreshore by MHI's actions. Surely this demonstrates clearly and in a quantifiable fashion that the company has been acting within the spirit of the regulatory system and thereby securing the public interest.***
- ***The department, armed with this data, can show any interested parties that it is effectively regulating the activity at the site and that it is ensuring the highest levels of environmental protection."***

The licence condition referred to above by the company is in relation to smolt stocking levels and does not form part of the matters



under consideration in this submission. The issue of benthic impacts was also subsequently raised by the company in their letter of 3<sup>rd</sup> April 2017 and is considered separately below. The data referred to by the company is also addressed separately below.

A copy of the letter of 15<sup>th</sup> June 2016 is attached at **TAB 6b**.

**Letter of 19<sup>th</sup> July 2016.**

The advice of the Department's Legal Services Division in respect of this particular letter is as follows:

[REDACTED]

Accordingly this letter does not form any part of the consideration of the matters that arise in this submission.

A copy of the letter of 19<sup>th</sup> July 2016 is attached at **TAB 6c**.

LSD advice is attached at **TAB 7**.

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**12. That there has been no breach of the Licence conditions or consequential environmental impacts**

Marine Harvest Ireland raises two separate but inter-linked issues in its letter of 3<sup>rd</sup> April 2017. Essentially they argue that:

1. There has been no breach of the license condition in relation to harvest limits (Condition 2(e)).
2. That there have been no negative environmental impacts.

The text of Licence Condition 2(e) is unambiguous, the Licensee is not permitted to harvest more than "**500 tonnes (dead weight) of salmon in any one calendar year**".

There is no dispute in relation to the quantum of the harvest in 2016. Marine Harvest Ireland in its email of 24<sup>th</sup> February 2017 has advised that the Dead Weight Harvest for 2016 was 1,108,907.36 Kgs (1108.91 tonnes). This harvest figure is 121.78% in excess of what is permitted under licence condition 2(e).

The company goes on to argue that, as it "**transfers live salmon from Deenish to the quay at Castletownbere, where the harvesting of this salmon occurs**" there is consequently no breach of the licence. It ignores the fact that Licence Condition 2(e) refers only to harvest and is not specific on location. In any event it is clear that the fish are removed from the Deenish site for the purpose of slaughter and therefore Deenish is a harvest site. There is no reasonable basis for the Company's argument in relation to this aspect. If the Marine Harvest argument was to be accepted, it would effectively render all harvest limits at all Aquaculture sites as redundant and entitle operators to effectively produce and harvest without restriction by simply stating that they had removed the stock from site and harvested (effectively slaughtered) elsewhere.

It is also worth noting that the Company did not apply for or obtain a Fish Movement Order from the Marine Institute which would be the case if the fish were being moved for further ongrowing. It is a requirement on all operators to notify the Marine Institute in advance where fish are moved for 'ongrowing'. The company did not in this case apply for a Fish Movement Order and it is clear that any movement from the site was to harvest/slaughter.

The Company has argued that there has been no negative/adverse environmental impact arising from their breach of Condition 2 (e) of the licence.

It is axiomatic that an increase of 121% in the stock harvested from the site must increase the effluent discharge from the site. The extent to which this increase in effluent discharge is significant is open to argument, however, it is not open to the Company to interpret the licence conditions any way it wishes.

Legal Services Division provided the following advice in relation to the Company's argument:

[REDACTED]

Copy of email correspondence of 24<sup>th</sup> February 2017 is attached at **TAB 4**.

The full text of the legal advice is attached at **TAB 7**.

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**13. That the legislation does not provide for the revocation of the company's statutory entitlement to operate and that the Company relies on its constitutional property rights to operate under the provisions of Section 19(A)4 of the 1997 Fisheries Amendment Act**

The Department's Legal Services Division has examined the argument made by the Company and has concluded that:

[REDACTED]

The full advice of Legal Services Division is attached at **TAB 7** and specific attention is drawn to Section 5-18 inclusive.

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14. *That the "parameters and terminology of the Licence are out of date when compared to best international practises"*

The Company has stated that *"the parameters and terminology of the Licence are out of date when compared to best international practise"* and also that *"the Licence sets stocking limits by reference to "smolts", rather than 'Maximum Allowable Biomass', despite the fact Maximum Allowable Biomass is internationally-recognised as the most appropriate standard metric of production and that the Minister issued a press release on 5 December 2011 clearly outlining the policy to implement a Maximum Allowable Biomass limit to salmon rearing operations"*.

In support of its position the Company commissioned a report by an industry professional which is attached. Not surprisingly, the report is also of the view that the wording of the licence is out of date and contrary to supporting best practices.

Even if the Department accepted this view, which it does not, the relevant facts in respect of the licence are as follows:

- The licence held by the company sets out clearly the terms and conditions attaching to that licence.
- The company was fully aware of the terms and conditions of the licence.
- The company had sought and obtained a temporary amendment to the licence which allowed it to operate on revised terms and conditions for the duration only of the pilot study.
- The company was notified and fully aware of the expiry of the temporary amendment to the licence with effect from 31<sup>st</sup> March 2015.

In addition to the above, Legal Services Division has advised as follows:

[REDACTED]

The use of Maximum Allowable Biomass (MAB) as a measure for capping production has yet to be implemented by the Department and will require scientific, technical and possibly legal input before implementation. The application of MAB to licences is likely to represent a material change to each licence and therefore will require both public and statutory consultation as well as the submission of an Environmental Impact Statement. The obvious time for such a transition is therefore when licence renewal is under consideration. In the meantime the current mechanism for capping production is of general application throughout the industry and unilateral departure by one operator would inject huge levels of uncertainty into the overall system in addition to being unlawful. Prior to transitioning to MAB the Department will need to assess every renewal application with a view to ensuring that production levels are properly transitioned from the existing calculation methods over to MAB. It should be clear therefore that the transition to MAB will be a significant operation for the Department and relevant agencies.

For all of these reasons the argument put forward by the Company is not sustainable and is rejected in full.

A copy of the report is attached at **TAB 6d**.

The full text of the legal advice is attached at **TAB 7**.

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**15. That revocation of the Company's statutory entitlement to continue aquaculture operations at the Deenish site pursuant to Section 19(A)4 of the 1997 Fisheries (Amendment) Act would not be in the public interest**

The public interest argument is of particular interest and relevance in relation to this case. The Company has adduced a number of technical and quasi legal arguments in support of its case but it can be argued that the most important consideration is the public interest. This Company is by far the largest producer of organic finfish in the country. The Company has substantial technical, administrative and managerial resources available to it in order to manage its production and also the licences which underpin that production. Because of its dominant role in the industry the Company has a close working relationship with the Licensing Division through a series of Coordination meetings. The Company is fully aware of the terms and conditions of all licences held or operated by them. Furthermore, on all relevant occasions the Department has underlined the importance of compliance with the regulatory regime operated by the State. There is absolutely no doubt whatsoever that the Company has been and continues to be fully aware of the importance of compliance with licence conditions. In its letter of 3<sup>rd</sup> April 2017 the Company has emphasised the employment it creates and the revenue it generates from its operation and also states as follows:

***"In light of the current deadlock being experienced in the existing aquaculture licensing system, MHI cannot understate the importance of being able to operate every facility for which it has permission in order to maintain our viability and levels of employment."***

Of course the problem is that the Company has not only operated ".....**every facility for which is has permission.....**" but has exceeded the permission it has under the terms and conditions of its licence and that is the core issue.

Advice from Legal Services Division in respect of the "public interest" argument put forward by the Company indicates that the Minister's consideration of relevant issues should include the following:

**i.** [Redacted]

**ii.** [Redacted]

In relation to **i.** above [Redacted]

In relation to **ii.** [Redacted]

There are further public interest considerations beyond those raised by the Company. The actions by the Company if allowed to go unchecked could place in jeopardy the ongoing acceptance by the EU Commission that the licensing of aquaculture is being carried out by the State in compliance with the ECJ judgement against Ireland of 2007. Anything which would cause the Commission to



review its position would have very serious implications for the industry as a whole and the employment generated thereby.

The setting of a cap on production and the enforcement of same is clearly in the public interest in respect of all operators. The specific reasons applicable to this case include the following:

1. An increase of 121% in the stock harvested from the site must increase the effluent discharge from the site. The extent of the discharge is open to argument. However it is not open to the Company to interpret the licence conditions any way it wishes.
2. Enforcement of the licence conditions by the Department serves, inter alia, to uphold the integrity of the State's regulatory regime in respect of food production from the marine environment.
3. The maintenance and development of Ireland's food exports is clearly dependent upon the acceptance by the general public and the authorities in other jurisdictions of the certitude attached to Ireland's regulatory regime.
4. Failure or perceived failure by the Department to enforce licence conditions will inevitably provide an incentive for further non-compliance by this operator and perhaps by others.
5. Failure to enforce licence conditions by the Department would amount to a de facto anti-competitiveness measure as it affords a major commercial advantage to the operator that is non compliant.
6. The current iteration of the Department's Mission Statement states:

***"Serving the government and people of Ireland by leading, developing and regulating the agri-food sector, protecting public health and optimising social, economic and environmental benefits."***

The explicit reference to regulation underscores not only the Department's commitment to carrying out this function but also acts as a recognition of the liabilities associated with non enforcement.

The final argument must be that the Company is aware of the terms and conditions of the licence it holds and must conduct its affairs in accordance with the law.

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#### **16. Attachments appended to the company's letter of 3<sup>rd</sup> April 2017**

The following documents were appended to the Company's letter of 3<sup>rd</sup> April 2017:

- Previous correspondence (15/06/16) and 19/07/16)
- Professor Randolph Richards expert opinion dated 29 November 2016 and résumé
- Aquaculture Stewardship Council's Certificate of Conformity dated 10 March 2015
- Environmental Survey carried out by Aquafact International Services Limited, issued September 2016
- MHI Submission to Independent Aquaculture Licensing Review Group.

All of these documents have been given the fullest consideration by the Division in the preparation of this submission.

The documents are attached at **TAB 6b-g**.

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**17. Actions for consideration on foot of a breach of the Licence condition No 2(e) by Marine Harvest Ireland.**

The following are the available options identified by the Division:

1. Do Nothing
2. Seek to amend the licence
3. Treat the entitlement of Silver King Seafoods Ltd (Subsidiary Company of Marine Harvest Ireland) to continue aquaculture operations as discontinued, under the provisions of Section 19(A)4 of the 1997 Fisheries (Amendment) Act.

The Division has given detailed consideration to each of these options and has sought and obtained extensive legal advice from the Department's Legal Services Division in relation to the legislative options available. The three options are discussed in detail below.

**18. Do Nothing**

The Department has an obligation to implement the State's aquaculture licensing regime in an impartial manner in accordance with the provisions of the applicable legislation. Aquaculture and Foreshore Management Division has, within the resources available to it, sought to monitor and police compliance with the terms of all aquaculture and foreshore licences issued. The 1997 Fisheries (Amendment) Act does not provide for an extensive suite of sanctions, short of revocation, to be used in line with the seriousness of the breach of licence condition No 2(e).

As set out above, the Company has brought forward a number of arguments in support of its position and the Department's response to these has also been set out. The total tonnage harvested in 2016 **is not in dispute and the Division is in fact relying on the harvest data provided by the Company.** There can be no doubt that harvesting 121% in excess of what is permitted under the licence condition 2(e) represents a very serious breach. This breach occurred notwithstanding the Department's clearly stated position in relation to harvest limits as set out at its meeting with the Company earlier that same year on 14<sup>th</sup> March 2016 and the expiry on 31<sup>st</sup> March 2015 of the temporary amendment to the Aquaculture Licence.

An additional issue in this case is the statutory entitlement to operate which applies given that operations are subject to Section 19 (A)4 of the 1997 Fisheries (Amendment) Act (see Section 2 above). Section 19(A)4 is the means by which most of Ireland's aquaculture industry (shellfish and finfish) has continued to function while the "Appropriate Assessment" procedure has been rolled out in respect of NATURA bays. The continued applicability of Section 19(A)4 has not been without controversy as environmental NGO's have asserted that it allows aquaculture operators to continue to function without a licence (and the environmental impact analysis that goes with consideration of licences). However the State has successfully argued that the continued applicability of Section 19(A)4 is essential to the survival of the industry pending completion of the "Appropriate Assessment" process. The EU Commission has, at least tacitly, accepted this position following confirmation from the national authorities that no new licences would be issued or existing licences renewed until a full "Appropriate Assessment" is available for the NATURA bays in which the aquaculture in question takes place. It is clear however that a breach of licence conditions by any operator while operating under Section 19(A)4 weakens the whole basis for this measure and lends substantial credence to the NGO argument. If NGO's, via the Courts, or via approaches to the EU Commission succeeded in having Section 19(A)4 overturned on the basis that it is not policed adequately by the State there would undoubtedly be serious consequences for both the finfish and shellfish industry.

Legal Services Division has [REDACTED]

[REDACTED] In this regard, it must be acknowledged that Section 19(A)4 was not designed to take into account the circumstances surrounding Deenish (and indeed other cases of a similar nature). However, the Department must cope as best it can with the existing legislation and cannot ignore complexities that arise from the current legislation. Whether the facilities available under the legislation can extend to an actual amendment of an out of date licence is undoubtedly open to argument.

There is always a strict separation between the Minister's role as Regulator and the Ministerial duty to promote the sustainable development of the industry. This situation is essential in view of the dual role of the Department as regulator and developer in respect of the industry. In the current circumstances, while it can be argued that the development of the industry will be affected



adversely by any sanction against the Company, the overriding obligation of the Department is to take action in accordance with the obligations set out in the legislation. In circumstances where there has been a clear breach by the Company of their obligations under the licence and under the law, anything less than this will seriously undermine the State's regulatory system in relation to marine aquaculture. The long term effect which this would have on the development of the industry is as serious as it is obvious. In this regard the recent Supreme Court Decision in the State's appeal of a High Court Case on mussel seed availability (Cromane Seafoods Ltd & Others –v- The Minister for Agriculture, Food and Fisheries & Others) has explicitly pointed to the "overarching legal duty" of the Minister to comply with and implement EU law. It has long been asserted by Environmental NGO's and others that the State's regulatory regime in respect of Marine Aquaculture is implemented inadequately. The EU Commission has twice opened a Pilot Case against the State in respect of sea lice controls, for example. For its part the Department has always provided robust responses to these assertions and has successfully defended the regulatory regime. To that extent, dealing vigorously with significant breaches of licence conditions constitutes no more than the discharge of both regulatory and developmental responsibilities which must be a crucial consideration, in the public interest.

The representations made by the Company to the Minister on foot of the Department's letter of 9<sup>th</sup> March 2017 have been carefully considered by the Division as set out above. In relation to the breach of Licence Condition 2(e) the company has argued that as it **"transfers live salmon from Deenish to the quay at Castletownbere, where the harvesting of this salmon occurs"** that there is no breach of the licence. There is as already set out, no reasonable basis for the Company's argument in relation to this aspect. The legislation, and the upholding of same, is clearly in the public interest of all aquaculture operators. The Company has availed of an enhanced bilateral communication facility with the Department's Licensing Division due to its overwhelming prominence in the industry. This took the form of regular scheduled bilateral coordination meetings with agreed detailed agendas. This group has met on at least 20 occasions and it would be fair to say that the Department has emphasised the need to comply with licence conditions at all times during these meetings. The operator, by virtue of its dominant role in the industry, its administrative and technical resources and its participation in the Coordination Group meetings is acutely aware of the importance the Department attaches to compliance with legislation.

It should also be noted that a number of Parliamentary Questions have been received in respect of this and related cases. In all the circumstances, it is clear that to do nothing is not an option which is desirable or, indeed, available in any meaningful way to the Department in this case. Furthermore it is considered that action such as a letter of admonishment to the company will be tantamount to doing nothing and will be seen as such by the company, by other stakeholders and by the general public. This would seriously undermine the integrity of the regulatory process.

A "do nothing" option cannot therefore be recommended.

A copy of the legal advice is attached at **TAB 7**.

See copy of Department's letter attached at **TAB 5**.

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#### **19. Amendment of the Aquaculture Licence**

Although the recommendation in this submission is that the Minister withdraw the entitlement enjoyed by Silver King Seafoods Limited (Subsidiary Company of Marine Harvest Ireland) to continue aquaculture operations under Section 19(A)4 of the 1997 Fisheries (Amendment) it should be noted that Condition No 3 of the Aquaculture Licence provides for an amendment to the licence where the Minister considers that it is in the public interest to do so or if he is satisfied that there has been a breach of any condition specified in the licence.

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#### **Condition No 3.**

***"The Minister shall be at liberty at any time to revoke or amend this licence if he considers that it is in the public interest to do so or if he is satisfied that there has been a breach of any condition specified in the licence or that the fishery to which the licence relates is not being properly maintained. Any such revocation or amendment shall be subject to the provisions of Section 15 of the Fisheries (Consolidation) Act 1959"***

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**Legislation**

Sections 68 and 70 of the 1997 Fisheries (Amendment) Act are the relevant provisions dealing with any amendments to the licence that might be considered in this case. The Division previously received the advice of Legal Services Division in relation to the possible amendment of aquaculture licence conditions where the operator is operating under the provisions of Section 19(a)4 of the 1997 Fisheries Amendment Act. The Division was advised that [REDACTED]

[REDACTED]

The legal advice goes on [REDACTED]

[REDACTED]

Having considered the applicability of the 1997 Fisheries (Amendment) Act to a possible amendment on foot of the breach of the licence conditions the legal advice as set out below, [REDACTED]

[REDACTED]

[REDACTED]

- | [REDACTED]
- | [REDACTED]
- | [REDACTED]
- | [REDACTED]

- | [REDACTED]
- | [REDACTED]
- | [REDACTED]

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-

**Licence Condition regarding amendment**

Condition No 3 of the Aquaculture Licence quoted above does however set out the circumstances in which the Minister may amend the aquaculture licence:

***"there has been a breach of any condition specified in the licence or that the fishery to which the licence relates is not being properly maintained".***



The advice goes on to state however that [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

It should be noted also that any decision to amend the aquaculture licence will be subject to all the legislative requirements of Section 68 of the Act together with subsequent Public and Statutory consultation processes, appeal processes etc and that the outcome of such processes cannot be prejudged.

Copy of relevant Legal advice attached at **TAB 7**.

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#### **Conclusion**

Given that the Minister is precluded from amending the licence in any fashion that could be seen as punitive it is difficult to see how any amendment to the conditions of the Aquaculture Licence (now operation under the provisions of Section 19(A)4 of the 1997 Fisheries (Amendment) Act) could be seen as any form of sanction against the company for the breach of Condition 2(e) of the licence (which sets out the maximum harvest limit under the terms and conditions of the licence).

The 1997 Fisheries (Amendment) Act does not permit the amendment of a licence as a sanction against the licensee but Condition 3 of the licence does provide for an amendment of the licence where the Minister is satisfied that there has been a breach of any condition specified in the licence. Any such amendment is however subject to the legislation. An amendment in this particular case is simply not viable as it cannot be by way of punitive sanction. Since there is no other reason to amend the licence other than as some sort of punitive sanction this course of action is not viable.

Amendment of the licence is therefore not recommended in the circumstances.

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#### **20. Withdrawal of the entitlement to continue aquaculture operations under the provisions of Section 19(A)4 of the 1997 Fisheries (Amendment) Act**

As will be seen above, amendment of the licence is not recommended in this case for reasons of clear public interest. What remains therefore, is the option of treating as discontinued the statutory entitlement to engage in aquaculture operations provided for by Section 19(A)4 of the 1997 Act. There is no doubt that withdrawal of the consent to operate will have the effect of extinguishing the Company's activity in relation to this site. It should be noted however, that the Company's application for renewal of the licence will still be operative and will be processed in the normal way.

Withdrawal by the Department of the Company's entitlement to continue operations is proportionate to the breach of the applicable licence condition (excess production by 121%) for all of the reasons set out heretofore in this submission and, while it will undoubtedly impact the commercial interests of the operator it is unlikely to have a catastrophic impact having regard to the overall size of the Company and the wide scale of its operations.

It is considered that withdrawal of the entitlement to continue aquaculture operations under the provisions of Section 19(A)4 of the 1997 Fisheries (Amendment) Act, is not only appropriate in this case given all of the circumstances, but also necessary in view of the seriousness of the breach in question having regard to the following:

1. The extent of the breach of Condition 2(e) which sets the harvest limits, (121% excess) resulting in a significant commercial gain for the Company.
2. The fact that the breach of the licence condition took place in circumstances where the Company was fully aware of the limits set by the specific condition of the licence governing harvest tonnage.

## 21. Recommendation

Having regard to all of the above, it is recommended:

1. That the Minister determine that a breach of Condition 2(e) of the applicable aquaculture licence has occurred as described above.
2. That the Minister treat the statutory entitlement of Silver King Seafoods Ltd (Subsidiary Company of Marine Harvest Ireland) to continue aquaculture operations under the provisions of Section 19(A)4 of the 1997 Fisheries (Amendment) Act as discontinued for the following reason:

Breach of condition 2(e) of the applicable aquaculture licence which states:

*"the Licensee shall not harvest more than 500 tonnes (dead weight) of salmon in any one calendar year"*

Submitted please for approval.

John Quinlan  
Principal Officer  
Aquaculture and Foreshore Management Division

## Related submissions

There are no related submissions.

## Comments

**Quinlan, John** - 01/11/2017 10:55

The attached submission and supporting documentation is comprehensive in nature and contains a clear recommendation. Due to the size of the submission a hard copy has also been forwarded.

**Beamish, Cecil** - 17/11/2017 12:13

Secretary General,

This file relates to a salmon farm in Ballinskelligs Bay, Caherdaniel, Co. Kerry operated by a subsidiary of Marine Harvest Ireland under licence from the Minister.

The issue

The core point at issue is that the licence contains a condition that:



"the licence shall not harvest more than 500 tonnes (dead weight) of salmon in any one calendar year."

Records submitted by the company suggest that 1108.91 tonnes were produced on this site in 2016. This core fact is not contested. The matter is however complicated by the fact that the licence which was granted in 1997 has, on plain reading, expired in February 2007 simply by the effluxion of time. However, this is not the case.

Section 19(A) 4 of the 1997 Act provides that :

"a licensee who has applied for renewal or further renewal of an aquaculture licence shall notwithstanding the expiration of the period for which the licence was granted or renewed but subject otherwise to the terms and conditions of the licence be entitled to continue the aquaculture or operations in relation to aquaculture authorised by the licence pending a decision on the said application."

It is on the basis of Section 19(A) 4 that the firm currently operates and that requires it operate subject to the terms and conditions of the licence. The legal contention, [REDACTED]

In short, the firm is subject to the 500 tonne per annum production limit, by virtue of its licence. If the Minister were to determine that the terms and conditions of the old licence are not respected it is contended in the submission beneath and in the legal advices given that the effect automatically would be that the firm's statutory entitlement to continue farming at the site would cease, effectively closing the enterprise at that farm. While this is the perceived consequence it would undoubtedly be tested.

**The Submission**

The issues addressed in this file must be considered within the legal framework applicable and taking account of the specificities of the case and the Legal Advices available (Tab 7).

Mr. Quinlan's submission below is well presented and laid out. It traverses the issues in relation to this matter and should be read fully in conjunction with the following and with the other documentation on file.

The Aquaculture legislation does not provide for graduated sanctions and there are limited options available to the Minister, as set out in Mr. Quinlan's submission. In this case, the core issue is that the proposed consequence of determining that a breach occurred in relation to this specific licence condition is to cease all activity on this farm.

Mr. Quinlan's extensive submission recommends that the Minister determine that the harvest limit in the licence has been breached and that the Minister treat as discontinued the entitlement of the company to continue aquaculture operations at the site. Key issues around this course of action that will undoubtedly be tested and fall for consideration in determining this course of action are reasonableness, public interest and proportionality and in the following I will endeavour to tease these out a little further to inform further any decision which falls to be made in this case.

**The Company's defence**

The company's defence to the matter relies on a variety of arguments which are all on file and examined legally in the file and in the submission. Firstly, the company would like the licence in this respect to be something other than it is and this does not seem to me to be pertinent. The company seeks to look behind conditions of the licence and speculate as to what might have been intended and construct a defence on that basis. That does not seem valid.

The company argues that the licence is "out of date" in terms of parameters and terminology. The company points out that it applied for renewal in 2007 and then seeks to argue that the old licence should operate on different parameters informed by modern aquaculture thinking.

The delay in determining the renewal application is understandably frustrating to all concerned, including the State side. The delay is due to the fact that the firm operates in a Natura 2000 site and following the ECJ judgement against Ireland in 2007, no determination can be made in a Natura 2000 site until multi-year biological data was gathered on the site, scientific conservation interests were determined for the site by NPWS, a detailed appropriate assessment is carried out on the site and only then can the licensing process move forward to determination in respect of any aquaculture operations in this Natura 2000 site. At this point the multi year scientific data has been collected, the scientific interests to be protected in Kenmare Bay have been identified and the appropriate assessment for Kenmare Bay has been completed. However, as this is a salmon farming operation EU law requires that an EIS is carried out by the operator. An EIS for this site is currently awaited from the company. In short consideration of a licence renewal is on going, in the way that it must proceed under EU and National law and in accordance with the process agreed with the EU Commission following the ECJ Judgement.

Notwithstanding the delay in determining the renewal, this matter must be considered under the terms of the old licence under which the firm operates. Those Terms and Conditions must be respected it is contended to maintain the Statutory entitlement under Section 19(A) 4 which provides the basis on which the firm continues to operate.

The other defences raised by the company are addressed in Mr. Quinlan's submission and in the Legal Advices (Tab 7). A consistent defence stated by the company is that, because the fish taken for harvest from the site were killed elsewhere, then no harvest actually occurred on site and hence no harvest limit applies or was breached. The fish taken from the site were not moved to other sites for on growing, but instead were moved for immediate slaughter and processing. The fish removed were "harvestable", were removed from the site for "harvest" and were "harvested", hence it is hard to see how this defence could stand up.

In summary, on the face of it, it does appear that a quantity in excess of the harvest limit was "harvested" from the site in 2016. The



issue is what is the appropriate thing to do in the circumstances and this is more complicated.

Mr. Quinlan's submission argues for treating as discontinued the right to operate. In effect, the logic is that by determining the breach the Statutory entitlement to continue operating under Section 19 (A) 4. This is a strong punitive result arising from the determination of a breach in one instance, which effectively closes the operation at this site.

#### Some Legal Considerations

The following legal considerations, in addition to those set out in Mr Quinlan's submission which should be read in conjunction, should be borne in mind in weighing up the appropriate course of action in this matter.

The legal advice on file (Tab 7) [REDACTED]

Mr Quinlan's submission sets out reasons why it would be in the public interest to take such action. Marine Harvest Ireland argued that no environmental damage was done by the level of production on the site and the Department has no evidence to refute this. Marine Harvest Ireland's other public interest arguments relate to the viability of the firm and the employment it creates (Tab 6A). The legal advice on file (Tab 7) states that :

The legal advice above [REDACTED]

[REDACTED] Those seem to be advised as the key tests to be considered in deciding whether or not to take a decision whose effect is to discontinue the right to operate.

The concluding legal advice (Tab 7) is that :

Marine Harvest Ireland have already strongly contested the merits of the tonnage limit arguing that it was outdated and did not represent modern regulatory practices. The licence at issue here was amended by the Minister and confirmed by ALAB in 2012 for a trial period to early 2015 to allow for a different control provision, based on Maximum Allowable Biomass. In effect, the Minister removed the 500 tonne limit for a Trial period and replaced it with a different type of limit based on biomass. That trial adjustment to the licence ended on 31/03/2015. Thus while production in 2016 was governed by the 500 tone limit condition Marine Harvest argue that the maximum production limitation was changed for a period by the Minister and they will undoubtedly argue that this strengthens their contention that the condition is outdated. The company have submitted expert evidence supporting this view. Undoubtedly, this approach will be employed to test the "reasonableness" of any decision that the licence term was breached and the "proportionality" of thereby removing the right to continue aquaculture operations on the site. Those arguments coupled with the lack of State evidence of environmental damage caused by the increased level of production will undoubtedly be used to test if any action taken meets the "public interest" test. Whilst the trial licence approach, based on maximum allowable biomass, came to an end and the tonnage limit was in place in 2016, the mere fact that the Minister allowed this to be "tried" at this site and supported the general merits of an approach based on a biomass limit, will be used by the company to argue against the "public interest" being served by taking action which results in discontinuance of the enterprise at this site based on a breach of the tonnage limit.

These tests and potential vulnerabilities in relation to the reasonableness and public interest must be weighed against the reasons stated in the underlying submission and in deciding whether or not to take the action recommended in the submission beneath and much of this resolves to legal advice and legal argument.

#### Amendment of Licence

It is worth considering separately the question of amending the Licence , which is not an alternative to punitive action but is worthy of consideration on its own merits. Section 19 of the submission addresses the question of whether or not the Minister can amend the licence. [REDACTED] However the Minister can make an amendment to the licence "if it is in not being properly maintained", but it must be "in the public interest to do so."

One of the dimensions of this matter is that the apparent breach of the production limit for 2016 was detected by the Department in



late February 2017, when the company forwarded its harvest records for the site. Harvesting had gone on progressively day by day according to the company records on file from the start of October 2016 to the end of December. The 500 tonnes limit would have been breached according to the Harvest records by mid October. Determining any injurious environmental impact would have required inspections in the October – December period but as the harvest figures did not have to be reported in real time, the type of determination was not facilitated.

It could be argued that an amendment of the licence which required real time harvest notification or pre-notification would be in the public interest, to allow any volume breach to be detected contemporaneous with the fish being in the water so as address the issue immediately and carry out any necessary investigations into possible injurious environmental impact. Such a determination would assist the Minister moving quickly, in weighing any action in the public interest and in defending any such action when taken. The issue of making an amendment to the company's licence as set out above is an issue which might also be considered by the Minister.

#### Next Steps

Mr. Quinlan's submission covers the issues and consideration of those issues and should be read in full. That submission makes one recommendation which is to determine that the company breached the licence and that as a consequence their right to continue operations under Section 19(A) 4 is removed by virtue of the breach. On the face of it this is a logical summation of the position. However given its consequences in terms of ceasing the legal right to operate at all on this farm the

A separate matter that arises is whether or not there is some public interest merit in amending the licence in respect of reporting/pre-reporting harvest tonnages. Such an amendment could not be seen as punitive or a sanction in relation to a breach. Rather such a course of action would be in the public interest to allow better real time environmental assessment of such a future breach.

As a next step and as any course of action is strongly framed within a judgement and weighing of the legal issues and considerations, I would recommend that a further meeting might be advisable involving the head of legal services, yourself and the relevant other officials involved. It would be a matter for the Minister as to whether or not he would wish to be a party to any such meeting to hear and tease out the issues. In any event, the meeting would, I suggest be necessary before the file is finally considered by the Minister for decision.

C Beamish  
17/11/2017

**Beamish, Cecil** - 17/11/2017 12:16  
Hard Copy file to follow for ease of reference

**ODriscoll, Aidan** - 30/11/2017 09:55

The papers in this submission are quite detailed and complex. The recommendation (see "next steps") is that these issues be further examined with legal division and others. I propose to go ahead with this meeting to develop a specific recommendation for action. I am therefore forwarding this submission at this stage for the Minister's information and an indication of whether he wishes to meet to discuss the case at this time or to await the outcome of the meeting referred to above.

#### User details

INVOLVED: Quinlan, John  
Beamish, Cecil  
Sub Sec Gens Office  
eSub Ministers Office

READ RECEIPT: Quinlan, John  
BTSSP-SC  
Beamish, Cecil  
Smith, Ann  
Ball, Siobhan  
ODriscoll, Aidan  
Waldron, Ultan  
Lennox, Graham

#### Action log

ACTION	USER	DATE	DESCRIPTION
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Sent For Review	Quinlan, John	01/11/2017 10:58	Submission sent to Cecil Beamish for review by John Quinlan
Sent to the Secretary General	Beamish, Cecil	17/11/2017 12:17	Submission sent to Secretary General for review by Cecil Beamish
Sent to the Minister	ODriscoll, Aidan	30/11/2017 09:56	Submission sent to Minister for review by Aidan ODriscoll
Completed	Lennox, Graham	30/11/2017 17:30	Submission completed by Graham Lennox on behalf of the Minister

CERTIFICATION OF RENEWAL  
OF  
AQUACULTURE LICENCE No.199  
AND  
FORESHORE LICENCE No.199


Dated 30 January 1995

This is to certify that the above-mentioned licences have been renewed, subject to the modification of the Aquaculture Licence specified below, with the approval of the Minister of State at the Department of Communications, Marine and Natural Resources, for the period up to and including 15 February 2007 subject to the terms and conditions thereof and subject to the provisions of the Fisheries (Amendment) Act, 1997 (No. 23), as amended.

Aquaculture Licence

- substitution for condition 2(l) of the following condition

- 2(l)(i) *The Licensee shall follow the licensed area for at least 30 continuous days before restocking with fish of a different generation, in accordance with the requirements of the Department of Communications, Marine and Natural Resources (Protocol No. 5 Fallowing at Offshore Finfish Farms, as may be revised from time to time).*
- 2(l)(ii) *The Licensee shall undertake Benthic Monitoring of the licensed area in accordance with the detailed specifications of the Department of Communications, Marine and Natural Resources (Monitoring Protocol No. 1 for Offshore Finfish Farms - Benthic Monitoring, as may be revised from time to time) and promptly prepare and implement a Benthic Amelioration Plan if permitted parameters are breached.*
- 2(l)(iii) *The Licensee shall undertake Water Column Monitoring of the licensed area in accordance with the detailed specifications of the Department of Communications, Marine and Natural Resources (Monitoring Protocol No. 2 for Offshore Finfish Farms - Water Column Monitoring, as may be revised from time to time) and promptly take any required follow-up action in the light of the results of that monitoring.*
- 2(l)(iv) *The Licensee shall arrange for the treatment of fish against sea-lice and shall comply with the detailed specifications of the Department of Communications, Marine and Natural Resources (Monitoring Protocol No. 3 for Offshore Finfish Farms - Sea lice Monitoring and Control, as may be revised from time to time).*
- 2(l)(v) *The Licensee shall co-operate in the audit from time to time of its aquaculture operations and licensed area and facilities and premises in accordance with the detailed specifications of the Department of Communications, Marine and Natural Resources (Monitoring Protocol No. 4 for Offshore Finfish Farms - Audit of Operations, as may be revised from time to time)*

Signed:   
A person authorised under Section 15 of the Minister and Secretaries Act, 1924, to authenticate the seal of the Minister for Communications, Marine and Natural Resources

Dated this 4 AUG 2004



CERTIFICATE OF ASSIGNMENT

OF  
AQUACULTURE LICENCES No's. AQ 198, AQ 199 AND AQ 299.

AND  
FORESHORE LICENCES No's AQ 198, AQ 199 AND AQ 299

This is to certify that the Licences referred to above have been assigned, with the approval of the Minister of State at the Department of Communications, Marine and Natural Resources, from:

Murpet Fish Ltd.

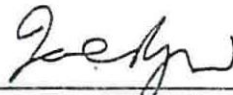
to

Silver King Seafoods Limited

c/o John Power  
Curryglass  
Waterfall  
Co. Cork

subject to the terms and conditions thereof.

Signed:



A person authorised under Section 15  
of the Ministers and Secretaries Act 1924,  
to authenticate the seal of the Minister for  
Communications, Marine and Natural  
Resources.

31 July 2004

FCL 199  
File copy

## CERTIFICATION OF ASSIGNMENT

LICENCES Nos. FCL1, FCL11, FCL64, FCL77, FCL198, FCL199 and  
FCL299, GRANTED IN ACCORDANCE WITH SECTION 15 OF THE  
FISHERIES (CONSOLIDATION) ACT, 1959.

(deemed to be Aquaculture Licences under the Fisheries (Amendment) Act, 1997)


and

LICENCES NOS. FCL 198, FCL 199 AND FCL 299, GRANTED IN  
ACCORDANCE WITH SECTION 3 (1) OF THE FORESHORE ACT, 1933

This is to certify that the above mentioned licences have been assigned with the approval of the Minister of State at the Department of the Marine and Natural Resources, on behalf of the Minister for the Marine and Natural Resources, to **Murpet Fish Ltd., Fintra Road, Killybegs, Co Donegal** with effect from **15 November, 1999**, subject to the terms and conditions thereof.

By virtue of Section 75 of the Fisheries (Amendment) Act, 1997 (No. 23) the above mentioned licences under the Fisheries (Consolidation) Act, 1959 are deemed to be Aquaculture Licences under the Fisheries (Amendment) Act, 1997 and therefore shall be subject to the provisions of the last mentioned Act.

Signed:



A person authorised under Section 15 of the Minister and Secretaries Act, 1924, to authenticate the seal of the Minister for the Marine and Natural Resources.

Date: 15 November, 1999

# DEENISH

FCC 199.

AGREEMENT made the 30th day of January, 1995.

1. The Minister for the Marine, (hereinafter referred to as "the Minister"), in exercise of the powers conferred on him by Section 15 of the Fisheries (Consolidation), Act, 1959, and the Fisheries (Transfer of Departmental Administration and Ministerial Functions) Order, 1977 (S.I. No. 30 of 1977), (as adapted by the Tourism, Fisheries and Forestry (Alteration of Name of Department and Title of Minister) Order, 1987 (S.I. No. 82 of 1987), hereby grants to Gaelic Seafoods (Ireland) Ltd., whose registered address is at Rusheenamanagh, Carna, Co. Galway (hereinafter referred to as "the Licensee"), at the place and in the waters delineated on the map annexed hereto and thereon coloured red (hereinafter referred to as "the fishery"), the exclusive right to
  - (a) perform all operations necessary for the culture of salmon in cages, details of which have been submitted to and approved by the Minister placed in that area east of Deenish Island in Ballinskelligs Bay, Co. Kerry, designated in the agreement dated the 30th day of January, 1995 and the map annexed thereto between the Licensee and the Minister;
  - (b) at any time of year to purchase, have in possession or sell salmon and salmon smolts, the acquisition of which has been approved by the Minister;
  - (c) at any time of year to take and have in possession salmon and salmon smolts within the confines of the area referred to at (a) above;
  - (d) for the management of the fishery, to have in possession and use nets, traps or other such devices as may be approved by the Minister for the taking of salmon as aforesaid.



2. This licence shall be subject to the following conditions:

- (a) no fish other than salmon shall be cultured or taken under the terms of this licence without the prior written permission of the Minister;
- (b) the Licensee shall make adequate arrangements to ensure that the cages shall not obstruct the passage of migratory fish and shall take all measures necessary to prevent the escape of salmon from the cages and shall carry out any instructions issued in this connection by the Minister;
- (c) the licensee shall ensure that all towing of cages for any reason to and from the fish farm site is carried out only with the prior notification to and approval of the Minister;
- (d) the stock of fish in the cages shall not exceed such quantity as may be specified by the Minister from time to time, the number of smolts to be stocked at the site should not in any event exceed 400,000. Licensed stocking densities are not to be exceeded and will be subject to inspection at any time by the Department of the Marine;
- (e) the Licensee shall not harvest more than 500 tonnes (dead weight) of salmon in any one calendar year.
- (f) all chemicals and antibiotics used in the fishery shall be used in accordance with instructions issued by the Minister from time to time;
- (g) the Licensee shall keep records of all chemicals and antibiotics with which the fish have been treated, including quantities and times of use;

- (h) The Licensee shall notify the Secretary, Department of the Marine, (Aquaculture Section), Leeson Lane, Dublin 2, and the Fisheries Research Centre (Fish Pathology Unit), Abbotstown, Castleknock, Dublin 15, within forty-eight hours of the suspected appearance of any disease in the fishery or of any abnormal losses or mortalities in the fishery and shall carry out any instructions issued by the Minister as a result of the notification including instructions relating to the treatment, disposal and destruction of diseased stocks;
- (i) disposal of all dead fish shall be in a manner acceptable to the local authority;
- (j) the Licensee shall notify the Secretary, Department of the Marine, (Aquaculture Section), Leeson Lane, Dublin 2, within twenty-four hours of any escapes of fish from the fishery and shall keep records of fish escaped, including numbers, types, origin and year classes and shall make these records available to the Secretary on request;
- (k) the Licensee shall furnish to the said Secretary at the said address such returns relating to the fishery as may be required by the Minister;
- (l) the Licensee shall carry out such monitoring as the Minister shall specify from time to time and the results of such monitoring shall be furnished to said Secretary;
- (m) the licensee shall ensure that water quality monitoring is continued for the duration of this licence in accordance with specifications laid down by the Minister, which may be modified from time to time, and results should be forwarded to the Fisheries Research Centre at agreed regular intervals;

- (n) the licensee shall, before the end of each year for the duration of this licence, forward to the Fisheries Research Centre, annual review/update of water chemistry and other environmental parameters to assess the impact of operations at the fish farm;
- (o) the licensee shall ensure that sea-lice densities are monitored regularly and that all warranted measures are taken to ensure that lice densities are minimised and the licensee shall comply with any instructions issued by the Minister in this regard;
- (p) live salmon and salmon smolts shall not be sold or disposed of to any person or in any way transferred outside the said fish farm save in accordance with the prior written permission of the Minister;
- (q) the licensee shall keep the Secretary, Department of the Marine advised of ongoing precautionary measures to deal with naturally occurring algal blooms in the area of the fish farm;
- (r) the fishery and any equipment, structure, thing or premises wherever situated, used in connection with operations carried on in the fishery shall be open for inspection at any time by an authorised person (within the meaning of section 292 of the Fisheries (Consolidation) Act, 1959 (No.14 of 1959) (as amended by the Fisheries Act, 1980) other than a private water keeper), a sea fisheries protection officer (within the meaning of section 220 of the Fisheries (Consolidation) Act, 1959) or any other person appointed in that regard by the Minister;




- (s) the Licensee shall give all reasonable assistance to an authorised person, a sea fisheries protection officer or any person duly appointed by the Minister, to enable the person or officer enter and inspect the fishery, equipment, structures, things or premises pursuant to sub-paragraph (r) of this paragraph;
- (t) the Licensee shall not use any substance or thing or do anything which has a deleterious effect on the fishery environment including the use of organotin based anti-foulants and shall make adequate arrangements for the hygienic and disease-free operation of the fishery and shall comply with any directions issued by the Minister from time to time in that regard;
- (u) the Licensee shall not carry out any operations authorised by this licence in the fishery in such a manner as to interfere unreasonably with fishing or navigation in the vicinity of the fishery and shall comply with any direction given to it in that regard by the Minister;
- (v) the Licensee shall make adequate provision for the removal and disposal of all waste from the fishery;
- (w) the Licensee shall indemnify and keep indemnified the State, the Minister, his officers, servants or agents against all actions, loss, damage, costs, expenses and any demands or claims howsoever arising in connection with the construction, maintenance or use of any structures, apparatus, equipment or other thing used in connection with the fishery or in the exercise of the rights granted under this licence and the Licensee shall take such steps as the Minister may specify in order to ensure compliance with this condition;

- (x) the Licensee shall obtain the consent of the Minister to any proposed major change in the shareholding or control of the Licensee where such change substantially alters the identity of the Licensee;
  - (y) this licence shall remain in operation until the 15th day of February, 2001 subject to the payment of the fee prescribed by the Department of the Marine;
3. The Minister shall be at liberty at any time to revoke or amend this licence if he considers that it is in the public interest to do so or if he is satisfied that there has been a breach of any condition specified in the licence or that the fishery to which the licence relates is not being properly maintained. Any such revocation or amendment shall be subject to the provisions of section 15 of the Fisheries (Consolidation) Act, 1959.
  4. This licence will remain subject to ongoing review in light of continued monitoring of, and research into, the two marine sites and neighbouring sea trout fisheries which may be undertaken by the Salmon Research Agency and/or the Fisheries Research Centre.
  5. In the event of proven contra-indications for sea trout stocks causatively linked to the fish farming operations permitted under this licence, the Minister may exercise his discretion to take any necessary protective measures ranging from reduction in permitted production levels to revocation of the licence and harvesting of all stock.
  6. The number given to the Licensee under this licence shall be FCL 199.
  7. This licence is not transferable.

8. This Licence replaces the licence dated 15th day of February, 1991 between the Minister and Salmara Fisheries Ltd.

<u>PRESENT</u> when the Seal of Office )	
of the MINISTER FOR THE MARINE )	
was affixed and was authenticated )	
by the Signature of: )	_____
_____ )	a person authorised
in the presence of: )	under section 15(1)
WITNESS: _____ )	of the Ministers and
ADDRESS: _____ )	Secretaries Act,
_____ )	1924 to authenticate
OCCUPATION: _____ )	the Seal of the
	Minister.

I agree, on behalf of Gaelic Seafoods (Ireland) Ltd. to accept the terms and conditions of this licence.

Signed:  \_\_\_\_\_

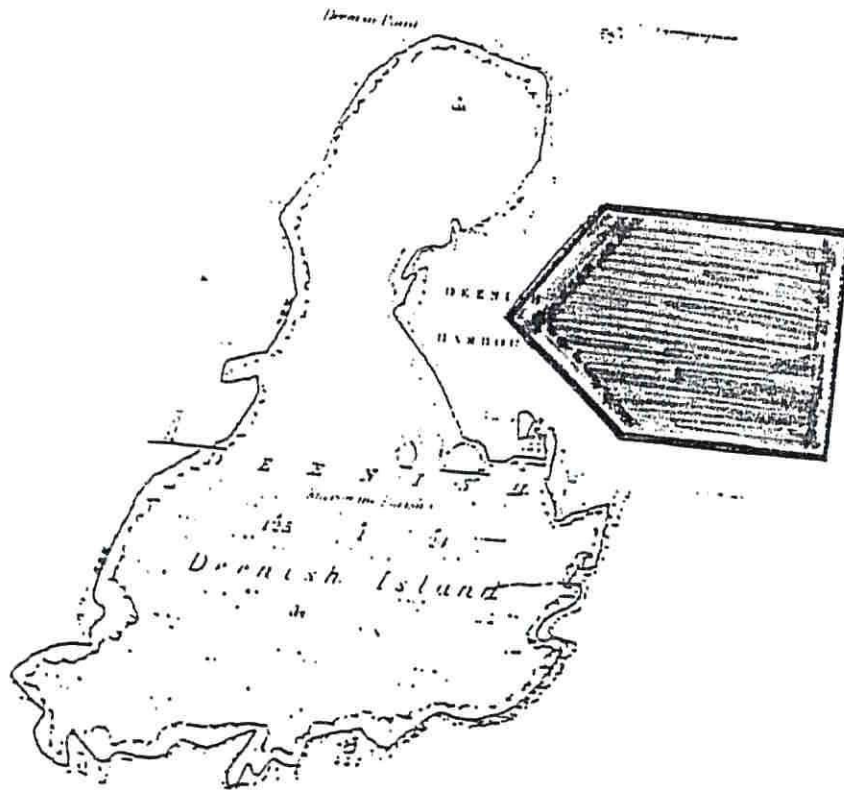
Date: SEPTEMBER 16<sup>th</sup> 1995

Witness: 

Address: C. C. O. Co.

Occupation: C. Galway  
Fishery Assistant





DEPARTMENT OF THE MARINE  
Leeson Lane, Dublin, 2. Tel No.  
Engineering Section. Fisheries Division

BASED ON THE ORDNANCE SURVEY BY  
PERMISSION OF THE GOVERNMENT  
PERMIT No 4004  
COUNTY KERRY Spill No: 105

Dated 30th January, 1995

MINISTER FOR THE MARINE

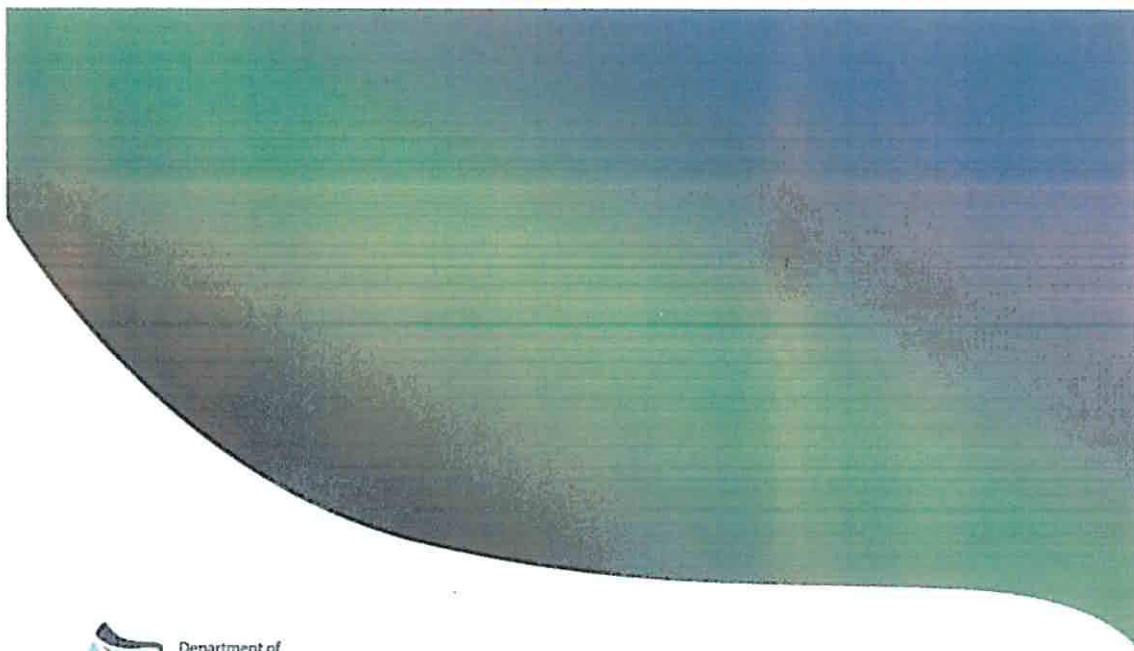
WITH

GAELIC SEAFOODS (IRELAND)

LIMITED

FISH CULTURE LICENCE

2a

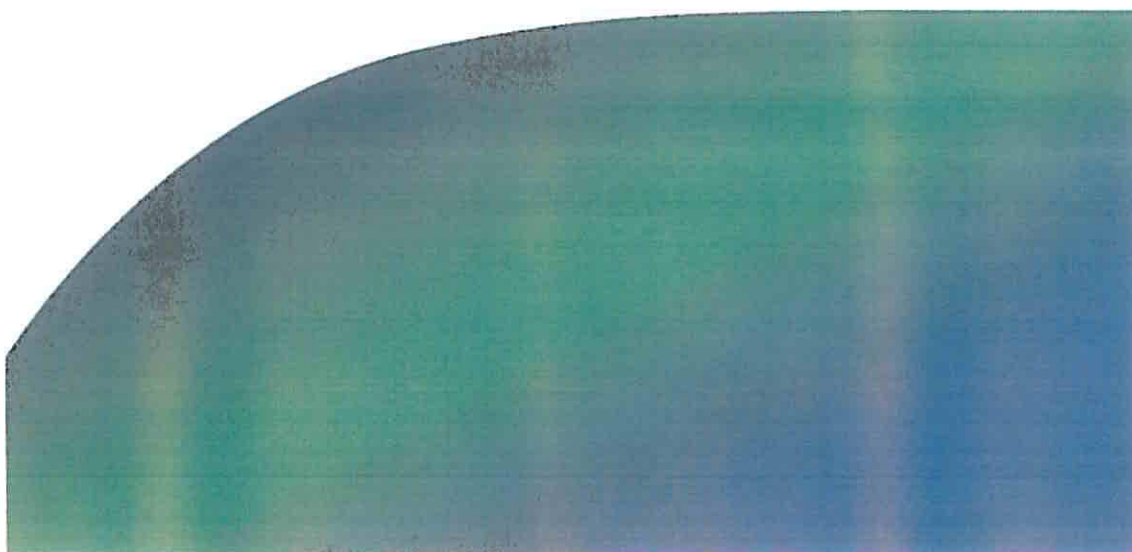


[www.agriculture.gov.ie](http://www.agriculture.gov.ie)

## MARINE FIN-FISH FARM INSPECTION REPORT

### MARINE ENGINEERING DIVISION

File No.	Date of Inspection	Prepared By
T06/202 AQ199	2/07/2015	MD & NOM





**DEPARTMENT OF AGRICULTURE FOOD AND THE MARINE**

**INSPECTION CHECKLIST FOR MARINE FIN-FISH FARMS**

**NAME OF FARM:** Marine Harvest Ltd.

**INSPECTED BY:** Michael Doyle and Noel O'Murchu

**DATE:** 02/07/2015

**FILE NO:** Licence T06/202 AQ199

**SITE:** Deenish Is., Caherdaniel, Co.Kerry.

**LAND BASE:** Dinish Island, Castletownbere, Co.Cork.

Tel: 027 70216 Office Castletownbere. 086 8050501 John Power Manager.

**TIME:** 10.30am

**WIND FORCE** 3

**WIND DIRECTION:**

**SEA CONDITION:** Good

**TIME OF HIGH TIDE:**

**FARM PERSONNEL MET:**

**NAME:**

**STATUS:**

**RECORDS**

**Are Records of:**

Smolts bought on to the farm.  
 Amount of fish harvested.  
 Mortalities.

Good	Ave	Poor
	√	
	√	
	√	

**MANAGEMENT**

Are chemicals stored properly .....None Used.....Yes/No  
 Is food stored properly .....Yes/No

Is the Pier used

Public	Private
√	

Name of Pier .....Bealtra, Caherdaniel.....

If Pier is public is its use causing an obstruction .....Yes/No

If Yes is obstruction

Major	Intermediate	Minor

Is there equipment/supplies on the shore .....Yes/No  
 If yes, is it stacked neatly .....Yes/No

Is there any litter or debris on the shore or public pier, that may have come from the farm .....Yes/No

Is there provision for litter collection and removal .....N/A

Are disinfection facilities readily accessible:- N/A

Footbath .....Yes/No

Handwash .....Yes/No

Wheelbath .....Yes/No

**CAGES AND STOCK:** (See "Other Comments" page 5)

TYPE	Quantity	Size	Depth (Net)	Licensed Stock. (Input quantity permitted)	Actual standing stock (numbers)	Fish size (grams)	Biomass. (tonnes)
Polar Circle	14	120m	10m	400000	735883	345	253.9
Feed Ship	1						

Checked by	
Visual Insp	Survey Instrument
Yes/No	Yes/No
	G.P.S.

Are cages in Licensed area.....Yes

Are cages configured as specified .....N/A..... Yes/No

Are the cages moored as specified .....N/A..... Yes/No

Are cages tidily arranged ..... Yes/No

Main colour of structure .....Black .....

Visual impact of farm

Major	Intermediate	Minor
		√

Are navigation lights installed ..... Yes/No

Are navigation lights installed as specified ..... Yes/No

Are navigation lights working ..... Yes/No

Are navigation buoys installed as specified .....N/A..... Yes/No

Are Radar reflectors fitted ..... Yes/No

Are walkways non-slip ..... Yes/No

Are walkways of adequate width ..... Yes/No

\* If no give details:

Wear or fatigue on:

Mooring ropes

Shackles/Eyes

Joint/Hinges

Nets

Fouling on the nets

Major	Intermediate	Minor
		√
		N/A
		√
		√
		√

Are there top predator nets ..... Yes/No

Are there underwater predator nets ..... Yes/No

Is there a seal scarer ..... Yes/No



**SAFETY MEASURES:**

Do cages carry:

Life-belts (with lines) ..... Yes/No  
 Flares ..... Yes/No

**HARVESTING:**

How are fish Killed: N/A

**MORTALITIES:**

How are dead fish disposed of ..... Taken to College Proteins, Nobber, Co.Meath.

Did you observe this..... Invoices were not provided during inspection.

**WATER QUALITY:**

Is there any increase in the turbidity of the water Yes/No

Is there any visible trace of oil, fat or grease? Yes/No  
 on the water or on the shoreline

Is there any evidence of scum, froth or foam on the water Yes/No

Is there any litter or debris in the water Yes/No

**BOATS:**

List boats used on the farm:

TYPE	LENGTH	REG NO.
Steel Hull	11m	
Barge	16m	
Steel Hull	8m	
Polar Circle	8m	

Do boats used appear to be sea worthy and appropriate.....  
 to the site condition.

Did all persons seen at sea wear life-jackets?..... Yes

**OTHER COMMENTS:**

**Stocking Figures:**

Stocking records were provided following the inspection. In January 2015 there was 222,999 smolts with an average weight of 0.04kg in the site. At the end of May 2015 there was 738,458 fish with an average weight of 0.339kg in the site.

**REMEDIAL MEASURES REQUIRED:**

Licence conditions were amended in 31<sup>st</sup> October 2012, allowing for increased standing stock, for the period up to and including the 31<sup>st</sup> March 2015. From 01 April 2015 onwards, the number of smolts to be stocked at the site should not in any event exceed 400,000 and the licensed harvest tonnage of 500 tonnes (dead weight) should not be exceeded in any one calendar year (in accordance with Licence condition 2 (d) and 2 (e) respectively of the original licence). However, as above, the standing stock at the end of May 2015 was 738,458 fish, i.e. exceeding the licenced figure by 338,458 fish. This situation requires attention.

**Overall Assessment:**

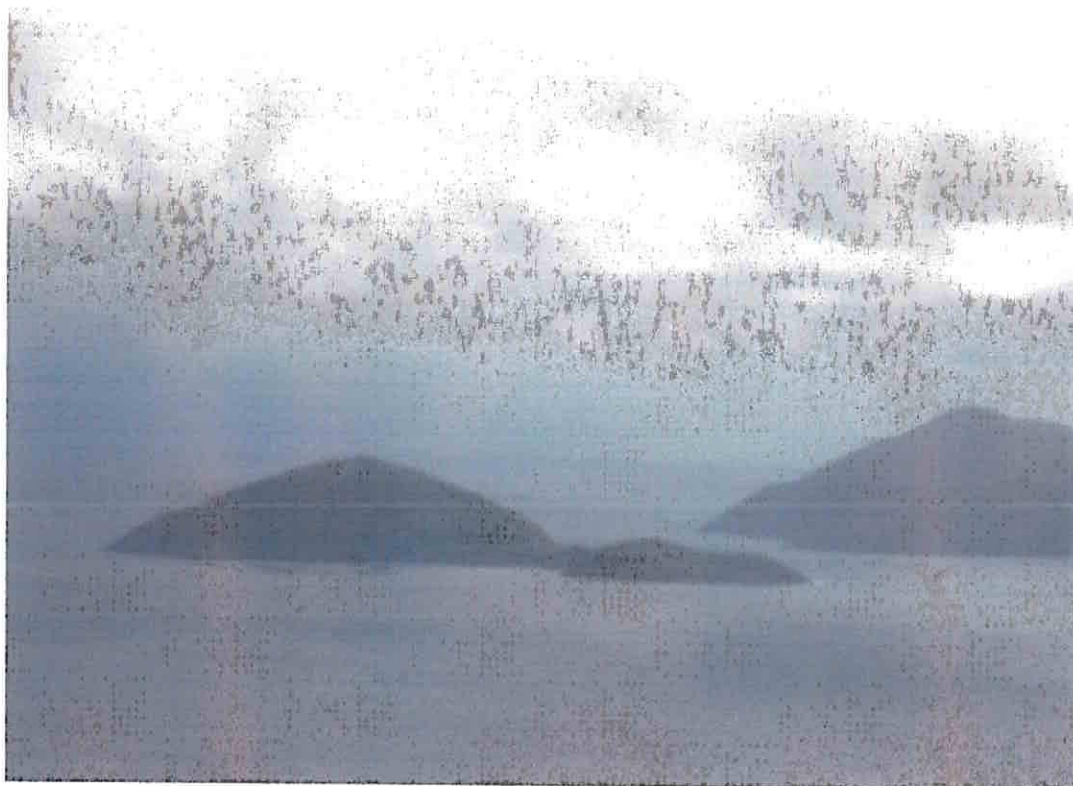
**Following the inspection, the site appears to be in a good state of maintenance. The cage superstructures looked in good repair and are within the licensed area.**

**Overall assessment however is unsatisfactory as the number of smolts inputted to the site in 2015 resulted in smolt numbers exceeding the licenced figure post 01 April 2015.**

Deenish Site T06/202 AQ199







Showing location of cages at Deenish Island.

26



Department of  
**Agriculture,  
Food and the Marine**  
An Roinn  
**Talmhaíochta,  
Bia agus Mara**

**COPY**  
sent by registered post

Catherine McManus  
Marine Harvest Ireland  
Rinmore  
Ballylar P.O.  
Letterkenny  
Co Donegal  
F92 T677

06<sup>th</sup> January 2016

Dear Catherine,

Attached please find Engineering Reports dated 08<sup>th</sup> June 2015, 02<sup>nd</sup> July 2015, 17<sup>th</sup> November 2015 and 08<sup>th</sup> September 2015 for your sites, reference no: T5/233,T5/444D+E, T6/202,T10/54, T10/58/4 and T10/58/8.

Any remedial actions highlighted as a result of the inspections must be completed within 2 weeks of the date of this letter.

It is imperative that you inform this Department when you have completed these actions, which must be not later than 3 weeks after the date of this letter.

The Department will take very seriously any failure to immediately complete remedial actions highlighted. Failure to comply with the conditions of the aquaculture licence issued to you may result in revocation of that licence.

Yours sincerely,

Nicole O'Shea  
Aquaculture & Foreshore Management Division  
National Seafood Centre  
Clonakilty  
Co Cork  
P85 TX47







Nicole O'Shea  
Aquaculture & Foreshore Licencing Division  
Department of Agriculture & the Marine  
National Seafood Centre  
Clonakilty  
Co. Cork.

29.01.2016

RINMORE

**Re. Site T6/202: Marine Engineering inspection on 02/07/15.**

Dear Nicole,

I refer to your letter dated January 6<sup>th</sup> 2016 regarding the remedial measures allegedly required arising from the engineering inspection of the Deenish sea site on July 2<sup>nd</sup>, 2015.

Under the circumstances I feel that we must point out that some of the terms attaching to the aquaculture licence for this site are to say the least ambiguous, and we would argue that it is actually impossible to interpret them with any degree of precision or reliability.

The licence refers to *smolt stocking* events not exceeding 400,000. The licence does not contain any condition concerning how many salmon, that are not smolts, may be kept on the site at any point in time. I would suggest that the Marine Institute, who are the minister's advisers on scientific and biological matters be consulted in terms of explaining the different stages of a salmon's lifecycle and in particular the very short-lived and distinct 'smolt' phase.

Marine Harvest Ireland had two separate silver salmon stocking inputs into this site during the period of interest, neither of which concerned fish at the 'smolt' stage in their life cycle. Further, neither of the stocking events involved fish transfers exceeding 400,000 fish. On that basis we strongly contend that we have not breached the licence term concerning *smolt stocking* and therefore no remedial action is required.

With regard to harvest volumes, It should be noted that no harvesting took place at this site thus the maximum harvest rate of 500 tonnes per annum was not exceeded. On that basis no remedial action is needed with regard to this issue.

It is also very important to point out that the benthic impact monitoring results for this site show clearly that there has been no overstocking and that no adverse biological impacts have occurred. The results show that MHI have operated the site responsibly and well within its 'biological carrying capacity'.

The confusing and biologically incorrect phraseology employed in this licence highlights the recurring drafting problem we have all encountered, whereby inconsistent, contradictory and technically meaningless terms and conditions have found their way into many of the salmon farming licences issued over the years.

Marine Harvest Ireland  Registered in Ireland as Comhlucht Iascaireachta Fanad Teoranta, VAT No: IE45307340: Registration No. 66929 Directors: Jan Feenstra, David Brennan	<small>OFFICE</small> Kindrum, Cashel P.O., Fanad. Letterkenny Co. Donegal, IRELAND F92 XD93	<small>PHONE</small> 00353 74 9192105	<small>FAX</small> [Address]
	<small>BRANCH</small> Rinmore, Ballylar P.O. Letterkenny Co. Donegal, IRELAND F92 T677	<small>EMAIL</small> catherine.mcmanus@marineharvest.com	<small>WEB</small> <a href="http://marineharvest.com">http://marineharvest.com</a> <a href="http://marineharvestireland.com">http://marineharvestireland.com</a>

Both as an individual company and through our representative organisation we have repeatedly requested that Irish marine salmon licenses be brought into line with best international practices with regard to the control of stocking levels. The Minister for Agriculture, Food and the Marine, Simon Coveney TD issued a press release on December 5th 2011 to announce the new format for Aquaculture Licence templates. In this press release the Minister confirmed that one of the core changes to Aquaculture licences would be a *“Change from licensing by Annual Harvested Tonnage (i.e. the dead weight of fish harvested from a site in a calendar year measured in tonnes) to Standing Stock Biomass for Finfish (the weight of live fish on a site at any given time, measured in tonnes). Standing Stock Biomass is recognised internationally as the appropriate metric for assessing loading at an aquaculture production site and can be measured on a real time basis thus facilitating effective regulation and management of sites.”*

We welcomed this announcement at the time and we fully agree with the minister that maximum allowable biomass (MAB) is the only rational and enforceable way of regulating stocking on marine finfish sites. We look forward to continue working with the Department of Agriculture, Food and Marine (DAFM) with a view to establishing a logical and consistent regulatory framework for Irish aquaculture. In this particular instance we do not believe that we breached any of the licenced terms as they are written and thus we are of the view that no remedial actions are called for at this point in time.

With Regards

*Catherine McManus.*

**Catherine McManus**

TECHNICAL MANAGER

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2d

## MED Review of Fish Farm Inspection Report

Deenish (Site T06-202 AQ Licence AQ 199)

MED Finfish inspection of 02 July 2015

### 1.0

This report refers to a marine fish farm inspection at Marine Harvest Ireland (MHI) site at Deenish Island Co. Kerry. The site was inspected by Marine Engineering Division (MED) in summer 2015.

The report is a review of the Inspection Report completed by MED following the farm inspection on 2 July 2015, and is prepared as a follow-up to a meeting held with MHI on 28 October 2015. At the meeting the firm took issue with the inspection report. The report also comments on issues raised in a letter from MHI, dated 29 January 2016, wherein the firm detailed their issues with regard to the inspection report.

For reference attachments are included as follows:

- MED Inspection Report following site inspection of 02 July 2015
- Aquaculture Licence No AQ 199
- MHI letter dated 29 January 2016
- e-mails from MHI dated 25 June 2015 and 20 July 2015 with stock records
- Marine Institute Movement Approval Notices relating to the Deenish Site

### 2.0 Relevant Licence Conditions

The following relevant extracts from the licence (Aquaculture Licence AQ 199) are of note:

Condition 2(d) states:

*the stock of fish in the cages shall not exceed such quantity as may be specified by the Minister from time to time, the number of smolts to be stocked at the site should not in any event exceed 400,000. Licensed stocking densities are not to be exceeded and will be subject to inspection at any time by the Department of the Marine;*

Condition 2(e) states:

*The licensee shall not harvest more than 500 tonnes (dead weight) of fish in any one calendar year.*



### 3.0 Stock Numbers

3.1 The inspection report noted that the stock number of smolts on site at the end of May 2015 was 735,883 (Table P3 of Inspection Report).

A pilot case stocking arrangement in place from 31 October 2012 ended on 31 March 2015. After this date the licensing arrangements reverted to the conditions set out in the original licence; the original licence conditions therefore represented the conditions (including stocking conditions) prevailing on the date of inspection (02 July 2015).

The inspection report noted that "From 01 April 2015 onwards, the number of smolts to be stocked at the site should not in any event exceed 400,000".

MHI Stock Records show a February 2015 opening count of 222,999 fish. A further 219,108 fish (of average weight 138g) were input to the site in February 2015 and a further 384,952 (of average weight 157g) were input in March 2015. The closing count at end of March 2015 and the opening count on 1 April 2015 was 759,144 fish (of average weight 157g).

(Note in the period above – 01 Feb 15 to 31 Mar 15 - a total of 67,915 were culls /mortalities).

It is clear that the number of smolts on site, both on 1 April 2015 (759,144) and at end of May (as per the Inspection Report - 735,883), are far in excess of the maximum 400,000 stated in the licence.

Note that above figures were supplied to MED by e-mail from MHI (attached) and verbally by the MHI operator in the case of the figure of 735,883 at the time of the site inspection

3.2 Review Finding in regard to stock numbers:

MED's finding, based on the fact that after 31 March 2015 the original conditions of the licence prevailed, is: *the number of smolts stocked at the site was in excess of 400,000*, in contravention of Condition 2(d).

### 4.0 Harvest Tonnage

4.1 The inspection report does not give details in regard to harvest figures (no harvesting had taken place).

4.2 Review Finding in regard to Harvest Tonnage:

MED does not report a breach of licence conditions in regard to harvest tonnage in 2014 (as no fish were harvested out of the site in 2014). The report comments that while harvest tonnage for 2015 is estimated to exceed 500 tonnes based on stock figures to hand and projected stock figures to end of 2015 (or whenever harvesting takes place), harvest figures cannot be calculated until actual figures are available; and therefore, while highlighted as a concern, there is no breach of licensing conditions reported in the Inspection Report in regard to harvest tonnage.

## 5.0 Review Finding Summary

The original report found that a breach of licence condition 2(d) had occurred. MED stands over the accuracy of the Inspection Report in this case.

## 6.0 Additional Comments

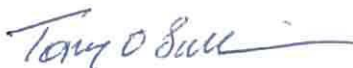
6.1 MHI argue that smolts were input of to the site under the pilot arrangements referred to above and that because the input occurred in the period prior to 31 March 2015 there is no breach of the licence. MED comment in relation to this is that immediately following the pilot programme and thereafter numbers were recorded in excess of the licence conditions.

6.2 MHI argue in their letter dated 29 January 2016 that the fish were not in fact smolts (as referred to in the licence) and that therefore they are not in breach of condition 2(d). They suggest that advice be sought from the Marine Institute in regard to the difference between smolt and post-smolt/salmon stage. MED comment that this advice should be sought, as a technical / legal interpretation may be needed should any legal case be pursued in relation to the matter. MED have taken the view that all fish referred to can reasonably be regarded as smolts in the context of the licence in this instance.

6.3 With reference to MHI letter dated 29 January 2016, MED does not accord with many of the issues raised, particularly in regard to MHI's interpretation of the licence conditions. In this regard, for example, the MHI letter states that "The licence refers to smolt stocking events not exceeding 400,000." This is not the case. The licence states (see above) that "...the number of smolts to be stocked at the site should not in any event exceed 400,000." Also, MHI's interpretation of "in any event" appears to be "*in any [single] stocking event*"; while MED's reading of this in the context of the licence condition is meaning "*under any circumstances*".

6.4 While MED regards some of MHI's interpretations of the licence conditions, particularly as communicated in their letter of 29 January 2016 to be incorrect, MED recognises (but does not necessarily agree with) the case made by MHI regarding ambiguity in this particular instance. MED recognises that complexities were introduced by the pilot case that ended on 31 March 2015, that practicalities existed surrounding an immediate change back to the original licence conditions on 1 April 2015 and that complexities exist in regard to the timing of stock input. Nevertheless, MED stands over the inspection report as representing the factual position in respect of the licencing conditions.

6.6 MED suggests that that a follow up report relating to the harvesting aspects be completed following harvesting, which may possibly be towards the latter stage of 2016. The stock information in the inspection report for Deenish Island strongly suggests that high stock levels on site in mid-summer are likely to result in a breach of the licenced harvest limit for 2016.



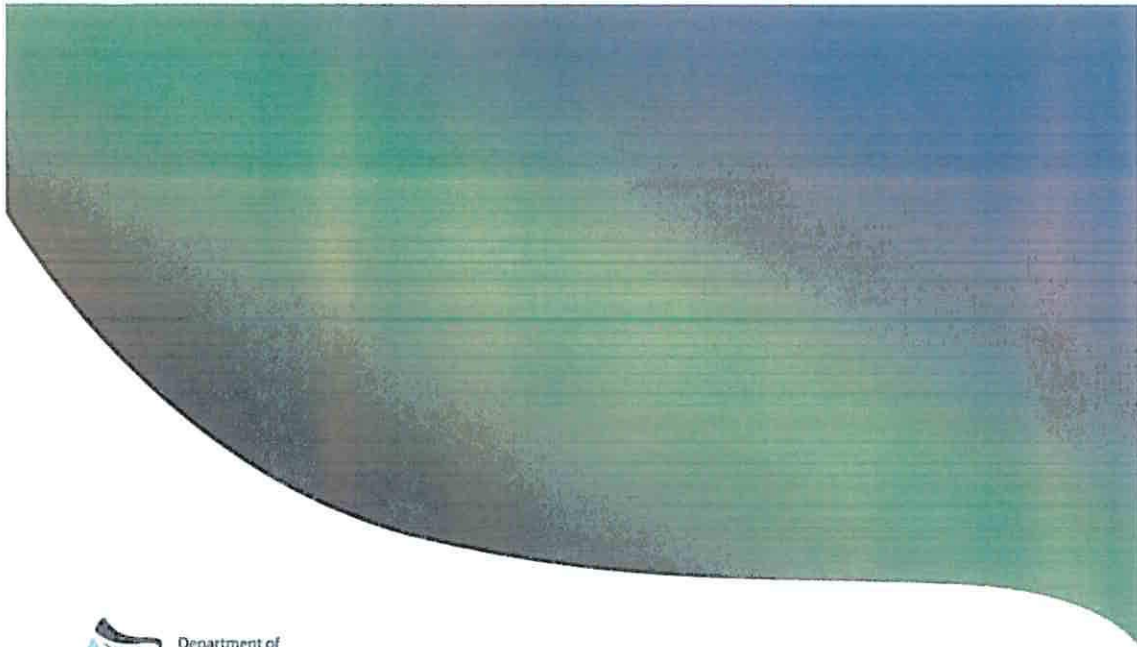
Tony O'Sullivan

MED Southern Region

18 February 2016

**MED Marine Finfish Inspection Report**



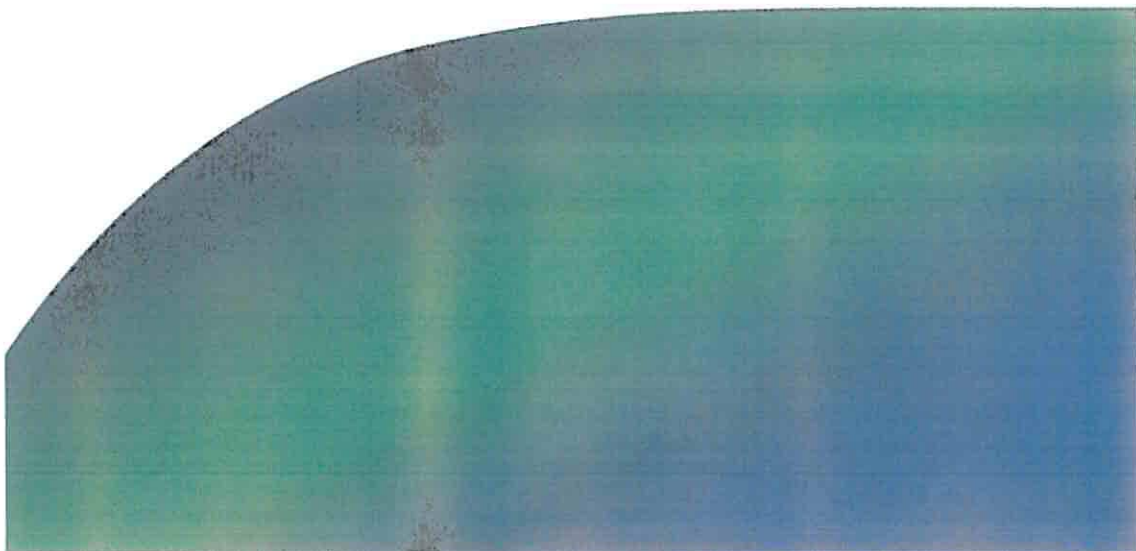


[www.agriculture.gov.ie](http://www.agriculture.gov.ie)

## MARINE FIN-FISH FARM INSPECTION REPORT

### MARINE ENGINEERING DIVISION

File No.	Date of Inspection	Prepared By
T06/202 AQ199	2/07/2015	MD & NOM



**DEPARTMENT OF AGRICULTURE FOOD AND THE MARINE**  
**INSPECTION CHECKLIST FOR MARINE FIN-FISH FARMS**

**NAME OF FARM:** Marine Harvest Ltd.

**INSPECTED BY:** Michael Doyle and Noel O'Murchu

**DATE:** 02/07/2015

**FILE NO:** Licence T06/202 AQ199

**SITE:** Deenish Is., Caherdaniel, Co.Kerry.

**LAND BASE:** Dinish Island, Castletownbere, Co.Cork.

Tel: 027 70216 Office Castletownbere. 086 8050501 John Power Manager.

**TIME:** 10.30am

**WIND FORCE** 3

**WIND DIRECTION:**

**SEA CONDITION:** Good

**TIME OF HIGH TIDE:**

**FARM PERSONNEL MET:**

**NAME:**

**STATUS:**

**RECORDS**

**Are Records of:**

Smolts bought on to the farm.  
 Amount of fish harvested.  
 Mortalities.

Good	Ave	Poor
	√	
	√	
	√	

**MANAGEMENT**

Are chemicals stored properly .....None Used.....Yes/No  
 Is food stored properly .....Yes/No

Is the Pier used

Public	Private
√	

Name of Pier .....Bealtra, Caherdanial.....

If Pier is public is its use causing an obstruction .....Yes/No

If Yes is obstruction

Major	Intermediate	Minor

Is there equipment/supplies on the shore .....Yes/No  
 If yes, is it stacked neatly .....Yes/No

Is there any litter or debris on the shore or public pier, that may have come from the farm .....Yes/No

Is there provision for litter collection and removal .....N/A

Are disinfection facilities readily accessible:- N/A

Footbath .....Yes/No

Handwash .....Yes/No

Wheelbath .....Yes/No



**CAGES AND STOCK:** (See “Other Comments” page 5)

TYPE	Quantity	Size	Depth (Net)	Licensed Stock. (Input quantity permitted)	Actual standing stock (numbers)	Fish size (grams)	Biomass. (tonnes)
Polar Circle	14	120m	10m	400000	735883	345	253.9
Feed Ship	1						

Checked by	
Visual Insp	Survey Instrument
Yes/No	Yes/No
	G.P.S.

Are cages in Licensed area.....Yes

Are cages configured as specified .....N/A.....Yes/No

Are the cages moored as specified .....N/A.....Yes/No

Are cages tidily arranged .....Yes/No

Main colour of structure .....Black .....

Visual impact of farm

Major	Intermediate	Minor
		√

Are navigation lights installed ..... Yes/No

Are navigation lights installed as specified ..... Yes/No

Are navigation lights working ..... Yes/No

Are navigation buoys installed as specified .....N/A.....Yes/No

Are Radar reflectors fitted ..... Yes/No

Are walkways non-slip ..... Yes/No

Are walkways of adequate width ..... Yes/No

\* If no give details:

Wear or fatigue on:

Mooring ropes

Shackles/Eyes

Joint/Hinges

Nets

Fouling on the nets

Major	Intermediate	Minor
		√
		N/A
		√
		√
		√

Are there top predator nets ..... Yes/No

Are there underwater predator nets .....Yes/No

Is there a seal scarer .....Yes/No

**SAFETY MEASURES:**

Do cages carry:

Life-belts (with lines) ..... Yes/No  
 Flares ..... Yes/No

**HARVESTING:**

How are fish Killed: N/A

**MORTALITIES:**

How are dead fish disposed of ..... Taken to College Proteins, Nobber, Co.Meath.

Did you observe this..... Invoices were not provided during inspection.

**WATER QUALITY:**

Is there any increase in the turbidity of the water Yes/No

Is there any visible trace of oil, fat or grease? Yes/No  
 on the water or on the shoreline

Is there any evidence of scum, froth or foam on the water Yes/No

Is there any litter or debris in the water Yes/No

**BOATS:**

List boats used on the farm:

TYPE	LENGTH	REG NO.
Steel Hull	11m	
Barge	16m	
Steel Hull	8m	
Polar Circle	8m	

Do boats used appear to be sea worthy and appropriate.....  
 to the site condition.

Did all persons seen at sea wear life-jackets?..... Yes

**OTHER COMMENTS:**

**Stocking Figures:**

Stocking records were provided following the inspection. In January 2015 there was 222,999 smolts with an average weight of 0.04kg in the site. At the end of May 2015 there was 738,458 fish with an average weight of 0.339kg in the site.

**REMEDIAL MEASURES REQUIRED:**

Licence conditions were amended in 31<sup>st</sup> October 2012, allowing for increased standing stock, for the period up to and including the 31<sup>st</sup> March 2015. From 01 April 2015 onwards, the number of smolts to be stocked at the site should not in any event exceed 400,000 and the licensed harvest tonnage of 500 tonnes (dead weight) should not be exceeded in any one calendar year (in accordance with Licence condition 2 (d) and 2 (e) respectively of the original licence). However, as above, the standing stock at the end of May 2015 was 738,458 fish, i.e. exceeding the licenced figure by 338,458 fish. This situation requires attention.

**Overall Assessment:**

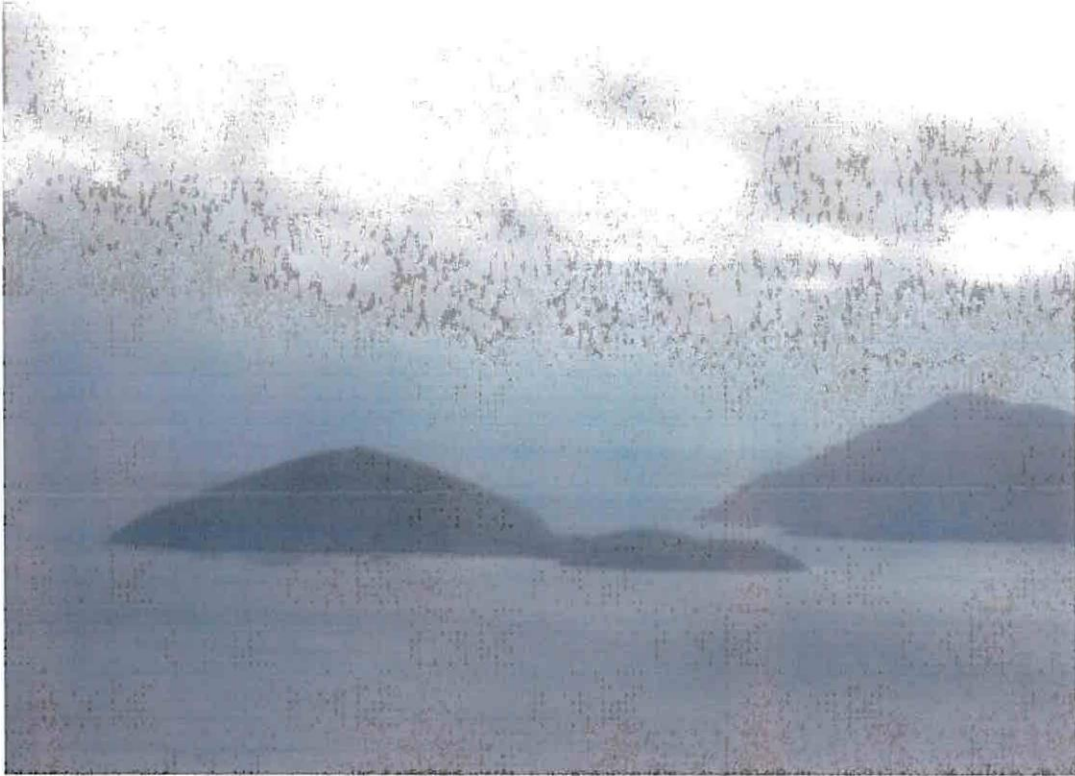
**Following the inspection, the site appears to be in a good state of maintenance. The cage superstructures looked in good repair and are within the licensed area.**

**Overall assessment however is unsatisfactory as the number of smolts inputted to the site in 2015 resulted in smolt numbers exceeding the licenced figure post 01 April 2015.**



Deenish Site T06/202 AQ199





Showing location of cages at Deenish Island.

## **Aquaculture and Foreshore Licence**



T6/202

CERTIFICATION OF AMENDMENT  
OF  
AQUACULTURE LICENCE No. 199  
AND  
FORESHORE LICENCE No. 199

Dated the 31<sup>st</sup> of October, 2012

This is to certify that the above-mentioned licences referred to as "Deenish T6/202 AQ199" have been amended subject to the modification of the Aquaculture Licence specified in the Certification of Renewal dated the 4<sup>th</sup> of August 2004, with the approval of the Minister for Agriculture, Food and the Marine for the period up to and including the 31<sup>st</sup> of March 2015 subject to the special conditions thereof and subject to the provisions of the Fisheries (Amendment) Act 1997 (No 23) as amended.

The special conditions are set out in a letter from the Department of Agriculture, Fisheries and Food to Mr Jan Feenstra, Marine Harvest Ireland dated 1<sup>st</sup> April 2011 and is attached hereto.

Signed



Mark O'Connell,  
Chairman,  
Aquaculture Licence Appeals Board

Mr Jan Feenstra  
Marine Harvest Ireland  
Rinnmore  
Ballylar  
Letterkenny  
Co Donegal

h. 2011 1/4/11

✓  
Department of  
Agriculture,  
Fisheries and  
Food

Our Ref: - Deenish T6/202 AQ199

1 April 2011

Dear Mr Feenstra,

I refer to your letter of 7<sup>th</sup> February 2011 requesting the Department to approve the company's request to change the permitted stocking arrangements at the Deenish site.

The Minister approved the amendment of the licence on 22 March, 2011, subject to the following "special conditions".

- That MHI only introduce smolts into Deenish and do not introduce any smolts into any of the other sites in their Southwest portfolio in 2011.
- In particular, that the Travara site, which may be defunct in any case, be kept on an extended fallow arrangement for the full duration of this pilot action (*i.e.* until 2013).
- That MHI carry out an additional benthic impact monitoring study to the usual pattern (in accordance with the protocol methodology), at their own expense, to check that the predictive model is correct at the mid point in the cycle.
- That MHI submit monthly stock reports, including all fish movements both within and to and from the site, of a standard and format agreed and determined by the agencies and DAFF Engineering Division to the Department to ensure that the pilot operation is proceeding as anticipated.
- That the company shall have available on demand by the Department, or its agents, records of all key site activities including; net inspections, preventative maintenance actions and that all required navigation marks are maintained in a good state of repair.
- That it be made clear to the company that this arrangement, if permitted, is solely a once off pilot for this site only and that any aspect of the stocking pattern would have to be considered, hereafter, in light of the outcome of the monitoring and the progress of the implementation of overall licensing policy towards the use of sustainable stocking stock biomass as a control point in licence management conditions.

This letter is for the use of the company only and should not be used for any other purpose.

The Notice of Decision is attached.

Please be aware, however, that in accordance with Regulation 19 of S.I. No. 236/1998 - Aquaculture (Licence Applications) Regulations, 1998, the Minister is required to publish a notice of his decision "within 2 weeks after making the decision, in a newspaper circulating in the vicinity of the location of the proposed aquaculture". Any person aggrieved by the decision may, in accordance with Section 41 of the Fisheries (Amendment) Act, 1997, appeal against it in writing to the Aquaculture Licences Appeals Board, by completing the Notice of Appeal Application Form available from the Board. This appeal must be lodged within one month beginning on the date of the publication of the decision.

In the case that there is no appeal the licence will be issued to you as soon as practicable after the end of the appeal period.

Yours sincerely,



John A Kelly  
AFMD



CERTIFICATION OF RENEWAL  
OF  
AQUACULTURE LICENCE No.199  
AND  
FORESHORE LICENCE No.199

Dated 30 January 1995

This is to certify that the above-mentioned licences have been renewed, subject to the modification of the Aquaculture Licence specified below, with the approval of the Minister of State at the Department of Communications, Marine and Natural Resources, for the period up to and including 15 February 2007 subject to the terms and conditions thereof and subject to the provisions of the Fisheries (Amendment) Act, 1997 (No. 23), as amended.

Aquaculture Licence

- substitution for condition 2(l) of the following condition

- 2(l)(i) *The Licensee shall fallow the licensed area for at least 30 continuous days before restocking with fish of a different generation, in accordance with the requirements of the Department of Communications, Marine and Natural Resources (Protocol No. 5 Fallowing at Offshore Finfish Farms, as may be revised from time to time).*
- 2(l)(ii) *The Licensee shall undertake Benthic Monitoring of the licensed area in accordance with the detailed specifications of the Department of Communications, Marine and Natural Resources (Monitoring Protocol No. 1 for Offshore Finfish Farms - Benthic Monitoring, as may be revised from time to time) and promptly prepare and implement a Benthic Amelioration Plan if permitted parameters are breached.*
- 2(l)(iii) *The Licensee shall undertake Water Column Monitoring of the licensed area in accordance with the detailed specifications of the Department of Communications, Marine and Natural Resources (Monitoring Protocol No. 2 for Offshore Finfish Farms - Water Column Monitoring, as may be revised from time to time) and promptly take any required follow-up action in the light of the results of that monitoring.*
- 2(l)(iv) *The Licensee shall arrange for the treatment of fish against sea-lice and shall comply with the detailed specifications of the Department of Communications, Marine and Natural Resources (Monitoring Protocol No. 3 for Offshore Finfish Farms - Sea lice Monitoring and Control, as may be revised from time to time).*
- 2(l)(v) *The Licensee shall co-operate in the audit from time to time of its aquaculture operations and licensed area and facilities and premises in accordance with the detailed specifications of the Department of Communications, Marine and Natural Resources (Monitoring Protocol No. 4 for Offshore Finfish Farms - Audit of Operations, as may be revised from time to time).*

Signed: \_\_\_\_\_

A person authorised under Section 15 of the Minister and Secretaries Act, 1924, to authenticate the seal of the Minister for Communications, Marine and Natural Resources

Dated this 1 AUG 2004



CERTIFICATE OF ASSIGNMENT

OF  
AQUACULTURE LICENCES No's. AQ 198, AQ 199 AND AQ 299.

AND  
FORESHORE LICENCES No's AQ 198, AQ 199 AND AQ 299

This is to certify that the Licences referred to above have been assigned, with the approval of the Minister of State at the Department of Communications, Marine and Natural Resources, from:

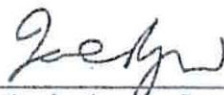
Murpet Fish Ltd.

to

Silver King Seafoods Limited  
c/o John Power  
Curryglass  
Waterfall  
Co. Cork

subject to the terms and conditions thereof .

Signed:



A person authorised under Section 15  
of the Ministers and Secretaries Act 1924,  
to authenticate the seal of the Minister for  
Communications, Marine and Natural  
Resources.

31 July 2004

VOL III

T6/202 - Deenish Island, Ballinskelligs Bay

*Certification of Renewal of Aquaculture Licence No. AQ 199*

*Dated 30 January, 1995*

*and Companion Foreshore Licence*

*Granted to*

Murpet Fish Company, Unit 2, Garvan Court, Main Street, Ballyboffey, Co Donegal

This is to certify that the above mentioned licences have been renewed with the approval of the Minister of State at the Department of the Marine and Natural Resources for the period up to and including 15 February, 2004 subject to the terms and conditions thereof and subject to the provisions of the Fisheries (Amendment) Act, 1997 (No. 23) and

(a) The Licensee shall undertake Benthic Monitoring of the licensed areas in accordance with the detailed specifications of the Department of the Marine and Natural Resources (Monitoring Protocol No. 1 for Offshore Finfish Farms - Benthic Monitoring, as may be revised from time to time) and promptly prepare and implement a Benthic Amelioration Plan if permitted parameters are breached.

(b) The Licensee shall undertake Water Column Monitoring of the licensed areas in accordance with the detailed specifications of the Department of the Marine and Natural Resources (Monitoring Protocol No. 2 for Offshore Finfish Farms - Water Column Monitoring, as may be revised from time to time) and promptly take any required follow-up action in the light of the results of that monitoring.

(c) The Licensee shall comply with the detailed specifications of the Department of the Marine and Natural Resources (Monitoring Protocol No. 3 for Offshore Finfish Farms - Sea Lice Monitoring and Control, as may be revised from time to time) for Sea Lice Monitoring and Control in all licensed areas of the Licensee.

(d) The Licensee shall co-operate in the Audit from time to time of its aquaculture operations and licensed areas and facilities and premises in accordance with the detailed specifications of the Department of the Marine and Natural Resources (Monitoring Protocol No. 4 for Offshore Finfish Farms - Audit of Operations, as may be revised from time to time).

Signed: 

A person authorised under Section 15 of the Minister and Secretaries Act, 1924, to authenticate the seal of the Minister for the Marine and Natural Resources.

8 March, 2001

FCL 199 ✓  
File copy

## CERTIFICATION OF ASSIGNMENT

LICENCES Nos. FCL1, FCL11, FCL64, FCL77, FCL198, FCL199 and  
FCL299, GRANTED IN ACCORDANCE WITH SECTION 15 OF THE  
FISHERIES (CONSOLIDATION) ACT, 1959.

(deemed to be Aquaculture Licences under the Fisheries (Amendment) Act, 1997)

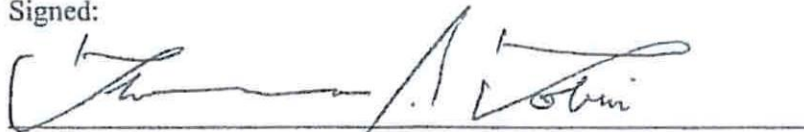
and

LICENCES NOS. FCL 198, FCL 199 AND FCL 299, GRANTED IN  
ACCORDANCE WITH SECTION 3 (1) OF THE FORESHORE ACT, 1933

This is to certify that the above mentioned licences have been assigned with the approval of the Minister of State at the Department of the Marine and Natural Resources, on behalf of the Minister for the Marine and Natural Resources, to **Murpet Fish Ltd., Fintra Road, Killybegs, Co Donegal** with effect from 15 November, 1999, subject to the terms and conditions thereof.

By virtue of Section 75 of the Fisheries (Amendment) Act, 1997 (No. 23) the above mentioned licences under the Fisheries (Consolidation) Act, 1959 are deemed to be Aquaculture Licences under the Fisheries (Amendment) Act, 1997 and therefore shall be subject to the provisions of the last mentioned Act.

Signed:



A person authorised under Section 15 of the Minister and Secretaries Act, 1924, to authenticate the seal of the Minister for the Marine and Natural Resources.

Date: 15 November, 1999



# DEENISH

FCL 199 ✓

AGREEMENT made the 30th day of January, 1995.

1. The Minister for the Marine, (hereinafter referred to as "the Minister"), in exercise of the powers conferred on him by Section 15 of the Fisheries (Consolidation), Act, 1959, and the Fisheries (Transfer of Departmental Administration and Ministerial Functions) Order, 1977 (S.I. No. 30 of 1977), (as adapted by the Tourism, Fisheries and Forestry (Alteration of Name of Department and Title of Minister) Order, 1987 (S.I. No. 82 of 1987), hereby grants to Gaelic Seafoods (Ireland) Ltd., whose registered address is at Rusheenamanagh, Carna, Co. Galway (hereinafter referred to as "the Licensee"), at the place and in the waters delineated on the map annexed hereto and thereon coloured red (hereinafter referred to as "the fishery"), the exclusive right to
  - (a) perform all operations necessary for the culture of salmon in cages, details of which have been submitted to and approved by the Minister placed in that area east of Deenish Island in Ballinskelligs Bay, Co. Kerry, designated in the agreement dated the 30th day of January, 1995 and the map annexed thereto between the Licensee and the Minister;
  - (b) at any time of year to purchase, have in possession or sell salmon and salmon smolts, the acquisition of which has been approved by the Minister;
  - (c) at any time of year to take and have in possession salmon and salmon smolts within the confines of the area referred to at (a) above;
  - (d) for the management of the fishery, to have in possession and use nets, traps or other such devices as may be approved by the Minister for the taking of salmon as aforesaid.



2. This licence shall be subject to the following conditions:

- (a) no fish other than salmon shall be cultured or taken under the terms of this licence without the prior written permission of the Minister;
- (b) the Licensee shall make adequate arrangements to ensure that the cages shall not obstruct the passage of migratory fish and shall take all measures necessary to prevent the escape of salmon from the cages and shall carry out any instructions issued in this connection by the Minister;
- (c) the licensee shall ensure that all towing of cages for any reason to and from the fish farm site is carried out only with the prior notification to and approval of the Minister;
- (d) the stock of fish in the cages shall not exceed such quantity as may be specified by the Minister from time to time, the number of smolts to be stocked at the site should not in any event exceed 400,000. Licensed stocking densities are not to be exceeded and will be subject to inspection at any time by the Department of the Marine;
- (e) the Licensee shall not harvest more than 500 tonnes (dead weight) of salmon in any one calendar year.
- (f) all chemicals and antibiotics used in the fishery shall be used in accordance with instructions issued by the Minister from time to time;
- (g) the Licensee shall keep records of all chemicals and antibiotics with which the fish have been treated, including quantities and times of use;

- (h) The Licensee shall notify the Secretary, Department of the Marine, (Aquaculture Section), Leeson Lane, Dublin 2, and the Fisheries Research Centre (Fish Pathology Unit), Abbotstown, Castleknock, Dublin 15, within forty-eight hours of the suspected appearance of any disease in the fishery or of any abnormal losses or mortalities in the fishery and shall carry out any instructions issued by the Minister as a result of the notification including instructions relating to the treatment, disposal and destruction of diseased stocks;
- (i) disposal of all dead fish shall be in a manner acceptable to the local authority;
- (j) the Licensee shall notify the Secretary, Department of the Marine, (Aquaculture Section), Leeson Lane, Dublin 2, within twenty-four hours of any escapes of fish from the fishery and shall keep records of fish escaped, including numbers, types, origin and year classes and shall make these records available to the Secretary on request;
- (k) the Licensee shall furnish to the said Secretary at the said address such returns relating to the fishery as may be required by the Minister;
- (l) the Licensee shall carry out such monitoring as the Minister shall specify from time to time and the results of such monitoring shall be furnished to said Secretary;
- (m) the licensee shall ensure that water quality monitoring is continued for the duration of this licence in accordance with specifications laid down by the Minister, which may be modified from time to time, and results should be forwarded to the Fisheries Research Centre at agreed regular intervals;

- (n) the licensee shall, before the end of each year for the duration of this licence, forward to the Fisheries Research Centre, annual review/update of water chemistry and other environmental parameters to assess the impact of operations at the fish farm;
- (o) the licensee shall ensure that sea-lice densities are monitored regularly and that all warranted measures are taken to ensure that lice densities are minimised and the licensee shall comply with any instructions issued by the Minister in this regard;
- (p) live salmon and salmon smolts shall not be sold or disposed of to any person or in any way transferred outside the said fish farm save in accordance with the prior written permission of the Minister;
- (q) the licensee shall keep the Secretary, Department of the Marine advised of ongoing precautionary measures to deal with naturally occurring algal blooms in the area of the fish farm;
- (r) the fishery and any equipment, structure, thing or premises wherever situated, used in connection with operations carried on in the fishery shall be open for inspection at any time by an authorised person (within the meaning of section 292 of the Fisheries (Consolidation) Act, 1959 (No.14 of 1959) (as amended by the Fisheries Act, 1980) other than a private water keeper), a sea fisheries protection officer (within the meaning of section 220 of the Fisheries (Consolidation) Act, 1959) or any other person appointed in that regard by the Minister;



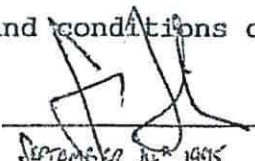
- (s) the Licensee shall give all reasonable assistance to an authorised person, a sea fisheries protection officer or any person duly appointed by the Minister, to enable the person or officer enter and inspect the fishery, equipment, structures, things or premises pursuant to sub-paragraph (r) of this paragraph;
- (t) the Licensee shall not use any substance or thing or do anything which has a deleterious effect on the fishery environment including the use of organotin based anti-foulants and shall make adequate arrangements for the hygienic and disease-free operation of the fishery and shall comply with any directions issued by the Minister from time to time in that regard;
- (u) the Licensee shall not carry out any operations authorised by this licence in the fishery in such a manner as to interfere unreasonably with fishing or navigation in the vicinity of the fishery and shall comply with any direction given to it in that regard by the Minister;
- (v) the Licensee shall make adequate provision for the removal and disposal of all waste from the fishery;
- (w) the Licensee shall indemnify and keep indemnified the State, the Minister, his officers, servants or agents against all actions, loss, damage, costs, expenses and any demands or claims howsoever arising in connection with the construction, maintenance or use of any structures, apparatus, equipment or other thing used in connection with the fishery or in the exercise of the rights granted under this licence and the Licensee shall take such steps as the Minister may specify in order to ensure compliance with this condition;

- (x) the Licensee shall obtain the consent of the Minister to any proposed major change in the shareholding or control of the Licensee where such change substantially alters the identity of the Licensee;
  - (y) this licence shall remain in operation until the 15th day of February, 2001 subject to the payment of the fee prescribed by the Department of the Marine;
3. The Minister shall be at liberty at any time to revoke or amend this licence if he considers that it is in the public interest to do so or if he is satisfied that there has been a breach of any condition specified in the licence or that the fishery to which the licence relates is not being properly maintained. Any such revocation or amendment shall be subject to the provisions of section 15 of the Fisheries (Consolidation) Act, 1959.
  4. This licence will remain subject to ongoing review in light of continued monitoring of, and research into, the two marine sites and neighbouring sea trout fisheries which may be undertaken by the Salmon Research Agency and/or the Fisheries Research Centre.
  5. In the event of proven contra-indications for sea trout stocks causatively linked to the fish farming operations permitted under this licence, the Minister may exercise his discretion to take any necessary protective measures ranging from reduction in permitted production levels to revocation of the licence and harvesting of all stock.
  6. The number given to the Licensee under this licence shall be FCL 199.
  7. This licence is not transferable.


6. This Licence replaces the licence dated 15th day of February, 1991 between the Minister and Salmara Fisheries Ltd.

<u>PRESENT</u> when the Seal of Office )	
of the MINISTER FOR THE MARINE )	
was affixed and was authenticated )	
by the Signature of: )	<u>David Glynn</u>
<u>David Glynn</u> )	a person authorised
in the presence of: )	under section 15(1)
WITNESS: <u>Beenadette Kiely</u> )	of the Ministers and
ADDRESS: <u>Department of the</u> )	Secretaries Act,
<u>Marine, Leeson Lane, D2</u> )	1924 to authenticate
OCCUPATION: <u>Civil Servant</u> )	the Seal of the
	Minister.

I agree, on behalf of Gaelic Seafoods (Ireland) Ltd. to accept the terms and conditions of this licence.

Signed: 

Date: September 12th 1995

Witness: 

Address: Galna.

12 Collins

Occupation: Regional Assistant



1 NO. SITE AT Deenish Island CO.Kerry

Co-ordinates & Area

Site T06/202 (14.4899 Ha)

The area seaward of the high water mark and enclosed by a line drawn from Irish National Grid Reference point

- 046920, 056280 to Irish National Grid Reference point
- 047050, 056460 to Irish National Grid Reference point
- 047400, 056460 to Irish National Grid Reference point
- 047400, 056100 to Irish National Grid Reference point
- 047100, 056100 to the first mentioned point.



Dated 30th January, 1995

MINISTER FOR THE MARINE  
WITH  
GAELIC SEAFOODS (IRELAND)  
LIMITED

FISH CULTURE LICENCE



T6/202

CERTIFICATION OF RENEWAL  
OF  
AQUACULTURE LICENCE No.199  
AND  
FORESHORE LICENCE No.199

Dated 30 January 1995

This is to certify that the above-mentioned licences have been renewed, subject to the modification of the Aquaculture Licence specified below, with the approval of the Minister of State at the Department of Communications, Marine and Natural Resources, for the period up to and including 15 February 2007 subject to the terms and conditions thereof and subject to the provisions of the Fisheries (Amendment) Act, 1997 (No. 23), as amended.

Aquaculture Licence

- substitution for condition 2(l) of the following condition

- 2(l)(i) The Licensee shall fallow the licensed area for at least 30 continuous days before restocking with fish of a different generation, in accordance with the requirements of the Department of Communications, Marine and Natural Resources (Protocol No. 5 Fallowing at Offshore Finfish Farms, as may be revised from time to time).
- 2(l)(ii) The Licensee shall undertake Benthic Monitoring of the licensed area in accordance with the detailed specifications of the Department of Communications, Marine and Natural Resources (Monitoring Protocol No. 1 for Offshore Finfish Farms - Benthic Monitoring, as may be revised from time to time) and promptly prepare and implement a Benthic Amelioration Plan if permitted parameters are breached.
- 2(l)(iii) The Licensee shall undertake Water Column Monitoring of the licensed area in accordance with the detailed specifications of the Department of Communications, Marine and Natural Resources (Monitoring Protocol No. 2 for Offshore Finfish Farms - Water Column Monitoring, as may be revised from time to time) and promptly take any required follow-up action in the light of the results of that monitoring.
- 2(l)(iv) The Licensee shall arrange for the treatment of fish against sea-lice and shall comply with the detailed specifications of the Department of Communications, Marine and Natural Resources (Monitoring Protocol No. 3 for Offshore Finfish Farms - Sea lice Monitoring and Control, as may be revised from time to time).
- 2(l)(v) The Licensee shall co-operate in the audit from time to time of its aquaculture operations and licensed area and facilities and premises in accordance with the detailed specifications of the Department of Communications, Marine and Natural Resources (Monitoring Protocol No. 4 for Offshore Finfish Farms - Audit of Operations, as may be revised from time to time)

Signed: \_\_\_\_\_

A person authorised under Section 15 of the Minister and Secretaries Act, 1924, to authenticate the seal of the Minister for Communications, Marine and Natural Resources

Dated this 4<sup>th</sup> AUG 2004

76/202

Dated 30th day of January, 1995

MINISTER FOR THE MARINE

with

GAELIC SEAFOODS (IRELAND) LIMITED

FORESHORE LICENCE

T6/202  
FCL 199  
30/1/95

AGREEMENT made the 30th day of January, 1995 between the Minister for the Marine (hereinafter referred to as "the Minister"), of the one part and Gaelic Seafoods (Ireland) Ltd. whose registered address is at Rusheenamanagh, Carna, Co. Galway (hereinafter referred to as the "the Licensee") of the other part whereby the Minister in exercise of the powers vested in him by Section 3 (1) of the Foreshore Act, 1933 hereby grants onto the Licensee licence to use and occupy that part of the Foreshore east of Deenish Island in Ballinskelligs Bay, Co. Kerry, delineated on the map annexed hereto and thereon coloured red for the purpose of mooring six hexagonal Bridgestone cages and eight service cages for the cultivation of salmon on the terms and conditions following:

1. This licence shall remain in force until the 15th day of February, 2001 except as hereinafter provided.
2. The Licensee shall pay to the Minister through the Department of the Marine (Aquaculture Section), Leeson Lane, Dublin 2, the annual sum of £100 such payment to be made on the 15th day of February in every year during the continuance of this licence.
3. The Licensee shall use that part of the foreshore, the subject matter of this licence, for the mooring of fish cages as detailed above in connection with the cultivation of salmon and for no other purpose whatsoever. The number of cages specified herein shall not be exceeded.
4. The Licensee shall at all times during the continuance of this licence keep the said cages in a good and proper state of repair



and condition to the satisfaction of the Minister and ensure that they will not be injurious to navigation, the adjacent lands or the public interest.

5. The Licensee shall ensure that the licensed area and the area around the development shall be kept clear of all redundant structures, waste products or materials associated with the development.
6. The Licensee shall cause each cage to be fitted to the satisfaction of the Minister with a low intensity, battery powered, yellow coloured flashing light and a radar reflector for the safety of navigation during the hours of darkness and reduced visibility.
7. The Licensee shall comply with any directions which may be issued by the Minister from time to time in that regard.
8. The Licensee shall ensure that each cage shall bear the licence number FCL 199.
9. The Licensee shall fit adequate anti-predator netting on all cages and shall comply with any directions which may be issued by the Minister from time to time in that regard.
10. The licensee shall ensure that cage locations and configurations, and marking and lighting arrangements shall conform to licence



specifications as agreed with the Department of the Marine and the Marine Survey Office. Any changes for operational reasons at any time shall be approved in advance by the Minister.

11. The Licensee shall indemnify and keep indemnified the State, the Minister, their officers, agents and employees against all actions, loss, claims, damages, costs, expenses and demands arising in any manner whatsoever in connection with the construction, maintenance or use of the said cages or in the exercise of the permission hereby granted.
12. The Minister shall be at liberty at any time to terminate this licence by giving to the Licensee three weeks previous notice in writing ending on any day and upon determination of such notice the licence and permission hereby granted shall be deemed to be revoked and withdrawn without the liability for the payment of any compensation by the Minister to the Licensee.
13. The Licensee shall if so required by the Minister and, within three weeks after receipt of such notice or on determination of this licence from any other cause at its expense remove the said cages to the satisfaction of the Minister and if the Licensee refuses or fails to do so the Minister may cause the said cages to be removed and shall be entitled to recover from the Licensee as a simple contract debt in any court of competent jurisdiction all costs and expenses incurred by him in connection with the

removal and restoration, and the Licensee shall take such steps as the Minister may specify in order to secure compliance with this condition.

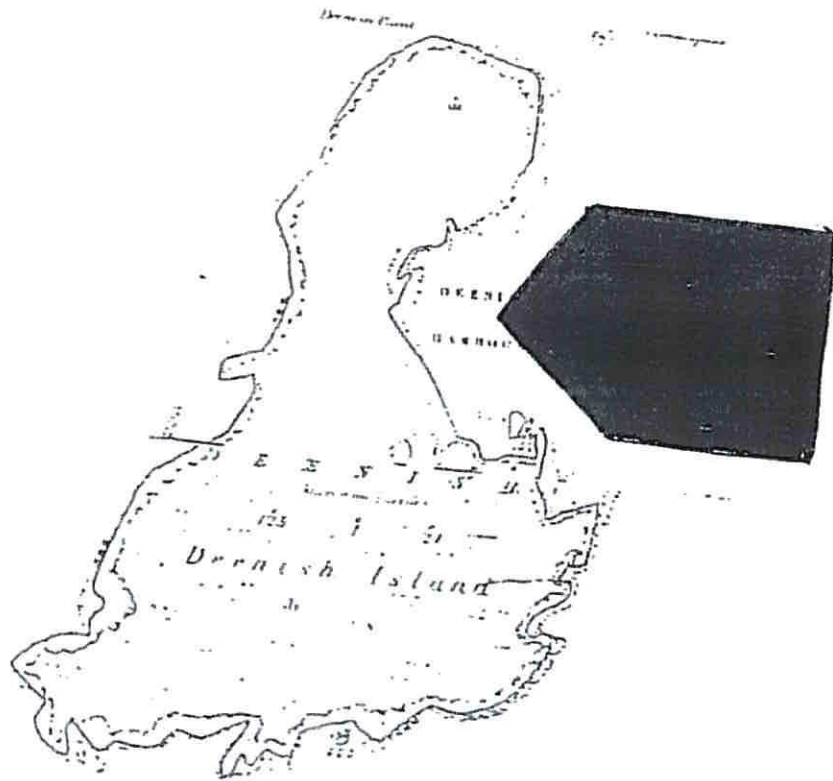
14. On site operations and related landbased activities including the use of piers are to be carried out with all possible circumspection and regard for other users and the environs.
15. The licensee shall keep the Secretary, Department of the Marine advised of ongoing and future arrangements reached with the Office of Public Works, local authorities or private owners concerning the use of piers and other local infrastructure;
16. In the event of the breach, non-performance or non-observance by the Licensee of any of the conditions herein contained the Minister may forthwith terminate this licence without prior notice to the Licensee.
17. Any notice to be given by the Minister may be transmitted through the Post Office addressed to the Licensee at its last known address.
18. This licence replaces Foreshore Licence dated 15th day of February, 1991 granted to Salmara Fisheries Ltd.

PRESENT when the Seal of Office )  
of the MINISTER FOR THE MARINE )  
was affixed and was authenticated )  
by the Signature of )  
David Glynn )  
in the presence of: )  
WITNESS: Benedette Kiew )  
ADDRESS: Department of the )  
Marine, Leeson Lane, D2 )  
OCCUPATION: Civil Servant )

SIGNED on behalf of Licensee )  
in the presence of: )  
WITNESS: Colleen Colloid )  
ADDRESS: Colna Co. Galway )  
 )  
OCCUPATION: Personal Assistant )

David Glynn  
a person authorised  
under section 15(1)  
of the Ministers and  
Secretaries Act,  
1924 to authenticate  
the Seal of the  
Minister.

[Signature]  
Director



DEPARTMENT OF THE MARINE  
Leeson Lane, Dublin, 2. Tel No.  
Engineering Section. Fisheries Division

BASED ON THE ORDNANCE SURVEY BY  
PERMISSION OF THE GOVERNMENT  
PERMIT No 4034  
COUNTY KERRY SHEET No: 105



**MHI letter dated 29 January 2016**



Nicole O'Shea  
 Aquaculture & Foreshore Licencing Division  
 Department of Agriculture & the Marine  
 National Seafood Centre  
 Clonakilty  
 Co. Cork.

29.01.2016

RINMORE

**Re. Site T6/202: Marine Engineering inspection on 02/07/15.**

Dear Nicole,

I refer to your letter dated January 6<sup>th</sup> 2016 regarding the remedial measures allegedly required arising from the engineering inspection of the Deenish sea site on July 2<sup>nd</sup>, 2015.

Under the circumstances I feel that we must point out that some of the terms attaching to the aquaculture licence for this site are to say the least ambiguous, and we would argue that it is actually impossible to interpret them with any degree of precision or reliability.

The licence refers to *smolt stocking* events not exceeding 400,000. The licence does not contain any condition concerning how many salmon, that are not smolts, may be kept on the site at any point in time. I would suggest that the Marine Institute, who are the minister's advisers on scientific and biological matters be consulted in terms of explaining the different stages of a salmon's lifecycle and in particular the very short-lived and distinct 'smolt' phase.

Marine Harvest Ireland had two separate silver salmon stocking inputs into this site during the period of interest, neither of which concerned fish at the 'smolt' stage in their life cycle. Further, neither of the stocking events involved fish transfers exceeding 400,000 fish. On that basis we strongly contend that we have not breached the licence term concerning *smolt stocking* and therefore no remedial action is required.

With regard to harvest volumes, It should be noted that no harvesting took place at this site thus the maximum harvest rate of 500 tonnes per annum was not exceeded. On that basis no remedial action is needed with regard to this issue.

It is also very important to point out that the benthic impact monitoring results for this site show clearly that there has been no overstocking and that no adverse biological impacts have occurred. The results show that MHI have operated the site responsibly and well within its 'biological carrying capacity'.

The confusing and biologically incorrect phraseology employed in this licence highlights the recurring drafting problem we have all encountered, whereby inconsistent, contradictory and technically meaningless terms and conditions have found their way into many of the salmon farming licences issued over the years.

Marine Harvest Ireland  Registered in Ireland as Comhlucht Iascaireachta Fanad Teoranta, VAT No: IE45307340: Registration No. 66929 Directors: Jan Feenstra, David Brennan	<small>OFFICE</small> Kindrum, Cashel P.O., Fanad. Letterkenny Co. Donegal, IRELAND F92 XD93	<small>PHONE</small> 00353 74 9192105	<small>FAX</small> [Address]
	<small>HEAD OFFICE</small> Rinmore, Ballylar P.O. Letterkenny Co. Donegal, IRELAND F92 T677	<small>EMAIL</small> catherine.mcmanus@marineharvest.com	<small>WWW</small> <a href="http://marineharvest.com">http://marineharvest.com</a> <a href="http://marineharvestireland.com">http://marineharvestireland.com</a>

Both as an individual company and through our representative organisation we have repeatedly requested that Irish marine salmon licenses be brought into line with best international practices with regard to the control of stocking levels. The Minister for Agriculture, Food and the Marine, Simon Coveney TD issued a press release on December 5th 2011 to announce the new format for Aquaculture Licence templates. In this press release the Minister confirmed that one of the core changes to Aquaculture licences would be a *“Change from licensing by Annual Harvested Tonnage (i.e. the dead weight of fish harvested from a site in a calendar year measured in tonnes) to Standing Stock Biomass for Finfish (the weight of live fish on a site at any given time, measured in tonnes). Standing Stock Biomass is recognised internationally as the appropriate metric for assessing loading at an aquaculture production site and can be measured on a real time basis thus facilitating effective regulation and management of sites.”*

We welcomed this announcement at the time and we fully agree with the minister that maximum allowable biomass (MAB) is the only rational and enforceable way of regulating stocking on marine finfish sites. We look forward to continue working with the Department of Agriculture, Food and Marine (DAFM) with a view to establishing a logical and consistent regulatory framework for Irish aquaculture. In this particular instance we do not believe that we breached any of the licenced terms as they are written and thus we are of the view that no remedial actions are called for at this point in time.

With Regards



**Catherine McManus**

TECHNICAL MANAGER

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**e-mail from MHI including Stock Records**



## Dillon, Noel

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**From:** Power, John <John.Power@marineharvest.com>  
**Sent:** 25 June 2015 15:19  
**To:** OMurchu, Noel  
**Subject:** FW: Deenish site monthly stock  
**Attachments:** Document\_0008.pdf

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**From:** Power, John  
**Sent:** 11 June 2015 12:05  
**To:** 'noel.omuruchu@agriculture.gov.ie'  
**Subject:** Deenish site monthly stock

Hi Noel  
See attached the stock monthly for Deenish site.  
Thanks.

Best regards

---

**John Power**

South West Operations Manager  
MARINE HARVEST IRELAND

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Direct Line: +353 27 57402  
MOBILE: +353 86 8050501  
MAIL: [john.power@marineharvest.com](mailto:john.power@marineharvest.com)  
WEB: [www.marineharvestireland.com](http://www.marineharvestireland.com)

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OFFICE: Marine Harvest Ireland SW  
Castletownbere  
Beara  
Co Cork  
Ireland

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<b>Filtered By</b>	<b>Filter</b>	<b>Grouped by</b>	<b>From date</b>	<b>End date</b>
Operation	All	Project	2015-01-01	2015-01-31

Year	Class	Project	Site	Open		Mortality / Culls		Harvest		Transfer		Total		Closing		Feed		LCTD		Temp (°C)	
				Count	Count	Count	%	LCTD	Count	Count	Pending	Count	Count	Avg.	Weight	SFR	Bio FCR	Eco (D)	Eco (D)		
2015	Q1	SWDE	Deenish	224 226	224 226	1 227	#NUM!	0	0	0	0	0	0	222 999	222 999	117	400	0.172	1.050	1.662	9.64
	<b>Total</b>			224 226	224 226	1 227	#NUM!	0	0	0	0	0	222 999	222 999	117	400					

<b>Total</b>				224 226	224 226	1 227	#NUM!	0	0	0	0	0	222 999	222 999	117	400					
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Monthly Summary - Feb'15

Filtered By	Filter	Grouped by	From date	End date
Operation	All	Project	2015-02-01	2015-02-28

Year	2015	Class	Project	Site	Open		Mortality / Culls		Harvest	Transfer		Closing		Feed			Temp (°C)
					Count	Count	Count	%		LCTD	Count	Pending	Count	Avg.	Weight	SFR	
		Q1	SWDE	Deenish	222 999	29 453	13.208%	6.92%	0	219 108	219 108	412 654	138	13 569	1.054	1.633	8.89
		<b>Total</b>			222 999	29 453	13.208%	6.92%	0	219 108	219 108	412 654	138	13 569			
		<b>Grand Total</b>			222 999	29 453	13.208%	6.92%	0	219 108	219 108	412 654	138	13 569			



Monthly Summary - Mar'15

Filtered By	Filter	Grouped by	From date	End date
Operation	All	Project	2015-03-01	2015-03-31

Year	2015	Class	Project	Site	Open		Mortality / Culls		Harvest	Transfer		Closing		Feed		LCTD		Temp (°C)
					Count	Count	%	LCTD		Count	Pending	Count	Count	Weight	SFR	Bio FCR	Eco (D)	
		Q1	SWDE	Deenish	412 654	38 462	9.321%	8.348%	0	384 952	0	759 144	157	30 625	1.100	1.051	1.414	9.05
		Total			412 654	38 462	9.321%	8.348%	0	384 952	0	759 144	157	30 625				

Grand Total					412 654	38 462	9.321%	8.348%	0	384 952	0	759 144	157	30 625				
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Monthly Summary - Apr'15

Filtered By		Filter	Grouped by	From date	End date							
Operation		All	Project	2015-04-01	2015-04-30							
Year	2015	Open Count	Mortality / Culls	Harvest Count	Transfer Pending	Total Count	Closing Count	Weight	Feed SFR	LCTD Bio FCR	Eco (D)	Temp (°C)
Class	Project Site		Count %	LCTD								
Q1	SWDE Deenish	759 144	4 733 0.623%	8.919%	0	0	754 411	244	69 174	1.585	1.181	10.29
<b>Total</b>		759 144	4 733 0.623%	8.919%	0	0	754 411	244	69 174			
<b>Grand Total</b>		759 144	4 733 0.623%	8.919%	0	0	754 411	244	69 174			



Monthly Summary - May '15

Filtered By	Filter	Grouped by	From date	End date
Operation	All	Project	2015-05-01	2015-05-31

Year	2015	Class	Project	Site	Open		Mortality / Culls		Harvest	Transfer		Total	Closing		Feed			Temp (°C)		
					Count	Count	%	LCTD		Count	Count		Pending	Count	Count	Avg.	Weight		SFR	Bio FCR
		Q1	SWDE	Deenish	754 411	15 953	2.115%	10.845%	0	0	0	0	738 458	738 458	339	74 992	1.151	1.050	1.160	11.21
		<b>Total</b>			754 411	15 953	2.115%	10.845%	0	0	0	0	738 458	738 458	339	74 992				

<b>Grand Total</b>					754 411	15 953	2.115%	10.845%	0	0	0	0	738 458	738 458	339	74 992				
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**Marine Institute Fish Movement Approvals**

**From:** [FHU](#)  
**To:** [hugh.mcginley@marineharvest.com](mailto:hugh.mcginley@marineharvest.com)  
**Cc:** [FHU](#)  
**Subject:** Approval for Finfish Movement within Ireland  
**Date:** 19 December 2014 10:35:09

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**European Communities (Health of Aquaculture Animals and Products) Regulations 2008, S.I. No. 261 of 2008, as amended by S.I. No. 398 of 2010 and S.I. No. 430 of 2011**

**Movement Approval Notice**

**MOV-1036**

**Marine Harvest Ireland FHA-000025 (the 'Applicant')**

The Marine Institute in exercise of its powers under the European Communities (Health of Aquaculture Animals and Products) Regulations 2008 - 2011, and subject to the conditions set out below, confirms its approval of the following (the 'Movement'):

Origin of Finfish		Destination of Finfish	
<b>Company Name:</b> Marine Harvest Ireland		<b>Company Name:</b> Marine Harvest Ire (formally Silverking Seafoods Ltd)	
<b>Site of Origin:</b> Lough Altan		<b>Site of Destination:</b> Deenish Kerry	
• <b>Date(s) of Movement:</b> 19/12/2014 - 31/12/2014			
• <b>Details of Transportation:</b> Gripfisk Service AS Grip Transporter (WellBoat),			
Species	Quantity	Age	Average Weight
Atlantic salmon	400000 Number	11 Months	110 g

**Conditions**

1. The Movement shall be carried out in accordance with the details submitted to the Marine Institute, and with these conditions and the EC (Health of Aquaculture Animals and Products) Regulations 2008 - 2011 as may be amended from time to time.
2. This Movement Approval Notice is non-transferable. Any proposed change to the details of the Movement shall be notified to the Marine Institute for its prior approval.
3. The Applicant shall not be entitled solely by reason of the grant of this Movement Approval Notice to carry out the Movement. For the avoidance of doubt, this Movement Approval Notice does not authorise any Movement or the carrying on of any activity in a manner that does not comply with any legislation which may be applicable including, but not limited to:
  - a. EC (Health of Aquaculture Animals and Products) Regulations 2008 - 2011
  - b. Fisheries (Amendment) Act 1997, as amended, and relevant Regulations
  - c. EC (Quality of Shellfish Waters) Regulations 2006



d. EC (Food and Feed Hygiene) Regulations 2009, S.I. 432 of 2009, as amended

e. EC (Birds and Natural Habitats) Regulations 2011, S.I. 477 of 2011, as amended

4. The Marine Institute reserves the right to refuse or revoke approval on breach of any of these conditions or otherwise in accordance with S.I. 261/2008, as amended by S.I. No. 398 of 2010 and S.I. No. 430 of 2011.

**Issued By: Fish Health Unit    Dated:19/12/2014**

On behalf of the Marine Institute

Rinville, Oranmore,  
Co. Galway  
IRELAND

Tel: +353 (0)91 387 200  
Fax: +353 (0)91 387 201  
Email: [notification@marine.ie](mailto:notification@marine.ie)  
Website: [www.fishhealth.ie](http://www.fishhealth.ie)

Notes:

Please let us know if there are any changes to the details supplied.  
A copy of this email should be kept for your Fish Health Records

**From:** [FHU](#)  
**To:** [hugh.mccainley@marineharvest.com](mailto:hugh.mccainley@marineharvest.com)  
**Cc:** [FHU](#)  
**Subject:** Approval for Finfish Movement within Ireland  
**Date:** 26 February 2015 18:17:02

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**European Communities (Health of Aquaculture Animals and Products) Regulations 2008, S.I. No. 261 of 2008, as amended by S.I. No. 398 of 2010 and S.I. No. 430 of 2011**

**Movement Approval Notice**

**MOV-1113**

**Marine Harvest Ireland FHA-000024 (the 'Applicant')**

The Marine Institute in exercise of its powers under the European Communities (Health of Aquaculture Animals and Products) Regulations 2008 - 2011, and subject to the conditions set out below, confirms its approval of the following (the 'Movement'):

Origin of Finfish		Destination of Finfish	
Company Name: Marine Harvest Ireland		Company Name: Marine Harvest Ire (formally Silverking Seafoods Ltd)	
Site of Origin: Pettigo		Site of Destination: Deenish Kerry	
• Date(s) of Movement: 04/03/2015 - 26/03/2015			
• Details of Transportation: Gripfisk Service AS Grip Transporter (WellBoat),			
Species	Quantity	Age	Average Weight
Atlantic salmon	385000 Kg	12 Months	95 g

**Conditions**

1. The Movement shall be carried out in accordance with the details submitted to the Marine Institute, and with these conditions and the EC (Health of Aquaculture Animals and Products) Regulations 2008 - 2011 as may be amended from time to time.
2. This Movement Approval Notice is non-transferable. Any proposed change to the details of the Movement shall be notified to the Marine Institute for its prior approval.
3. The Applicant shall not be entitled solely by reason of the grant of this Movement Approval Notice to carry out the Movement. For the avoidance of doubt, this Movement Approval Notice does not authorise any Movement or the carrying on of any activity in a manner that does not comply with any legislation which may be applicable including, but not limited to:
  - a. EC (Health of Aquaculture Animals and Products) Regulations 2008 - 2011
  - b. Fisheries (Amendment) Act 1997, as amended, and relevant Regulations
  - c. EC (Quality of Shellfish Waters) Regulations 2006
  - d. EC (Food and Feed Hygiene) Regulations 2009, S.I. 432 of 2009, as amended

e. EC (Birds and Natural Habitats) Regulations 2011, S.I. 477 of 2011, as amended

4. The Marine Institute reserves the right to refuse or revoke approval on breach of any of these conditions or otherwise in accordance with S.I. 261/2008, as amended by S.I. No. 398 of 2010 and S.I. No. 430 of 2011.

**Issued By: Fish Health Unit    Dated:26/02/2015**

On behalf of the Marine Institute

Rinville, Oranmore,  
Co. Galway  
IRELAND

Tel: +353 (0)91 387 200  
Fax: +353 (0)91 387 201  
Email: [notification@marine.ie](mailto:notification@marine.ie)  
Website: [www.fishhealth.ie](http://www.fishhealth.ie)

Notes:

Please let us know if there are any changes to the details supplied.  
A copy of this email should be kept for your Fish Health Records

**From:** FHU  
**To:** Sean.Begley@marineharvest.com  
**Cc:** FHU  
**Subject:** Approval for Finfish Movement within Ireland  
**Date:** 21 May 2015 17:01:29

**European Communities (Health of Aquaculture Animals and Products) Regulations 2008, S.I. No. 261 of 2008, as amended by S.I. No. 398 of 2010 and S.I. No. 430 of 2011**

**Movement Approval Notice**

**MOV-1255**

**Marine Harvest Ire (formally Silverking Seafoods Ltd) (the 'Applicant')**

The Marine Institute in exercise of its powers under the European Communities (Health of Aquaculture Animals and Products) Regulations 2008 - 2011, and subject to the conditions set out below, confirms its approval of the following (the 'Movement'):

<b>Origin of Finfish</b>		<b>Destination of Finfish</b>	
<b>Company Name:</b> Marine Harvest Ire (formally Silverking Seafoods Ltd)		<b>Company Name:</b> Marine Harvest Ireland	
<b>Site of Origin:</b> Inishfarnard		<b>Site of Destination:</b> Millstone Fanad Kindrum Donegal	
• <b>Date(s) of Movement:</b> 22/05/2015 - 22/05/2015			
• <b>Details of Transportation:</b> Gripfisk Service AS Grip Transporter (WellBoat),			
<b>Species</b>	<b>Quantity</b>	<b>Age</b>	<b>Average Weight</b>
Atlantic salmon	2000 Number	13 Months	4 Kg

**Conditions**

1. The Movement shall be carried out in accordance with the details submitted to the Marine Institute, and with these conditions and the EC (Health of Aquaculture Animals and Products) Regulations 2008 - 2011 as may be amended from time to time.
2. This Movement Approval Notice is non-transferable. Any proposed change to the details of the Movement shall be notified to the Marine Institute for its prior approval.
3. The Applicant shall not be entitled solely by reason of the grant of this Movement Approval Notice to carry out the Movement. For the avoidance of doubt, this Movement Approval Notice does not authorise any Movement or the carrying on of any activity in a manner that does not comply with any legislation which may be applicable including, but not limited to:
  - a. EC (Health of Aquaculture Animals and Products) Regulations 2008 - 2011
  - b. Fisheries (Amendment) Act 1997, as amended, and relevant Regulations
  - c. EC (Quality of Shellfish Waters) Regulations 2006



d. EC (Food and Feed Hygiene) Regulations 2009, S.I. 432 of 2009, as amended

e. EC (Birds and Natural Habitats) Regulations 2011, S.I. 477 of 2011, as amended

4. The Marine Institute reserves the right to refuse or revoke approval on breach of any of these conditions or otherwise in accordance with S.I. 261/2008, as amended by S.I. No. 398 of 2010 and S.I. No. 430 of 2011.

**Issued By: Fish Health Unit    Dated:21/05/2015**

On behalf of the Marine Institute

Rinville, Oranmore,  
Co. Galway  
IRELAND

Tel: +353 (0)91 387 200  
Fax: +353 (0)91 387 201  
Email: [notification@marine.ie](mailto:notification@marine.ie)  
Website: [www.fishhealth.ie](http://www.fishhealth.ie)

Notes:

Please let us know if there are any changes to the details supplied.  
A copy of this email should be kept for your Fish Health Records

**European Communities (Health of Aquaculture Animals and Products) Regulations 2008,  
S.I. No. 261 of 2008, as amended by S.I. No. 389 of 2010 and S.I. No. 430 of 2011**

**Movement Approval Notice**

Marine Harvest Ireland (the 'Applicant')

The Marine Institute in exercise of its powers under the European Communities (Health of Aquaculture Animals and Products) Regulations 2008 - 2011, and subject to the conditions set out below, confirms its approval of the following (the 'Movement'):

Date (s) of Movement	Name of Operator at Site of Origin	Details of Site of Origin	Name of Operator at Site of Destination	Details of Site of Destination	Species	Quantity	Age	Average Weight	Details of Transportation
29/11/14 - 06/12/2014	Marine Harvest Ireland, Castletownbere	Deenish FHA-000042	Marine Harvest Ireland, Castletownbere	Ahabeg FHA 550	Atlantic salmon	120,000 number	20 months	4.5 - 5.0 kg	Grip Transporter

**Conditions**

1. The Movement shall be carried out in accordance with the details submitted to the Marine Institute, and with these conditions and the EC (Health of Aquaculture Animals and Products) Regulations 2008 - 2011 as may be amended from time to time.
2. This Movement Approval Notice is non-transferable. Any proposed change to the details of the Movement shall be notified to the Marine Institute for its prior approval.
3. The Applicant shall not be entitled solely by reason of the grant of this Movement Approval Notice to carry out the Movement. For the avoidance of doubt, this Movement Approval Notice does not authorise any Movement or the carrying on of any activity in a manner that does not comply with any legislation which may be applicable including, but not limited to:
  - a. EC (Health of Aquaculture Animals and Products) Regulations 2008 - 2011
  - b. Fisheries (Amendment) Act 1997, as amended, and relevant Regulations
  - c. EC (Quality of Shellfish Waters) Regulations 2006
  - d. EC (Food and Feed Hygiene) Regulations 2009, S.I. 432 of 2009, as amended
  - e. EC (Birds and Natural Habitats) Regulations 2011, S.I. 477 of 2011, as amended
4. The Marine Institute reserves the right to refuse or revoke approval on breach of any of these conditions or otherwise in accordance with S.I. 261/2008, as amended by S.I. No. 389 of 2010 and S.I. No. 430 of 2011.

Signed:

*Edyasha Power*

Dated: 26<sup>th</sup> November 2014

**Fish Health Unit**

On behalf of the Marine Institute

Rinville, Oranmore,  
Co. Galway  
IRELAND

Tel: +353 (0)91 387 200

Fax: +353 (0)91 387 201

Email: [notification@marine.ie](mailto:notification@marine.ie)

Website: [www.fishhealth.ie](http://www.fishhealth.ie)

**Notes:**

Please let us know if there are any changes to the details supplied and report any unexplained mortalities in the consignment to us immediately.

A copy of this Approval should be kept for your Fish Health Records.

**European Communities (Health of Aquaculture Animals and Products) Regulations 2008,  
S.I. No. 261 of 2008, as amended by S.I. No. 389 of 2010 and S.I. No. 430 of 2011**

**Movement Approval Notice**

Marine Harvest Ireland (the 'Applicant')

The Marine Institute in exercise of its powers under the European Communities (Health of Aquaculture Animals and Products) Regulations 2008 - 2011, and subject to the conditions set out below, confirms its approval of the following (the 'Movement'):

Date (s) of Movement	Name of Operator at Site of Origin	Details of Site of Origin	Name of Operator at Site of Destination	Details of Site of Destination	Species	Quantity	Age	Average Weight	Details of Transportation
15/10/2014 – 30/11/2014	Marine Harvest Ireland, Castletownbere	Deenish FHA- 000042	Marine Harvest Ireland, Castletownbere	Ahabeg FHA 550	Atlantic salmon	68,000	18 months	4.5 kg - 4.7 kg	Grip Transporter

**Conditions**

1. The Movement shall be carried out in accordance with the details submitted to the Marine Institute, and with these conditions and the EC (Health of Aquaculture Animals and Products) Regulations 2008 - 2011 as may be amended from time to time.
2. This Movement Approval Notice is non-transferable. Any proposed change to the details of the Movement shall be notified to the Marine Institute for its prior approval.
3. The Applicant shall not be entitled solely by reason of the grant of this Movement Approval Notice to carry out the Movement. For the avoidance of doubt, this Movement Approval Notice does not authorise any Movement or the carrying on of any activity in a manner that does not comply with any legislation which may be applicable including, but not limited to:
  - a. EC (Health of Aquaculture Animals and Products) Regulations 2008 - 2011
  - b. Fisheries (Amendment) Act 1997, as amended, and relevant Regulations
  - c. EC (Quality of Shellfish Waters) Regulations 2006
  - d. EC (Food and Feed Hygiene) Regulations 2009, S.I. 432 of 2009, as amended
  - e. EC (Birds and Natural Habitats) Regulations 2011, S.I. 477 of 2011, as amended
4. The Marine Institute reserves the right to refuse or revoke approval on breach of any of these conditions or otherwise in accordance with S.I. 261/2008, as amended by S.I. No. 389 of 2010 and S.I. No. 430 of 2011.



Signed:

*Edysha Power*

Dated: 14<sup>th</sup> October 2014

**Fish Health Unit**

On behalf of the Marine Institute

Rinville, Oranmore,  
Co. Galway  
IRELAND

Tel: +353 (0)91 387 200

Fax: +353 (0)91 387 201

Email: [notification@marine.ie](mailto:notification@marine.ie)

Website: [www.fishhealth.ie](http://www.fishhealth.ie)

**Notes:**

Please let us know if there are any changes to the details supplied and report any unexplained mortalities in the consignment to us immediately.

A copy of this Approval should be kept for your Fish Health Records.



**Meeting between the Department and Marine Harvest Ireland  
14<sup>th</sup> March 2016, 11:30am at Agriculture House, Kildare Street**

**SUMMARY REPORT**

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**Present**

(Marine Harvest)

Catherine McManus, Technical and Quality Manager

Pat Connors, Sales and Processing Director

David Brennan, Financial Controller

(Department)

John Quinlan (AFMD)

Kevin Hodnett (AFMD)

Nicole O'Shea (AFMD)

Tony O'Sullivan (Marine Engineering Division)

Dr Dave Jackson (Marine Institute)

Joanne Gaffney (BIM)

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**1. Purpose of the Meeting**

The meeting was convened by the Department to afford the Company an opportunity to outline further its position on overstocking in respect of sites at Inishfarnard and Deenish.

**2. Inishfarnard**

The Department provided an overview of its position including the Engineering Report of 08/06/2015 which pointed to a total of 820,604 smolts inputted to the site in March 2014 which exceeds the permitted smolt stocking (400,000 smolts) by 420,604. The Report also pointed to a likely harvest from the site in excess of the permitted limit of 500 tonnes.

The Department noted the Company's response contained in its letter of 29/01/2016. The Company also made the following points at the meeting:

- The existing licences do not reflect the current reality of fish production.
- Production at the site represents best practice and no negative environmental effects have resulted from the stocking.
- The question of whether the fish inputted were actually smolts is a matter best decided by the Marine Institute as the Minister's advisors on biological and scientific matters.

The Company pointed towards its repeated request for a modernisation of licences to reflect current production techniques and they alluded to public comments by the Minister for the need for modern licences.

The Company interpreted the licence as 400,000 smolts per year. The Company emphasised that no environmental damage had occurred as a result of the stocking.

The Department pointed to the text of condition 2 (d) of the licence which stated:

*"the stock of fish in the cages shall not exceed such quantity as may be specified by the Minister from time to time, the number of smolts to be stocked at the site should not in any event exceed 400,000. Licensed stocking densities are not to be exceeded and will be subject to inspection at any time by the Department of the Marine;"*

It was the Department's view that the language was clear and unambiguous. The Department acknowledged that it was not aware of environmental damage resulting from the overstocking but while this was welcome it was not directly relevant to the issue at hand. It was the Department's view that the inputting of 820,604 smolts was a major breach of the licence condition above which could not be ignored.

BIM and MI were broadly of the view that licences needed to be updated to meet modern production techniques but neither agency would condone a breach of existing licence conditions.

In relation to condition 2 (e) which states:

*"the Licensee shall not harvest more than 500 tonnes (dead weight) of fish in any one calendar year."*

The Department asked what tonnage was harvested from the site. The Company stated that no fish were harvested from the site as the fish were moved to a well boat and were harvested on the boat. The Company indicated that more than 500 tonnes were harvested in this way. The Department noted that the Company did not consider the harvesting of these fish to be related to condition 2 (e) of the licence as the fish were moved to the well boat for slaughter. The Department was of the view that as the fish were removed from the site for the purpose of slaughter, condition 2 (e) applied to the process. As the Company confirmed that in excess of 500 tonnes were harvested the Department was of the view that the condition set out in 2 (e) of the licence had also been breached by the Company.

The Department emphasised that it wished to afford the Company every opportunity to set out a defence of its position and asked if it had anything whatsoever to add. The Company representatives indicated that they had nothing more to say.

### **3. Deenish**

The Department referred to the Inspection Report dated 02/07/2015 which indicated an input in excess of 700,000 smolts. The Department was conscious that the Pilot programme concerning measurement based on biomass had applied to this site up to 31/03/2015, however the input of smolts in early 2015 effectively meant that the smolt stock was in excess of 700,000 on 01/04/2015. This was in clear breach of condition 2 (d) which specified a maximum smolt stock of 400,000 (Condition 2 (d) is identical for Inishfarnard and Deenish sites)



In response the Company made the following points:

- The Environmental Report from the Company on the pilot case showed no negative environmental effects had occurred.
- The Company's interpretation of the licence did not preclude the stocking that occurred.

In response to specific questions from the Department the Company indicated that it did not dispute the figures cited in the Engineering Reports concerning smolt inputs for either Inishfarnard or Deenish.

The Department pointed out that the Company must have been aware that the input of smolts in early 2015 would have created the situation whereby licence condition 2 (d) was breached with effect from 01/04/2015. (i.e. after the pilot had ended on 31/03/2015.) The exceptionality which applied as part of the pilot case would in itself have alerted the Company to the normal conditions of the licence which applied after the pilot was concluded.

In relation to harvesting the Company said it could not state what tonnage would be harvested but in any event harvesting would not occur from the site as the fish would be removed in the same manner as Inishfarnard. The Department restated its position that it regarded removal of fish from the site for slaughter as representing harvesting from the site in accordance with condition 2 (e) of the licence.

The Department again pointed to the plain language contained in the licence and referred to legal advice obtained in 2010, which seemed to confirm that the plain reading of the licence made clear that 400,000 smolts was the maximum permitted under each licence. The situation regarding harvested tonnage was also equally clear.

The Department said that the seriousness of the situation should not be underestimated and asked the Company if it wished, in any way, to elaborate on its position. The Company representatives confirmed that they had nothing further to say.

**ENDS**



AQUACULTURE LICENCES APPEALS BOARD

FISHERIES (AMENDMENT) ACT 1997 (AS AMENDED AND SUBSTITUTED)

Appeal Reference Number: AP1-2011

DETERMINATION

**WHEREAS** appeals having been made to the Aquaculture Licences Appeals Board (hereinafter also referred to as "the Board") pursuant to section 40 of the Fisheries (Amendment) Act 1997 (as amended and substituted) by parties with the names **Salmon Watch Ireland, Inland Fisheries Ireland and Waterville Fisheries Development Group** (hereinafter referred to as "the Appellants") against the decision of the Minister for Agriculture, Food and the Marine to approve a temporary amendment of two years duration to Aquaculture Licence AQ 199, for the cultivation of salmon at Deenish Island, Ballinskelligs Bay, Co Kerry by Silver King Seafoods Limited (hereinafter referred to as "the Applicant"). (Department Reference T6/202, Board Reference AP1/2011).

**AND WHEREAS** the Board, having regard to the appeals and *inter alia* the provisions of the Fisheries (Amendment) Act 1997 (as amended and substituted) decided to determine the appeal by determining the application for the licence as if the application had been made to the Board in the first instance pursuant to section 40(4)(b) of the Fisheries (Amendment) Act 1997 (as amended and substituted).

**AND WHEREAS** the Board in considering the appeal took account of the objections contained in the appellants' files and the report of the Board's technical adviser and the matters set out at Section 61 of the Fisheries (Amendment) Act, 1997 (as amended and substituted). The Board also had the benefit of the Natura Impact Appropriate Assessment of the Deenish Island site which was conducted at the request of the Board.

**THE BOARD DETERMINED** at its meeting on the 31<sup>st</sup> of October, 2012 to GRANT a two-year amendment to Aquaculture Licence AQ199 which was assigned to Silver King Seafoods Limited, thereby permitting the cultivation of salmon at Deenish Island,

Ballinskelligs Bay, Co Kerry subject to the enforcement of the special conditions in the Schedule attached to said licence.

The Board, having carefully considered all of the evidence, reports, assessments and submissions, made this Determination for the following reasons:

- a) following a review of the Natura Impact Appropriate Assessment, the Board made a finding of no significant effects, within the meaning of the Birds Directive 2009\147\EC and the Habitats Directive 92\43\EEC;
- b) the Board believed the site under appeal was appropriate for the purpose intended by the Applicant;
- c) the proposed licence change would have an insignificant impact on the possible users of the area;
- d) the proposed licence change would not affect the statutory status of the area and in particular, would not be inconsistent with the Kerry Biodiversity and Heritage Plans 2008 - 2012;
- e) the proposed licence change would enhance employment security and generally benefit local economic activity;
- f) wild fisheries, natural habitat, flora and fauna populations in the area would not be affected in any significant way as long as effective controls and monitoring protocols were observed;
- g) the proposed change was consistent with best practice in the industry;
- h) environmental changes would be negligible following the proposed amendment to the licence; and,
- i) man-made heritage values in the area would not be affected following the envisaged change.

In summary – and taking all other available information into account – it would appear the amendment would pose an insignificant impact on the environment, statutory status and man-made heritage value of the area. Furthermore, the Board believes the proposed change would have positive effects on the economy in the surrounding area.





Mark O'Connell

Chairperson

For and on the behalf of the  
Aquaculture Licences Appeals Board

T6/202


CERTIFICATION OF AMENDMENT  
OF  
AQUACULTURE LICENCE No. 199  
AND  
FORESHORE LICENCE No. 199

Dated the 31<sup>st</sup> of October, 2012

This is to certify that the above-mentioned licences referred to as "Deenish T6/202 AQ199" have been amended subject to the modification of the Aquaculture Licence specified in the Certification of Renewal dated the 4<sup>th</sup> of August 2004, with the approval of the Minister for Agriculture, Food and the Marine for the period up to and including the 31<sup>st</sup> of March 2015 subject to the special conditions thereof and subject to the provisions of the Fisheries (Amendment) Act 1997 (No 23) as amended.

The special conditions are set out in a letter from the Department of Agriculture, Fisheries and Food to Mr Jan Feenstra, Marine Harvest Ireland dated 1<sup>st</sup> April 2011 and is attached hereto.

Signed

  
\_\_\_\_\_  
Mark O'Connell,  
Chairman,  
Aquaculture Licence Appeals Board

Mr Jan Feenstra  
Marine Harvest Ireland  
Rinmore  
Ballylar  
Letterkenny  
Co Donegal

Our Ref: - Deenish T6/202 AQ199

1 April 2011

Dear Mr Feenstra,

I refer to your letter of 7<sup>th</sup> February 2011 requesting the Department to approve the company's request to change the permitted stocking arrangements at the Deenish site.

The Minister approved the amendment of the licence on 22 March, 2011, subject to the following "special conditions".

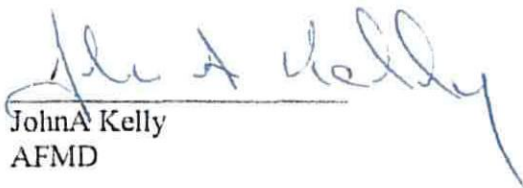
- That MHI only introduce smolts into Deenish and do not introduce any smolts into any of the other sites in their Southwest portfolio in 2011.
- In particular, that the Travara site, which may be defunct in any case, be kept on an extended fallow arrangement for the full duration of this pilot action (*i.e.* until 2013).
- That MHI carry out an additional benthic impact monitoring study to the usual pattern (in accordance with the protocol methodology), at their own expense, to check that the predictive model is correct at the mid point in the cycle.
- That MHI submit monthly stock reports, including all fish movements both within and to and from the site, of a standard and format agreed and determined by the agencies and DAFF Engineering Division to the Department to ensure that the pilot operation is proceeding as anticipated.
- That the company shall have available on demand by the Department, or its agents, records of all key site activities including; net inspections, preventative maintenance actions and that all required navigation marks are maintained in a good state of repair.
- That it be made clear to the company that this arrangement, if permitted, is strictly a once off pilot for this site only and that any repeat of the stocking pattern would have to be considered, *inter alia*, in light of the outcome of the monitoring and the progress of the implementation of overall licensing policy towards the use of 'maximum standing stock biomass' as a control point in licence terms and conditions
- That this pilot shall not be considered as a precedent in the context of the licence conditions attaching to any other site.

The Notice of Decision is attached.

Please be aware, however, that in accordance with Regulation 19 of S.I. No. 236/1998 – Aquaculture (Licence Applications) Regulations, 1998, the Minister is required to publish a notice of his decision “within 2 weeks after making the decision, in a newspaper circulating in the vicinity of the location of the proposed aquaculture”. Any person aggrieved by the decision may, in accordance with Section 41 of the Fisheries (Amendment) Act, 1997, appeal against it in writing to the Aquaculture Licences Appeals Board, by completing the Notice of Appeal Application Form available from the Board. This appeal must be lodged within one month beginning on the date of the publication of the decision.

In the case that there is no appeal the licence will be issued to you as soon as practicable after the end of the appeal period.

Yours sincerely,



John A Kelly  
AFMD





# Deenish 13S1 Stock Report

LICENCE REF. T6/202; AP1/2011  
20.01.2015

MARINE HARVEST ASA

## Introduction

On October 31<sup>st</sup> 2012, Marine Harvest Ireland was granted a 2 year amendment to Aquaculture licence No. AQ199 which was assigned to Silverking Seafoods Ltd., permitting the cultivation of salmon at Deenish Island, Ballinskelligs Bay, co. Kerry, subject to the enforcement of special conditions.

Under the terms of this amended licence a crop of Fanad/Mowi strain of salmon smolts was moved from Altan Smolt Unit, Co. Donegal to Deenish in April 2013 and moved from the Deenish site for harvest by November 30<sup>th</sup> 2014.

This report summarises the Key performance indicators of this crop in addition to the assessed impact on the local marine benthos.

### Site Natural Features:

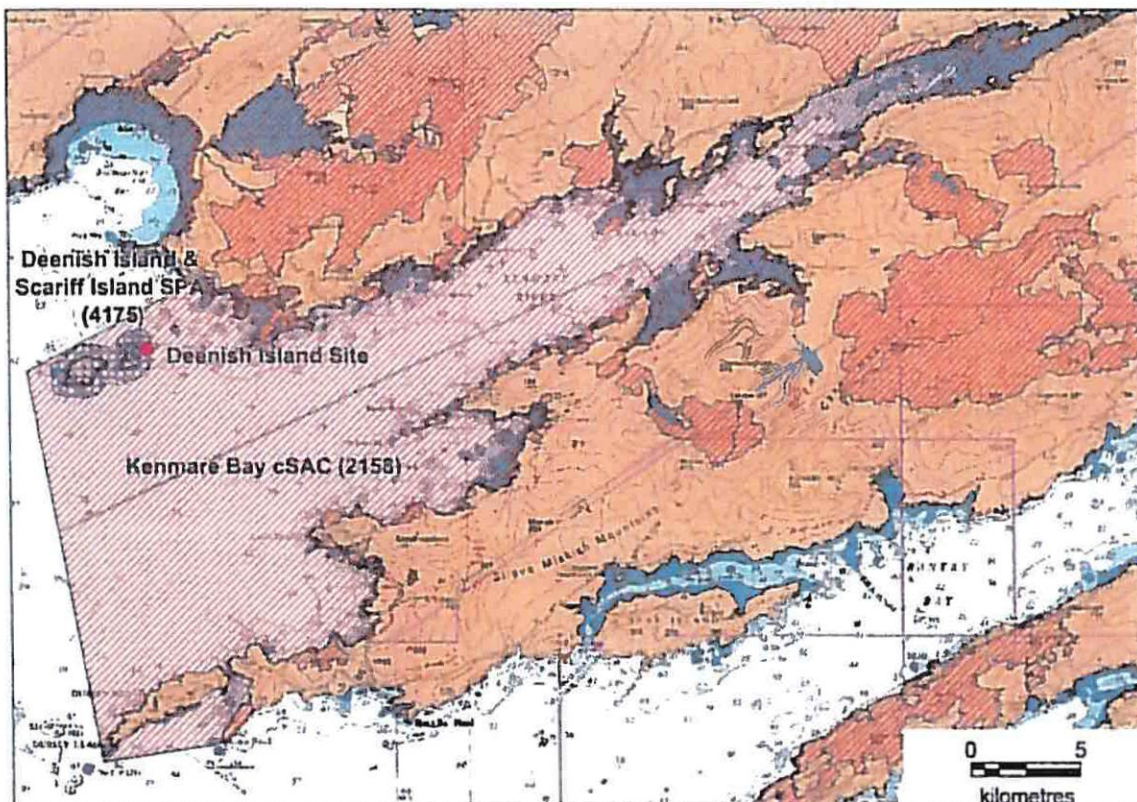


Figure 1: Map showing the locations of the relevant cSAC and SPA.





Kenmare Bay, Co. Kerry, is a long and narrow, south-west facing bay. It is a deep, drowned glacial valley and the bedrock is mainly Old Red Sandstone which forms reefs along the middle of the bay throughout its length. Exposure to prevailing winds and swells at the mouth diminishes towards the head of the bay. Numerous islands and inlets along the length of the bay provide further areas of additional shelter in which a variety of habitats and unusual communities occur.

Two Natura 2000 sites are of relevance for the Deenish site (see Figure 2.2). Deenish Island is located in the outer reaches of the Kenmare River cSAC (Site code: 002158) and the island forms part of the Deenish Island and Scariff Island SPA (Site code: 004175).

Kenmare River cSAC has a very wide range of marine communities from exposed coast to ultra-sheltered areas. The site contains three marine habitats listed on Annex I of the EU Habitats Directive, namely reefs, large shallow bay and caves. There is also an extremely high number of rare and notable marine species present (24) and some uncommon communities. Kenmare River is the only known site in Ireland for the northern sea-fan, *Swiftia pallida* and is the only known area where this species and the southern sea-fan *Eunicella verrucosa* co-occur. Midway along the south coast of Kenmare River, a series of sea caves stretch back into the cliff. They typically support encrusting sponges, ascidians and bryozoans.

Deenish Island and Scariff Island are small- to medium-sized islands situated between 5 and 7 km west of Lamb's Head off the Co. Kerry coast; they are thus very exposed to the force of the Atlantic Ocean. The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Fulmar, Manx Shearwater, Storm Petrel, Lesser Black-backed Gull and Arctic Tern. Scariff is the larger of the two. It is steep-sided all the way around and rises to a peak of 252m. The highest cliffs are on the south side. The island vegetation is a mix of maritime grassland, areas dominated by Bracken and heathy areas with Ling Heather. There are the ruins of a monastic settlement and a cottage in the north-east sector of the island. Deenish is less rugged than Scariff, and rises to 144m in its southern half; the northern half is lower and flatter. The vegetation is mostly grassland, with some heath occurring on the higher ground. Old fields are now overgrown with Bracken and brambles. The sea areas to 500m around the islands are included inside the SPA boundary to provide a 'rafting' area for shearwaters.

### Site Layout and equipment:

A total of 14 Aqualine plastic pens along with associated grid frame and moorings were laid out in a 3 x 5 grid pattern, within the licenced area. One pen was not stocked. A feed barge which also houses a small canteen and office was moored on the western site of the grid layout and in the lee of Deenish Island. Refer to the following sketch map. Fig. 2

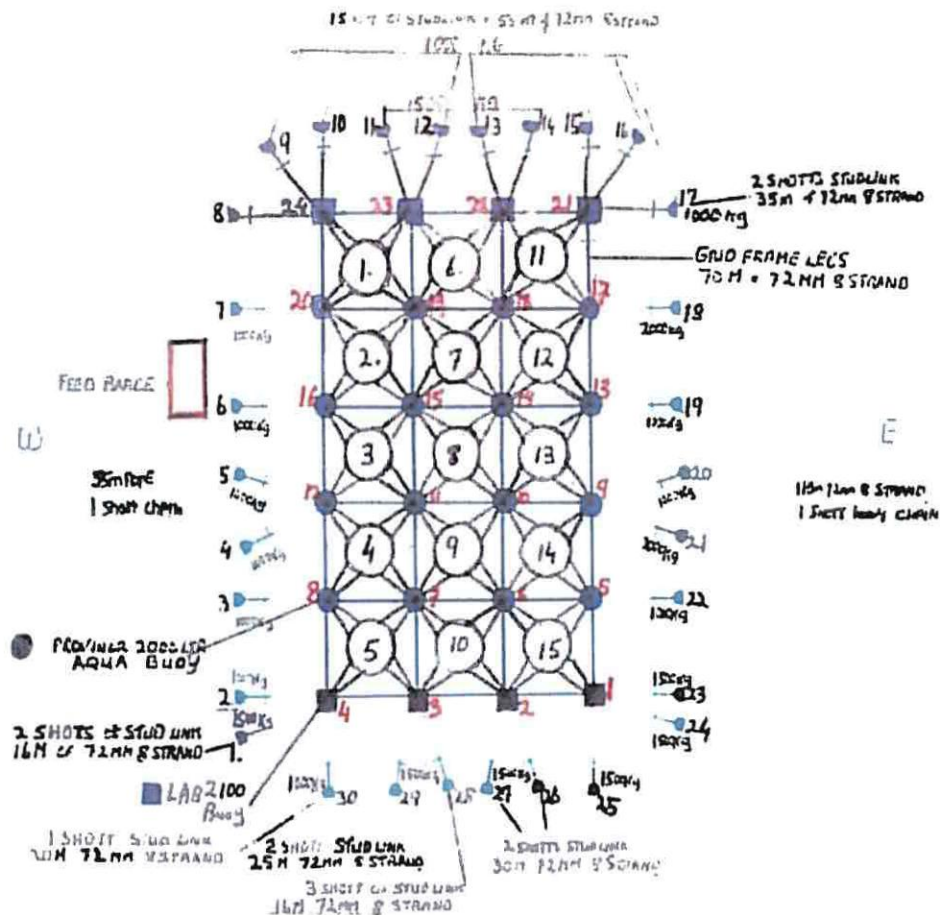


Figure 2: Site layout.

### Site Staffing:

The Deenish site was staffed by 8 staff including a site Manager. Additional sub aqua diving and mooring services was provided by an additional 5 staff employed or subcontracted by MHI. In addition, the site was serviced by engineers and electricians based in Castletownbere.

### Key Performance Indicators:

Stock Input	834,000 Fanad Mowi smolt
Total input biomass	49 tons
Total Harvest biomass	2,270 tons live weight (1,884 gutted weight)
Economic Feed Conversion Ratio (EFCR)	1.36
Biological Feed Conversion ratio (BFCR)	1.2





Relative Growth Index:	91.2%
Total mortality:	36.4%
Principal causes of mortality:	Jellyfish, harmful algal blooms and Amoebic Gill Damage.
Lice treatments	None
Escaped fish	None
Lost Time Injuries	None
AGD Freshwater baths	3
Superior quality Grade	93.5%
Ordinary Quality Grade	4.29%

### Sea Lice monitoring and control:

In accordance with MHI Sealice monitoring and control procedures and when weather conditions allowed, at least 10 fish were sampled weekly from each of a minimum of three pens on site. Sea lice counts were conducted up to the point of commencement of harvest thus counts cover a period of 80 weeks from April 2013 to November 2014. When average numbers of gravid lice reach 0.2 per fish or total lice numbers exceed 5, a treatment is required. For organic production, this is subject to permission from the organic certifying bodies.

However, in the case of Deenish 13S1 crop, sea lice levels remained below treatment trigger levels and thus did not require any lice removal treatments. Sea lice levels for the 13S1 crop are summarised on the following graph.

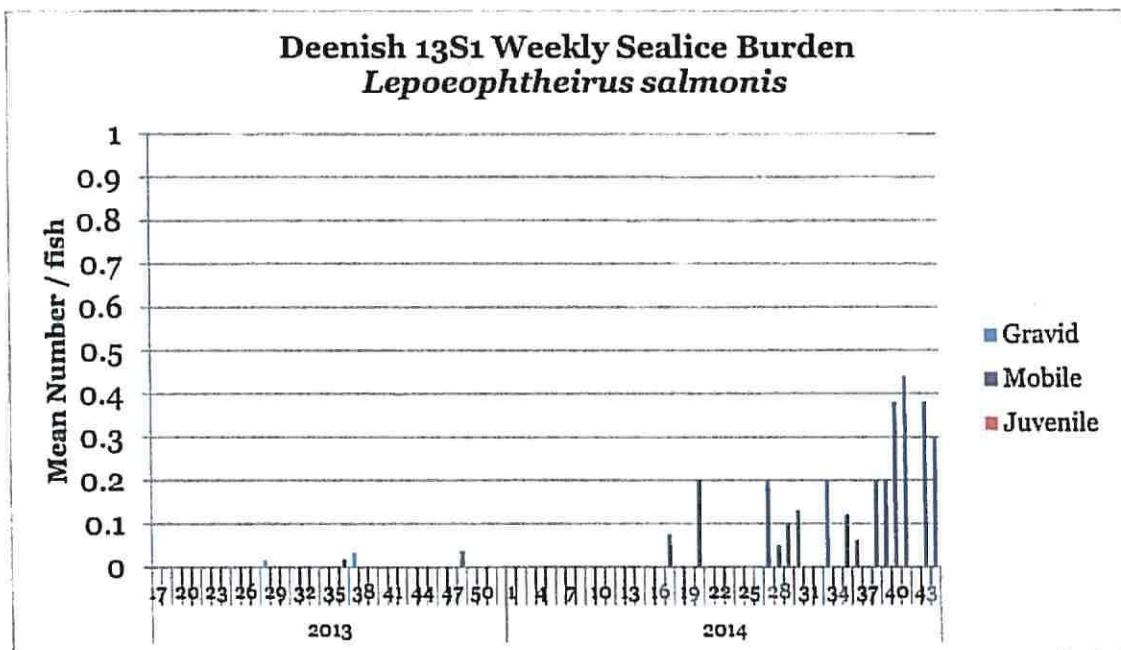


Fig. 3 Deenish Sea lice burden (all stages)

## Fish Health Management:

The health of the Deenish 13S1 fish was closely monitored and recorded at four levels:

1. Daily observations by the site manager and feeding operatives of fish behaviour during routine operations such as feeding and net changing. Any unusual behaviour was recorded on the daily feeding sheets and reported immediately to the Operations Manager and the Marine Fish Health Manager.
2. Professional divers examined the behaviour and general health of the fish on a regular basis. Diver observations and a breakdown of mortality numbers by likely cause of death were recorded on the 'Mortality Record' sheets.
3. The company veterinarian (Vet-Aqua International) carried out a total of 16 site visits. In addition to this all sites was visited at least monthly by the South West Fish Health Surveillance biologist. During visits, fish would be clinically examined for general behaviour, body condition and external abnormalities, by anaesthesia. Samples were screened for skin, gill and internal parasites and recent mortalities also post-mortemed for any unusual findings. Full laboratory support was provided by the designated veterinary practice.
4. The stock performance (e.g. feeding rate, mortality rates) were assessed at least once a week by the Production Manager for any indication of disease/abnormalities in the stock

## Benthic Monitoring and Impact:

During the 20 month production period, two benthic surveys were carried out on the Deenish site by Environmental consultants, Aquafact Ltd.

On 28<sup>th</sup> August 2013 a benthic survey was carried out on the Deenish site. The survey followed the DCMNR Level I monitoring protocols. The site was fallow for approximately three weeks before an onsite biomass production of 249.5 tonnes in the four month period prior to the survey. Mean current speed at the site is approximately 0.3ms<sup>-1</sup>.

The seabed was composed of a mix of sediment types with areas of of fine-medium sand and areas of slightly coarser sand shell gravel mix as can be seen in the following images.



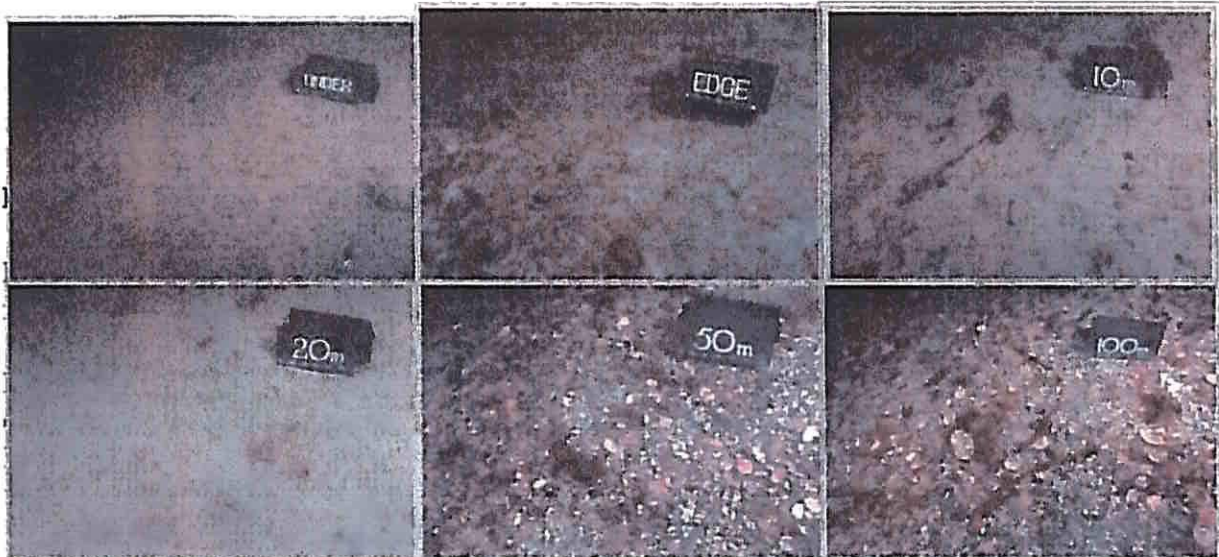


Figure 4: Sea bed images

The composition of sediments at each station can be seen in the sediment profile imagery (SPI) images with fine sand at the under pen station to a coarser shelly gravelly sand at the outer end of the transect. (Fig. 4). ARPD depths ranged from a minimum of 0.2cm (T1 Under, T1 Edge, T1 20m and T1 50m) to a maximum of >6.5cm (T1 100m). (Fig. 5).



Figure 5: ARPD depths

Organic carbon values ranged from 1.88 % (T2 50 m) to 7.08 % (T1 100 m) with the reference station recording a value of 1.56 %

In August 2014 Aquafact Environmental consultants carried out a DCMNR Level 2 survey with the addition of an Aquaculture Stewardship Council (ASC) standard survey as requested by MHI. This additional ASC survey was required in partial fulfilment of the second principle of the ASC Aquaculture Standard which is;

- *Principle 2: Conserve natural habitat, local biodiversity and ecosystem function*

The fulfilment of Criterion 1: of ASC Principle 2 - Benthic biodiversity and benthic effects was the purpose of this assessment.

At the time of the survey, the standing biomass on site was 2,067 tons. A total of 9 sample stations at the Deenish fish farm site on the 7th August 2014 were sampled for faunal and sediment analyses.

Redox potential values met the standard of  $>0$  mV at all stations except stations S5 and S2 (replicate A). Shannon Weiner diversity values met the standard of  $>3$  at 6 of the stations, with stations S1, S4 and S5 returning values below the standard. AMBI scores met the standard of  $\leq 3.3$  at 6 of the stations, with stations S1, S2 and S4 returning values  $>3.3$ . These 3 stations were closest to the pen and as expected were the most impacted and returned a disturbance classification of 'Moderately Disturbed'. The remaining stations were all classified as 'Slightly Disturbed' with the Reference station classified as 'Undisturbed'. Five of the 9 stations met the standard for numbers of non-pollution indicator species present at frequencies of  $\geq 100/m^2$ .

When compared to the 2012 and 2013 benthic surveys, results for this site indicate little habitat degradation is obvious beyond the edge station on both transects at the Deenish site. Results from previous years surveys of the seafloor beneath the Deenish Island pen blocks indicated little change year on year on and showed few obvious signs of impact. In general the surface appearance of the seafloor was devoid of any indication of the overlying pens beyond the immediate footprint of the pens.

### Water Column nutrient monitoring:

In accordance with Monitoring Protocol No. 2. for offshore finfish farms water column monitoring, water samples were collected at three points in the centre of the farm site and one control sample was collected at a distance from the site. Results are summarised in the following table;





Sample point	GPS location	DATE	WEEK	NO <sub>2</sub> ug/L	NO <sub>3</sub> ug/L	Phosphorous ug/L	TAN ug/l	Chlorophyll ug/L
1m below surface	Lat. 51-44-18 Long. 10-13-04	17-Dec-13	51	0.89	66.51	24.62	0.45	0.00
		10-Jan-14	2	1.17	85.52	18.33	3.58	0.00
		17-Feb-14	8	0.98	28.63	20.35	17.22	0.00
		06-Mar-14	10	1.56	19.53	20.35	5.71	0.17
Mid depth		17-Dec-13	51	1.74	73.03	24.62	0.0	0.00
		10-Jan-14	2	1.17	62.91	12.66	2.58	0.00
		17-Feb-14	8	1.27	34.63	20.35	5.71	0.00
		06-Mar-14	10	1.86	55.73	29.03	6.75	0.00
1m above seabed		17-Dec-13	51	1.45	66.38	29.95	0.45	0.00
		10-Jan-14	2	0.91	67.45	14.55	1.59	0.00
		17-Feb-14	8	0.98	35.47	18.18	8.84	0.00
		06-Mar-14	10	1.86	63.14	39.88	9.89	0.00
Control	Lat 51-44-90 Long 10-0-10	10-Jan-14	2	2.52	95.33	18.33	12.53	0.00
		17-Feb-14	8	1.06	74.64	12.42	5.82	0.00
		06-Mar-14	10	0.5	29.45	16.45	3.56	0.00

### Site Inspections and Certifications:

The 13S1 crop was reared under EU Organic rules in accordance with EC 710/2009 in addition to Naturland (German Private Label) and BioSuisse (Swiss) Organic aquaculture standards with certificates awarded after independent audit verification during 2013 and 2014. In addition the site was audited and awarded the Global GAP aquaculture standard.

The integrated Quality, Environmental and HES management systems for the site also audited by the NSAI under ISO 9001, ISO 14001 and OHSAS 18001 standards.

During November 2014, the first Aquaculture Stewardship Council aquaculture audit in the Irish Aquaculture industry was carried out on the Deenish 13S1 crop.

The Aquaculture Stewardship Council (ASC) sets an unprecedented standard for sustainable food production. This Salmon standard provides guidelines for responsible salmon farming which minimises negative impacts on the environment and enhances local communities. The ASC standard includes guidelines for the protection of the health and genetic integrity of wild populations, responsible use of resources, disease management, social responsibility, and community and stakeholder engagement are included to ensure compliance by aquaculture companies worldwide. The ASC certification decision for this site is expected in February 2015.

## Conclusions:

Concerning stock husbandry, management of sea lice and benthic impacts this pilot project worked very well. By stocking Deenish with one smolt input to grow out within a 21 month period with no additional stock inputs, this has allowed the effective control of sea lice without the use of any therapeutic interventions.

In addition, the environmental benthic surveys have shown no difference in impact compared to previous inputs and with an increased standing biomass in excess of 2,000 tons.

## Appendices:

[O:\Benthic Monitoring Marine\2014\JN1263 Deenish 2014 ASC Audit.pdf](#)  
[O:\Benthic Monitoring Marine\2014\JN1263 Deenish 2014 Audit.pdf](#)  
[O:\Benthic Monitoring Marine\2013\JN1208 Kenmare Bay 2013 Audit.pdf](#)  
[O:\Benthic Monitoring Marine\2012\JN1160 Kenmare Bay 2012 Audit.pdf](#)  
[I:\Aquaculture licenses\Deenish Aquaculture licenses\ALABDeenishDecision311012.pdf](#)  
[Deenish amendment 2011.pdf](#)  
[O:\Certifications 2014\Bio Suisse\Bio Suisse 2014 SW.pdf](#)  
[O:\Certifications 2014\COSORG\COSORG1029 MHI Deenish Cert 020715.pdf](#)  
[O:\Certifications 2014\Global GAP\GGAP Certificate MH Ireland 110614.pdf](#)  
[O:\Certifications 2014\Naturland\Naturland 2014 2015.pdf](#)  
[O:\Certifications 2014\ISO Certs\ISO 14001 cert exp 110116.pdf](#)  
[O:\Certifications 2014\ISO Certs\ISO 9001 cert exp 110116.pdf](#)

3c



Department of  
**Agriculture,  
Food and the Marine**  
An Roinn  
**Talmhaíochta,  
Bia agus Mara**

Mr Jan Feenstra,  
Chief Executive Officer,  
Bradán Fanad Teoranta,  
Kindrum,  
Fanad,  
Letterkenny,  
Co Donegal.

27 March 2015

Aquaculture Licence No AQ 199 and Foreshore Licence FSL 199.  
Deenish. Ref: T6/202

Dear Mr Feenstra,

I refer to the amendment to the above licences granted by the Aquaculture Licence Appeals Board on 31<sup>st</sup> October 2012.

I am to remind and advise you that the amendment granted was for the period up to and including 31<sup>st</sup> March 2015 and that the licensee must from that date forward operate in full compliance with the original terms and conditions of the licence.

Marine Harvest Ireland is as you aware currently operating at this site under the provisions of Section 19A(4) of the Fisheries (Amendment) Act 1997, pending a determination on the renewal of the licence, currently under consideration. The existing terms and conditions of the licence must be adhered to in all respects pending this determination.

Section 19A(4) of the Fisheries (Amendment) Act states:

*"A licensee who has applied for the renewal or further renewal of an aquaculture licence shall, notwithstanding the expiration of the period for which the licence was granted or renewed but subject otherwise to the terms and conditions of the licence, be entitled to continue the aquaculture or operations in relation to aquaculture authorised by the licence pending the decision on the said application."*

Yours sincerely,

Kevin Hodnett  
Assistant Principal  
Department of Agriculture, Food and the Marine  
Aquaculture & Foreshore Management Division  
National Seafood Centre  
Clonakilty  
Co Cork.  
Tel 023/8859503





**FISHERIES (AMENDMENT) ACT, 1997 (No.23)**  
**NOTICE OF DECISION TO AMEND AN AQUACULTURE LICENCE**

**Reference Number:** T6/202

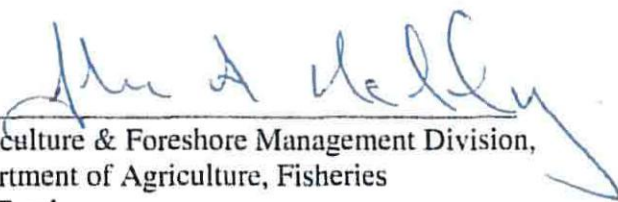
**Licensee:** Silver King Seafoods Limited  
c/o John Power  
Curryglass  
Waterfall  
Co Cork

**Aquaculture to which decision relates:** A temporary amendment of two years duration for the cultivation of salmon at Deenish Island, Ballinskelligs Bay, Co Kerry to facilitate a once-off pilot project involving the use of maximum standing stock biomass as a means of gauging and capping production capacity, subject to special conditions.

**Date of Decision:** 22 March 2011

**Amendment of Licence:** The amended licence will be issued as soon as possible after the end of the period of one month from the date of publication of a notice in a newspaper circulating in the vicinity of the proposed aquaculture if no appeal is made to the Aquaculture Licences Appeals Board within that period, under Section 40 of the Fisheries (Amendment) Act, 1997

**Signed:**

  
Aquaculture & Foreshore Management Division,  
Department of Agriculture, Fisheries  
And Food.



4

**OShea, Nicole**

---

**From:** McManus, Catherine [Catherine.McManus@marineharvest.com]  
**Sent:** 24 February 2017 15:41  
**To:** OShea, Nicole  
**Cc:** Feenstra, Jan C  
**Subject:** RE: T6/202 - Deenish  
**Attachments:** Deenish Harvest DW 2016.pdf

Dear Nicole,

Please find attached details of all harvest batches from Deenish T6/202 in 2016. Note that no fish were harvested from Deenish stocks in 2015.

The contents of the attached harvest summary submitted to Department of Agriculture, Food and the Marine (the "Department") are confidential and commercially sensitive. The document is provided to the Department on a confidential basis, and on the understanding that they will remain confidential.

The information contained in the document submitted, in its entirety, constitutes commercially sensitive information, the disclosure of which would prejudice and adversely affect the interests of Marine Harvest Ireland.

If, pursuant to section 12 of the Freedom of Information Act 2014, Regulation 6 of the Access to Information on Environment Regulations 2007 – 2014 or otherwise, the Department receives any requests for disclosure of information contained in this document submitted by Marine Harvest Ireland the Department should refuse to grant the request on the basis that the contents of the document (as mentioned) are confidential and commercially sensitive and exempt from disclosure. Without prejudice to the foregoing, we ask that we are notified of such request and that we are consulted and our comments taken into account and we are given an opportunity to redact any and all information as we deem appropriate before any action is taken. We also ask that you notify us of any appeal to the Office of the Information Commissioner, the Commissioner for Environmental Information or any other decision-making / judicial body that arises from any such request.

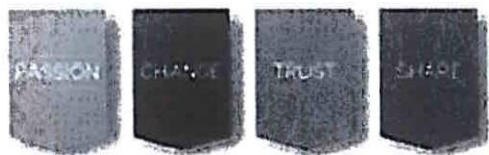
Best regards

**Catherine McManus**

Technical Manager  
MARINE HARVEST IRELAND

MOBILE: +353 87 2441364  
DIRECT: +353 74 9192105  
MAIL: [catherine.mcmanus@marineharvest.com](mailto:catherine.mcmanus@marineharvest.com)  
WEB: [www.marineharvestireland.com](http://www.marineharvestireland.com)

OFFICE: Rinmore, Ballylar P.O., Letterkenny  
Co. Donegal  
Ireland. F92 T677



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**From:** OShea, Nicole [mailto:Nicole.OShea@agriculture.gov.ie]  
**Sent:** 13 February 2017 15:15  
**To:** McManus, Catherine  
**Cc:** Quinlan, John; Hodnett, Kevin; Feenstra, Jan C  
**Subject:** T6/202 - Deenish

Dear Catherine,

This is further to previous correspondence and discussion in relation to the above site. In order to facilitate the cross references of records, you are requested please to forward information in relation to the above site for the years 2015 and 2016. The details sought are as follows:

- Date of each harvest
- The tonnage (dead weight) per harvest

You are requested please to forward these to me as soon as possible and in any event not later than Monday 27<sup>th</sup> February.

Yours Sincerely,

Nicole O'Shea  
Aquaculture & Foreshore Management Division  
Department of Agriculture, Food and the Marine  
National Seafood Centre,  
Clonakilty  
Co. Cork  
023 8859507

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Department of Agriculture, Food and the Marine

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An Roinn Talmhaíochta, Bia agus Mara

Tá an t-eolas san ríomhphost seo, agus in aon ceanglaín leis, faoi phribhléid agus faoi run agus le h-ghaigh an seoláí amháin. D'fhéadfadh ábhar an seoládh seo bheith faoi phribhléid profesúnta nó dlíthiúil. Mura tusa an seoláí a bhí beartaíthe leis an ríomhphost seo a fháil, tá cosc air, nó aon chuid de, a úsáid, a chóipeál, nó a scaoileadh. Má tháinig sé chugat de bharr dearmad, téigh i dteagmháil leis an seoltóir agus scríos an t-ábhar ó do ríomhaire le do thoil.



**DEENISH HARVEST DATA 2016**

Date	Batch	Pen No.	Dead WT Kg
02/10/2016	100211	15	51,964.39
04/10/2016	100218	15	54,757.43
05/10/2016	100215	15	54,743.00
06/10/2016	100221	15	26,545.06
06/10/2016	100224	7	10,017.57
09/10/2016	100227	3	56,081.94
10/10/2016	100228	3	51,183.49
12/10/2016	100231	3	56,441.96
13/10/2016	100237	1	51,816.48
16/10/2016	100239	1	40,539.95
17/10/2016	100242	1	52,596.24
18/10/2016	100244	10	40,644.31
18/10/2016	100249	1	6,987.52
19/10/2016	100246	10	50,326.73
20/10/2016	100248	10	48,992.78
24/10/2016	100253	10	50,262.43
25/10/2016	100255	13	41,802.40
26/10/2016	100257	13	43,698.64
27/10/2016	100259	13	42,139.83
13/12/2016	100345	5	34,406.39
14/12/2016	100346	5	26,587.00
15/12/2016	100348	5	37,599.17
18/12/2016	100350	5	48,880.30
19/12/2016	100352	5	32,308.56
19/12/2016	100355	13	17,732.27
20/12/2016	100353	13	48,242.40
21/12/2016	100354	13	31,609.12
<b>TOTAL</b>			<b>1,108,907.36</b>



5

Mr Jan Feenstra  
Silver King Seafoods  
Comhlucht Iascaireacta Fanad Teoranta (t/a Marine Harvest Ireland)  
Fanad Fisheries  
Kindrum  
Fanad  
Letterkenny  
Co Donegal



Department of  
**Agriculture,  
Food and the Marine**  
An Roinn  
**Talmhaíochta,  
Bia agus Mara**

**COPY**

**sent by registered post**

9<sup>th</sup> March 2017

**Re: Aquaculture and Foreshore Licences for Silver King Seafoods Limited at a designated site east of Deenish Island in Ballinskelligs Bay, Co Kerry (T6/202)**

Dear Mr Feenstra,

I am to refer to the above licences, which are now expired. I am also to refer to Section 19A(4) of the Fisheries (Amendment) Act 1997 (as amended), and to the Company's statutory entitlement to continue aquaculture operations subject to the conditions of the above-named expired licences.

I am to inform you that, pursuant to the provisions of Section 19A(4) of the Fisheries (Amendment) Act 1997 (as amended), the Minister may treat the Company's statutory entitlement to continue aquaculture operations as having ceased, should you breach the conditions of your expired licences pending the consideration of your application for renewal of those licences.

Condition No. 2(e) of the Aquaculture Licence ('the licence') for the culture of salmon in cages at a designated site east of Deenish Island in Ballinskelligs Bay, Co Kerry (T6/202) states:

*"the Licensee shall not harvest more than 500 tonnes (dead weight) of salmon in any one calendar year."*

The Department is in receipt of your Company's email dated 24<sup>th</sup> February 2017 which has advised that the total dead weight harvested for the above site in the calendar year ended 31<sup>st</sup> December 2016 was 1,108,907.36kg (1,108.91 tonnes) dead weight.

Condition 3 of the licence states:

*"The Minister shall be at liberty at any time to revoke or amend this licence if he considers that it is in the public interest to do so or if he is satisfied that there has been a breach of any condition specified in the licence or that the fishery to which the licence relates is not being properly maintained. Any such revocation or amendment shall be subject to the provisions of section 15 of the Fisheries (Consolidation) Act, 1959."*

I am to advise you that consideration is now being given to the possibility that your statutory entitlement to operate at the above site under the provisions of Section 19(A)4 of the Fisheries (Amendment) Act 1997 (as amended) may now have ceased, on account of the breach of a condition of the licence.

I am to inform you that the Minister shall consider any representations in relation to the proposed cessation of your statutory entitlement, and that said representations must be communicated within 28 days of the date of this notification if they are to be considered.

Yours Sincerely,



Kevin Hodnett

Assistant Principal Officer

Aquaculture & Foreshore Management Division

Department of Agriculture, Food and the Marine

National Seafood Centre

Clonakilty

Co Cork



Mr. Kevin Hodnett,  
Ass. Principal Officer,  
Aquaculture & Foreshore Management Div.  
Dept. of Agriculture, Food and the Marine,  
National Seafood Centre,  
County Cork.



(6a)

**Marine Harvest Ireland**  
Rinmore, Fanad, Letterkenny, Co. Donegal  
Telephone: +353 (0) 74 9159071  
Fax: +353 (0) 74 9159077

3<sup>rd</sup> of April 2017.

Ref. Your correspondence dated 9<sup>th</sup> of March 2017 in relation to our licensed operation T6/202.

Dear Mr. Hodnett,

I refer to your letter dated 9 March 2017 and to your invitation to Marine Harvest Ireland ("MHI") to make representations to the Department of Agriculture, Food and the Marine (the "Department") in relation to our statutory entitlement to continue operation of MHI's facility at Deenish and Licence T6 / 202 (the "Licence").

We have previously made representations about this site (letters dated 15 of June 2016 and 19 July 2016), and these letters remain relevant and should be read together with this letter.

MHI is pleased to confirm that there has not been any breach of the Licence as alleged. The environmental monitoring of the site demonstrates a most responsible and sustainable activity with no adverse effects on the local environment.

MHI is making these representations strictly without prejudice to the fact that MHI's statutory entitlement to operate cannot be treated by the Minister as having ceased because the legislation makes no such provision. Even if condition 3 of the Licence (which refers to defunct and now repealed legislation) were to have such a meaning, MHI is not in breach of the Licence. As the evidence demonstrates, the aquaculture operation at Deenish is being properly maintained with the application of best available techniques.

MHI relies on its constitutional property rights, which are protected by the statutory entitlement to operate conferred by section 19A(4) of the Fisheries (Amendment) Act 1997 (as amended) (the "1997 Act"). Silver King Seafoods Limited applied for a renewal of the Licence on 5 February 2007. Unfortunately, the decision in relation to this application is long delayed and is still awaited. Due to that delay, MHI has continued to engage in aquaculture at the Deenish site under the statutory entitlement afforded to it by section 19A(4) of the 1997 Act.

MHI would like to take this opportunity to submit that the decision in relation to this Licence should be made within a period of no more than six months from this date.

The Department will be aware that the parameters and terminology of the Licence are out of date when compared to best international practices. This is unfortunately the case with many aquaculture licences. For example, the Licence sets stocking limits by reference to "smolts", rather than "Maximum Allowable Biomass", despite the fact that Maximum Allowable Biomass is

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Registered Office: Kindrum, Fanad, Letterkenny, Co. Donegal.  
Directors: Jan Feemstra (Dutch), Pat Connors, David Brennan

internationally-recognised as the most appropriate standard metric of production and that the Minister issued a press release on 5 December 2011 clearly outlining the policy to implement a Maximum Allowable Biomass limit to salmon rearing operations.

We have enclosed an independent opinion on the wording of the Licence which has been prepared by Professor Randolph Richards, who is one of the world's leading experts on aquaculture. The Department will note that Professor Richards has concluded that the wording is:

*"...out of date, inappropriate and contrary to supporting best practices."*

## 1 Summary

The issue raised in your letter notes a harvest weight of 1,109 tonnes HOG in 2016 and draws attention to the condition 2(e) of the Licence:

*(e) the Licensee shall not harvest more than 500 tonnes (dead weight) of salmon in any one calendar year".*

MHI understands that this condition was originally included in the Licence because there was a concern about the practice and effects of blood-water during harvesting and the potential environmental implications. The Department, and the Marine Institute, will be aware that modern practices of harvesting have since changed to ensure that zero blood-water is spilled from a farm into its local environment.

In line with best practice and in accordance with condition 2(d) of the Licence, MHI operates a two-year gestation and transfer cycle at the Deenish facility. The practical outcome of this cycle is that salmon are transferred from the Deenish facility every second year only (ie, 2012, 2014, 2016, etc). In other years (ie, 2013, 2015, 2017), there is no transfer of salmon from the Deenish facility. The records submitted to the Department by MHI will verify this cycle.

In any event, MHI does not harvest salmon at Deenish. At the end of two-year gestation cycle, MHI transfers live salmon from Deenish to the quay at Castletownbere, where the harvesting of those salmon occurs.

Accordingly, there has been no breach of condition 2(e) of the Licence.

Without prejudice to that position, the Minister is obliged to adopt a holistic and purposive approach to interpreting compliance with the conditions of the Licence<sup>1</sup>. The purpose of this condition 2(e) is to minimise environmental impacts. MHI's practice, described above, minimises all impacts. The calendar timeframe outlined in the Licence is incompatible with the rearing cycle of a salmon whilst applying an "all in all out" production schedule as is recognised to be critical optimising the control of sea-lice (and recommended by the Marine Institute). There is surely an onus on the Department to encourage, if not insist on, the application of best available technology in the management and operation of aquaculture; specifically with the aim to minimise sea-lice.

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1. It has been recognised by the Irish courts that when considering the meaning of the language in a document that governs legal rights and obligations, including licences, the meaning of the words used must be considered in light of their context.



## 2 No breach of Licence and no impacts

MHI has engaged in aquaculture at the Deenish facility under the Licence since April 2010. You may be unaware that this Licence was previously (2001) operated in conjunction with a sister summer site licence (Travara) which was surrendered in anticipation of regularising this and other nearby licences – but this process fell apart during de-centralisation. There is abundant evidence that there have been no breaches and that the aquaculture operation is being properly maintained. By way of example only:

MHI carries out all testing required by the terms of the Licence, namely:

- Benthic Monitoring, in accordance with the specifications of the Department's *"Monitoring Protocol No 1 for Offshore Finfish Farms – Benthic Monitoring"*; and
- Water Column Monitoring in accordance with the specifications of the Department's *"Monitoring Protocol No 2 for Offshore Finfish Farms – Water Column Monitoring"*.

MHI also arranges for the management of sea-lice in accordance with the specifications of the Department's *"Monitoring Protocol No 3 for Offshore Finfish Farms – Sea-Lice Monitoring and Control"* and co-operates in the audit of its aquaculture operations in accordance with the specifications of the Department's *"Monitoring Protocol No 4 for Offshore Finfish Farms – Audit of Operations"*. The sea-lice control at this site has been exemplary with no trigger level exceedances noted by the experts, the Marine Institute, since Marine Harvest commenced operations at this site in April 2010

MHI has also attained the Aquaculture Stewardship Council's Certificate of Conformity for the Deenish facility (copy certificate dated 10 March 2015 and environmental survey carried out by Aquafact International Services Limited dated September 2016 enclosed).

The test results, audits and certification, which are all available to the Department, confirm that there have been no exceedances of limits caused by any of MHI's activities at the Deenish facility, including the transfer of salmon over 2016.

## 3 Public interest

MHI is Ireland's largest seafood company and employs 295 staff in remote communities. MHI utilises over 800 Irish suppliers for goods and services and, if one applies the Teagasc approved aquaculture multiplier of 2.27, it can be seen that the employment of approximately 1,000 persons is dependent on MHI's operations in Ireland. MHI's sales revenue for 2016 was €67 million with 83% of our fish being exported. MHI's taxes to the Irish exchequer in 2016 are estimated to be approximately €3.6 million. MHI also paid licence fees of €116,000 to the Department in 2016.

In light of the current deadlock being experienced in the existing aquaculture licensing system, MHI cannot understate the importance of being able to operate every facility for which it has permission in order to maintain our viability and levels of employment. Unlike our competing industries and sister companies in Scotland, the Faroe Isles and Norway, our production has shrunk over time and

continues to struggle for viability. Our processing plant was shut for January and February past, and for most months of the year we are not able to offer a 5 day working week to our 120 processing staff. Continuing our operation at this Deenish site is critical to MHI's overall viability and Ireland's attractiveness for further and new investment in aquaculture.

The government has commissioned a number of reports which have noted the potential of the Irish aquaculture industry. Those reports have set ambitious growth targets to develop the sector. At present, the aquaculture industry in Ireland is underperforming as a direct consequence of the inefficiencies within the current licensing system.

In this context MHI is most grateful to the Minister for having executed the Independent Aquaculture Licensing Review Group ("IALRG"), which is expected to report to the Minister in a month or so from now. We are hopeful that this group's findings will offer constructive and implementable measures to regularise our industry and bring it up to date. There must surely be a shared vision for an aquaculture industry that is fully compliant with up to date licences that are readily monitored in a transparent and sensible manner. To this end, MHI put in a very big and constructive effort to support this review as demonstrated by its submission. For your benefit we attach our submission to the Independent Review Group, in case you have thus far not had the benefit of our input.

Unless the Department is able to break through its deadlock and inability to update and grant licences in a reasonable and timely manner, this industry is doomed to fail – a concept that is surely contrary to government and the Department's policy on aquaculture. There is a view that these literal and so called technical breaches you continue to raise are a consequence of the Department's inability to take care of this industry and its needs – which includes a rational and transparent regulatory framework enabling best sustainable fish health and environmental management practices.

Any purported cessation of MHI's statutory entitlement to carry out aquaculture activities at the Deenish facility would be a disproportionate and unreasonable interference with MHI's property rights, and would not be in the public interest.

#### 4 Conclusion

In summary:

- MHI has not committed any breach of the terms and conditions of the Licence.
- The test results, monitoring reports and certification demonstrate the overall compliance of the operation.
- Without prejudice to the foregoing, the Minister does not have any entitlement to revoke the statutory entitlement conferred on MHI by section 19A(4) of the 1997 Act.

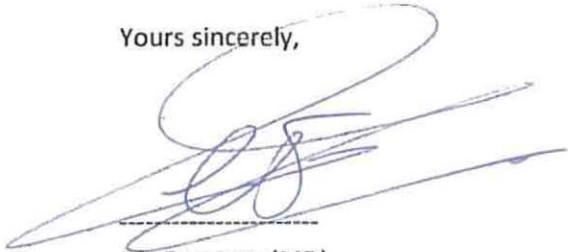
The alleged technical breaches identified by the Department ignore the scientific facts and requirements to operate a sustainable salmon farm in Ireland. This is a reflection of a defunct regulatory status which is not the fault of the industry, and so we plead with the Minister and his



Department to break through this unsatisfactory situation with the assistance of the IALRG and regularise matters, including licences such this as one. We look forward to continuing to work with the Department to bring about the necessary changes to the regulatory regime to make it fit for purpose while in the meantime maintaining the highest standards of environmental performance.

MHI trusts that the above addresses any concerns and hopes that this matter is now closed.

Yours sincerely,



Jan Feenstra (MD)

Attachments:

Previous correspondence (15/06/16 and 19/07/16)  
Professor Randolph Richards expert opinion dated 29 November 2016 and resume  
Aquaculture Stewardship Council's Certificate of Conformity dated 10 March 2015  
Environmental Survey carried out by Aquafact International Services Limited, issued September 2016  
MHI submission to Independent Aquaculture Licensing Review Group



6b



**Marine Harvest Ireland**  
Rinnore, Fanad, Letterkenny, Co. Donegal  
Telephone: +353 (0) 74 9159071  
Fax: +353 (0) 74 9159077

Mr Kevin Hodnett,  
Assistant Principal,  
AFMD,  
National Seafood Centre,  
Clonakilty,  
County Cork.

15<sup>th</sup> of June, 2016.

Ref. Your correspondence of June 23<sup>rd</sup> (site reference T6/202).

Dear Kevin,

I acknowledge receipt of your registered letter dated 23<sup>rd</sup> of June 2016 concerning our salmon farming site at Deenish, Co Cork (T6/202).

I note that your letter makes no reference to correspondence sent to Ms Nicole O'Shea of your department by our Catherine McManus dated the 1-6-16. In that correspondence Catherine set out a series of explanations demonstrating that MHI was not actually acting in breach of the licence terms and conditions attaching to T6/202. We find this omission surprising as we did set out a detailed and rational account of what led us, collectively, to the current position.

Notwithstanding this, and assuming that you continue to assert that MHI acted in breach with regard to the number of 'smolts' (despite our explanation of the meaningless nature of this colloquial and undefined term) stocked at the site on the date of the inspection by MED in July of 2015, I would make the following points;

- MHI asserts that the licence term attaching to T6/202 limiting the number of 'smolts' is anachronistic, legally and technically meaningless and its application is contrary to modern good salmon farming practice.
- The irrefutable evidence arising from the benthic impact monitoring programme is that the stocking levels at this site are and have been comfortably within the site's 'biological assimilative capacity'. Thus it is a matter of fact that no significant environmental damage has been visited on the state's foreshore by MHI's actions. Surely this demonstrates clearly and in a quantifiable fashion that the company has been acting within the spirit of the regulatory system and thereby securing the public interest.
- The department, armed with this data, can show any interested parties that it is effectively regulating the activity at the site and that it is ensuring the highest levels of environmental protection.

I am aware from our previous extensive discussions around salmon farm licensing generally that it is the view of the department that the minister's only available sanction in the event of a breach in the licence terms and conditions is licence revocation; regardless of the triviality or severity of the

alleged breach. Not having a tiered series of sanctions available to the minister is a gross flaw in the Act and it places the minister in a wholly unreasonable position, effectively pressurising him or her into taking actions which, in this instance, would result in egregious discrimination against MHI.

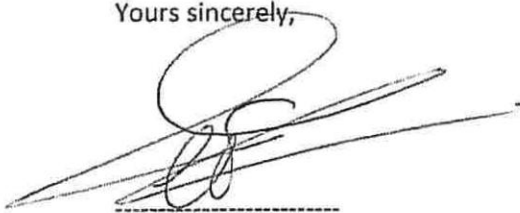
On that basis I note with horror your observation that '*...consideration is now being given to your continued entitlement to engage in aquaculture operations pursuant to Section 19(A)4 of the Fisheries Amendment Act...*'. To interfere with our entitlement to operate arising from what may be, at worst, a minor technical breach of what is an effectively meaningless licence condition would be a grossly disproportionate and unwarranted response. If the minister were to withdraw MHI's entitlement to operate at this location it would have catastrophic consequences for the company, the local economy and the industry in Ireland. If required, I am prepared, in confidence, to map out the financial and socio-economic consequences that would follow such an action being taken by the minister against MHI.

The 1997 Act does give the Minister the power to exercise discretion with regard to licence terms and conditions and we would strongly assert that this situation would merit the exercise of such discretion. We respectfully make this request as this unfortunate situation arises despite the longstanding acceptance by all associated with salmon aquaculture licensing in Ireland that the terms and conditions associated with control of stocking density are deeply flawed and have effectively become unworkable from either a practical or commercial standpoint. We did point this out in earlier correspondence of the 1.6.16 and cited the minister's own public acknowledgement of this flaw in the regime. Ireland is now out of step with every other salmon farming country in the world in this regard and an amendment to the current regime bringing in 'Maximum allowable Biomass' as the primary tool for stocking control is long overdue.

The duty to reform the regulatory regime lies squarely with the minister and on that basis the company should, in this instance, be allowed some leeway pending this necessary and long overdue system overhaul. Consequently, we make the case to the minister to exercise the discretionary powers granted to him under the act so that MHI should not suffer any undue interference with its entitlement to operate at this site arising from this unfortunate situation.

MHI wishes to make it clear that it is fully committed to compliance with all of the appropriate regulations pertaining to our sector and above all to ensure that its operations are not impacting in any significant way on the receiving environment. We look forward to continuing to work with DAFM to bring about the necessary changes to the regulatory regime to make it fit for purpose whilst maintaining the highest standards of environmental performance.

Yours sincerely,

A handwritten signature in black ink, appearing to be 'Jan CE Feenstra', written over a horizontal dashed line. The signature is stylized and somewhat cursive.

Jan CE Feenstra (MD)



60

Mr Kevin Hodnett,  
Assistant Principal,  
AFMD,  
National Seafood Centre,  
Clonakilty,  
County Cork.



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19<sup>th</sup> of July, 2016.

Ref. Supplementary information to our correspondence of July 15<sup>th</sup> concerning our sites at Deenish and Inishfarnard.

Dear Kevin,

Following our meeting last Thursday with the minister and officials from DAFM, we have reviewed our correspondence in light of the information imparted to us at that meeting and we feel it necessary to submit some further supplementary correspondence before the statutory time for response elapses.

As we have pointed out in our previous correspondence some of the terms and conditions attaching to our licences are now anachronistic and deeply counter to the original intention of the legislation governing our sector. It is the responsibility of the state and the department to take the necessary steps to keep the regulatory regime updated so that companies such as ourselves can carry out our business without being forced into impossible situations whereby we simply cannot operate without incurring the accusation of being in breach of certain inimical terms and conditions contained within the same aquaculture licence.

Given the economic importance of our activities to the localities in which we operate and the clearly demonstrable fact that we are not having any significant adverse environmental impact, there is a heavy burden of liability on the Minister and the department to maintain, and if necessary from time to time overhaul the regulatory regime so that the licence holders can operate without being forced into impossible situations never envisaged by the original legislation. That is the situation we currently find ourselves in; it is effectively impossible for us to operate, even at a minimal level without seeming to fall foul of the contradictory terms and conditions attaching to our hopelessly outmoded licences.

It thus came as a crushing disappointment to us to be told at our meeting on Thursday that the vital review of the licensing system promised in Food Wise 2025 had not been acted upon as yet. We noted that the minister stated that 'he hoped' to have the process started by the end of the year. This leaves us to have to try to carry on under the current impossible circumstances. We do not for a moment lay any blame on the Minister's shoulders as he has only just started in his new role but the delay in tackling this problem is reminiscent of the delays which led to the state being prosecuted by the EU in 1997 for failure to overhaul the licensing system to bring it into compliance with Natura 2000. The repercussions of that failure have dogged the sector ever since and are still stymying

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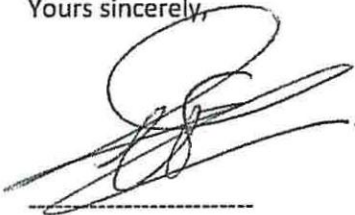
Directors: Jan Feenstra (Dutch), Pat Connors, David Brennan

development to this day. This current delay in initiating the vital review committed to in Food Wise 2025 is further evidence of ongoing failure on the part of the state and the department to fulfil its obligations to its licence holders.

On the basis that the minister, to his credit, has decided to finally initiate the long overdue review of the system we contend that no action or sanction of any kind should be taken against our company with regard to the alleged breaches in the contradictory licence terms and conditions at our sites until such time as the review has been completed and our reasonable actions in running our operations in accordance with good practice in modern salmon farming can be seen through a modern regulatory lens. Otherwise we run the risk of being sanctioned in a manner that is utterly contrary to the original intention of the legislation.

Thank you again for your interest and attention.

Yours sincerely,

A handwritten signature in black ink, appearing to be 'Jan CE Feenstra', written over a horizontal dashed line. The signature is stylized and somewhat cursive.

Jan CE Feenstra (MD)

6d

**PROFESSOR R.H. RICHARDS.** C.B.E., M.A., Vet.M.B., Ph.D., C.Biol., F.S.B., F.R.S.M., M.R.C.V.S., F.R.Ag.S., F.R.S.E.

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November 29, 2016

## ISSUES CONCERNING SITE LICENSING AT MARINE HARVEST IRELAND

### Abstract

A short review of a sample of salmon aquaculture licences held by MHI in the south west of Ireland concludes that their wording is out of date, inappropriate and contrary to supporting best practices. Using terms such as 'growers' and 'smolts' is confusing and erroneous in biological terms. It is recommended that a MAB (Maximum Allowable Biomass) should be the key parameter to limit production on all salmon production sites as is the International Standard. The MAB relates directly to the EIS (Environmental Impact Statement) and environmental loading as well as the annual benthic monitoring, while enabling market led production. Licences should promote "all in all out" and fallowing between generations of stock as opposed to being scheduled to a calendar timeframe that is unrelated to the production cycles. It is further recommended that a young industry such as aquaculture benefits from regular reviews and modifications between the regulator and licensees, as is practised in Scotland and Norway.

### Historical Perspective

The licensing of Fish Farming Sites in the marine environment has been carried out by Government Agencies since the early days of salmon farming in the 1970s. Norway pioneered these developments and initially licensed farm sites according to the allowable surface area of the ocean to be covered by pen structures. No account was taken of total numbers of fish to be stocked into the sea or total biomass to be present at a site at any one time. At that time, farmers chose to maximise production by increasing the depth of the nets being used. Significant problems were experienced with disease, in particular the bacterial disease furunculosis and the parasitic disease caused by sea lice infection. A mortality rate in excess of 50% was often experienced, causing farmers to double the number of fish stocked in anticipation of such high mortality. This often led to very high stocking densities being used, resulting, especially in inshore sites with poor water circulation, in significant deterioration of the benthic and water column quality. Subsequent control of numbers stocked or tonnage produced was used in order to avoid environmental deterioration and the risk of disease development.



It was also common practice to use inshore, protected sites to stock fish from the freshwater environment in the first year and subsequently transfer the partially grown stock to other less-protected sites for their second and even third year of sea production. The industry in both Ireland and Scotland consisted of a large number of smaller companies, usually operating independently in the same bays or bodies of water. There was little coordination of husbandry procedures such as treatment for sea lice and, as a result, disease agents often circulated around sites in the same bay. Disease control became very problematical.

### **Development of Code of Good Practice**

An outbreak of the exotic notifiable disease Infectious Salmon Anaemia in Scotland in May 1998, which resulted in the slaughter of large numbers of fish, led to the establishment of the Joint Government / Industry Working Group on Infectious Salmon Anaemia, the purpose of which was to identify the measures required to prevent or minimise the impact of further outbreaks of ISA. The conclusions of the group are presented in document number ISBN 0 7480 8950 0. Available literature on the topic was assessed and epidemiological modelling used to produce a risk assessment of husbandry procedures in use at that time and provide recommendations as to future husbandry practice. This work also formed the basis of the current Code of Good Practice for Scottish Finfish Aquaculture. The application of the principles outlined has also drastically reduced the spread of other disease conditions and forms the basis of international salmon production methodology.

### **Key principles of the Code of Good Practice**

- A general presumption against seawater to seawater movement. This may occur, exceptionally, followed the application of a documented risk assessment.
- Delineation of management areas, defined hydrologically, where ideally, all sites in a management area are controlled by a single company. If more than one company is present, a management agreement should be in place to ensure the coordination of procedures such as sea lice treatment and fallowing.
- The stocking of sites with fish from a single source, or if that proves impossible, a restricted number of sources.
- Well boat movements are also a source of transfer of infection and 'bus-stop' deliveries going from site to site are discouraged unless sites are managed by the same entity and even then, only when fish are stocked into appropriately fallowed sites.
- The use of site-specific equipment and staff and, if equipment or staff have to be shared between sites, the use of approved disinfection procedures.
- Agreed methods for monitoring and recording of sea lice numbers.

All the above have resulted in the licensing of sites being based on MAB (Maximum Allowable Biomass), established in Scotland through modelling of environmental parameters by the Scottish Environmental Protection Agency (SEPA). Ongoing monitoring takes place to ensure that the effects predicted by the model are not exceeded and involves a mixture of monitoring being carried by experts employed the aquaculture company and also by SEPA. Permissions may be adjusted according to the monitoring results. As seawater to seawater movements are



considered particularly risky, an input of fish from freshwater to a marine site usually remains at that site until harvest, unlike the earlier systems used.

### **Interaction between the aquaculture industry and government**

Scotland provides an excellent example of the development of a working relationship between government and industry regarding aquaculture.

A formal government/ industry working group was established at the time of the first outbreak of Infectious Salmon Anaemia. The group involved experts from the aquaculture industry, government health officials, academics, and other interested parties such as SEPA. The group met regularly and eventually produced an agreed detailed report and recommendations which formed the basis of the current Code of Good Practice for Scottish Finfish Aquaculture, which is regularly updated.

This was seen to be a very successful way of promoting interaction between government and industry and was followed by the Ministerial Working Group on Aquaculture which has met regularly and convenes subgroups as necessary to evaluate issues of interest or concern. This group has contributed significantly to the development of aquaculture legislation in Scotland, and particularly the Aquaculture and Fisheries (Scotland) Acts of 2007 and 2013, and the Aquatic Animal Health (Scotland) Regulations 2009. The latest Working Group to be established is the Scottish Government/Industry Working Group on Integrated Sea Lice Management in 2016.

In addition, representatives of the SSPO meet regularly (approximately monthly) with scientific staff at Marine Scotland in Aberdeen to review current issues and ensure that officials are aware of industry developments.

### **Licences currently held by Marine Harvest Ireland Ltd.**

I have been provided with historical details of licences currently held by Marine Harvest Ireland, specifically licences 198 (Inishfarnard), 199 (Deenish), and 444 D & E (Bantry Bay). The licences were originally issued to Gaelic Seafoods and subsequently transferred to Murpet, then to Silver King and eventually to Marine Harvest Ireland. Earlier licences were held by the Electricity Supply Board.

Initial terms of the licences generally included :-

- The farming of only salmon or trout.
- Allowance of passage of migratory fish and no interference with fishing or navigation.
- Chemicals and antibiotics to be controlled and recorded.
- Notification of the presence of disease or any abnormal losses.
- Disposal of dead fish according to local authority requirements.
- Application of 30 day fallowing periods.
- Notification of escapes.
- Details of benthic and water quality monitoring to be reported and reviewed.
- Details of sea lice monitoring and control.
- Sale or disposal only to be carried out with written permission of the authorities.
- Ongoing precautionary measures against algal blooms.



### Smolt Numbers and Tonnage

I note that the licences also contain details of allowable stocking in terms of either smolt numbers and/or grower production in tonnage terms in a calendar year and these figures are those allowed in the licences in 1995 and have not subsequently been modified. This takes no account of the accepted methodology of single year class stocking at a site which depends on fish remaining at the site from original input to final harvest. As explained earlier, the use of seawater to seawater movement is considered very high risk – it will increase the risk of disease spread and will also considerably stress the fish, leading to increased likelihood of disease development. I believe that the practice of rearing of stock from transfer to harvest has been carried out at these sites since before Marine Harvest Ireland acquired them, in keeping with industry norms. Should the Maximum Allowable Biomass approach be taken, following practice elsewhere, the number of smolts to be transferred from freshwater would be determined by the producer based on expected harvest weight and anticipated mortality rate during the on-growing phase at sea. A margin of error would be applied in case of unexpected losses, and if survival was higher than expected, harvest of fish earlier than expected could be undertaken in order to remain within the consented limits. Initial stocking would be based on expected market requirements and should the market change, earlier harvest could again be undertaken. The key issue is the requirement to remain within the consented maximum biomass at any time in order to avoid any possible environmental degradation.

I am not sufficiently acquainted with the marketing plans of Marine Harvest Ireland to know of their market requirements but harvesting at 4.5 kilos bodyweight with an average loss of 25% stock in the saltwater phase would be a reasonable industry average, suggesting that approximately 300 smolts would be required to be transferred from freshwater for each tonne of eventual production. This would tend to equate to the numbers of fish stocked in relation to eventual biomass at sites 444D and 444E, where 2000 tonnes would be reared at each site from an initial stocking of 600,000 fish.

The eventual tonnage produced from stocking 400,000 fish at sites 198 and 199 would be approximately 1350 tonnes, not 500 tonnes and so in this case, there is little correlation between smolt numbers and expected tonnage. Sites with as little as 500 tonnes capacity would not be justified financially in terms of the costs of boats, staff and shore support and even the 1350 tonnage seems undersized considering the very open and exposed location of these sites.

I also believe that the terminology used in the licences is confusing and erroneous in biological terms. The definition of a smolt applies only to a fish in freshwater which has adapted to allow it to be transferred to saltwater through changes in gills and kidney. The basic changes include the development of 'chloride cells' in the gills to allow active transport of sodium and chloride ions out of the gill and changes in the glomerulus of the kidney which lead to a decreased glomerular filtration rate and decreased urine production. The fish are recognised by aquaculturists and fisheries biologists by the silvered appearance of the skin and testing is carried out to determine whether fish to be transferred are capable of adapting to the saltwater environment. Fish in saltwater should all be considered as 'salmon' or 'growers'. It could be that the use of 'smolts' was meant to indicate the number of smolts to be transferred from fresh water, but at sites 444D and 444E, there is no meaningful relationship between numbers of smolts consented and tonnage consented. As there is no certain means of establishing the final

tonnage that will result from stocking with a given number of smolts, then allowable biomass is a much more meaningful measure. The maximum allowable biomass (MAB) would also be relevant to stocking biomass at any time in the cycle in the sea, whereas total tonnage allowed may be interpreted as a total maximum tonnage to be produced in a calendar year rather than that being held at any point in time. This is the current state of the licences at sites 198 and 199 which stipulate tonnage on a calendar year basis and take no account of the total harvest taking place in year 2 in the sea.

The MAB can be calculated for each site by using the environmental impact statements submitted by the aquaculture producers to the authorities as part of the licence requirements.

### **Fallowing**

It is also important to remember that the period of time that fish would be expected to remain at an individual site would be close to two years and would then result in triggering the fallow process. This does not equate to annual fallowing as is possibly suggested in the current licences, which would result in movement of fish at sea, producing considerable stress and the increased risk of disease development.

There is an increasing tendency to use heat and light control in hatcheries in order to produce larger smolts and thus reduce the timescale of the marine phase of production.

My personal opinion would be that it is necessary to modify the licences to allow stocking to be based on Maximum Allowable Biomass and allow fallowing to be carried out at the end of the production cycle, as is practised in other countries. Synchronous fallowing should also be undertaken in an individual management area.



Professor Randolph Richards.



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November 29, 2016

Professor Randolph H. Richards.  
Expertise in Aquaculture and links to Irish Aquaculture.

Please see the attached curriculum vitae for further details.

I qualified as a veterinary surgeon from the University of Cambridge in 1972 and have worked at the Institute of Aquaculture at Stirling University since 1973 until the present time. I carried out a PhD on Fish Disease between 1973 and 1979, was the deputy-director of the Unit of Aquatic Pathobiology and then the Institute of Aquaculture between 1976 and 1996 and was the Director of the Institute of Aquaculture between 1996 and 2009.

My work has concentrated on international aquaculture development and particularly disease control, both as an academic running major multinational projects and training large numbers of Masters and PhD students, but also working in very close association with the developing aquaculture industry. A particular interest was the development of disease diagnostic services for the industry and advising industry associations.

In Scotland, I have acted as Research Director of the Scottish Salmon Growers Association between 1986 and 1989 and since 1989 have been the Veterinary Adviser of the Scottish Salmon Growers Association. I have also been Director of a number of Aquaculture companies.

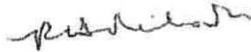
In the Irish context, I worked closely with a large number of Irish Aquaculture companies such as Fanad and the Electricity Supply Board, particularly during the 1980s and was a board member of the Disease Committee of the Irish Aquaculture Association. I also acted as a Director of Aquahatch (Ireland) Ltd and was Director of the Salmon Fisheries Disease Diagnostic Services (Irish Aquaculture Association). During this period, I also held regular meetings with NADCORP (the National Development Organisation). I also have particularly strong links with the Aquaculture Insurance Industry and have been involved in the investigation of many insurance claims in Ireland.



[Type text]

I have been a member or chair of many government/industry working groups in the UK and Europe and of particular relevance to Ireland, I was rapporteur to the DG Fish working group on EU regulations on organic aquaculture.

My experience and expertise have been recognised with the award of many honours, of particular note being the award of the CBE in the Queen's birthday honours list for services to veterinary science and the Aquaculture Today award for personal contribution to global aquaculture, both in 2008; the Award for Excellence in European aquaculture from FEAP (Federation of European Aquaculture Producers) in 2009; and the award of the Royal College of Veterinary Surgeons Queen's Medal in 2016 for outstanding contribution to aquaculture.



Professor Randolph Richards



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# CERTIFICATE OF CONFORMITY

This is to certify that the aquaculture operation of:

## Marine Harvest Ireland

Site: Deenish Farm Site

Head Office: Rinmore, Ballylar, Letterkenny, Co. Donegal

*Has been evaluated by SAI GLOBAL Assurance, ASI Accreditation Code ASC-ACC-006, and found to comply with the requirements of the Aquaculture Stewardship Council (ASC):*

### ASC Salmon Standard Version 1.0 June 2012

*For the following Scope:*

#### Production of Atlantic Salmon

*Point at which certified products may enter a Chain of Custody:*

**Where salmon is entering harvest and processing line directly.**

*For the full list of product groups covered please refer to: <http://www.asc-aqua.org/finalfarmauditreports>*

Certificate No: ASC-SAI-005 (Issue 0.0)

Certificate Issue Date: 10<sup>th</sup> March 2015

Certificate Expiry Date: 9<sup>th</sup> March 2018



Aquaculture  
Stewardship  
Council

Signed on behalf of SAI Global Assurance:

Mr Bill Paterson, General Manager

The validity of this certificate shall be verified on <http://www.asc-aqua.org/finalfarmauditreports>

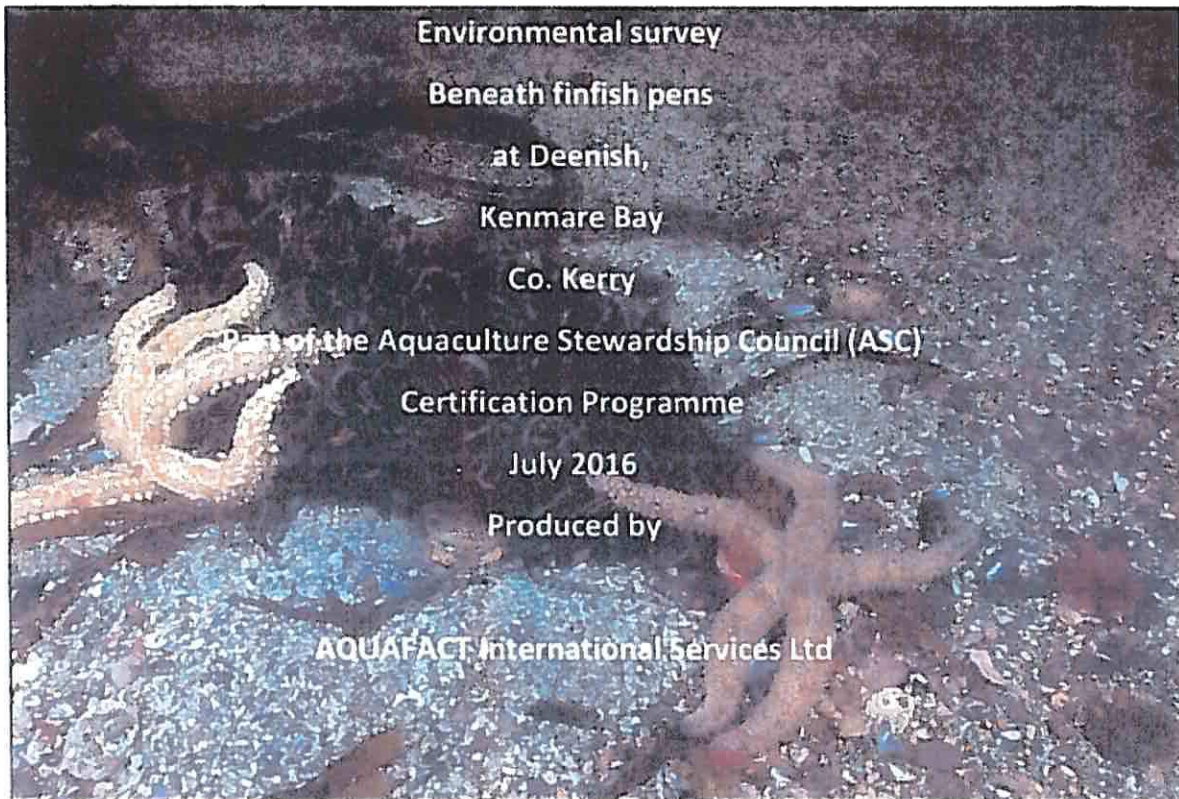
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# AQUAFACT



On behalf of

Marine Harvest Ireland

Issued September 2016

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## Executive Summary

AQUAFACT surveyed nine stations at a salmon aquaculture site operated by Marine Harvest Ireland Ltd. off Deenish Island on the 20<sup>th</sup> of July 2016. The survey was part of the Aquaculture Stewardship Council certification scheme followed by Marine Harvest Ireland Ltd. More specifically, the survey assessed the benthic environment to determine if the requirements for Criterion 2.1 'Benthic biodiversity and benthic effects' were met at the time of the survey in 2016. Station layout took into consideration a standard Allowable Zone of Effect (AZE) of 30 m around the fish holding pens.

The requirement for Indicator 2.1.1 (redox potential  $>0$  mV at 2 cm sediment depth) was met at the stations outside the AZE where it could be measured using a redox probe (ASC- 6, ASC-8, ASC-9). The coarseness of the substratum did not allow measurement with the probe at the other stations. Although supporting sediment profile images (SPI) showed low penetration, visual observation clearly suggested that the minimum redox depths of 2cm were achieved at all stations outside the AZE as required. The requirement for Indicator 2.1.2 was met at all stations outside the AZE using the AMBI score (AMBI scores  $\leq 3.3$ ). All stations yielded sufficient numbers of non-pollution indicator species at frequencies of  $\geq 100/m^2$  (or equally high to the reference site if natural abundance is lower than this level) and, thus, the requirements for Indicator 2.1.3 were achieved.

The ASC Standard for Criterion 2.1 Biodiversity and benthic effects was met for Indicators 2.1.1 and 2.1.2 and consequently the results of the benthic audit indicate that the Deenish site is in compliance with the benthic requirements of the Aquaculture Stewardship Council certification scheme.

Table 1.1 summarises the results for each station.

**Table 1** ASC benthic survey summary results, Deenish finfish site, Kenmare Bay.

	<b>Position relative to AZE</b>	<b>Redox (mV) Sample A</b>	<b>Redox (mV) Sample B</b>	<b>AMBI Score</b>	<b>No. of non-pollution indicators</b>
S1	Inside	N/A	N/A	3.51	10
S2	Inside	N/A	N/A	4.68	14
S3	Outside	N/A	N/A	2.93	18
S4	Inside	-0.03	N/A	3.27	9
S5	Inside	75	N/A	3.02	18
S6	Outside	34	N/A	3.02	14
S7	Inside	120	N/A	1.74	15
S8	Outside	72	665	1.83	7
S9 REF	Outside	660	975	1.70	24

## 1. Introduction

This report documents the environmental conditions of the seabed at a Marine Harvest Ireland finfish (Atlantic salmon *Salmo salar*) aquaculture site in Kenmare Bay, Co. Kerry recorded during SCUBA surveys undertaken by AQUAFACT on 20<sup>th</sup> July 2016 (Figure 1).

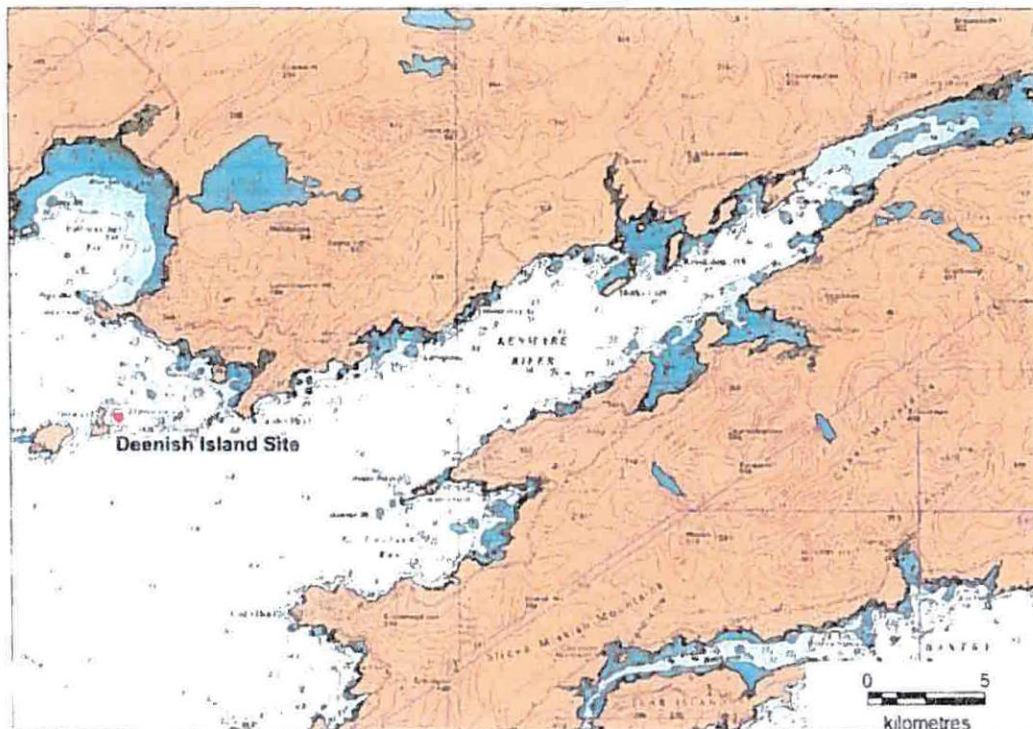


Figure 1 Map showing the location of the aquaculture site off Deenish Island (Kenmare Bay) surveyed by AQUAFACT on 20<sup>th</sup> July 2016 by AQUAFACT Ltd. as part of the ASC audit and certification system.

### 1.1. *The Aquaculture Stewardship Council (ASC) Salmon Standard*

The aim of the ASC Salmon Standard is to minimise the potential negative effects of salmon aquaculture on the environment and society, while permitting the salmon farming industry to remain economically viable. Although the ASC Salmon Standard will be applicable at the farm level, it will also help protect



and maintain ecosystem function and ecosystem services in salmon producing areas, with the recognition that aquaculture operations are not solely responsible for total ecosystem health.

The ASC Salmon Standard is defined by eight principles:

1. Principle: Comply with all applicable national laws and local regulations
2. Principle: Conserve natural habitat, local biodiversity and ecosystem function
3. Principle: Protect the health and genetic integrity of wild populations
4. Principle: Use resources in an environmentally efficient and responsible manner
5. Principle: Manage disease and parasites in an environmentally responsible manner
6. Principle: Develop and operate farms in a socially responsible manner
7. Principle: Be a good neighbour and conscientious citizen
8. Principle: Standards for the suppliers of smolt

The second principle consists of five criteria and the fulfilment of Criterion 2.1 'Benthic biodiversity and benthic effects' was the purpose of the benthic surveys conducted by AQUAFAC<sup>T</sup> Ltd. The findings of the assessment are presented and discussed in this report.

### **1.2. Basis of the Standard**

There is a concern in finfish pen aquaculture that waste organic material falling from the suspended pens would accumulate on the sea or lake bed, especially when it consists of soft sediment (*e.g.* silt). Although this fine organic waste may constitute a potential food source for natural filter feeding and deposit feeding fauna living in the sediment, it could also lead to an undesired change in species composition and biodiversity. As the organic waste accumulates it decays, potentially rendering the deeper layers of the sediment anaerobic, which in turn can eliminate naturally occurring species, particularly those regarded as sensitive to pollution or organic enrichment. In addition, the lack of oxygen could result in the generation of hydrogen sulphide (H<sub>2</sub>S), which is also toxic to marine organisms. The chemical condition in the sediment is regarded as 'reduced' due to the deficiency in oxygen as measured by its redox potential. The presence of H<sub>2</sub>S can also be visually detected by the presence of layers of black (reduced) sediment and the smell of rotten eggs when such sediment is returned to the surface.

There are two potential chemical indicators of the low oxygen (*i.e.* reduced conditions), namely the redox potential and the sulphide concentration. In addition, changes in the natural benthic community can indicate the overall impact on the benthic environment caused by the accumulation of organic material from the finfish pens, conditions which are to be avoided. Therefore, the four Indicators under Criterion 2.1 (Benthic biodiversity and benthic effects) are aimed at measuring the extent to which any organic material originating from the pen culture is causing changes to the sea bed communities. Nonetheless, it should be noted that such anaerobic conditions can occur naturally or may be due to other causes beyond the farm and, consequently, any potential impacts from the fish farm operations would need to be assessed in relation to the existing reference conditions outside the farm area.

The four indicators used to assess Criterion 2.1 are discussed in the following subsections.

#### **1.2.1. Indicator 2.1.1 Redox Potential**

The redox potential or sulphide levels in the sediment outside of the Allowable Zone of Effect (AZE) must be measured. The redox potential values give an indication of the degradation of sediment conditions due to decomposition of excess organic material which can come from the pens above. As the decomposition progresses oxygen becomes progressively scarce in the water within the sediment, which can become anaerobic. Anaerobic bacteria continue the process creating progressively reduced conditions leading to an 'oxygen debt' and, ultimately, acidic conditions in the sediment. These conditions are indicated by the redox potential which is to be measured in duplicate at nine stations (giving 18 analyses). The acceptable Standard is >0mV at 2.0 cm below the sediment surface. Sediment profile images are also taken to assess the apparent redox potential discontinuity (ARPD) for comparison. There is a general agreement of a high concordance between apparent redox depths taken using SPI and redox potential values (Diaz and Trefry, 2006).

#### **1.2.2. Indicator 2.1.2 Faunal Index Score**

Four options of faunal indicators can be used in the ACS Standard, all based on the relative numbers of animals for each species from a measured area expressed per m<sup>2</sup>. Two faunal index scores (out of the total of four suggested by the ASC Guidelines) were chosen for this assessment: the **Shannon Weiner Index** and the **AZTI marine biotic index (AMBI)**. Both of these indices are calculated using the faunal

abundance data returned from the duplicate sampling at the same nine sites used for the calculation of the redox potential.

The **Shannon-Weiner Index** is regarded as diversity index. It is a relatively simple index because the taxa do not have to be named, just separated and counted. When plotted on a ranked basis with the first taxon (*i.e.* species, genus) being the commonest, a steep fall in the numbers for the remaining taxa and a low number of taxa would indicate low benthic diversity, usually associated with impacted conditions. A lower decrease in the number of individuals per taxon and with a wider range of species indicates a more diverse community, a concept usually associated with a more 'healthy' community. The standard requires Shannon Weiner index values above 3.

The **AZTI marine biotic index (AMBI)** was developed to indicate disturbance by organic enrichment and it is a measure of the overall pollution sensitivity of a benthic assemblage (Muxika *et al.*, 2005). Taxa (generally identify to species or genus) are assigned to one of five ecological sensitivity groups (from disturbance-sensitive to pollution-tolerant or opportunistic), the AMBI being subsequently calculated as a weighted average of the sensitivity scores. Assemblages with a high proportion of sensitive taxa are indicative of areas with low levels of disturbance, whilst sites dominated by opportunistic taxa could reflect impacted areas. The ASC Standard requires the AMBI score to be 3.3 or below.

#### **1.2.3. Indicator 2.1.3 Macrofaunal Taxa**

Taxa regarded having a frequency greater than 100 individuals per m<sup>2</sup> (or equally high to the reference site if natural abundance is lower than this level) should be identified. Amongst these the standard states that there should be at least two or more taxa which are not pollution indicators (non-pollution indicator species are those species which are sensitive to, indifferent to and tolerant of organic enrichment, *i.e.* AMBI Groups I, II and III; see Borja *et al.*, 2000).

#### **1.2.4. Indicator 2.1.4 Definition of Site-Specific AZE**

At the commencement of the Standard the 30m AZE was a pragmatic working estimate. It is anticipated that within the first three years of the standard a more exact, site specific assessment will be made,



which will take into account a number of factors such as current and wind that will enable this to be done more exactly. This has been the case for the site operated by Marine Harvest Ireland Ltd. at Roancarriag, Co. Cork, where a site-specific AZE (AZE) has been calculated (RPS, 2016). The AZE was determined using Gaussian distribution models based on the corner co-ordinates of the site, site configuration and its hydrodynamic characteristics. With regards to the Deenish site, the 30 m AZE was used during the 2016 assessment.

## 2. Sampling Procedure & Processing

### 2.1. Site description and conservation status

The site surveyed on July 2016 was located off Deenish Island, in Kenmare Bay, southwest Ireland. Kenmare Bay, Co. Kerry, is a long and narrow, south-west facing bay. It is a deep, drowned glacial valley and the bedrock forms reefs along the middle of the bay throughout its length. Exposure to prevailing winds and swells at the mouth diminishes towards the head of the bay while numerous islands and inlets provide further areas of additional shelter.

Deenish Island is part of two Natura 2000 sites, namely the Kenmare River cSAC (Site code: 002158) and the Deenish Island and Scariff Island SPA (Site code: 004175).

The diversity of environmental conditions, from exposed to ultra-sheltered, that characterises Kenmare River cSAC results in the presence of a wide range of marine habitats including three listed on Annex I of the EU Habitats Directive, namely reefs, large shallow bay and caves. According to the cSAC site synopsis (available from [www.npws.ie](http://www.npws.ie)) Kenmare Bay is host to a high number of rare and notable marine species present (24) and some uncommon communities. The Kenmare River cSAC is the only known site in Ireland for the northern sea-fan, *Swiftia pallida* and is the only known area where this species and the southern sea-fan *Eunicella verrucosa* co-occur. Midway along the south coast of Kenmare River, a series of sea caves stretch back into the cliff, typically supporting a diversity of epifauna including encrusting sponges, ascidians and bryozoans.

Deenish Island and Scariff Island are small to medium size islands situated between 5 and 7 km west of Lamb's Head off the Co. Kerry coast and thus very exposed to the force of the Atlantic Ocean. The site is a Special Protection Area (SPA) under the E.U. Birds Directive due to its special conservation interest for



seabirds including fulmar, Manx shearwater, storm petrel, lesser black-backed gull and Arctic tern. Scariff is the larger of the two islands, with very steep sides rising to a peak of 252 m with the highest cliffs located on the south side. Deenish is less rugged than Scariff, and rises to 144 m in its southern half; the northern half being lower and flatter. The vegetation is mostly grassland, with some heath occurring on the higher ground. Old fields are now overgrown with bracken and bramble. The sea areas within a 500m radius of both islands are included inside the SPA boundary to provide a 'rafting' area for shearwaters.

## 2.2. Benthic survey

Survey work took place on the 20<sup>th</sup> of July 2016. The dive at the Deenish Island site was conducted at a maximum depth of 21 m. Pen layouts at the time of survey and benthic grab stations are displayed in Figure 2. Table 2 shows the dGPS coordinates of the sampling stations. Duplicate samples were collected at each of the nine quantitative benthic station. Sampling was carried out near peak pen biomass of the production cycle.

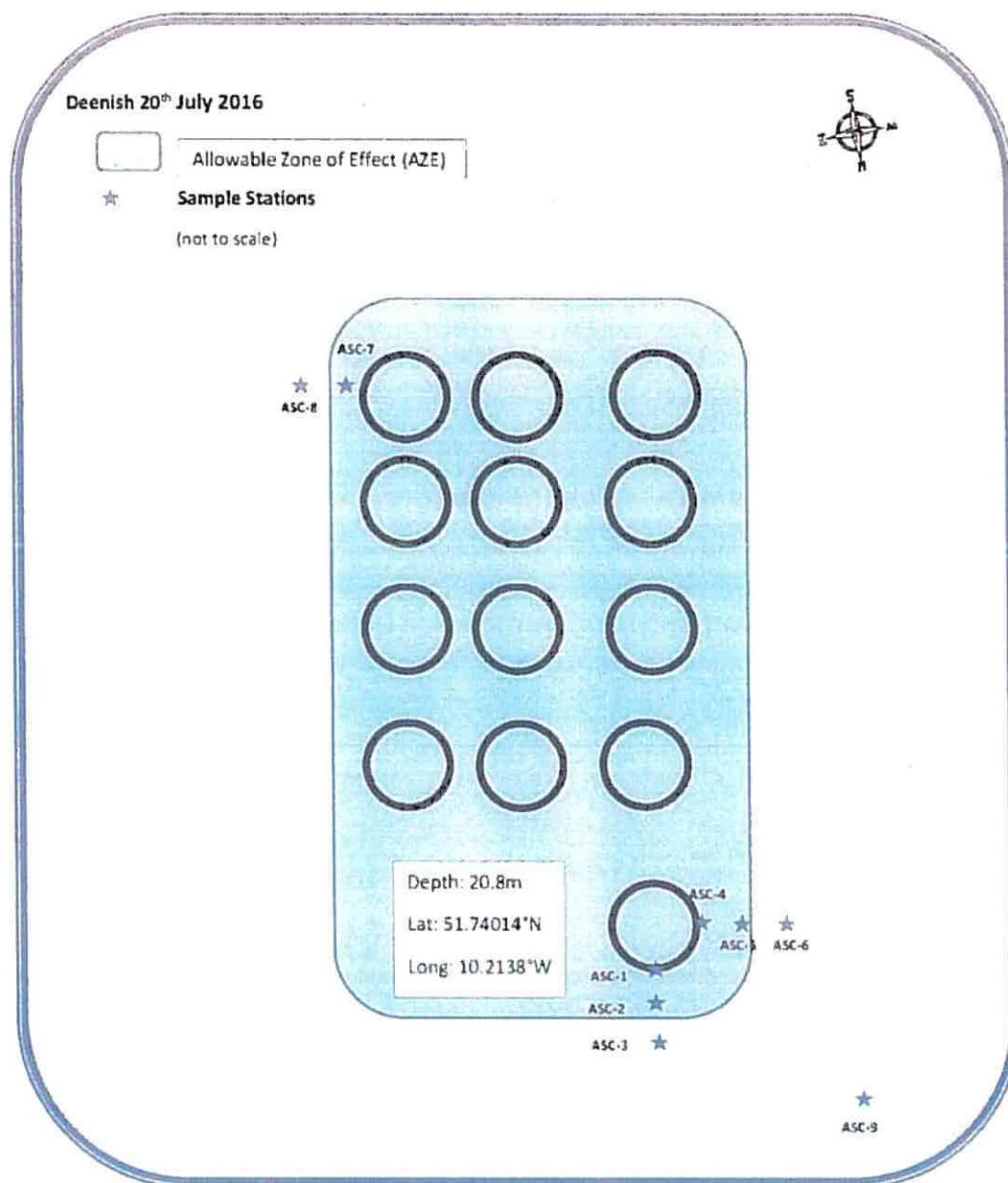
The sampling regime was conducted as follows:

- Two stations were sampled at the edge of the pen (Stations ASC-1 and ASC-4);
- Three stations were sampled inside the AZE; Stations ASC-2, ASC-7 and ASC-5, due to the rocky nature of the southern side of the site, Station ASC-7 was located to the side of the site rather than the south end (see Figure 2) ;
- Three stations were sampled in the same arrangement as above but at a distance of 20m outside the AZE (Stations ASC-3, ASC-6 and ASC-8);
- The Reference station (Station ASC-9) was located *ca.* 200m to the north-west of the pen. This reference station was well outside the AZE and of similar benthic conditions as those stations outside the pen edges.

A 0.025 m<sup>2</sup> van Veen grab was used to collect the duplicate benthic samples from each station. A redox probe with a platinum ring indicator attached to a portable pH/Redox meter (calibrated in mV along with a silver/silver chloride reference electrode) was used to measure the redox potential of each sediment sampled retrieved by the grab. However, the coarse nature of the seafloor at the Deenish site (cobble and gravel) was not suitable for readings with the probe at all stations. Thus, for a number of

stations, the redox depth could only be determined by means of *in situ* visual observations and the Sediment Profile Imagery (SPI). Details of the SPI can be seen in Appendix 1. SPI is one of the methods recommended by the Irish Department of Agriculture, Fisheries and Food and Irish Marine Institute to determine the apparent redox potential depth (aRPD) as part of their fish farm benthic monitoring protocols (DAFF, 2008).

Each grab sample was washed through a 1 mm mesh sieve, stained with Rhodamine dye, fixed with 10% buffered formalin. Upon return to the laboratory all samples were then sorted under a microscope (x 10 magnification) into four main groups: Polychaeta, Mollusca, Crustacea and others (*e.g.* echinoderms, nematodes, nemerteans, cnidarians and other lesser phyla) and preserved in 70% ethanol. The taxa were then identified to species level where possible. All names were checked against the World Register of Marine Species (WoRMS; <http://www.marinespecies.org/>).



**Figure 2** Schematic drawing showing salmon holding pens layout, the AZE and the stations sampled during the 20<sup>th</sup> July 2016 ASC benthic monitoring survey at the Deenish Island finfish aquaculture site operated by Marine Harvest Ireland Ltd. in Kenmare Bay. The drawing is only indicative and it is not to scale.

**Table 2** Coordinates for stations sampled at the Deenish Island finfish aquaculture site operated by Marine Harvest Ireland Ltd. in Deenish Island, Kenmare Bay.

Station	Latitude	Longitude	Distance from cage edge (m)
1	51.74039°N	10.21311°W	0
2	51.74062°N	10.21305°W	20
3	51.74089°N	10.21302°W	50
4	51.74016°N	10.21316°W	0
5	51.74011°N	10.21350°W	10
6	51.74007°N	10.21393°W	50
7	51.74007°N	10.21025°W	20
8	51.73822°N	10.20978°W	50
9	51.74149°N	10.21315°W	150

### 2.3. Data Analysis

The faunal replicates for each station were combined and the numbers of individuals for each taxa adjusted to densities (Individuals per m<sup>2</sup>) by dividing them by 0.05 (representing the 0.05 m<sup>2</sup> of seafloor sampled by the Van Veen grabs). A data matrix of all the faunal density data was compiled for the univariate and multivariate statistical analyses carried out using PRIMER<sup>®</sup> (Plymouth Routines in Multivariate Ecological Research).

A suite of diversity indices were calculated on the combined replicate data for each sampling station using the DIVERSE package in Primer, including:

- Total abundance of individuals (N);
- Total number of taxa (S);
- Margalef's species richness index (d):

$$d = \frac{S - 1}{\log_2 N}$$

- Shannon-Wiener diversity index (H') :

$$H' = - \sum_{i=1}^S p_i (\log_e p_i)$$



where  $p_i$  is the proportion of the total count accounted for by the  $i^{\text{th}}$  taxa

- Pielou's Evenness index (J):

$$J = \frac{H'(\text{observed})}{H'_{\max}}$$

where  $H'_{\max}$  is the maximum possible diversity which could be achieved if all species were equally abundant ( $= \log_e S$ ). Evenness is a measure of how evenly the individuals are distributed among different species, *i.e.* benthic assemblages with low evenness are dominated by few taxa while assemblages of high evenness are characterized by similar numbers of individuals in each taxa recorded.

PRIMER (Clarke and Gorley, 2006) was used to carry out multivariate analyses on the station-by-station faunal data. Data was truncated to eliminate spurious results and ease the ecological interpretation of multivariate analyses results, *e.g.* indeterminate nemertean (e.g. A, B, etc) were merged into one taxa Nemertea indeterminate, while species such as harpacticoids were removed since they are easily missed during the sorting process and are usually associated with drift algae adding undesired variance to the data. All species abundance matrix was fourth root transformed to down-weight the importance of several abundant taxa and thus allow the mid-range and rarer species to play a part in the similarity calculation. The transformed data matrix was used to prepare a Bray-Curtis similarity matrix, also in PRIMER, prior to the classification and cluster analysis. The aim of the cluster analysis was to find 'natural groupings' of samples, *i.e.* samples within a group that are more similar to each other, than they are similar to samples in different groups (Clarke and Gorley, 2006). The PRIMER® program CLUSTER carried out this analysis by successively fusing the samples into groups and the groups into larger clusters, beginning with the highest mutual similarities then gradually reducing the similarity level at which groups are formed. The result was represented graphically in a dendrogram, the x-axis representing the full set of samples and the y-axis representing similarity levels at which two or more groups are joined.

The CLUSTER routine, also in PRIMER, was set to include a series of 'similarity profile' (SIMPROF) permutation tests to provide statistical evidence of significant clusters between samples which are *a priori* unstructured. SIMPROF performs tests at every node of a completed dendrogram to assess if the group being sub-divided has statistically significant internal structure. The test results are displayed in a colour convention on the dendrogram plot (samples connected by red lines cannot be differentiated at the 5% significance level).

The Bray-Curtis similarity matrix was also subjected to a non-metric multi-dimensional scaling (nMDS) algorithm using the PRIMER program MDS. This routine produces an ordination whereby the placement of samples reflects the similarity of their biological communities (Clarke and Gorley, 2006). The stress values of an nMDS give an indication of how well the multi-dimensional similarity matrix is represented by the two-dimensional plot. They are calculated by comparing the interpoint distances in the similarity matrix with the corresponding interpoint distances on the 2-d plot. Perfect or near perfect matches are rare, especially in the absence of a single overriding forcing factor such as an organic enrichment gradient. Stress values increase not only with the reducing dimensionality (lack of clear forcing structure), but also with increasing quantity of data (it is a sum of the squares type regression coefficient). The reliability of the nMDS plots is based on the stress values obtained (Clarke and Gorley, 2006), whereby:

- Stress value < 0.05: Excellent representation of the data with no prospect of misinterpretation;
- Stress value < 0.10: Good representation, no real prospect of misinterpretation of overall structure, but very fine detail may be misleading in compact subgroups;
- Stress value < 0.20: This provides a useful 2-d picture, but detail may be misinterpreted particularly nearing 0.20;
- Stress value 0.20 to 0.30: This should be viewed with scepticism, particularly in the upper part of the range, and discarded for a small to moderate number of points such as < 50;
- Stress values > 0.30: The data points are close to being randomly distributed in the 2-d ordination and not representative of the underlying similarity matrix.

AZTI Marine Biotic Index (AMBI) scores were calculated using AZTI's AMBI programme (<http://ambi.azti.es/>). Each taxon was assigned to one of five possible ecological sensitivity groups (from disturbance sensitive to pollution tolerant or opportunistic species) and the AMBI was calculated as a weighted average of the sensitivity scores. Assemblages with high proportions of sensitive taxa (Type I) are indicative of areas with low levels of disturbance, whilst sites dominated by opportunistic taxa reflect impacted areas. The AMBI was developed to indicate disturbance by organic enrichment (Muxika *et al.*, 2005). The identification of non pollution indicator taxa (Indicator 2.1.3) was undertaken following the latest AMBI species sensitivity group assignation (November 2014; available from <http://ambi.azti.es/>).

### 3. Results

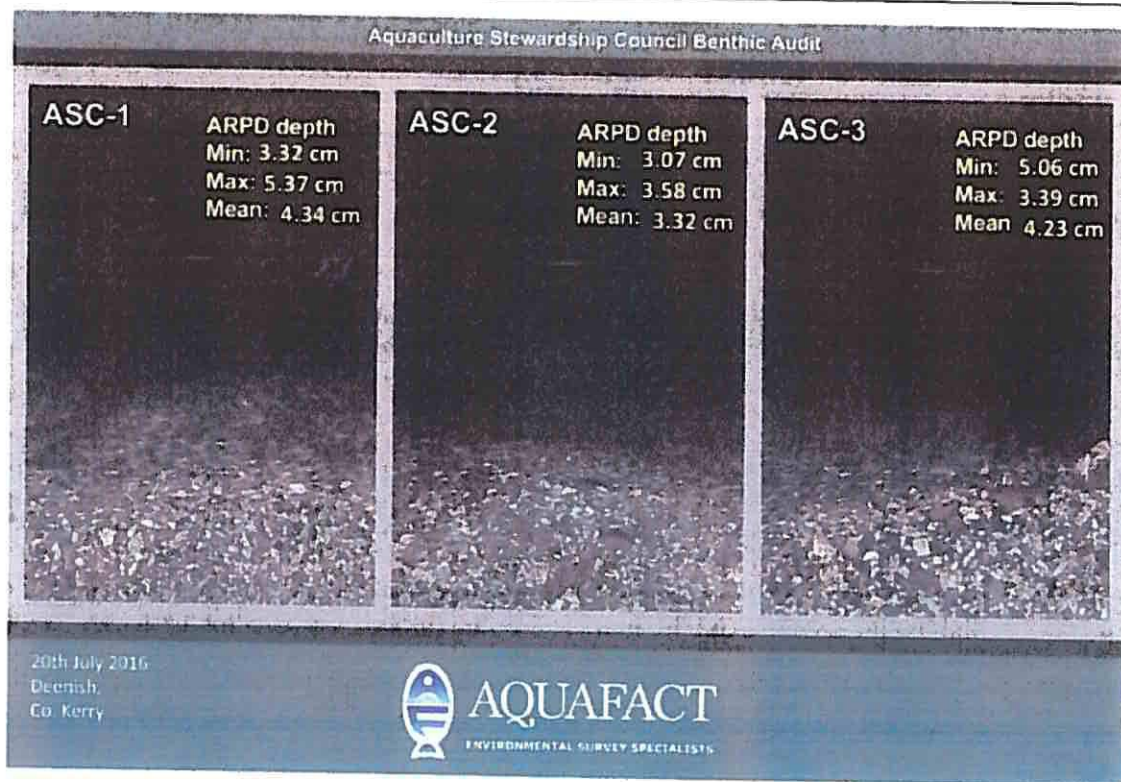
#### 3.1. Redox Potential

Seafloor sediment consisted of gravel and coarse sand covered by a thin layer of silt under and near the aquaculture cages. Station ASC-6 (20 m outside the AZE, in a perpendicular direction to the prevalent current) was dominated by coarse sand. Diver SPI prism penetration was very poor due to the coarse nature of the seafloor. Therefore, if not clearly visible, the ARPD was considered to be deeper than the maximum penetration achieved by the SPI camera .

Redox potential values outside of the AZE were above 0 mV at 2 cm sediment depth in all sediment samples where the probe was operable (stations ASC-4 to ASC-9; Table 1).

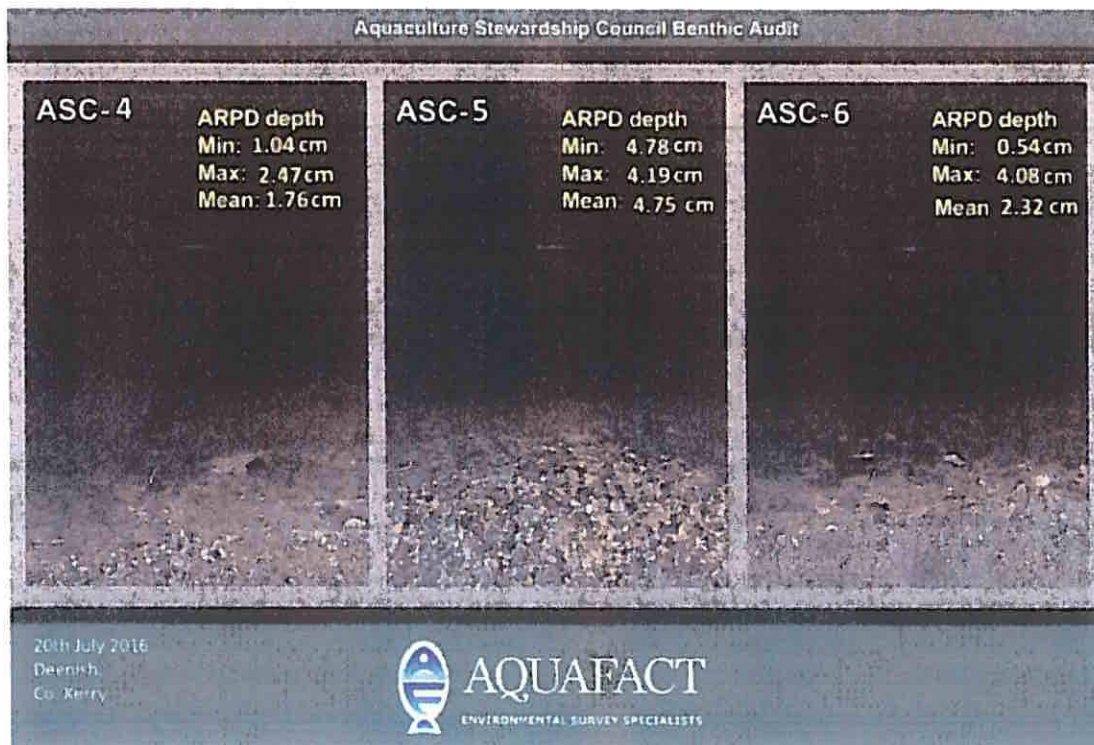
The photographs of the profiled seafloor (Figures 3 to 5) showed well sorted sediment (gravel) with undefined ARPD but overall prevailing oxygenated conditions at most stations including the distant reference station ASC-9. Slightly reduced sediment (grey in colour) was only visible at Station ASC-6, where coarse sand was the dominant size fraction. Mean ARPD depths ranged from more than 1.76 cm (Station ASC-4; Figure 4) to more than 7.80 cm (Station 9; Figure 5). These results indicate that, on 20<sup>th</sup> July 2016, the requirements of the ASC standard for Indicator 2.1.1 were met at the Deenish site in 2016.



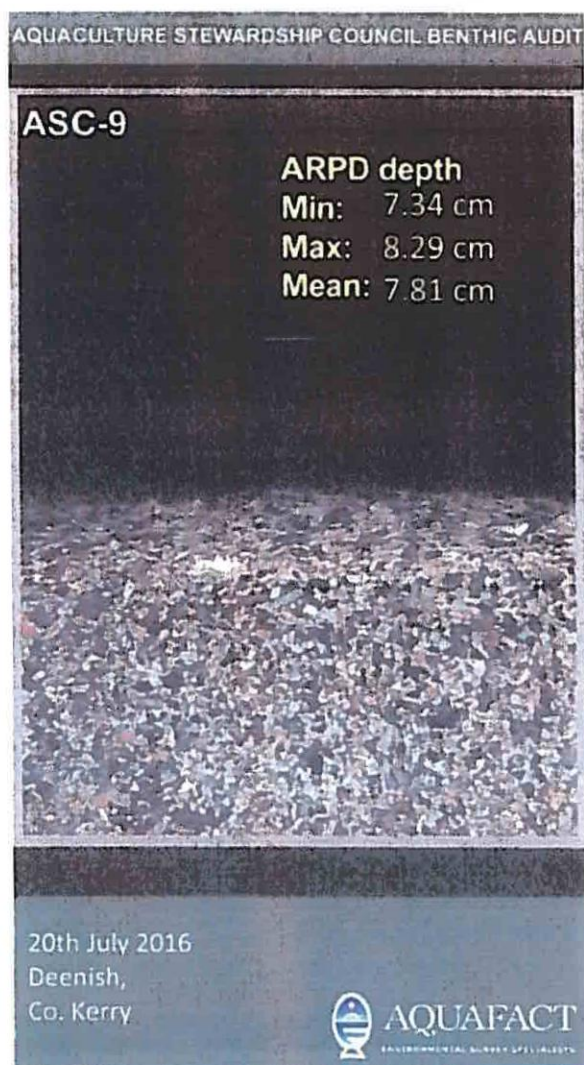


**Figure 3** SPI images and corresponding ARPD depths from Stations ASC-1 to ASC-3. Deenish Island finfish aquaculture site, Kenmare Bay, surveyed on 20<sup>th</sup> July 2016.





**Figure 4** Diver SPI images and corresponding ARPD depths from Stations ASC-4 to ASC-6. Deenish Island finfish aquaculture site, Kenmare Bay, surveyed on 20<sup>th</sup> July 2016.



**Figure 5** Diver SPI image and corresponding ARPD depths at Station ASC-9 (Reference station), Deenish Island finfish aquaculture site, Kenmare Bay, surveyed on 20<sup>th</sup> July 2016.

### 3.1.1. Benthic Macrofaunal Analysis

The taxonomic identification of the benthic samples collected at the Deenish fish farm site yielded a total of 186 taxa before data truncation. The taxa identified were ascribed to 8 phyla, namely: Mollusca (40), Annelida (81), Arthropoda (43), Echinodermata (14), Porifera (1), Cnidaria (1), Nemertea (2), Nematoda (1), and Chordata (2). Of the 186 taxa present, 138 were identified to species level, the

remaining 48 being juveniles or partially damaged specimens and thus impossible to identify to the lowest possible taxonomic level. A complete listing of the taxa abundance is provided in Appendix 2.

### 3.1.1.1. Univariate Analysis (including Shannon Weiner Diversity Index)

Univariate statistical analyses were carried out on the faunal abundance data for each station sampled, *i.e.* merging replicates A and B. All abundances were expressed as individuals per m<sup>2</sup> for each taxa. Taxon numbers ranged from 32 (Station ASC-1) to 70 (Station ASC-9). Numbers of individuals ranged from 2,740 (Station ASC-5) to 294,900 (Station ASC-5). Margalef's richness (d) ranged from 2.61 (Station ASC-1) to 7.02 (Station ASC-9). Pielou's evenness (J) ranged from 0.07 (Station ASC-5) to 0.88 (Station ASC-8). Shannon Weiner diversity (H') ranged from 0.28 (Station ASC-5) to 3.37 (Station ASC-8). Benthic diversity was variable, with the richest stations located along the most distant transect (ASC-8) and the reference station (ASC-9). Only those stations (ASC-8 and ASC-9) conformed to the Shannon-Wiener faunal index score outside the AZE required to comply with the requirements for Indicator 2.1.2 (*i.e.* H' > 3, see Table 3). Shannon-Wiener Index values were very low at all other stations outside the AZE (ASC-3 and ASC-6) and in all cases under the ASC requirement (Table 3).

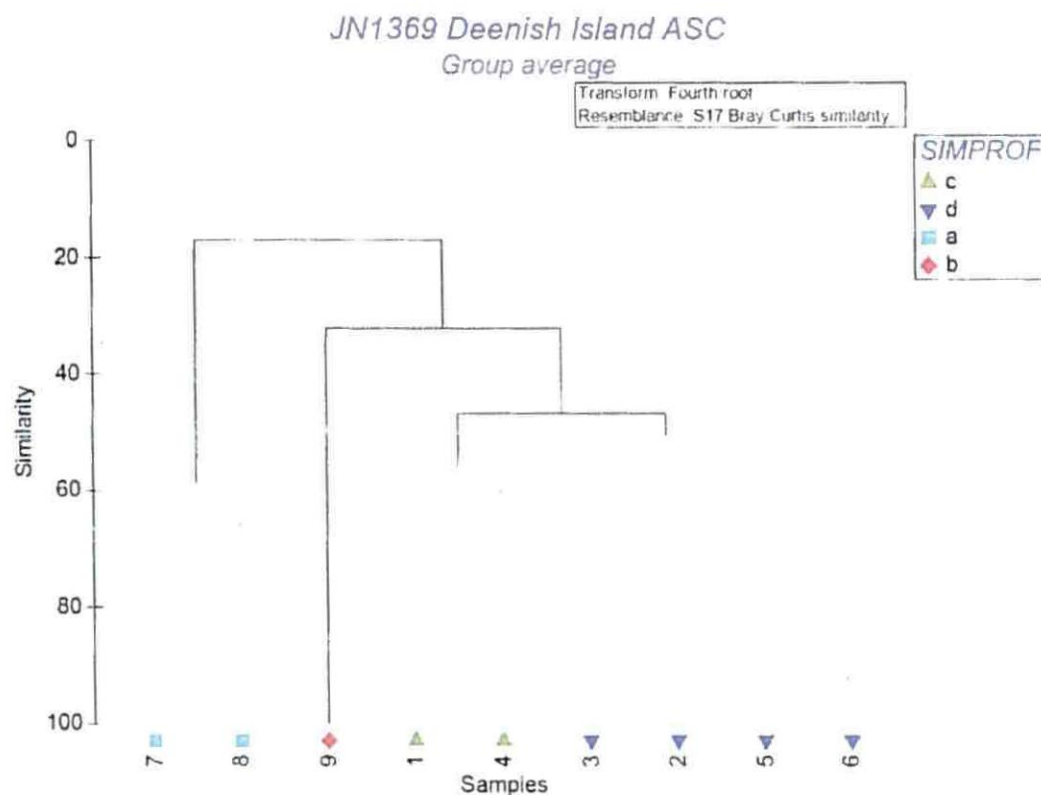
**Table 3** Results of the DIVERSE analyses conducted in Primer showing number of taxa (S), Total number of individuals (N) and diversity indices calculated from grab samples collated on 20<sup>th</sup> July 2016 in the vicinity of the finfish aquaculture site operated by Marine Harvest Ireland at Deenish Island, Co. Kerry. \* Indicates (also in bold) non conformance with the ASC requirement for Indicator 2.1.2 (Shannon-Wiener Index)

Station	No. Taxa (S)	No. Individuals (N)	Richness (d)	Evenness (J)	Shannon Weiner Diversity (H')
ASC-1	32	145900	2.61	0.27	0.94
ASC-2	42	31760	3.96	0.47	1.76
<b>ASC-3</b>	<b>49</b>	<b>24440</b>	<b>4.75</b>	<b>0.43</b>	<b>1.69*</b>
ASC-4	33	203100	2.62	0.16	0.56
ASC-5	56	294900	4.37	0.07	0.28
ASC-6	42	83360	3.62	0.13	<b>0.50*</b>
ASC-7	48	3420	5.78	0.86	3.33
ASC-8	46	2740	5.68	0.88	3.37
ASC-9	70	18600	7.02	0.76	3.23



### 3.1.1.2. Multivariate analysis

CLUSTER and SIMPROF analyses revealed four statistically significant groupings between the nine stations (Figure 6): Group a (Stations ASC-7 and ASC-8); Group b (Station ASC-9); Group c (Station ASC-1, and ASC-4); and Group d (Stations ASC-2, ASC-3, ASC-5 and ASC-6).

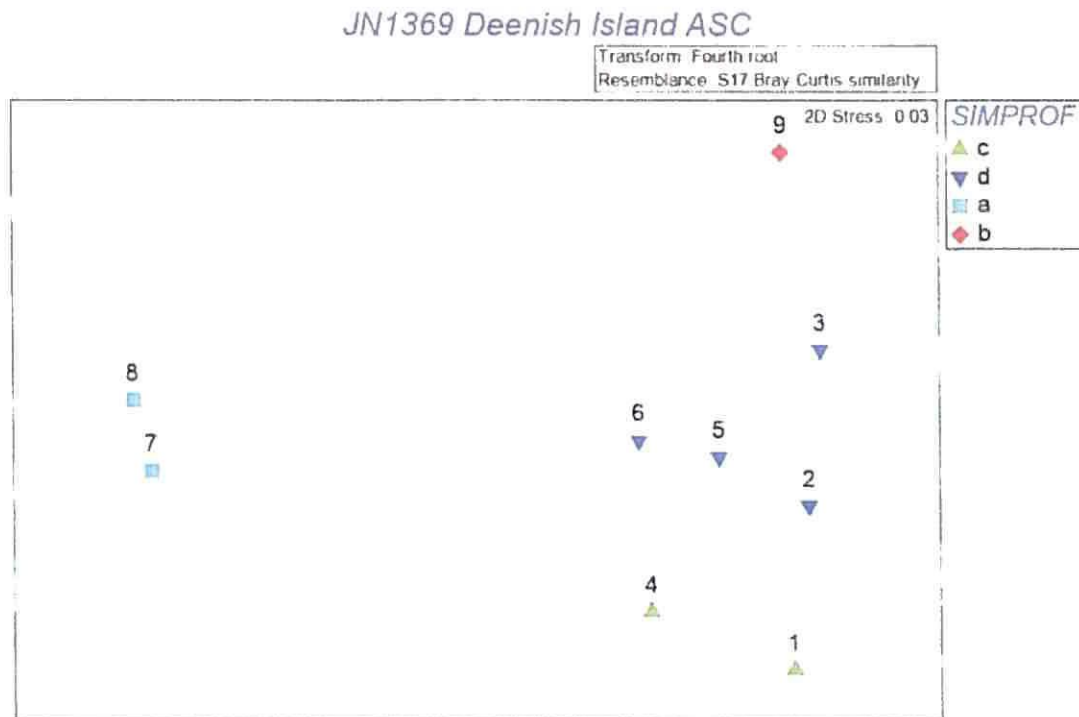


**Figure 6** Multivariate dendrogram calculated using the CLUSTER routine in Primer. Benthic stations sampled at the finfish aquaculture site operated by Marine Harvest Ireland in Deenish Island, 20<sup>th</sup> July 2016. Three significant groupings (at the 0.05 cut-off point) were identified by SIMPROF analysis. The stations joined by red lines could not be statistically differentiated from each other.

The stress value of the MDS plot (Figure 7) was 0.03 suggesting a very good representation of the data, with no real prospect for misinterpretation of the results. The SIMPROF groupings could be, to some extent, discerned in the MDS diagram, e.g. the faunal communities from Stations ASC-7 and 8 (furthest cage, see Figure 2) and ASC-9 (Reference Station) distinctively separated from those recorded in the remaining stations. Stations belonging to Group d were clearly clustered indicating similarity in the faunal composition. The relative distance between Station ASC-3 (within the AZE) and those stations



forming Group c can be interpreted as a somewhat distinct separation in the characterizing communities between both groups. Stations ASC-1 and ASC-4 (Edge of cage were relatively distant from each other in the MDS plot suggesting distinct faunal communities (significantly separated according to the results of the SIMPROF tests which assign those stations to Group d).



**Figure 7** Multi-Dimensional Scaling (MDS) plot for faunal data collated from sediment samples collated at the finfish aquaculture site operated by Marine Harvest Ireland in Deenish Island, 20<sup>th</sup> July 2016.

#### Multivariate faunal assemblages (SIMPROF groupings)

**Group a** contained two stations joining at a 58.84% similarity: Stations ASC-7 (10 m within the AZE on the furthest cage to the north of the site) and ASC-8 (outside the AZE, also on the furthest cage to the north). This group contained 67 taxa comprising 6,160 individuals (totals extrapolated to individuals per m<sup>2</sup>). In total eleven taxa accounted for just over 50% of the within-group similarity: Nematodes (760 individuals/m<sup>2</sup>, 6.06% contribution to SIMPER similarity), *Spiophanes bombyx* (460 ind/m<sup>2</sup>, 5.23% cont.), *Periculodes longimanus* (440 ind/m<sup>2</sup>, 5.23% cont.), *Fabulina fabula* (460 ind/m<sup>2</sup>, 5.23% cont.), *Magelona filiformis* (260 ind/m<sup>2</sup>, 4.60% cont.), *Tubificoides amplivasatus* (180 ind/m<sup>2</sup>, 4.16% cont.), *Dosinia* sp. (240 ind/m<sup>2</sup>, 4.16% cont.), Edwarsiidae (140 ind/m<sup>2</sup>, 3.87% cont.), *Capitella* sp. complex (140

ind/m<sup>2</sup>, 3.87% cont.), *Pseudocuma simile* (180 ind/m<sup>2</sup>, 3.87%) and *Chamelea striatula* (440 ind/m<sup>2</sup>, 3.87% cont.)

Although Group a included some pollution indicating taxa (e.g. *Tubificoides amplivasatus*, *Capitella* sp.) most of this assemblage was defined by taxa sensitive (e.g. *Dosinia* sp. *C. striatula*, *M. filiformis*), indifferent (*P. simile*, Edwardsiidae) or tolerant to organic enrichment (nematodes, *S. bombyx*) according to the classification of Borja *et al.* (2000).

**Group b** consisted solely of Station ASC-9 (chosen as representative of ambient conditions), joining all other groups (bar Group a) at a 32.01% similarity level. This group contained 76 taxa comprising 18,609 individuals (totals extrapolated to individuals per m<sup>2</sup>). Ten taxa accounted for over 60% of the total faunal abundance: Nematoda dominated with 3,960 individuals representing 21.28% of the total macroinvertebrate abundance. The polychaete *Sphaerosyllis bulbosa* (1,880 ind/m<sup>2</sup>, 10.10%), *Phaloe inornata* (1,200 ind/m<sup>2</sup>, 6.45%), the amphipod *Animocera docus semiserratus* (960 ind/m<sup>2</sup>, 5.15%), brittlestars *Ophiocomina nigra* (960 ind/m<sup>2</sup>, 5.16%), bivalve *Gari tellinella* (780 ind/m<sup>2</sup>, 4.19%), the amphipod *Leptocheirus hirsutimanus* (720 ind/m<sup>2</sup>, 3.87%), the polychaete *Harmothoe* sp. (580 ind/m<sup>2</sup>, 3.12%) and the brittlestar *Amphipholis squamata* (580 ind/m<sup>2</sup>, 3.12%).

The vast majority of the dominant taxa for this group were non-pollution indicators and most can be regarded as sensitive to organic loads normally present in unimpacted scenarios. Such taxa included: those sensitive to organic enrichment (Group I), e.g. *A. semiserratus*, *O. nigra*, *G. tellinella*, and *A. squamata*; indifferent to organic enrichment (Group II) *S. bulbosa* and Group III types tolerant to organic enrichment, e.g. *L. hirsutimanus*.

**Group c** (formed by Stations ASC-1 and ASC-4, within the AZE at parallel and perpendicular directions to the prevalent currents) joined **Group d** at 46.8% similarity. Average within-group SIMPER similarity for this group was 55.88%. In total 51 taxa and 349,000 ind/m<sup>2</sup> were recorded at these two stations. Six taxa contributed to over 70% of the multivariate within-group similarity: nematodes (288,300 ind/m<sup>2</sup>, 24.63%), *M. fuliginosus* (36,700 ind/m<sup>2</sup>, 15.31%), *Capitella* sp. complex (5,540 ind/m<sup>2</sup>, 9.52%), *Mediomastus fragilis* (5,360 ind/m<sup>2</sup>, 8.41%), Mytilids (2,800 ind/m<sup>2</sup>, 6.74%) and *Tubificoides benedii* (3,080 ind/m<sup>2</sup>, 5.43%). This assemblage, found in close proximity to the cages, was typically species-poor and dominated by highly abundant pollution indicators (Group V) such as *M. fuliginosus*, capitellids (*Capitella* sp.) and oligochaetes (*T. benedii*), or taxa tolerant to organic enrichment (Nematoda, Mytilids, *M. fragilis* sp.).

**Group d** was the assemblage found at stations ASC-2, ASC-3, ASC-5 and ASC-6 (within and outwith the AZE in the southernmost cage, both at right angle and longitudinally in relation to the prevalent current. Within-group SIMPER similarity was 53.70%. This group contained a total of 97 taxa and a cumulative density of 434,460 individuals/m<sup>2</sup>.

Ten taxa contributed to over 50% of the total SIMPER similarity across the constituting stations, namely: Nematoda (380,480 ind/m<sup>2</sup>, 12.75% cont.), *M. fragilis* (7,580 ind/m<sup>2</sup>, 6.51% cont.), *M. fuliginosus* (5,120 ind/m<sup>2</sup>, 6.32%), *Capitella* sp. (19,520 ind/m<sup>2</sup>, 5.33%), *Eteone longa/flava* (1,740 ind/m<sup>2</sup>, 4.58%), *P. inornata* (980 ind/m<sup>2</sup>, 4.31%), *G. lapidum* (960 ind/m<sup>2</sup>, 4.15%), *Aonides oxycephala* (620 ind/m<sup>2</sup>, 4.04%), *T. benedii* (1,940 ind/m<sup>2</sup>, 3.40%), and *Psamathe fusca* (380 ind/m<sup>2</sup>, 3.16%).

The assemblage represented by Group d was dominated by a combination of opportunistic taxa usually regarded as indicative of organic enrichment (*M. fuliginosus*, *Capitella* sp., *T. benedii*) and taxa tolerant or indifferent to such enriched conditions (*Nematoda*, *M. fragilis*, *E. longa/flava*, *A. oxycephala*, *P. fusca*, *G. lapidum*).

#### 3.1.1.3. AMBI Index and Total Number of Macroinvertebrate Taxa

AMBI scores ranged from 1.70 (Station ASC-9, reference station) to 4.68 (Station ASC-2, within the AZE, southwest corner along the main current direction). All the stations outside the AZE (Stations ASC-3, ASC-6, ASC-8 and the reference station ASC-9) had AMBI index scores of less than 3.3 and thus complied with the requirements for Indicator 2.1.2 (Criterion 2.1). Most stations surveyed were classified as 'slightly disturbed' following the AMBI score classification (see Table 4, Figure 8 and Appendix 3). The exception were stations ASC-1 and ASC-2 which were classified as 'moderately disturbed'.

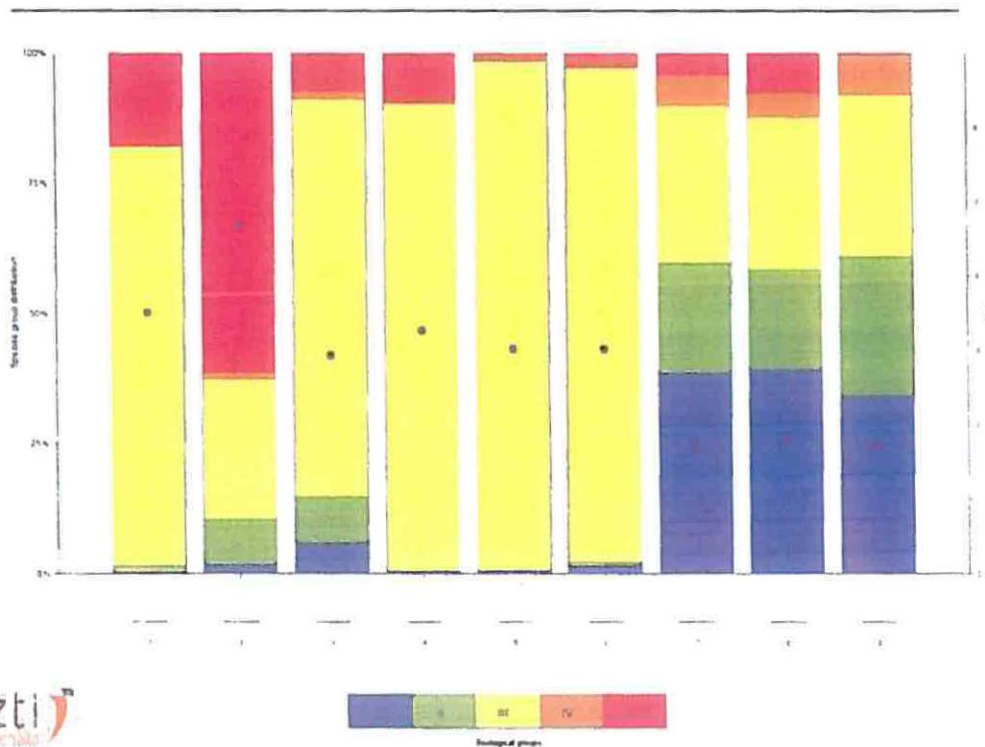
**Table 4** AMBI Scores and equivalent disturbance classification at nine sampling stations sampled in the vicinity of the finfish operations off Deenish Island, Kenmare Bay on 20<sup>th</sup> July 2016. \* denotes stations outside AZE.

Station	AMBI Score	Disturbance Classification
ASC-1	3.51	Moderately disturbed
ASC-2	4.68	Moderately disturbed
ASC-3	2.93*	Slightly disturbed
ASC-4	3.27	Slightly disturbed
ASC-5	3.02	Slightly disturbed
ASC-6	3.02*	Slightly disturbed



Station	AMBI Score	Disturbance Classification
ASC-7	1.74	Slightly disturbed
ASC-8	1.83*	Slightly disturbed
ASC-9 REF	1.70*	Slightly disturbed

Statistical Distribution



**Figure 8** Histogram showing the percentage contribution of Groups I to V (Groups IV and V are regarded as pollution indicators) to the infaunal assemblage recorded at the stations sampled in the vicinity of the Deenish Island finfish aquaculture operations on 20<sup>th</sup> July 2016. AMBI scores for each site are also represented.

Table 5 and Appendix 4 show the non-pollution indicator species (AMBI groups I to III, Borja *et al.*, 2000) recorded in densities greater than 100 individuals/m<sup>2</sup> (or equally high to the reference site ASC-9 if natural abundance is lower than the requirement). At all stations, inside and outside the AZE, the minimum number of two highly abundant taxa that are not pollution indicators was achieved. Therefore, the requirements for Indicator 2.1.3 were met at the Deenish site in 2016.



**Table 5** Non-pollution indicator taxa ( $\geq 100/m^2$  or equally high to reference) per station obtained from macroinvertebrate faunal data collated at nine sampling stations sampled in the vicinity of the Deenish Island finfish operations in Kenmare Bay, 20<sup>th</sup> July 2016. \* denotes less than 100 non-pollution indicators per  $m^2$  recorded but densities of those taxa equivalent (or higher) than those recorded in the reference station ASC-9. Groups were assigned following the latest AMBI species list (November 2014; available from <http://ambi.azti.es>).

Station	No. Non Pollution Indicator taxa	Non Pollution Indicator taxa and density
ASC-1	10	NEMATODA (110,380 ind/ $m^2$ ) <i>Mediomastus fragilis</i> (3,860 ind/ $m^2$ ) MYTILIDAE (2,180 ind/ $m^2$ ) <i>Spirobranchus spp.</i> (1,440 ind/ $m^2$ ) <i>Mytilus edulis</i> (480 ind/ $m^2$ ) <i>Aonides oxycephala</i> (240 ind/ $m^2$ ) <i>Atelecyclus rotundatus</i> (240 ind/ $m^2$ ) <i>Tritia incrassata</i> (120 ind/ $m^2$ ) SPIONIDAE (40 ind/ $m^2$ Reference is 40/ $m^2$ ) <i>Pisidia longicornis</i> (20 ind/ $m^2$ Reference is 20/ $m^2$ )
ASC-2	14	NEMATODA (5,300 ind/ $m^2$ ) <i>Spirobranchus spp.</i> (2,340 ind/ $m^2$ ) <i>Phyllodoce mucosa</i> (880 ind/ $m^2$ ) <i>Mediomastus fragilis</i> (800 ind/ $m^2$ ) <i>Eteone longa/flava</i> aggregate (740 ind/ $m^2$ ) <i>Psamathe fusca</i> (220 ind/ $m^2$ ) <i>Aonides oxycephala</i> (140 ind/ $m^2$ ) <i>Leptochiton cancellatus</i> (140 ind/ $m^2$ ) MYTILIDAE (120 ind/ $m^2$ ) <i>Glycera lapidum</i> (120 ind/ $m^2$ ) <i>Photis longicaudata</i> (120 ind/ $m^2$ ) NEMERTEA (100 ind/ $m^2$ ) <i>Tritia incrassata</i> (20 ind/ $m^2$ Reference is 20/ $m^2$ ) <i>Anapagurus hyndmani</i> (20 ind/ $m^2$ Reference is 20/ $m^2$ )
ASC-3	18	NEMATODA (16,220 ind/ $m^2$ ) <i>Pisione remota</i> (880 ind/ $m^2$ ) <i>Mediomastus fragilis</i> (780 ind/ $m^2$ ) <i>Sphaerosyllis bulbosa</i> (720 ind/ $m^2$ ) <i>Eteone longa/flava</i> aggregate (620 ind/ $m^2$ ) <i>Kurtiella bidentata</i> (480 ind/ $m^2$ ) <i>Glycera lapidum</i> (440 ind/ $m^2$ ) <i>Protodorvillea kefersteini</i> (240 ind/ $m^2$ ) <i>Syllis garciai</i> (200 ind/ $m^2$ )

Station	No. Non Pollution Indicator taxa	Non Pollution Indicator taxa and density
		<i>Aonides oxycephala</i> (160 ind/m <sup>2</sup> ) <i>Malmgrenia</i> sp. (100 ind/m <sup>2</sup> ) <i>Syllis pontxioi</i> (100 ind/m <sup>2</sup> ) <i>Glycera</i> sp. (80 ind/m <sup>2</sup> Reference is 60/m <sup>2</sup> ) SPIONIDAE (80 ind/m <sup>2</sup> Reference is 40/m <sup>2</sup> ) <i>Euspira nitida</i> (80 ind/m <sup>2</sup> Reference is 20/m <sup>2</sup> ) <i>Schistomeringos neglecta</i> (40 ind/m <sup>2</sup> Reference is 40/m <sup>2</sup> ) <i>Anapagurus hyndmani</i> (20 ind/m <sup>2</sup> Reference is 20/m <sup>2</sup> ) <i>Caecum glabrum</i> (20 ind/m <sup>2</sup> Reference is 20/m <sup>2</sup> )
ASC-4	9	NEMATODA (177,920 ind/m <sup>2</sup> ) <i>Mediomastus fragilis</i> (1,500 ind/m <sup>2</sup> ) <i>Photis longicaudata</i> (840 ind/m <sup>2</sup> ) <i>Eteone longa/flava</i> aggregate (740 ind/m <sup>2</sup> ) <i>Phyllodoce mucosa</i> (740 ind/m <sup>2</sup> ) MYTILIDAE (620 ind/m <sup>2</sup> ) SPIONIDAE (300 ind/m <sup>2</sup> ) <i>Psamathe fusca</i> (140 ind/m <sup>2</sup> ) <i>Anapagurus hyndmani</i> (100 ind/m <sup>2</sup> )
ASC-5	18	NEMATODA (282,400 ind/m <sup>2</sup> ) <i>Mediomastus fragilis</i> (4,280 ind/m <sup>2</sup> ) <i>Photis longicaudata</i> (560 ind/m <sup>2</sup> ) <i>Eteone longa/flava</i> aggregate (240 ind/m <sup>2</sup> ) SPIONIDAE (180 ind/m <sup>2</sup> ) <i>Harmothoe</i> sp. (180 ind/m <sup>2</sup> ) <i>Glycera lapidum</i> (160 ind/m <sup>2</sup> ) <i>Anapagurus hyndmani</i> (140 ind/m <sup>2</sup> ) <i>Glycera</i> sp. (140 ind/m <sup>2</sup> ) <i>Pholoe baltica</i> (140 ind/m <sup>2</sup> ) MYTILIDAE (120 ind/m <sup>2</sup> ) <i>Aonides oxycephala</i> (120 ind/m <sup>2</sup> ) <i>Spirobranchus</i> spp. (120 ind/m <sup>2</sup> ) <i>Kurtiella bidentata</i> (100 ind/m <sup>2</sup> ) <i>Cheirocratus</i> sp. (100 ind/m <sup>2</sup> ) <i>Clausinella fasciata</i> (40 ind/m <sup>2</sup> Reference is 20/m <sup>2</sup> ) <i>Phyllodoce mucosa</i> (20 ind/m <sup>2</sup> Reference is 20/m <sup>2</sup> ) <i>Pisidia longicornis</i> (20 ind/m <sup>2</sup> Reference is 20/m <sup>2</sup> )
ASC-6	14	NEMATODA (76,560 ind/m <sup>2</sup> ) <i>Mediomastus fragilis</i> (1,720 ind/m <sup>2</sup> )

Station	No. Non Pollution Indicator taxa	Non Pollution indicator taxa and density
ASC-6 (cont'd)	14	<p><i>Photis longicaudata</i> (640 ind/m<sup>2</sup>)  <i>Glycera lapidum</i> (240 ind/m<sup>2</sup>)  <i>Aonides oxycephala</i> (200 ind/m<sup>2</sup>)  <i>Eteone longa/flava</i> aggregate (140 ind/m<sup>2</sup>)  <i>Abra alba</i> (120 ind/m<sup>2</sup>)  <i>Iphinoe serrata</i> (120 ind/m<sup>2</sup>)  <i>Harmothoe</i> sp. (100 ind/m<sup>2</sup>)  <i>Cheirocratus</i> sp. (80 ind/m<sup>2</sup> Reference is 20/m<sup>2</sup>)  <i>Timoclea ovata</i> (80 ind/m<sup>2</sup> Reference is 40/m<sup>2</sup>)  <i>Anapagurus hyndmani</i> (40 ind/m<sup>2</sup> Reference is 20/m<sup>2</sup>)  <i>Clausinella fasciata</i> (20 ind/m<sup>2</sup> Reference is 20/m<sup>2</sup>)  <i>Tritia incrassata</i> (20 ind/m<sup>2</sup> Reference is 20/m<sup>2</sup>)</p>
ASC-7	15	<p><i>Chamelea striatula</i> (380 ind/m<sup>2</sup>)  NEMATODA (360 ind/m<sup>2</sup>)  <i>Fabulina fabula</i> (260 ind/m<sup>2</sup>)  <i>Perioculodes longimanus</i> (240 ind/m<sup>2</sup>)  <i>Spiophanes bombyx</i> (9200 ind/m<sup>2</sup>)  <i>Dosinia</i> sp. (160 ind/m<sup>2</sup>)  <i>Abra alba</i> (140 ind/m<sup>2</sup>)  <i>Magelona filiformis</i> (120 ind/m<sup>2</sup>)  <i>Pseudocuma (Pseudocuma) simile</i> (120 ind/m<sup>2</sup>)  <i>Pariambus typicus</i> (100 ind/m<sup>2</sup>)  SPIONIDAE (80 ind/m<sup>2</sup> Reference is 40/m<sup>2</sup>)  EDWARDSIIDAE (80 ind/m<sup>2</sup> Reference is 60/m<sup>2</sup>)  <i>Pisidia longicornis</i> (40 ind/m<sup>2</sup> Reference is 20/m<sup>2</sup>)  <i>Mediomastus fragilis</i> (20 ind/m<sup>2</sup> Reference is 20/m<sup>2</sup>)  <i>Phyllodoce mucosa</i> (20 ind/m<sup>2</sup> Reference is 20/m<sup>2</sup>)</p>
ASC-8	7	<p>NEMATODA (400 ind/m<sup>2</sup>)  <i>Spiophanes bombyx</i> (260 ind/m<sup>2</sup>)  <i>Fabulina fabula</i> (200 ind/m<sup>2</sup>)  <i>Perioculodes longimanus</i> (200 ind/m<sup>2</sup>)  <i>Magelona filiformis</i> (140 ind/m<sup>2</sup>)  EDWARDSIIDAE (60 ind/m<sup>2</sup> Reference is 60/m<sup>2</sup>)  SPIONIDAE (40 ind/m<sup>2</sup> Reference is 420/m<sup>2</sup>)</p>
ASC-9 REF	24	<p>NEMATODA (4,000 ind/m<sup>2</sup>)  <i>Sphaerosyllis bulbosa</i> (1,880 ind/m<sup>2</sup>)  <i>Animoceradocus semiserratus</i> (960 ind/m<sup>2</sup>)  <i>Ophiocomina nigra</i> (960 ind/m<sup>2</sup>)</p>

Station	No. Non Pollution Indicator taxa	Non Pollution Indicator taxa and density
ASC-9 REF (cont's)	24	<i>Gari tellinella</i> (9780 ind/m <sup>2</sup> ) <i>Leptocheirus hirsutimanus</i> (720 ind/m <sup>2</sup> ) <i>Harmothoe</i> sp. (580 ind/m <sup>22</sup> ) <i>Amphipholis squamata</i> (580 ind/m <sup>2</sup> ) <i>Skenea serpuloides</i> (460 ind/m <sup>2</sup> ) <i>Kurtiella bidentata</i> (440 ind/m <sup>2</sup> ) VENERIDAE (400 ind/m <sup>2</sup> ) AMPHIURIDAE (400 ind/m <sup>2</sup> ) <i>Leptochiton cancellatus</i> (380 ind/m <sup>2</sup> ) <i>Eunice norvegica</i> (320 ind/m <sup>2</sup> ) <i>Spirobranchus</i> spp. (280 ind/m <sup>2</sup> ) <i>Protodorvillea kefersteini</i> (220 ind/m <sup>2</sup> ) <i>Malmgrenia ljungmani</i> (220 ind/m <sup>2</sup> ) <i>Pisiane remota</i> (200 ind/m <sup>2</sup> ) <i>Liljeborgia pallida</i> (200 ind/m <sup>22</sup> ) <i>Glycera lapidum</i> (180 ind/m <sup>2</sup> ) <i>Trypanosyllis coeliaca</i> (180 ind/m <sup>2</sup> ) <i>Polygordius</i> sp. (180 ind/m <sup>2</sup> ) MYTILIDAE (140 ind/m <sup>2</sup> ) AORIDAE (100 ind/m <sup>2</sup> )



## 4. Discussion

The survey carried out at the Deenish Island-out site on the 20<sup>th</sup> of July 2016 involved grab sampling at nine stations following ASC guidance. The aim of the survey was to assess compliance with ASC Criterion 2.1 'Benthic biodiversity and benthic habitats'. More specifically, two stations were selected at the edge of the pen located to the southwest of the site, three within the AZE along set transects and three outside the AZE along the same transects. In addition, one distant reference station was selected to document baseline seafloor conditions (Figure 2). GPS coordinates for the sampling stations were taken at the time of the survey as stipulated by the ASC guidance manual (v. 1.0 – 14 February 2013) and these are shown in Table 2. Duplicate faunal samples were collected at each station and several diversity indices derived upon completion of the taxonomic analysis of the samples, namely the AZTI Marine Biotic Index (AMBI) and Shannon-Wiener index for Indicator 2.1.2. The number of macrofaunal taxa that are not pollution indicators was also estimated to confirm if the requirements for Indicator 2.1.3 were met. A Redox probe was used to measure redox potential (mV) in the sediment retrieved by the small (0.025 m<sup>2</sup>) Van Veen grab used. However, it was not possible to obtain a reading in all stations due to the coarseness of the sediment. In addition, probe measurements were supported by assessments using a diver-operated Sediment Profile Imagery (SPI) unit. This SPI survey was carried out only at seven of the nine stations investigated by means of grab sampling (Stations 1-6 and Station 9).

At all stations sampled outside the AZE where a probe value was obtained, redox potential was positive (>0 mV) within the first 2 cm of the seafloor, thus complying with the ASC requirement for Indicator 2.1.1. For the remaining stations outside the AZE (ASC-3 and ASC-6) supporting SPI photographs showed a well oxygenated, coarse seafloor with relatively deep apparent redox discontinuity layers (deeper than the actual penetration achieved by the SPI prism). The seafloor had an overall healthy, oxygenated appearance with few apparent signs of impact.

Two indices were used to determine compliance with the requirements for Indicator 2.1.2: the Shannon-Wiener index ( $H'$ ) and the AMBI scores. The requirement is for the one out of a possible total of four indices to indicate good to high ecological quality outside the AZE. The ASC requirement is for  $H'$  to be equal to or in excess of 3 outside the AZE. Such threshold was achieved at all stations sampled outside the AZE (ASC-6, ASC-8 and ASC-9) with the exception of Station ASC-3. Nonetheless, the requirements

for Indicator 2.1.2 can be regarded as satisfied based on the AMBI scores being less than 3.3 at all stations outside the AZE, as required by the ASC Standard.

Multivariate SIMPER analysis showed four distinct faunal assemblages. The assemblages found at the stations upstream from the main current direction (ASC-7, ASC-8 and at the reference station (ASC-9) were dominated by taxa sensitive or indifferent to pollution. The area downstream of the main current direction (ASC-1 to ASC-3) and at right angles (ASC-4 to ASC-6), inside and outside of the AZE, were mostly dominated by a combination of first and second degree opportunistic taxa and taxa indifferent or tolerant to impact. The presence of nematodes and other taxa tolerant of organic enrichment resulted in a classification of 'slightly disturbed' being assigned to all stations, including stations ASC-9 (which was selected as representative of baseline conditions). The presence of first and second order opportunistic taxa at Stations ASC-1 and ASC-2 (within the AZE, downstream of the prevalent current) resulted in a classification of 'moderately disturbed' for those stations.

Finally, the requirement for Indicator 2.1.3 for numbers of non-pollution indicator species was amply met at all stations. The requirement is for more than two of such taxa being highly abundant (*i.e.* present at frequencies of  $\geq 100$  individuals/m<sup>2</sup> or as high or higher than the reference site if natural abundance is lower than this level). Those numbers were achieved at all stations, with numbers of such taxa considerably exceeding the minimum required to satisfy the requirements for Indicator 2.1.3.

In summary, in relation to Criteria 2.1 for the assessment of the ASC Standard at the Deenish Island aquaculture site in 2016:

- Based on the appearance of the sediment and the depth of the ARPD calculated from SPI, the requirement for Indicator 2.1.1 (redox potential) was met.
- The requirement for Indicator 2.1.2 was met based on the AMBI Scores being equal to or less than 3.3 at those stations outside the AZE.
- The requirement for Indicator 2.1.3 ( $\geq 2$  highly abundant not-pollution indicator taxa) was met at all sediment stations within the AZE.

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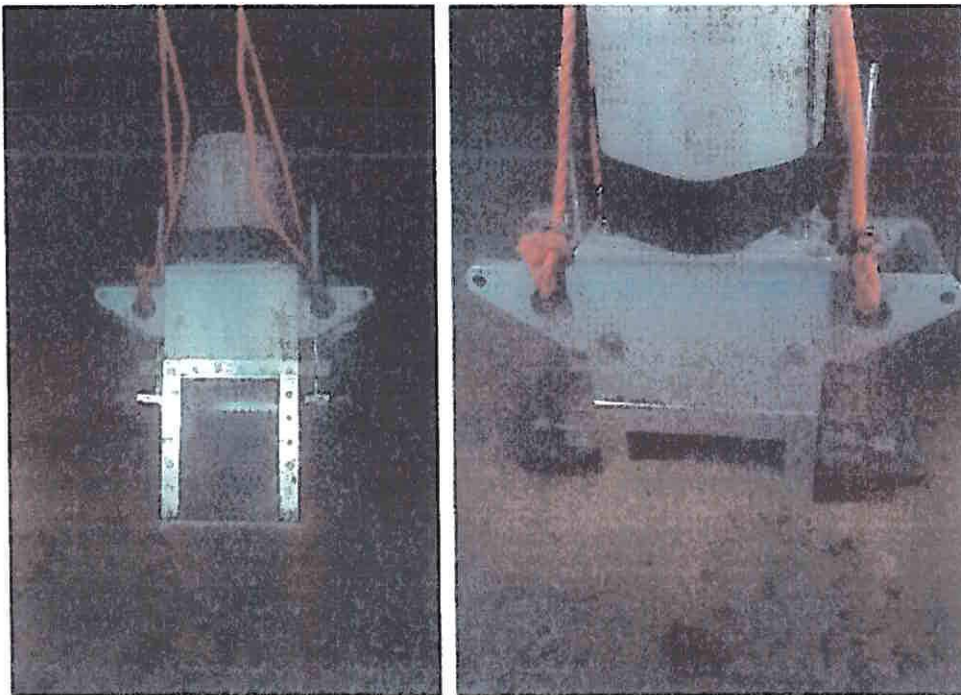
## **Appendix 1**

### **Sediment Profile Imagery (SPI)**



Sediment Profile Images (SPI) were acquired using a diver-deployed sediment profile imaging camera system at a number of the ASI stations as a comparison to redox potential measurements with the redox probe. This system is comprised of a digital SLR camera in a water-tight pressure vessel that is mounted above a prism that penetrates the upper 25 cm of sediment (Appendix 1 - Figure 1). The sediment profile is viewed through a plexiglass window. Its image is reflected to the camera lens via a plane mirror. Illumination is provided by an internally-mounted strobe.

The diver depresses the unit into the seafloor and manually triggers the camera. This process is repeated at each station investigated. The prism unit is filled with distilled water – thus ambient water clarity is never a limiting factor in image quality.



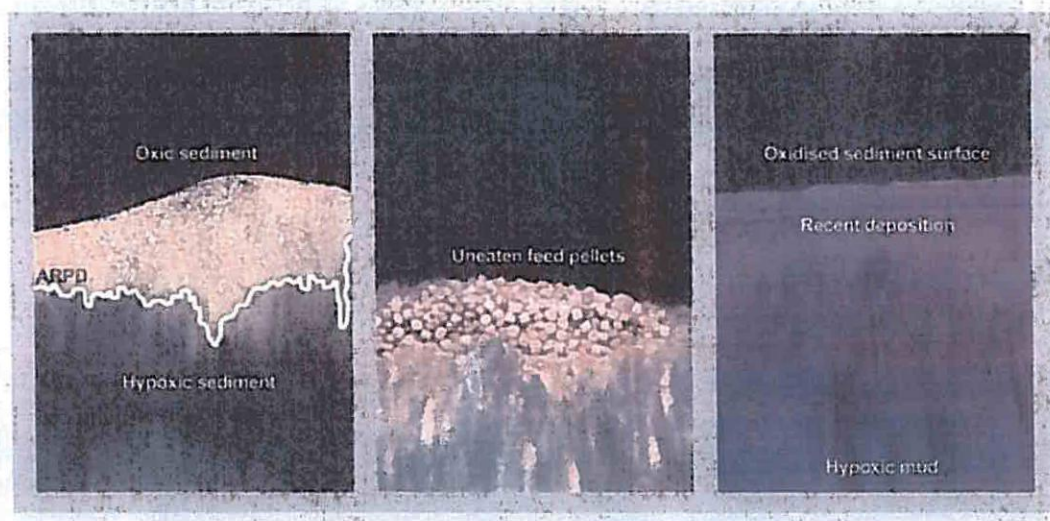
**Appendix 1 – Figure 19.** Diver operated Sediment Profile Imaging camera. The left-hand image gives a view of the camera at the sediment surface. The right-hand image shows the SPI camera when inserted into the sediment.

A great deal of information about benthic processes is available from sediment profile images. Measurable parameters, many of which are calculated directly by image analysis, include physical/chemical parameters (*i.e.* sediment type measured as grain size major mode, prism penetration depth providing a relative indication of sediment shear strength, sediment surface relief, condition of mud clasts, redox potential discontinuity depth and degree of contrast, sediment gas voids) and

biological parameters (*i.e.* infaunal successional stage of a well documented successional paradigm for soft marine sediments (see Pearson and Rosenberg, 1978), degree of sediment reworking, dominant faunal type, epifauna and infauna, depth of faunal activity, presence of microbial aggregations).

For the purposes of the current survey the primary feature of interest is the depth of oxygen penetration into the sediments in the vicinity of the finfish pens (as required by the regulations by the Department of Agriculture, Fisheries and Food, 2008 (DAFF, 2008). In this case the apparent redox potential discontinuity or ARPD depth is measured. Features of particular interest that may be gleaned from SPI images taken in sediments in the vicinity of finfish pens include the presence of:

- uneaten feed pellets (and depth of this material)
- faecal casts
- and depth of shell gravel deposits
- of gas voids in the sediment (Appendix 1 – Figure 2)



Appendix 1 – Figure 2. Typical sediment profile images with examples of features.

## **Appendix 2**

**Faunal Species List recorded in duplicate grab samples collected in the vicinity of the Deenish Island finfish aquaculture site, Kenmare Bay.**

**20<sup>th</sup> July 2016**

JN1369 Deenish Island ASC

Howson &  
Pictou  
(1997)<sup>1</sup>  
Inventory

Station	code	1	2	3	4	5	6	7	8	9
PORIFERA	C	1	0	0	0	0	0	0	0	0
CALCAREA	C	2	0	0	0	0	0	0	0	0
LEUCOSOLENIDA	C	49	0	0	0	0	0	0	0	0
Sycettidae	C	126	0	0	0	0	0	0	0	0
Sycon ciliatum	C	133	0	0	0	0	0	0	0	20
CNIDARIA	D	1	0	0	0	0	0	0	0	0
ANTHOZOA	D	583	0	0	0	0	0	0	0	0
HEXACORALLIA	D	627	0	0	0	0	0	0	0	0
ACTINIARIA	D	662	0	0	0	0	0	0	0	0
Edwardsiidae	D	759	0	0	0	0	0	0	0	0
Edwardsiidae indet.	D	759	0	0	0	0	0	80	60	60
NEMATODA	HD	1	0	0	0	0	0	0	0	0
Nematoda indet.	HD	1	110380	5300	177920	282400	76560	360	360	3960
NEMERTEA	G	1	0	0	0	0	0	0	0	0
Nemertea indet.	G	1	0	0	0	0	0	0	40	40
Nemertea sp A	G	1	0	100	20	0	20	0	0	20
Cerebratulus sp.	G	39	20	0	0	0	0	20	0	20
Cerebratulus sp. (partial/damaged)	G	39	0	0	0	0	0	0	0	20

<sup>1</sup> Howson, C. M., Pictou, B. E. (1997) The species directory of the marine fauna and flora of the British Isles and surrounding seas *Ulster Museum Publication*.  
276 *The Ulster Museum Belfast, UK. ISBN 0-948150-06-8* vi, 508 (+ cd-rom) pp



## JN1369 Deenish Island ASC

Howson &  
Picton  
(1997)  
Inventory

Station	1	2	3	4	5	6	7	8	9
<b>ANNELIDA</b>	P	0	0	0	0	0	0	0	0
<b>SIPUNCULA</b>	N	0	0	0	0	0	0	0	0
Sipuncula indet.	N	0	0	0	0	0	0	0	20
<b>GOLFINGIIDA</b>	N	10	0	0	0	0	0	0	0
<b>Golfingidae</b>	N	11	0	0	0	0	0	0	0
<i>Golfingia vulgaris vulgaris</i>	N	17	0	0	0	0	0	0	0
<b>POLYCHAETA</b>	P	2	0	0	0	0	0	0	0
<b>PHYLLODOCIDA</b>	P	3	0	0	0	0	0	0	0
<b>Pisionidae</b>	P	0	0	0	0	0	0	0	0
<i>Pisione remota</i>	P	15	0	0	0	0	880	0	200
<b>Polynoidae</b>	P	25	0	0	0	0	0	0	0
<i>Polynoidae</i> indet.	P	25	0	0	120	100	0	0	360
<i>Malmgrenia</i> sp.		0	0	0	0	0	0	0	20
<i>Malmgrenia ljunghmani</i>	P	66	0	0	0	0	0	0	220
<i>Harmothoe</i> sp.	P	50	0	0	180	100	0	20	580
<b>Pholoidae</b>		0	0	0	0	0	0	0	0
<i>Pholoe inornata</i>	P	92	40	200	200	180	0	0	1200
<i>Pholoe baltica</i> (sensu Petersen)	P	95	60	0	140	0	0	0	0
<b>Sigalionidae</b>		0	0	0	0	0	0	0	0
<i>Sthenelais</i> sp.	P	106	0	20	0	0	0	0	0

JN1369 Deenish Island ASC

Howson &  
Picton  
(1997)  
Inventory

Station	code	1	2	3	4	5	6	7	8	9
<b>Phyllocladaceae</b>	P	114	0	0	0	0	0	0	0	0
Phyllocladaceae indet.	P	114	60	20	60	40	0	20	0	180
Eteone longa/flava aggregate	P	118	0	620	740	240	140	20	0	0
Phyllodoce mucosa	P	145	0	880	740	20	0	20	0	20
Eulalia aurea	P	151	60	0	20	0	0	0	0	0
Paranaitis kosteriensis	P	176	0	0	0	0	0	0	20	0
<b>Glyceridae</b>	P	254	0	0	0	0	0	0	0	0
Glyceria sp. (partial/damaged)	P	255	0	80	0	140	0	0	0	40
Glyceria sp. (juv)	P	255	0	0	0	0	0	0	0	20
Glyceria alba	P	256	0	0	0	0	0	0	40	0
Glyceria lapidum	P	260	0	440	0	160	240	0	0	180
Glyceria tridactyla	P	265	0	0	0	0	0	20	20	0
<b>Goniadidae</b>	P	266	0	0	0	0	0	0	0	0
Goniada maculata	P	271	0	0	0	20	0	0	0	0
<b>Sphaerodoridae</b>	P	277	0	0	0	0	0	0	0	0
Ephesiella abyssorum	P	282	0	0	0	0	0	0	0	40
Sphaerodorum gracilis	P	291	0	0	0	0	0	0	0	20
<b>Hesionidae</b>	P	293	0	0	0	0	0	0	0	0
Hesionidae indet. (partial/damaged)	P	293	0	20	0	0	40	0	0	60
Psamathe fusca	P	305	40	60	140	40	60	0	0	0



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Howson &  
Pickett  
(1997)  
Inventory

Station	1	2	3	4	5	6	7	8	9
Lumbrineridae	P	569	0	0	0	0	0	0	0
Lumbrineris cf. cingulata	P	0	0	0	20	40	0	0	0
Lumbrineris cingulata/aniara	P	0	0	0	0	0	0	20	0
Dorvilleidae	P	598	0	0	0	0	0	0	0
Protodorvillea kefersteini	P	638	0	80	60	20	0	0	220
Schistomeringos neglecta	P	642	0	0	0	0	0	0	40
<b>ORBINIIDA</b>	P	654	0	0	0	0	0	0	0
<b>SPIONIDA</b>	P	707	0	0	0	0	0	0	0
<b>Paraonidae</b>	P	674	0	0	0	0	0	0	0
Paradoneis lyra	P	699	0	0	60	0	0	20	0
<b>Spionidae</b>	P	720	0	0	0	0	0	0	0
Spionidae indet.	P	720	40	20	80	180	80	40	40
Aonides oxycephala	P	722	240	140	160	200	0	0	0
Malacoceros fuliginosus	P	737	20220	2140	920	16480	600	0	0
Prionospio sp.	P	763	0	0	0	20	0	0	0
Prionospio sp. (partial/damaged)	P	763	0	0	0	0	20	40	0
Spiophanes bombyx	P	794	0	0	0	0	200	260	0
<b>Magelonidae</b>	P	802	0	0	0	0	0	0	0
Magelona alleni	P	804	0	0	0	0	20	0	0
Magelona filiformis	P	805	0	0	0	0	120	140	0



JN1369 Deenish Island ASC

Howson &  
Pieton  
(1997)<sup>1</sup>  
Inventory

Station	1	2	3	4	5	6	7	8	9
Magelona johnstoni	P	0	0	0	0	0	20	0	0
<b>Cirratulidae</b>	P	822	0	0	0	0	0	0	0
Cirratulidae indet. (partial/damaged)	P	822	40	60	0	0	0	40	0
Caulerella alata	P	829	0	180	0	220	0	0	0
Chaetozone zetlandica	P	831	0	0	0	0	0	0	0
Chaetozone christeais	P		0	0	0	0	180	40	0
Cirriformia tentaculata	P	839	0	80	20	0	0	0	0
<b>FLABELLIGERIDA</b>	P	872	0	0	0	0	0	0	0
<b>Flabelligeridae</b>	P	873	0	0	0	0	0	0	0
Diplocirrus glaucus	P	878	0	0	0	0	0	20	0
<b>CAPITELLIDA</b>	P	902	0	0	0	0	0	0	0
<b>Capitellidae</b>	P	903	0	0	0	0	0	0	0
Capitella sp. complex	P	906	3080	2460	1180	1400	60	80	0
Mediomastus fragilis	P	919	3860	1500	4280	1720	20	0	20
<b>Arenicolidae</b>	P	928	0	0	0	0	0	0	0
Arenicola marina	P	931	20	20	0	0	0	0	0
<b>OPHELIIDA</b>	P	992	0	0	0	0	0	0	0
<b>Scalibregmatidae</b>	P	1020	0	0	0	0	0	0	0
Scalibregma inflatum	P	1027	0	0	0	0	0	20	0
<b>POLYGORDIIDA</b>			0	0	0	0	0	0	0

JN1369 Deenish Island ASC

Howson &  
Pictou  
(1997)<sup>1</sup>  
Inventory

Station	code	1	2	3	4	5	6	7	8	9
<b>Polygordiidae</b>		0	0	0	0	0	0	0	0	0
Polygordius sp.	P 1062	0	0	40	0	0	0	0	0	0
Polygordius sp. (partial/damaged)	P 1062	0	0	0	0	0	0	0	0	180
<b>OWENIIDAE</b>										
Oweniidae	P 1089	0	0	0	0	0	0	0	0	0
Oweniidae	P 1090	0	0	0	0	0	0	0	0	0
Owenia borealis	P	0	0	0	0	0	0	20	20	0
<b>TEREBELLIDA</b>										
Pectinariidae	P 1099	0	0	0	0	0	0	0	0	0
Pectinariidae	P 1100	0	0	0	0	0	0	0	0	0
Pectinariidae indet. (juv)	P 1100	0	0	0	0	0	0	40	40	0
Amphictene auricoma	P 1102	0	0	0	0	0	0	0	20	0
Lagis koreni	P 1107	0	0	0	40	0	0	20	0	0
<b>Ampharetidae</b>										
Ampharete sp. (partial/damaged)	P 1133	0	0	0	0	0	0	0	20	0
<b>Terebellidae</b>										
Polycirrus sp.	P 1179	0	0	0	0	0	0	0	0	0
Polycirrus sp.	P 1235	0	0	180	0	0	0	0	0	0
Polycirrus sp. (partial/damaged)	P 1235	0	0	0	0	0	0	0	0	140
<b>Serpulidae</b>										
Serpulidae indet. (partial/damaged)	P 1324	0	0	0	0	0	0	0	0	0
Hydroides norvegica	P 1334	0	40	0	0	0	0	0	0	0
Spirobranchus sp.	P 1339	380	460	40	0	20	0	0	0	0

JN1369 Deenish Island ASC

Howson &  
Pieton  
(1997)<sup>1</sup>  
Inventory

Station	1	2	3	4	5	6	7	8	9
Spirobranchus sp. (partial/damaged)	P	1339	0	0	0	0	0	0	60
Spirobranchus lamarcki	P	1340	1060	1880	0	0	40	100	200
Spirobranchus triqueter	P	1341	0	0	0	0	0	0	20
Tubificidae	P	1425	0	0	0	0	0	0	0
Tubificoides amplivasatus	P	1489	0	0	0	20	80	100	0
Tubificoides benedii	P	1490	2820	200	80	260	1620	40	0
Enchytraeidae	P	1501	0	0	0	0	0	0	0
Enchytraeidae indet.	P	1501	20	60	720	0	200	0	80
CRUSTACEA	R	1	0	0	0	0	0	0	0
MYODOCOPIDA	R	2413	0	0	0	0	0	0	0
MALACOSTRACA	S	1	0	0	0	0	0	0	0
LEPTOSTRACA	S	3	0	0	0	0	0	0	0
Nebaliidae	S	4	0	0	0	0	0	0	0
Nebalia kocatasi	S	140	140	300	80	0	40	0	0
EUMALACOSTRACA	S	23	0	0	0	0	0	0	0
AMPHIPODA	S	97	0	0	0	0	0	0	0
Oedicerotidae			0	0	0	0	0	0	0
Perioculoides longimanus	S	131	0	0	0	0	60	240	200
Stenothoidae	S	187	0	0	0	0	0	0	0
Stenothoe monoculoides	S	214	0	0	0	0	0	0	60

JN1369 Deenish Island ASC

Howson &  
Pieton  
(1997)<sup>1</sup>  
Inventory

Station	1	2	3	4	5	6	7	8	9
<b>Urothoidae</b>									
<i>Urothoe elegans</i>	S	245	0	0	0	0	0	0	0
<i>Lysianassidae</i>									
<i>Lysianassidae</i>	S	248	0	0	0	0	0	20	0
<i>Lysianassidae</i>	S	271	0	0	0	0	0	0	0
<i>Acidostoma obesum</i>	S	272	0	0	20	0	0	0	40
<b>Liljeborgiidae</b>									
<i>Liljeborgia pallida</i>	S	394	0	0	0	0	0	0	0
<i>Liljeborgia pallida</i>	S	397	0	0	0	0	0	0	200
<b>Atylidae</b>									
<i>Atyla</i>									
<i>Nototropis guttatus</i>	S	411	20	0	0	0	0	0	0
<i>Nototropis vedlomensis</i>	S	413	0	0	0	0	0	20	0
<b>Ampeliscidae</b>									
<i>Ampelisca sp. (partial/damaged)</i>	S	422	0	0	0	0	0	0	0
<i>Ampelisca sp. (juv)</i>	S	423	0	0	0	0	20	0	0
<i>Ampelisca sp. (juv)</i>	S	423	0	0	0	0	0	20	0
<i>Ampelisca brevicornis</i>	S	427	0	0	0	20	0	0	0
<b>Pontoporeiidae</b>									
<i>Bathyporeia sp. (juv)</i>	S	450	0	0	0	0	0	0	0
<i>Bathyporeia sp. (partial/damaged)</i>	S	451	0	0	0	0	0	20	0
<i>Bathyporeia tenuipes</i>	S	459	0	0	0	0	20	0	0
<b>Melitidae</b>									
<i>Melita</i>	S	495	0	0	0	0	0	0	0
<i>Melitidae indet.</i>	S	495	0	20	0	0	0	0	0
<i>Animoceradocus semiserratus</i>	S	502	0	0	20	0	0	0	960



JN1369 Deenish Island ASC

Howson &  
Picton  
(1997)<sup>1</sup>  
Inventory

Station	1	2	3	4	5	6	7	8	9
<i>Cheirocratus</i> sp.	S	503	0	0	100	80	0	0	20
<i>Gammarella fucicola</i>	S	514	0	0	60	80	0	0	0
<b>Isaetidae</b>		0	0	0	0	0	0	0	0
<i>Gammaropsis lobata</i>	S	540	0	20	120	20	0	0	380
<b>Photidae</b>	S	0	0	0	0	0	0	0	0
<i>Photis longicaudata</i>	S	552	0	840	560	640	0	0	0
<b>Ischyroceridae</b>	S	558	0	0	0	0	0	0	0
<i>Jassa</i> sp.	S	568	0	0	0	0	0	0	0
<i>Jassa falcata</i>	S	569	0	0	0	0	0	0	0
<i>Jassa herdmanni</i>	S	20	0	0	0	0	0	0	0
<b>Aoridae</b>	S	577	0	0	0	0	0	0	0
<i>Aoridae</i> (partial/damaged)	S	577	0	0	0	0	0	0	100
<i>Leptocheirus hirsutimanus</i>	S	588	0	0	0	0	0	0	720
<b>Caprellidae</b>	S	639	0	0	0	0	0	0	0
<i>Caprella</i> sp.	S	640	40	0	0	0	0	0	0
<i>Pariambus typicus</i>	S	652	0	0	0	0	100	0	0
<b>ISOPODA</b>	S	790	0	0	0	0	0	0	0
<b>Sphaeromatidae</b>	S	857	0	0	0	0	0	0	0
<i>Cymodoce truncata</i>	S	863	20	0	0	0	0	0	0
<i>Dynamene bidentata</i>	S	0	20	0	0	0	0	0	0

JN1369 Deenish Island ASC

Howson &  
Picton  
(1997)<sup>1</sup>  
Inventory

Station	code	1	2	3	4	5	6	7	8	9
<b>Janiridae</b>		0	0	0	0	0	0	0	0	0
Janira maculosa	S 892	0	0	0	0	20	0	0	0	40
<b>Paramunnidae</b>		0	0	0	0	0	0	0	0	0
Paramunna bilobata	S 911	0	0	0	0	0	0	0	0	80
<b>CUMACEA</b>		0	0	0	0	0	0	0	0	0
<b>Bodotriidae</b>		0	0	0	0	0	0	0	0	0
Iphinoe serrata	S 1183	0	0	0	0	0	0	0	0	0
Iphinoe trispinosa	S 1184	0	0	0	0	0	0	0	0	0
<b>Nannastacidae</b>		0	0	0	0	0	120	0	0	0
Nannastacus unguiculatus	S 1201	0	0	0	0	0	0	0	0	0
<b>Pseudocumatidae</b>		0	0	0	0	0	0	20	40	0
Pseudocuma (Pseudocuma) longicorne	S 1203	0	0	0	0	0	0	0	0	0
Pseudocuma (Pseudocuma) simile	S 1214	0	0	0	0	0	0	0	0	0
<b>DECAPODA</b>		0	0	0	0	0	0	0	0	0
<b>Paguridae</b>		0	0	0	0	0	0	0	0	0
Paguridae indet.	S 1228	0	0	0	0	0	0	0	0	20
Anapagurus hyndmani	S 1231	0	0	0	0	0	0	0	0	0
<b>Porcellanidae</b>		0	0	0	0	0	0	0	0	0
Pisidia longicornis	S 1236	0	0	0	0	0	0	20	0	0
<b>Atelecyclidae</b>		0	0	0	0	0	0	120	60	0
	S 1237	0	0	0	0	0	0	0	0	0
	S 1276	0	0	0	0	0	0	0	0	0
	S 1445	0	0	0	0	0	0	0	0	0
	S 1448	0	0	20	0	60	0	0	0	0
	S 1480	0	20	20	100	140	40	0	0	20
	S 1482	20	0	0	0	20	0	0	0	0
	S 1553	0	0	0	0	0	0	40	0	20







JN1369 Deenish Island ASC

Howson &  
Pieton  
(1997)<sup>1</sup>  
Inventory

Station	1	2	3	4	5	6	7	8	9
Retusa umbilicata	W	1083	0	0	0	0	20	0	0
<b>PELECYPODA</b>	W	1560	0	0	0	0	0	0	0
<b>MYTILOIDA</b>	W	1689	0	0	0	0	0	0	0
Mytilidae	W	1691	0	0	0	0	0	0	0
Mytilidae indet. (juv.)	W	1691	2180	620	120	20	0	0	140
Mytilus edulis	W	1695	480	0	40	0	0	0	0
<b>VENEROIDA</b>	W	1815	0	0	0	0	0	0	0
<b>Montacutidae</b>	W	1888	0	0	0	0	0	0	0
Kurtiella bidentata	W	1906	0	20	100	40	40	0	440
<b>Astartidae</b>	W	1921	0	0	0	0	0	0	0
Goodallia triangularis	W	1929	0	0	20	0	0	0	60
<b>Cardiidae</b>	W	1938	0	0	0	0	0	0	0
Acanthocardia echinata	W	1943	0	0	0	0	20	40	0
Parvicardium pinnulatum	W	1951	0	0	0	20	0	0	0
Laevicardium crassum	W	1959	20	0	0	0	0	0	0
<b>Pharidae</b>	W	1995	0	0	0	0	0	0	0
Phaxas pelucidus	W	2006	0	0	0	0	0	60	0
<b>Tellinidae</b>	W	2008	0	0	0	0	0	0	0
Tellinidae indet. (juv.)	W	2008	0	20	0	0	0	0	0
Fabulina fabula	W	2019	0	0	0	0	260	200	0

JN1369 Deenish Island ASC

Howson &  
Pickett  
(1997)<sup>1</sup>  
Inventory

Station		1	2	3	4	5	6	7	8	9
Moerella donacina	W	2021	0	0	0	0	20	0	0	0
Asbjorsenia pygmaea	W	2023	0	40	0	0	0	0	0	0
<b>Psammobiidae</b>										
Gari sp. (juv)	W	2042	0	0	0	0	0	0	0	0
Gari tellinella	W	2044	0	0	0	0	0	0	0	20
Gari fervensis	W	2049	0	60	0	40	60	0	0	780
<b>Semelidae</b>										
Abra alba	W	2051	0	0	0	0	0	0	0	0
Veneridae	W	2057	0	0	0	0	0	0	0	0
Veneridae indet. (juv.)	W	2059	0	0	20	0	120	140	20	0
Chamelea striatula	W	2086	0	0	0	0	0	0	0	0
Clausinella fasciata	W	2086	0	40	0	80	0	0	60	400
Timoclea ovata	W	2100	0	0	0	0	20	380	60	0
Dosinia sp.	W	2104	0	0	0	40	20	0	0	20
Dosinia sp. (juv)	W	2126	0	0	0	20	80	0	0	40
<b>MYOIDA</b>										
<b>PHOLADOMYOIDA</b>										
Thraciidae	W	2126	0	0	0	0	0	160	0	0
Thracia sp. (juv.)	W	2140	0	0	0	0	0	0	80	0
Thracia phaseolina	W	2220	0	0	0	0	0	0	0	0
	W	2226	0	0	0	0	0	0	0	0
	W	2228	0	80	0	20	0	0	0	0
	W	2231	0	0	0	0	0	60	0	0

JN1369 Deenish Island ASC

Howson &  
Picton  
(1997)<sup>1</sup>  
Inventory

Station		1	2	3	4	5	6	7	8	9
<b>ECHINODERMATA</b>	ZB	1	0	0	0	0	0	0	0	0
<b>ASTEROIDEA</b>	ZB	18	0	0	0	0	0	0	0	0
<b>Astropectinidae</b>	ZB	24	0	0	0	0	0	0	0	0
Astropecten irregularis	ZB	26	0	0	0	0	0	0	20	0
<b>Asteroidea</b>				0	0	0	0	0	0	0
Asteroidea (juv)	ZB	18	20	0	0	0	0	0	0	60
<b>OPHIUROIDEA</b>	ZB	105	0	0	0	0	0	0	0	0
<b>OPHIURIDA</b>	ZB	121	0	0	0	0	0	0	0	0
<b>Ophiotrichidae</b>	ZB	122	0	0	0	0	0	0	0	0
Ophiotrix fragilis	ZB	124	0	0	0	0	0	0	0	40
<b>Ophiocomidae</b>	ZB	126	0	0	0	0	0	0	0	0
Ophiocomina nigra	ZB	128	0	20	0	0	0	0	0	0
Ophiocomina nigra (juv)	ZB	128	0	0	0	0	0	0	0	960
<b>Amphiuridae</b>	ZB	148	0	0	0	0	0	0	0	0
Amphiuridae indet. (damaged)	ZB	148	0	60	20	20	0	80	20	300
Amphiuridae indet. (juv)	ZB	148	0	0	0	0	0	0	20	100
Acrocnida brachiata	ZB	151	0	0	0	0	0	20	40	0
Amphipholis squamata	ZB	161	0	0	0	0	40	0	20	580
<b>Ophiuridae</b>	ZB	165	0	0	0	0	0	0	0	0
Ophiura sp. (juv.)	ZB	166	0	0	0	20	0	0	0	0

JN1369 Deenish Island ASC

Howson &  
Picton  
(1997)<sup>1</sup>  
Inventory

Station		1	2	3	4	5	6	7	8	9
<b>ECHINOIDEA</b>	ZB	181	0	0	0	0	0	0	0	0
Echinidae	ZB	194	0	0	0	0	0	0	0	0
Echinocyamus pusillus	ZB	212	0	20	0	40	20	0	0	0
Loveniidae	ZB	221	0	0	0	0	0	0	0	0
Echinocardium sp.	ZB	222	0	0	20	0	0	20	0	0
Echinocardium sp. (juv)	ZB	222	0	0	0	0	0	0	40	0
<b>CHORDATA</b>		0	0	0	0	0	0	0	0	0
<b>TUNICATA</b>	ZD	1	0	0	0	0	0	0	0	0
<b>ASCIDIACEA</b>	ZD	2	0	0	0	0	0	0	0	0
<b>PHLEBOBRANCHIA</b>	ZD	67	0	0	0	0	0	0	0	0
Ascidella sp. (partial/damaged)	ZD	83	0	0	0	0	0	0	0	40
<b>LEPTOCARDII</b>		0	0	0	0	0	0	0	0	0
<b>Branchistomidae</b>		0	0	0	0	0	0	0	0	0
Branchiostoma lanceolatum		0	0	20	0	0	0	0	0	0



**Appendix 3**

**AMBI Scores**

**Grab sampling stations surveyed at Deenish Island finfish aquaculture site,  
Kenmare Bay, Co. Kerry.**

**20<sup>th</sup> July 2016**



Station 2  
(1 replicates)

Area: 4.650

Block index: 4

Disturbance classification: Moderately disturbed

Arm (Arthropod) Beetles

Total Station

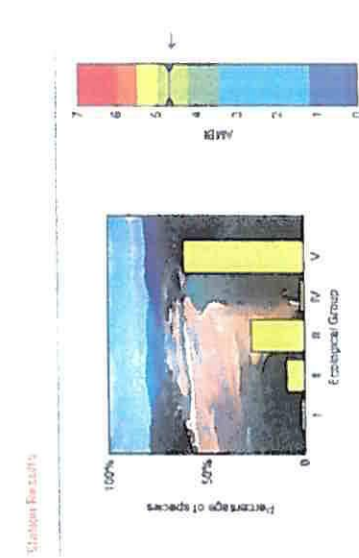
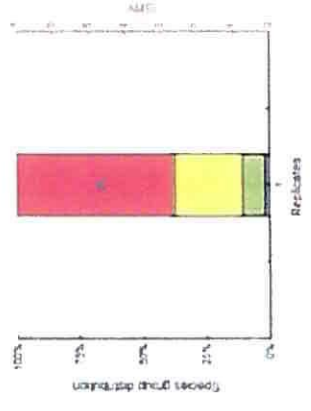
Population	Taxa
5300.0	NEMATODA (B)
100.0	NEURTEREA (B)
20.0	Hemiptera sp. (F)
440.0	Plebeia monacha (IV)
20.0	Plebeia sabica (I)
740.0	Elaphis longis (B)
600.0	Polysphincta mucosa (B)
60.0	Cyrtus sp. (I)
120.0	Gyrocampa lanuginosa (B)
20.0	RESCINDIDAE (Not assigned)
220.0	Plataneus fuscus (B)
40.0	Tyrannomyia coelestis (I)
20.0	Solenostoma barbata (I)
20.0	RESCINDIDAE (Not assigned)

Total Population: 31760.0

Insect Population: 31400.0

% Not assigned: 1.1

Number of taxa: 42



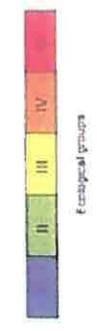
Replicate Disturbance

Rep	SI	SI2I	SI2V	SI2V	AMBI	BI	Disturbance Classification
1	1.7	0.8	26.7	1.4	61.4	4.650	4 Moderately disturbed



Back Sum

Navigation buttons: <<, >>, <, >, <<<, >>>



Station 3  
 (1 replicate)

AMIB: 7.934

Disturbance Classification: Slightly disturbed

Station 3  
 (1 replicate)

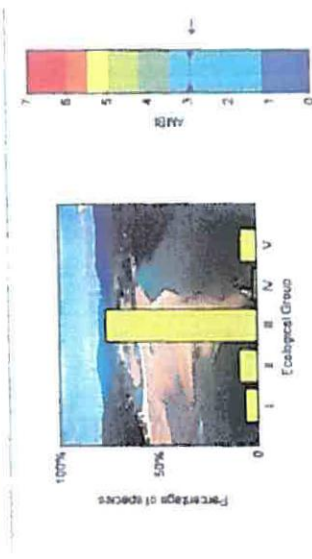
AMIB: 7.934

Disturbance Classification: Slightly disturbed

Sub Bottom Features

Sub Bottom Features

Population	Taxa
15220.0	NEMATODA (B)
20.0	Colony spongia (B)
500.0	Pisania remora (B)
60.0	POLYCHETA (Not assigned)
100.0	Mastigoma sp. (B)
100.0	Prober remora (IV)
60.0	Prober Baloca (B)
20.0	PHYLLOCORPORAL (Not assigned)
620.0	Chironomidae (B)
60.0	Cyanea sp. (B)
440.0	Cyanea spongia (B)
60.0	Palaemonetes (B)
60.0	Squilla (B)
20.0	Squilla (B)



Replicate Details

Rep.	SI	AMIB	STV	AV	AMBI	BI	Disturbance Classification
1	5.5	8.9	76.4	1.4	7.4	2.934	2 Slightly disturbed



Back Sum

Station 3

Ecological Groups: I, II, III, IV, V





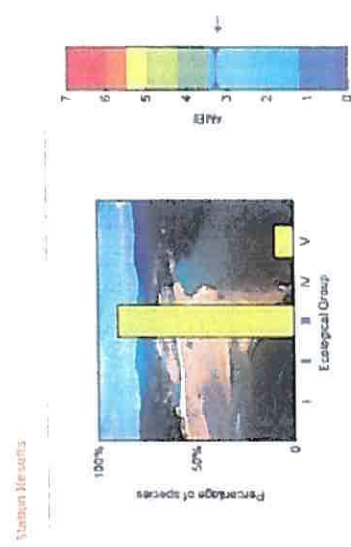
**Station A**  
(1 replicate)

AMBI: 3.271

Disturbance Classification: Slightly disturbed

AMBI: 3.271

Disturbance Classification: Slightly disturbed



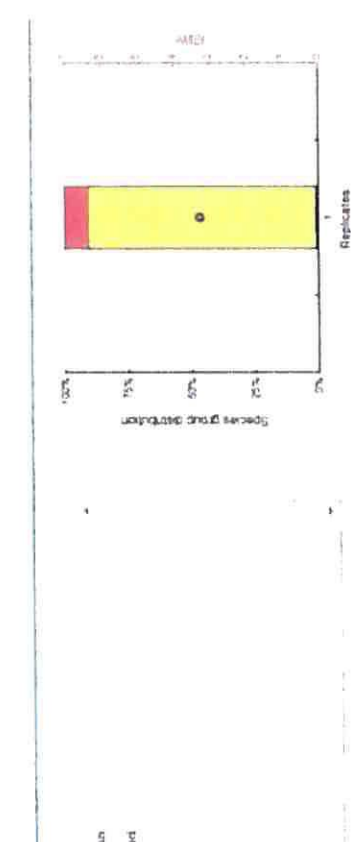
**Soft Bottom Benthos**

total status:

Total Population:	203100.0	Population	Taxa
Indicated Population:	202980.0	17920.0	HELIATODA (B)
% Not assigned:	0.1	20.0	HELIERTEA (B)
Number of taxa:	33	200.0	Pholoe serratia (V)
		20.0	Streblospio sp. (B)
		60.0	PHYLLOCCOLUS (Not assigned)
		740.0	Cisnoia zonga (B)
		740.0	Phycolioce mucosa (B)
		20.0	Lucicutia aurata (I)
		140.0	Pocumma huxleyi (B)
		20.0	Alysiinae pennigera (I)
		40.0	REPTOCOE (Not assigned)
		300.0	SPONDYLIA (B)
		18400.0	Indeterminate polychaetes (V)
		60.0	ORANTULIDAE (V)

**Replicate Details**

Rep	AMBI	AMBI SE	AMBI SW	Disturbance Classification					
1	0.6	0.0	0.7	0.3	9	5	3.271	2	Slightly disturbed



azl

Back Sum

Stations: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10

Ecological groups: I, II, III, IV, V



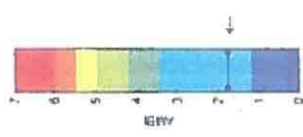
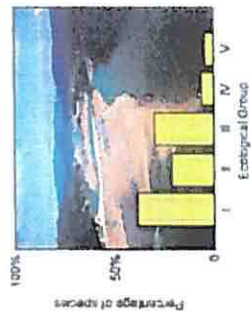
Station 7  
(1 replicate)

ADMI 1,744

Biotic index 2

Disturbance Classification Slightly disturbed

Station Results



Total station

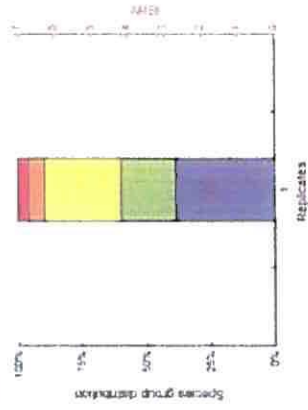
South Jordan Benthos

Population	Taxa
3420.0	EDWARDSIIDAE (F)
	NEMATODA (B)
	Ceratonereis sp. (B)
	PHYLLOCCIDAE (Not assigned)
3320.0	Eteone longi (B)
	Phyllodoce mucosa (B)
	Glycera tridactyla (F)
2.9	Heptyllia humbergii (F)
	Ampelisca bincata (F)
	Eunicia norvegica (B)
	SPOONIAE (B)
	Pronospeo sp. (not assigned)
48	Strophoscolus borborys (B)
	Marebicca albini (B)

Replicate Details

Rep. 01 011 0111 01V 01V ADMI BI Disturbance Classification

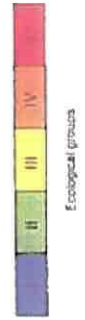
1 20.6 21.1 20.1 6.0 4.2 1.744 2 Slightly disturbed



Data Sum.

Navigation buttons: <<, <, >, >>

Stations







Station 8 (1 replicate)

Altazt 1,700

Wade Index 2

Disturbance Classification Slightly disturbed

Station Results

Soft Bottom Elements

total station

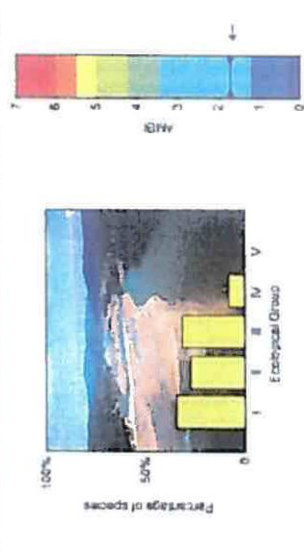
Population	Taxa
20.0	Syrinx colatum (Not assigned)
60.0	EDVIARIDIDAE (F)
4000.0	HEMATODA (F)
20.0	HEMIGRITA (F)
40.0	Cerastella sp. (F)
20.0	SPUNCULA (F)
200.0	Platys renata (F)
360.0	POLYDORIDAE (Not assigned)
20.0	Malingra sp. (F)
220.0	Malingra longmans (F)
500.0	Hemigraps sp. (F)
1200.0	Phobos nemata (F)
180.0	PHYLLODOCCIDAE (Not assigned)
25.0	Phyllodoce mucosa (F)

Total Population: 18600.0

Indexed Population: 17720.0

% Not assigned: 4.7

Number of taxa: 70



Replicate Details



Altazt

Back Sum

Station

#### **Appendix 4**

**AMBI groupings for fauna recorded in duplicate grab samples collected at  
Deenish Island, Kenmare Bay, Co. Kerry.**

**20<sup>th</sup> July 2016**

Group I (NPI)
Group II (NPI)
Group III (NPI)
Group IV (PI)
Group V (PI)

Blank (Not assigned)

Station 1	Density
NEMATODA	110380
Macroceros fuliginosus	20220
Mediomastus fragilis	3860
Capitella sp. complex	3080
Tubificoides benedii	2820
MYTILIDAE	2180
Spirobranchus spp.	1440
Mytilus edulis	480
Aonides oxycephala	240
Atelecyclus rotundatus	240
Tritia incrassata	120
SPIONIDAE	40
Pisidia longicornis	20

Station 2	Density
Capitella sp. complex	10800
NEMATODA	5300
Spirobranchus spp.	2340
Macroceros fuliginosus	2140
Phyllodoce mucosa	880
Mediomastus fragilis	800
Eteone longa/flava aggregate	740
Pholoe inornata	440
Psamathe fusca	220
Tubificoides benedii	200
Aonides oxycephala	140
Leptochiton cancellatus	140
MYTILIDAE	120
Glycera lapidum	120
Photis longicaudata	120

NEMERTEA	100
Glycera sp.	60
Tritia incrassata	20
Anapagurus hyndmani	20

Station 3	Density
NEMATODA	16220
Macroceros fuliginosus	920
Pisone remota	880
Mediomastus fragilis	780
ENCHYTRAEIDAE	720
Sphaerosyllis bulbosa	720
Eteone longa/flava aggregate	620
Kurtiella bidentata	480
Glycera lapidum	440
Protodorvillea kefersteini	240
Syllis garciai	200
Polycirrus sp.	180
Pholoe inornata	160
Aonides oxycephala	160
Malmgrenia sp.	100
Syllis pontxioi	100
Glycera sp.	80
SPIONIDAE	80
Euspira nitida	80
Schistomeringos neglecta	40
Anapagurus hyndmani	20
Caecum glabrum	20

Station 4	Density
NEMATODA	177920
Macroceros fuliginosus	16480
Capitella sp. complex	2460
Mediomastus fragilis	1500
Photis longicaudata	840
Eteone longa/flava aggregate	740
Phyllodoce mucosa	740
MYTILIDAE	620
SPIONIDAE	300



<i>Tubificoides benedii</i>	260
<i>Pholoe inornata</i>	200
<i>Caulleriella alata</i>	180
<i>Psamathe fusca</i>	140
<i>Anapagurus hyndmani</i>	100

Station 5	Density
NEMATODA	282400
<i>Mediomastus fragilis</i>	4280
<i>Tubificoides benedii</i>	1620
<i>Malacoceros fuliginosus</i>	1380
<i>Capitella</i> sp. complex	1180
<i>Photis longicaudata</i>	560
Eteone longa/flava aggregate	240
<i>Pholoe inornata</i>	200
ENCHYTRAEIDAE	200
SPIONIDAE	180
<i>Harmothoe</i> sp.	180
<i>Glycera lapidum</i>	160
<i>Anapagurus hyndmani</i>	140
<i>Glycera</i> sp.	140
<i>Pholoe baltica</i>	140
MYTILIDAE	120
<i>Aonides oxycephala</i>	120
<i>Spirobranchus</i> spp.	120
<i>Kurtiella bidentata</i>	100
<i>Cheirocratus</i> sp.	100
<i>Clausinella fasciata</i>	40
<i>Phyllodoce mucosa</i>	20
<i>Pisidia longicornis</i>	20

Station 6	Density
NEMATODA	76560
<i>Mediomastus fragilis</i>	1720
<i>Capitella</i> sp. complex	1400
<i>Photis longicaudata</i>	640
<i>Malacoceros fuliginosus</i>	800
<i>Glycera lapidum</i>	240
<i>Caulleriella alata</i>	220
<i>Aonides oxycephala</i>	200
<i>Pholoe inornata</i>	180

Eteone longa/flava aggregate	140
<i>Abra alba</i>	120
<i>Iphinoe serrata</i>	120
<i>Harmothoe</i> sp.	100
<i>Cheirocratus</i> sp.	80
<i>Timoclea ovata</i>	80
<i>Anapagurus hyndmani</i>	40
<i>Clausinella fasciata</i>	20
NEMERTEA	20
<i>Tritia incrassata</i>	20

Station 7	Density
<i>Chamelea striatula</i>	380
NEMATODA	360
<i>Fabulina fabula</i>	260
<i>Perioculodes longimanus</i>	240
<i>Spiophanes bombyx</i>	200
<i>Chaetozone christeis</i>	180
<i>Dosinia</i> sp.	160
<i>Abra alba</i>	140
<i>Magelona filiformis</i>	120
<i>Pseudocuma</i> ( <i>Pseudocuma</i> ) simile	120
<i>Pariambus typicus</i>	100
SPIONIDAE	80
EDWARDSIIDAE	80
<i>Pisidia longicornis</i>	40
<i>Mediomastus fragilis</i>	20
<i>Phyllodoce mucosa</i>	20

Station 8	Density
NEMATODA	400
<i>Spiophanes bombyx</i>	260
<i>Fabulina fabula</i>	200
<i>Perioculodes longimanus</i>	200
<i>Magelona filiformis</i>	140
<i>Tubificoides amplivasatus</i>	100
EDWARDSIIDAE	60
SPIONIDAE	40
Station 9	Density
NEMATODA	4000



Sphaerosyllis bulbosa	1880
Phoioe inornata	1200
Animoceradocus semiserratus	960
Ophiocomina nigra	960
Gari tellinella	780
Leptocheirus hirsutimanus	720
Harmothoe sp.	580
Amphipholis squamata	580
Skenea serpuloides	460
Kurtiella bidentata	440
VENERIDAE	400
AMPHIURIDAE	400
Leptochiton cancellatus	380
Eunice norvegica	320
Spirobranchus spp.	280
Protodorvillea kefersteini	220
Malmgrenia ljunmani	220
Pisione remota	200
Liljeborgia pallida	200
Glycera lapidum	180
Trypanosyllis coeliaca	180
Polygordius sp.	180
MYTILIDAE	140
Polycirrus sp.	140
AORIDAE	100



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Matheson

**MARINE HARVEST IRELAND ("MHI")  
SUBMISSION TO THE INDEPENDENT AQUACULTURE LICENSING REVIEW GROUP**

**LEGAL ANALYSIS BY MATHESON ON BEHALF OF MHI**

**9 FEBRUARY 2017**

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## Introduction and summary

### A. Purpose

This submission provides a legal analysis that demonstrates that it is legally possible to implement MHI's recommendations to modernise the aquaculture licensing process within the existing legislative framework. In some instances, we suggest minor amendments to the secondary regulations. This approach has been adopted as MHI is concerned that a full overhaul of the existing legislative framework could cause further delays to progressing licence applications for a strategically important industry in which the licensing system has reached a state of near paralysis.

### B. Format

Each section of the submission:

- identifies the road block(s) which exist in a specific area of the aquaculture licensing regime
- provides an analysis of the relevant area(s) of the existing legislative framework
- explains how MHI's recommendations can be implemented within the existing legislative framework.

### C. Summary of Issues and Recommendations

Section	Road Block(s)	Solution(s)
1	<ul style="list-style-type: none"> <li>▪ The conditions attached to aquaculture licenses are overly-prescriptive and require modernisation. Production limits based on annual tonnage, which is an inflexible and outdated metric, continue to be imposed.</li> <li>▪ The usual life of an aquaculture licence is disproportionately short at 10 years.</li> <li>▪ The same divisions of the Department of Agriculture, Food and the Marine (the "<b>Department</b>") are responsible for the licensing application and regulation functions.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Simplify the format of aquaculture licences by cross-referring to technical guidance documents in place of prescriptive technical conditions, and use Maximum Allowable Biomass as the metric of production in line with best practice internationally.</li> <li>▪ Aquaculture licences should be granted for a 20 year period, as is permitted by the existing legislative framework and in accordance with the other environmental licensing regimes in Ireland.</li> <li>▪ Allocate responsibility for the licensing application function and regulation functions to separate divisions of the Department.</li> </ul>
2	<ul style="list-style-type: none"> <li>▪ There are lengthy delays in determining applications for aquaculture licences.</li> <li>▪ Applicants are not kept informed of the progress of their licence applications.</li> <li>▪ Revised decision dates are not being</li> </ul>	<ul style="list-style-type: none"> <li>▪ Section 13 of the Fisheries (Amendment) Act 1997 (the "<b>1997 Act</b>") should be commenced as a matter of urgency. This section provides that the Minister shall endeavour to determine an application for an aquaculture licence within four months</li> </ul>

Section	Road Block(s)	Solution(s)
	<p>provided at the first stage of the process.</p> <ul style="list-style-type: none"> <li>▪ The statutory and public consultation periods are being run consecutively.</li> </ul>	<p>from the date on which all requirements for filing the application have been complied with.</p> <ul style="list-style-type: none"> <li>▪ The Minister should issue a policy directive<sup>1</sup> that the Aquaculture Licensing Appeals Board ("ALAB") should inform the applicant, in writing, of not only the revised date for the determination of an appeal but also the reasons for the delay, each time a revised, extended timeframe is set for the determination of an appeal.</li> <li>▪ The statutory and public consultation periods should be run concurrently.</li> </ul>
3	<ul style="list-style-type: none"> <li>▪ Repeated and excessive requests for information by the licensing authority<sup>2</sup>, often for information that is not within the direct expertise or statutory remit of the licensing authority.</li> </ul>	<ul style="list-style-type: none"> <li>▪ The Minister could issue a policy directive which (i) places reasonable parameters on the entitlement of the licensing authority to request further information and on the type of information it can seek; and (ii) provides that the licensing authority is only permitted to seek further information from an applicant on one occasion only.</li> <li>▪ The Minister could issue a policy directive which allows for pre-application consultations with potential applicants in order to clarify the information which the licensing authority will require to consider the application to ensure that the applicant submits all of necessary information.</li> </ul>
4	<ul style="list-style-type: none"> <li>▪ There are missed opportunities to streamline the application process without legislative change, for example, by way of policy directives issued by the Minister.</li> </ul>	<ul style="list-style-type: none"> <li>▪ The Minister could issue policy directives to streamline the application process. These policy directives could provide, for example, technical guidance, address the time frame for decision-making and format of aquaculture licences.</li> </ul>
5	<ul style="list-style-type: none"> <li>▪ The Aquaculture (Licence Application) Regulations 1998 (as amended) (the</li> </ul>	<ul style="list-style-type: none"> <li>▪ The 1998 Regulations could be amended in line with EU law to provide that an EIS</li> </ul>

1. As permitted by section 62 of the 1997 Act

2. Defined by section 3 of the Fisheries (Amendment) Act 1997 (as amended) (the "1997 Act") as

"(a) the Minister,

(b) an officer to whom functions have been delegated under section 21(1) by the Minister, or

(c) the Aquaculture Licences Appeals Board."

Section	Road Block(s)	Solution(s)
	<p>"1998 Regulations") require the submission of an Environmental Impact Statement ("EIS") more often than is required by European legislation or case law.</p>	<p>only needs to be submitted with an application for the renewal of an aquaculture licence where there would be a significant adverse change to the environmental effects cause by the change to the licensed activity.</p>
6	<ul style="list-style-type: none"> <li>▪ The refusal of the licensing authority to carry out Appropriate Assessment based on generic conservation objectives when no site specific conservation objectives have been set.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Appropriate Assessment can be carried out using generic conservation objectives when no site specific conservation objectives have been set. This process is undertaken in other licensing spheres in Ireland.</li> </ul>
7	<ul style="list-style-type: none"> <li>▪ The funding and resource constraint within the licensing authority.</li> </ul>	<ul style="list-style-type: none"> <li>▪ The Minister could increase the licensing fees for certain categories of aquaculture licence or activities of certain degrees of magnitude or consider the use of scaled fees in order to increase the funding available to the licensing authority.</li> </ul>
8	<ul style="list-style-type: none"> <li>▪ The absolute requirement to obtain a foreshore licence, even for the temporary placement of water pipe or other temporary equipment.</li> </ul>	<ul style="list-style-type: none"> <li>▪ The Minister could automatically issue a written permission to carry out a trivial activity on the foreshore at the same time that the licensing authority grants an aquaculture licence.</li> <li>▪ The General Scheme of Maritime Area and Foreshore (Amendment) Bill 2013 offers an opportunity to combine the aquaculture and foreshore licensing regimes into a single process and allow for the placement of temporary equipment on the foreshore to be permitted by the terms of an aquaculture licence.</li> </ul>



## 1 Licence Conditions, Period and Functions

### 1.1 Road blocks: (i) licence conditions and period; (ii) responsibility for licensing and compliance functions

#### (i) Licence Conditions and Period

A person is not permitted to engage in aquaculture without holding an aquaculture licence<sup>3</sup>. A holder of an aquaculture licence is obliged to comply with the conditions of the licence. The Minister may revoke an aquaculture licence if satisfied that there has been a breach of a condition specified in a licence<sup>4</sup>.

Three of MHI's key concerns regarding current licence conditions are:

- **Overly prescriptive conditions regarding process and methodology:** Aquaculture licences in their current form, contain extensive prescriptive conditions<sup>5</sup>, which do not allow for improvements in technology. Thus, even improvements aimed at lowering environmental impact cannot be made without licence change. Changes to a licence require a formal amendment that is subject to a protracted process. For example, an aquaculture licence can dictate the time of year at which the licence holder is required to harvest its stocks. This licence condition is not compatible with the production process, as the production process is not aligned with the annual cycle. The holder of an aquaculture licence could find itself subject to enforcement action for technical breach of licence if the licence-holder updated the method of carrying out an activity to have a lesser environmental impact. By contrast, licences issued by the EPA are granted subject to the over-arching requirement that:

*"...at all times BAT [Best Available Technique] must be considered in the management and operation of the activity."*

Also, aquaculture activity may not only be subject to aquaculture licensing but can also be covered by a wider regulatory framework. For example, a licence holder may be required to obtain planning permission to construct a facility and may require a waste water discharge licence to operate. An overly-prescriptive aquaculture licence can cause difficulty for a licence holder if it obliges the licence holder to comply with a prescriptive technical standard that is different to that imposed by another permit.

- **Use of limits based on annual tonnage:** The licensing authority continues to issue finfish aquaculture licences which measure the limit of production capacity by reference to an annual maximum production limit (eg, harvested annual tonnage) as opposed to standing stock biomass (the weight of live fish on a site at any given time). We understand that an annual tonnage limit is an inflexible and outdated metric which requires an operator to tread a delicate

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3. Section 6 of the 1997 Act. The licensing process is dealt with elsewhere in this document.

4. Section 68(1) of the 1997 Act

5. For example, specifying a particular technical process or methodology.



balance in stock management. An operator may be forced to transfer stock to another site, before it reaches a particular point in its development, to avoid a technical breach of a strict annual production limit. These issues are addressed further in section 5.3 of this submission.

- **Typical life time of 10 years for a licence:** Aquaculture licences are regularly granted for a limited period of 10 years, rather than the 20 years allowed by legislation<sup>6</sup>. In many other Irish industry sectors, operating life is either unlimited (such as for facilities licensed by the Environmental Protection Agency) or limited to 20 to 25 years unless further extended (in the case of wind farms). Environmental licences that require an Environmental Impact Assessment (“EIA”) must be assessed on the basis of whole-of-lifetime effects, ie, from commissioning and construction through to operation and decommissioning<sup>7</sup>. This type of analysis (which is undertaken for aquaculture licences that require EIA) fully supports long-term 20-year licences in line with the requirements of European environmental law. The relatively short term of aquaculture licences is disproportionate to the administrative and regulatory burden imposed on operators when applying for the licence. It is inconsistent with other industries and Irish environmental practice that aquaculture licensing is subject to such unnecessarily short licence lives.

(ii) Licensing Application and Compliance Functions

Unlike other environmental licensing regimes in Ireland<sup>8</sup>, we understand that the same departmental divisions are responsible for both the licensing and compliance functions for aquaculture. We are instructed that the concentration of responsibility for these functions can lead to a reduction in the availability of expertise necessary for the efficient turn-around of licence applications.

We understand that aquaculture licensing is administered through the Aquaculture and Foreshore Management Division (“AFMD”) of the Department. AFMD is responsible for the licensing and regulation of aquaculture. The Marine Engineering Division (“MED”) and the Marine Institute (“MI”) work with AFMD and provide support functions in relation to aquaculture. We understand that the current practice is that MI advises on the biological / scientific aspects of licence applications and renewals and that MED provides the functions of reviewing and examining aquaculture licence applications and environmental impact statements (“EIS”), carrying out site inspections and producing reports on licence compliance.<sup>9</sup> MED is also involved in assessing, reviewing and providing technical advice on foreshore licence and lease applications in respect of aquaculture. We are instructed that the resources of AFMD and MED are heavily focused on the compliance function.

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6. Under section 15(2) of the 1997 Act a licence can have a life of up to 20 years.

7. EPA, *Guidelines on the information to be contained in Environmental Impact Statements* (2002).

8. For example, the Integrated Pollution Control (“IPC”) Licence system under the Environmental Protection Agency Acts 1992 – 2013

9. See Chapter 4 – Seafood of the Structure of Department available here – <https://www.aquaculture.gov.ie/aboutus/briefingforministers2016/>

The arrangement where the same divisions of the Department have responsibility for the licensing and compliance functions is relatively unusual in our experience. For example, the Environmental Protection Agency (the "EPA") has overall responsibility for the application and compliance functions of a number of licensing regimes<sup>10</sup>. However, the EPA's functions are divided between five different offices<sup>11</sup>. The Office of Environmental Sustainability is responsible for the licensing application function and the Office of Environmental Enforcement is responsible for the licensing compliance function.

## 1.2 What changes should be made?

### (i) Licence Format and Period

There is no prescribed mandatory format for aquaculture licences under legislation, though template licences have been published<sup>12</sup>. The format of an aquaculture licence should be simplified by including cross-references to appendices or technical guidance documents in place of imposing extensive technical conditions. This approach would give the flexibility to update the technical requirements of the activity on an ongoing basis by updating the guidance without having to amend the letter of the licence directly by way of formal amendment.

The production parameters stated in an aquaculture licence should be quantified in terms of Standing Stock Biomass. In a press release by the Minister on 5 December 2011 to announce the launch of new aquaculture licence templates,<sup>13</sup> it was expressly acknowledged that:

*"Standing Stock Biomass is internationally recognised as the appropriate metric for assessing loading at an aquaculture production site and can be measured on a real time basis thus facilitating effective regulation and management of sites".*

Maximum Allowable Biomass should be adopted as the standard metric of production in all aquaculture licences. This approach would align the Irish licensing regime with the Scottish and Norwegian aquaculture licensing regimes, both of which use 'maximum standing biomass' as the measurement of the limit of production capacity.

Aquaculture licences should be granted for a period of 20 years as standard, as permitted by the legislation<sup>14</sup>. As suggested above, the introduction of flexibility to update technical requirements on an ongoing basis throughout the life of a licence should provide comfort to the authority in granting a licence for the 20 year term.

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10. For example, the IPC and the Waste Water Discharge licensing systems.

11. EPA organisation chart available here – <http://www.epa.ie/about/org/>

12. Section 7(1) of the 1997 Act provides that the licensing authority may licence a person to carry on aquaculture on such terms as it thinks fit and specifies in the licence. Subsection (3) provides a non-exhaustive list of conditions to which an aquaculture licence may be subject.

13. Press release available here - [http://www.agriculture.gov.ie/press/pressreleases/2011/december/title\\_59997.en.html](http://www.agriculture.gov.ie/press/pressreleases/2011/december/title_59997.en.html)

14. Section 15(2) of the 1997 Act

(ii) Licensing Application and Compliance Functions

There is no legal barrier to the Minister separating the licensing and compliance functions through internal reorganisation of the Department.



## 2 Timeline for Decision-Making

### 2.1 Road block: protracted timeframe for determining aquaculture licence applications

Delay in decision-making is a key roadblock. Licence applications can take many years to progress.<sup>15</sup>

The lack of a coherent time objective for determining applications and the lack of transparency in the current process is aggravating the delay.

During the process, (particularly the first stage), the applicant and interested parties are often left in the dark as to the progress of the application and are not given reasons for delay nor a revised decision date.

The European Commission (the "Commission") issued a Communication for the sustainable development of EU aquaculture<sup>16</sup> in which the Commission noted that authorisation procedures in several Member States can take around two to three years to complete. The Commission invited Member States to reduce time for licensing and other authorisations to one month by the end of 2015<sup>17</sup> provided EU environmental legislation is adhered to.

There are mechanisms within the current legislative framework that can address the objective to minimise delay as set out below.

### 2.2 The legal framework

In common with many environmental licensing regimes, the timelines for decision-making in the 1997 Act are not a strict cut-off point. There are helpful objectives, when backed with transparency of communication, and can assist in structuring the approach. The timelines are:

- Section 13 of the 1997 Act provides that the Minister shall endeavour to determine an application for an aquaculture licence within four months from the date on which all requirements for filing the application have been complied with. However, this section of the 1997 Act has not yet been commenced. Thus, this section will have no legislative force until brought into effect by commencement order (in the form of a regulation) passed by the Minister. The provision of the 1997 Act that sets a time limit for the Minister to determine an application (when commenced) will allow the Minister to extend the four month timeframe where it appears to the Minister that it will not be possible to determine an application within this timeframe. Where the Minister

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<sup>15</sup> The case of *Deerland Construction Ltd v The Aquaculture Licences Appeals Board & Anor* [2008] IEHC 289 demonstrated that the process of issuing an aquaculture licence took five years. Lett and Company Limited applied for an aquaculture licence in October 1996. The licence was granted in October 2001. The delay in processing the application did not form part of this case.

<sup>16</sup> Communication from the Commission to the European Parliament, the Council, the European and Social Committee and the Committee of the Regions, A strategy for the sustainable development of European aquaculture, 29 April 2013, available here - <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52013DC0229&from=EN>

<sup>17</sup> At page 5 the Communication notes "*The Commission has proposed an Action Plan to support entrepreneurship in Europe. The Action plan invites the Member States to reduce time for licensing and other authorisations necessary to start a business activity to one month by the end of 2015 provided that requirements of EU environmental legislation are met. As a first step, a comprehensive mapping and screening exercise needs to be performed*".



decides to extend the timeframe for an application, the Minister must issue a written notice to the applicant and any other person who has made submissions, setting out the reasons why the application will not be determined within the four month timeframe. The Minister must also specify a revised date in the written notice before which it is intended to determine the application.

- The provision of the 1997 Act<sup>18</sup> which requires ALAB to endeavour to determine an appeal within four months of the date of receipt of the notice of appeal has been commenced. This provision allows ALAB to extend the period for determining an appeal but requires ALAB to issue a notice to the parties to the appeal which (i) confirms the extension; (ii) gives the reasons for the extension; and (iii) specifies the date by which ALAB intends to determine the appeal. ALAB is obliged to endeavour to determine the appeal by the revised date set in such a notice. The 1997 Act does not specify what ALAB is required to do when the appeal is not determined by the revised date. However, we understand that ALAB notifies the applicant of any revised date for the determination of the appeal, but does not give reasons for the delay.

The legislation<sup>19</sup> also provides for public and statutory consultation periods. The legislation is silent on whether the consultation periods should be run consecutively or concurrently. The current practice is to run the consultation periods consecutively (first the statutory consultation and then the public consultation). This practice contributes to the delays experienced in the determination of aquaculture licence applications. We understand that the practice appears to be based on a concern that compliance with the Aarhus Convention<sup>20</sup> ("Aarhus") (which mandates public participation in decision-making and access to justice in environmental matters) cannot be achieved unless the public has an opportunity to consider the submissions of the statutory bodies. It has been held by both the High Court (in a judgment dealing with aquaculture licensing)<sup>21</sup> and the Court of Appeal<sup>22</sup> that Aarhus only forms part of Irish domestic law insofar as it has either (a) been incorporated into Irish law through the passing of legislation by the Oireachtas; or (b) been incorporated into European law that is of direct effect in Ireland (either by way of implementing Irish legislation or effluxion of time). Aarhus does not mandate anywhere that the consultation periods must be consecutive, and this type of provision cannot be implied into Irish law from a general concern about compliance with Aarhus. Other environmental licensing regimes<sup>23</sup> allow for notice periods for statutory bodies and the public to run concurrently.

### 2.3 What is the legal risk for the licensing authorities and the process if the current delays continue?

The current aquaculture licensing process, in which applicants experience significant delays, is at risk of being successfully challenged by court action. An expedient and transparent

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18. Section 56 of the 1997 Act

19. Regulations 9 and 10 of the 1998 Regulations

20. The UNECE Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters.

21. *Waterville Fisheries Development Limited v Aquaculture Licenses Appeals Board (No 3)* [2014] IEHC 522

22. *McCoy & Anor v Shillelagh Quarries Ltd & Ors* [2015] IECA 28

23. For example, the planning regime under the Planning Acts 2000 – 2016 (the "Planning Acts")

timeline will enhance the legitimacy of the aquaculture licensing process and reduce the risk of a court challenge.

The reason for this legal risk is that the courts have repeatedly held in other statutory contexts that an applicant is entitled to a decision one way or another within a reasonable time.<sup>24</sup> What might be a reasonable time depends on the circumstances of each case, including the nature of the decision sought, the particularities of the applicant's position, the impact the delay may have and also the conduct of the administrative decision maker in dealing with such applications, together with any explanation for the time taken<sup>25</sup>.

The courts have granted orders compelling a decision-maker to reach an administrative decision in instances where the applicant has experienced excessive and unjustifiable delay.

In 2016, the High Court, in *Mohammed Ahsan v Minister for Justice and Equality*<sup>26</sup>, granted an order compelling the Minister to make a decision on the applications of the applicants<sup>27</sup> for non-national family members of EU citizens, one way or the other, within six weeks of the court order. The Minister for Justice argued that the court was not entitled to make an order requiring a decision to be made as this would equate to a direction to the Minister for Justice as to how (already limited) resources should be allocated. It was also argued that such an order would cut across the level of investigation required into each application. The court rejected these arguments and held that it was not trespassing on the Minister for Justice's remit by requiring a decision to be taken within a set timeframe, given the excessive and unjustifiable delay. In the *Ahsan* case, the judge pointed out that if the delay had been only a couple of months, and if there was a stated timeframe provided to the court for the commencement of the examination of the visa applications, then some margin of appreciation might have been afforded to the Minister for Justice. However, in the absence of any projected timeframe, the question of resources and other factors raised by the Minister for Justice were not sufficient to outweigh the applicants' rights. The open-ended timeframe for processing the visa applications was a factor in the court's decision to find against the Minister for Justice.

Parallels can be drawn between the manner of processing applications under the visa scheme in the *Ahsan* case and the current aquaculture licensing process. The *Ahsan* judgment illustrates that in instances of excessive and unreasonable delay in the making of an administrative decision, an aggrieved applicant may obtain relief from the court in the form of an order compelling the relevant body to make a decision. The *Ahsan* case also shows that a decision-making body is less vulnerable to court action where it adheres to a stated timeframe, even where this timeframe is extended, provided the delay is justified and the applicant is kept informed of the projected timeframe.

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24. For example, *Point Exhibition Co. Ltd v The Revenue Commissioners* [1993] 2 IR 551

25. *Nearing v Minister for Justice* [2010] 4 IR 211

26. [2016] IEHC 691

27. The applicants had been variously advised by the visa centre that the timeframe for determination of the applications would range from 8 to 12 to 16 weeks. These periods expired without any decision having been made on any of the applications. The applicants were not further advised of the projected timeframe. The judicial review proceedings were heard in July 2016, approximately one year after their applications were submitted.



An applicant may also be awarded damages where it can be shown that the decision-maker's delay in reaching the decision has interfered with a fundamental right<sup>28</sup>, such as the right to property and to earn a livelihood in the context of aquaculture licensing.

#### 2.4 What changes should be made within the current legal framework to address the delays and lack of transparency?

The appropriate use of the timeframe provisions in the 1997 Act should impose some structure on the application process by ensuring that the licensing authority endeavours to make aquaculture licence determinations in accordance within an expedient and transparent timeframe. The framework set out in the 1997 Act allows for necessary flexibility by permitting the Minister to extend the timeframe, where appropriate. The requirement for the Minister to give written reasons for extending the timeframe for determining an application also ensures transparency.

The purpose of the timeframe provisions within the 1997 Act precisely aligns with the objectives of the independent review, ie, the delivery of licence determinations in a timely manner and enhanced transparency in the licensing process. We propose that the Independent Aquaculture Licensing Review Group should recommend that the timeframe provisions of the 1997 Act for the determination of a licence application by the Minister be commenced as a matter of urgency, by way of a regulation issued by the Minister.

When it is not possible to determine an appeal within four months, ALAB is required by the 1997 Act to issue a notice to the parties to the appeal which (i) confirms the extension; (ii) gives the reasons for the extension; and (iii) specifies the date by which ALAB intends to determine the appeal. We understand that ALAB does issue a notification to the parties to an appeal on each occasion that an extension is required. However, we are instructed that those notifications do not give the reasons for which the extension is required. The Independent Review Group could recommend that the Minister issue a policy directive<sup>29</sup> which requires ALAB to provide the parties to an appeal with the reasons for which an extension of time is required on every occasion that a notification that an extension of time is required is issued. This practice would increase transparency by ensuring that the applicant is at least kept informed of the progress and prospective determination of the appeal and also allow the applicant to assist ALAB, for example by submitting information which ALAB might require to determine the application.

The application process could also be made more efficient by running both the statutory and public consultation periods concurrently and the Minister could issue a policy directive to that effect.

Once it is clear that there is in place "*an orderly, rational and fair system for dealing with [aquaculture licence] applications*", the court would no longer have any reason to infer any

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28. In *O'Donoghue v The Legal Aid Board* [2004] IEHC 413, the High Court made an award of damages for breach of constitutional rights in favour of the plaintiff where she had experienced significant delay with her application for legal aid. Damages were awarded regardless of the fact that the decision-making body had eventually granted the plaintiff's application prior to the proceedings.

29. As permitted by section 62 of 1997 Act

illegality in the conduct of the licensing authority unless some specific wrong doing or default is demonstrated in a particular case<sup>30</sup>.

A stated timeframe for the determination of licence applications, together with a practice of keeping the applicant informed on the progress of the application and the reasons for any delay, are necessary elements for an '*orderly, rational and fair system*' for dealing with applications. Adherence to the timeframe and transparency provisions by the licensing authority will enhance the overall legitimacy of the aquaculture licensing process and reduce the likelihood of the process being challenged in the courts.

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30. *Nearing v Minister for Justice* [2010] 4 IR 211, para 25, per Cooke J.



### **3 Requests for Information During the Application Process**

#### **3.1 Road block: excessive requests for information**

As set out by MHI in its submission, the current practice of the licensing authority when determining aquaculture licence applications can be to make repeated requests for a wide range of information from an applicant. The information sought can concern matters which are not within the direct expertise of the licensing authority such as:

- Property rights and arrangements for access / rights of way; or
- Other matters which the licensing authority is not required to take account of when determining an application for an aquaculture licence<sup>31</sup>.

The type of additional information which is sought from an applicant can also differ from application to application. We are instructed that it appears to depend on subjective approaches as to how certain matters (for example, the visual impact of an aquaculture facility or passage of wild fish) should be addressed.

#### **3.2 What powers does the licensing authority have to request information from an applicant?**

Applications for an aquaculture licence must comply with the regulations set down by the Minister<sup>32</sup>. The application must be made on an application form approved by the Minister<sup>33</sup> and be accompanied by a number of specified documents<sup>34</sup>. The application form was most recently revised in June 2016<sup>35</sup>. There is a check-list of documents which must be included with the application form. The Minister is entitled to (i) require an applicant to furnish further information which may be reasonably required to allow an application be considered or (ii) produce any evidence which may be reasonably required to verify any information given in relation to the application<sup>36</sup>.

ALAB is also entitled to require a party, or other person who has made a submission to an appeal, to submit such documents, particulars or other information which it considers necessary for it to determine the appeal<sup>37</sup>.

#### **3.3 How do other statutory application processes operate?**

The application process under the Planning Acts operates in some similar respects to the aquaculture licensing process. Under the Planning Acts, a person who wishes to carry out development is obliged to obtain permission<sup>38</sup>, either from the relevant local authority or An

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31. The matters which the Licensing Authority shall take account of are listed in section 61 of the 1997 Act

32. The 1998 Regulations

33. Regulation 4(1) of the 1998 Regulations

34. These documents are listed in regulation 4(3) of the 1998 Regulations

35. Available at <https://www.agriculture.gov.ie/seafood/aquacultureforeshoremanagement/formsdownloads/>

36. Regulation 7 of the 1998 Regulations

37. Section 47 of the 1997 Act

38. Section 32 of the Planning Acts

Bord Pleanála ("ABP"). As with applications for aquaculture licences, regulations<sup>39</sup> have been made to govern the application process<sup>40</sup> and the documents which must accompany an application are specified<sup>41</sup> in those regulations.

The planning legislation<sup>42</sup> permits a potential applicant to enter into consultations with the relevant planning authority to discuss the proposed development and receive advice from the planning authority regarding the proposed application. A purpose of this consultation process is to ensure, as far as possible, that the applicant submits all of the information which the planning authority will require to consider the application.

Once an application is made, the planning authority is entitled to require an applicant to (i) submit any further information which the authority considers necessary to enable it to deal with the application or (ii) produce any evidence which may be reasonably required to verify any information given in relation to the application<sup>43</sup>. This approach is similar to the entitlement of the Minister under the 1997 Act. However, a planning authority, which has requested further information from an applicant, may not require that applicant to submit any further information or evidence unless it is necessary to clarify matters in the applicant's response to the planning authority's original request for further information<sup>44</sup>.

If an appeal is brought to ABP then ABP is entitled to require any party, or person who has made a submission to an appeal, to submit such documents, particulars or other information which ABP considers necessary to determine the appeal<sup>45</sup>.

It has been recognised by the courts<sup>46</sup> that a request for further information by a planning authority must be limited to planning matters which are relevant to the application. As a matter of practice, neither local authorities nor ABP generally require applicants to submit detailed information relating to property rights or arrangements for access / rights of way or other matters outside of their direct expertise and direct statutory remit. This information is not considered necessary because a planning permission, like an aquaculture licence, does not confer any property right on an applicant to actually carry out the development. The purpose of the planning permission or aquaculture licence is to consider the appropriateness of the development in environmental or other terms.

### 3.4 How should the powers of the licensing authority to request information be used?

Regulation 7 of the 1998 Regulations allows the Minister to seek further information from an applicant for an aquaculture licence. However, it is expressly stated that the Minister should only seek such information as is reasonably required to enable the application to be

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39. Under section 33 of the Planning Acts

40. SI 600 of 2001 – the Planning and Development Regulations 2001 (as amended) (the "2001 Regulations")

41. Regulation 22 of the 2001 Regulations

42. Section 247 of the Planning Acts

43. Regulation 33(1) of the 2001 Regulations

44. Regulation 33(2) of the 2001 Regulations

45. Section 132 of the 2000 Act

46. *Illum Properties Limited v Dublin City Council* [2004] IEHC 327



considered or verify any particulars or information given by the applicant in relation to the application. Equally, section 47 of the 1997 Act limits ALAB's entitlement to require the production of documents, particulars or other information to those that are necessary to determine an appeal.

The information which the Minister has deemed necessary for the licensing authority to have in order to consider the matters set out in section 61 of the 1997 Act is set out in regulation 4 of the 1998 Regulations, regulation 4 of the European Communities (Control of Dangerous Substances in Aquaculture) Regulations 2008 and is listed in the aquaculture licence application form.

It is implicit in both regulation 7 of the 1998 Regulations and section 47 of the 1997 Act that any further information requested from an applicant should be solely for the purposes of allowing the licensing authority to take account of the matters listed in section 61 of the 1997 Act. The current wide-ranging use of the powers under regulation 7 of the 1998 Regulations and section 47 of the 1997 Act to make repeated requests for information could reasonably be curtailed without in any way affecting the necessary scrutiny under Irish or European environmental legislation.

In line with the planning regime<sup>47</sup>, the licensing authority should endeavour to request further information from an applicant on one occasion only, unless otherwise justified. A subsequent request for further information should only be permitted if it is necessary to clarify matters in the applicant's response to the licensing authority's original request for further information. This efficiency in the application process could be achieved by the Minister issuing a policy directive that places reasonable parameters on the entitlement of the licensing authority to request further information and on the type of information it could seek. The Minister could also amend the powers of the Minister to seek information in regulation 7 of the 1998 Regulations using a statutory instrument.

As with the planning regime, the introduction of a pre-application consultation process could assist an applicant with submitting all of the information which the licensing authority will require to consider the application. The Minister could issue a policy directive which provides for this consultation process to be made available by the licensing authority to potential applicants.

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47. Regulation 33 of the 2001 Regulations

## 4 Policy Directives by the Minister

### 4.1 Road block: missed opportunities to streamline the process without legislative change

MHI has identified a number of areas of the aquaculture licensing process which do not function efficiently.

The Minister has the power to issue policy directives which could address those areas. MHI believes that this approach would result in a more streamlined application and decision-making process.

### 4.2 What powers does the Minister have to direct the licensing process?

Under section 62 of the 1997 Act, the Minister may issue such general directives as to policy in relation to aquaculture as he or she considers necessary. The licensing authority must, in performing its functions, have regard to any such directives. Such policy directives could provide useful guidance to applicants for, and holders of, aquaculture licences and the licensing authority itself for the licencing process. This is a common practice. The Supreme Court stated in *McCarron v Kearney*<sup>48</sup> that:

*"It would be wrong to preclude a decision-maker from formulating guidelines by reference to which he makes it clear that he will make his decisions. It would be inimical to good administration and to consistency in decision-making to oblige all decision-makers to treat each decision entirely on its own, without reference to previous decisions or criteria designed to serve the public interest."*

Accordingly, it is possible for the Minister to clarify the approach to be taken when considering an application for an aquaculture licence<sup>49</sup> by issuing a policy directive.

To date, the Minister has not issued any policy directives under section 62 of the 1997 Act. The Minister has issued policy directives under section 3(2) of the Fisheries (Amendment) Act 2003 (as amended by the Sea-Fishers and Maritime Jurisdiction Act 2006) (the "2003 Act")<sup>50</sup>.

### 4.3 What types of policy directives could the Minister give?

Based on the analysis in this submission we summarise below three options for policy directives. There may of course be other initiatives that would benefit from being encompassed in policy directives as the Minister determines to be appropriate

#### (a) *Technical guidance*

MHI believes that it would be helpful for the Minister to issue policy directives as to certain technical matters. This type of guidance is given in other environmental licensing regimes. For example, under the IPC licensing regime, which is administered by the EPA, the EPA issues technical guidance notes. The guidance notes set out, for example, the best available technique for performing various

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48. [2010] IESC 28

49. These matters to which the licensing authority shall have regard are listed in section 61 of the 1997 Act.

50. A full list of the Policy Directives issued under section 3(2) of the 2003 Act is available at <http://www.agriculture.gov.ie/seafood/seafisheriesadministration/fishingboatlicencing/>



industrial activities. The EPA considers applications for IPC licences in light of these guidance notes. The guidance can evolve over time as technology improves.

As with the IPC regime, the Department could issue technical guidance documents. The Minister could then issue a policy directive that all applications for aquaculture licences be assessed by reference to the technical guidance documents. The existence of such guidance documents and policy directives could provide useful guidance for applicants and the licensing authority and reduce the perceived need for the licensing authority to consider an applicant's scientific material from "first principles" every time it receives an application.

(b) *Time frame for decision-making*

The Independent Review Group could recommend that the Minister issue a policy directive<sup>51</sup> which requires ALAB, when notifying the parties to an appeal that an extension of time is required, to give the reasons for which the extension. This practice would increase transparency and also allow the applicant to assist ALAB, for example by anticipating information which ALAB might require to determine the application in light of the reasons given for the delay.

(c) *Terms of aquaculture licences*

New aquaculture licensing templates were announced in a press release issued by the Minister on 5 December 2011<sup>52</sup>. The new templates provide for Standing Stock Biomass to be used as the measurement for the limit of production capacity at a finfish aquaculture site. However, the licensing authority is continuing to issue finfish aquaculture licences which measure the limit of production capacity by reference to an annual maximum production limit (eg harvested annual tonnage).

The Minister could issue a policy directive that all future aquaculture licences issued by the licensing authority are in the same format as the new licence templates, use Standing Stock Biomass as the measurement of the limit of production capacity and do not dictate the time of year at which stocks must be harvested. This type of policy directive must be considered by the licensing authority and is thus a more effective mechanism to set policy than a press release. This type of licence would put the Irish licensing regime on an even footing with the Scottish and Norwegian aquaculture licensing regimes, both of which use 'Maximum Standing Biomass' as the measurement of the limit of production capacity.

(d) *Other policy directives*

Other Ministerial policy directives are suggested at the relevant points throughout this submission.

These types of Ministerial policy directive may benefit from a short prior consultation before issue, but the process should not be delayed by any such consultation. Indeed the

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51. As permitted by section 62 of 1997 Act

52. Press release available at - <http://www.agriculture.gov.ie/press/pressreleases/2011/december/title,59997.en.html>

consultation for this independent review would be more than adequate to inform a number of policy directives.

## 5 Environmental Impact Statements

### 5.1 Road block: The requirement to submit an environmental impact statement with licence renewal applications

The 1998 Regulations require the submission of an EIS and the carrying out of an EIA more often than is required by the European Environmental Impact Assessment Directive<sup>53</sup> or the case law of the European Court of Justice ("ECJ").

There is a lack of engagement between the licensing authority and the applicant prior to the submission of an EIS, despite the 1997 Act making provision for engagement on the EIS aspect of an application prior to submission of the application.

### 5.2 What do the licensing regulations currently require?

Under the 1998 Regulations, a renewal of a licence is treated the same way as an initial application for a licence<sup>54</sup>. An application for a renewal of an aquaculture licence must be made in accordance with the regulations<sup>55</sup>. Applications for certain aquaculture licences<sup>56</sup>, for example a seawater salmonid breeding installation (other than for trial or research purposes where the output would not exceed 50 tonnes), must be accompanied by a full EIS and are subjected to a full EIA and this requirement applies to the renewal of those licences, even if there are no significant environmental changes on renewal.

### 5.3 Are the current requirements necessary under European and Irish law?

The 1998 Regulations require EIS and EIA to be carried out as part of almost every renewal application (except for very limited circumstances). We are not aware of any other environmental licensing regime or industry which requires repeated submissions of EIS and carrying out of EIA if the project has not significantly changed.

The European Environmental Impact Assessment Directive only requires the submission of an EIS where there has been a significant adverse change to the environmental effects caused by the EPA licensed activity. Section 13 of Annex II of the Directive provides that an EIA is required for:

*"[a]ny change or extension of project [that required EIA], already authorised, executed or in the process of being executed which may have significant adverse effects on the environment..."*

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53. Directive 2011 / 92 / EU of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment, as implemented by various Irish legislative provisions (full list available at <http://www.housing.gov.ie/sites/default/files/migrated-files/en/Legislation/DevelopmentandHousing/Planning/FileDownload%2C33203%2Cen.pdf>), as amended by Directive 2014 / 52 / EU of the European Parliament and of the Council of 16 April 2014 on the assessment of the effects of certain public and private projects on the environment.

54. Regulation 1 of the 1998 Regulations

55. Regulation 4 of the 1998 Regulations

56. Specified in regulation 5(1) of the 1998 Regulations



Where there has been a change or extension in the aquaculture activity, whether that change is significant enough to warrant an EIS must be considered in accordance with the relevant criteria. Guidance issued by the EPA defines a 'significant impact', in the context of an EIS, as

*"[a]n impact which, by its character, magnitude, duration or intensity alters a sensitive aspect of the environment".*

Under the planning legislation, the relevant test for whether a change in a development already authorised will require an EIS is as follows:

*"[a]ny change or extension of development already authorised, executed or in the process of being executed ... which would:- ...*

*result in an increase in size greater than –*

*- 25 per cent, or*

*- an amount equal to 50 per cent of the appropriate threshold,*

*whichever is the greater."*<sup>57</sup>

Whilst aquaculture licences must currently be renewed from time to time<sup>58</sup>, if there have been no significant environmental changes then the European Environmental Impact Assessment Directive does not require an EIS and EIA upon renewal of the aquaculture licence.

In line with the European Environmental Impact Assessment Directive, an EIS should only be required upon renewal if there has been a significant change sufficient to warrant an EIS. Accordingly, it is clear that the current requirements to submit an EIS as part of a renewal application under the 1998 Regulations, is neither necessary nor required under European law.

#### **5.4 How can the environmental impact statement requirements be streamlined?**

The 1998 Regulations have already been amended once to slightly restrict the circumstances in which an EIS must be submitted<sup>59</sup>.

The Minister could amend the 1998 Regulations further, in line with the requirements of the European Environmental Impact Assessment Directive and the Irish implementing legislation, to provide that an EIS only needs to be submitted with an application for the renewal of an aquaculture licence if there would be a significant adverse change to the environmental effects caused by the change to the licensed activity or using the same types of thresholds as in the planning legislation.

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57. Section 13, Schedule 5 (Part 2), Planning and Development Regulations 2001, SI No 600/2001 (as amended).

58. As the maximum duration of a licence is 20 years – section 15(2) of the 1997 Act

59. The insertion of regulation 4A into the 1998 Regulations by regulation 4 of the European Union (Environmental Impact Assessment) (Aquaculture) Regulations 2012



## 6 Natura Impact Statements

### 6.1 Road block: the Natura Impact Statement and Appropriate Assessment when no detailed conservation objectives have been set for the site

The Natura Impact Statement (“NIS”) and Appropriate Assessment process is a separate process to EIS and EIA. The NIS and appropriate assessment process is undertaken under the EU Habitats Directive. The overall aim of the Habitats Directive<sup>60</sup> is to maintain or restore the favourable conservation status of habitats and species of community interest for which a site has been designated as a Natura 2000 site (sometimes called a European Site).

The licensing authority, when considering an application for an aquaculture licence (either a new licence or renewal) is obliged to conduct screening to ascertain whether the licensing authority must undertake an appropriate assessment under the Habitats Directive. If Appropriate Assessment is required, an applicant is obliged to submit a Natura Impact Statement. The June 2016 licence application guidance notes<sup>61</sup> state that an NIS should be included in applications for Marine Finfish Licences located within or adjacent to Natura 2000 sites.

The conservation objectives for Natura 2000 sites (ie, SACs<sup>62</sup> and SPAs<sup>63</sup>, being sites within the Natura 2000 network) are determined under Article 4 of the Habitats Directive. Conservation objectives for SACs and SPAs must be set for the habitats and species for which the sites are selected<sup>64</sup>. The objectives are intended to ensure that the relevant habitats and species present on a site are maintained in a favourable condition/conservation status. These objectives are used when carrying out appropriate assessments for projects that might impact on these sites.

The National Parks and Wildlife Service (the “NPWS”) website states that a “*process is underway for setting detailed site-specific conservation objectives for these habitats and*

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60. Council Directive 92 / 42 / EU, as amended by Council Directive 97 / 62 / EC, Regulation (EC) No 1882 / 2003, Council Directive 2006 / 105 / EC and as amended by Act of Accession of Austria, Sweden and Finland (adapted by Council Decision 95/1/EC, Euratom, ECSC), Act concerning the conditions of accession of the Czech Republic, the Republic of Estonia, the Republic of Cyprus, the Republic of Latvia, the Republic of Lithuania, the Republic of Hungary, the Republic of Malta, the Republic of Poland, the Republic of Slovenia and the Slovak Republic and the adjustments to the Treaties on which the European Union is founded and as amended by the Corrigendum to that Directive) (the “**Habitats Directive**”)

61. Available at <https://www.agriculture.gov.ie/media/migration/seafood/aquacultureforeshoremanagement/formsdownloads/Aquacultureappguidelines0616.pdf>

62. A Special Area of Conservation (“**SAC**”) is defined in regulation 2 of the 2011 Regulations, which were implemented with the stated purpose of giving effect to the Habitats Directive and Directive 2009 / 147 / EC (the “**Birds Directive**”), as:

*“a site of Community importance designated by a Member State pursuant to Article 4(4) of the Habitats Directive through a statutory, administrative or contractual act, or any combination thereof, where the necessary conservation measures are applied for the maintenance or restoration, at a favourable conservation status, of either or both the natural habitats and the populations of the species for which the site is designated.”*

63. A Special Protection Area (“**SPA**”) is defined in regulation 2 of the 2011 Regulations as:

*“an area classified pursuant to Article 4(1) or 4(2) of the Birds Directive as a special protection area.”*

64. <https://www.npws.ie/protected-sites/conservation-management-planning>

*species*" and provides a list of sites that have detailed conservation objectives. Site specific conservation objectives aim to define favourable conservation conditions for these habitats or species at the site level.

The NPWS website notes that generic conservation objectives have been compiled for the remaining Natura 2000 sites. These objectives are available to download<sup>65</sup>.

In the context of aquaculture licensing, the licensing authority raises questions for an applicant who is required to submit an NIS when no site-specific "conservation objectives" have been set for a Natura 2000 site.

We are instructed that, in aquaculture licensing, the licensing authority may refuse to undertake an Appropriate Assessment based on the generic objectives. We understand that this approach is based on an interpretation of the decision of the ECJ in *Commission v Ireland*<sup>66</sup>, namely that it is not possible to carry out an Appropriate Assessment of a Natura 2000 Site until site-specific conservation objectives have been set. This process has led to lengthy delays as the process of setting detailed site-specific objectives has taken many years.

This approach is contrary to that taken by other environmental licensing authorities in Ireland, which use the generic objectives if no site-specific objectives are available.

## 6.2 What does the legislation require in terms of conservation objectives?

The legislation<sup>67</sup> provides that a screening for Appropriate Assessment must take place in respect of a "plan or project" to assess whether it is likely to have a significant effect on a European Site. The guidance note<sup>68</sup> on Appropriate Assessment which was issued by the Department of Environment, Heritage and Local Government (now the Department of Housing, Planning, Community and Local Government) (revised on 11 February 2010) states that:

*"...existing plans and projects that are modified or undergo new or periodic consents or authorisations, are captured by Appropriate Assessment requirements."*

The application for an aquaculture licence (either a new licence or a renewal), constitutes a project for the purposes of the 2011 Regulations and is therefore subject to screening to assess whether it is likely to have a significant effect on a European Site.

The Minister, or ALAB, in carrying out its screening can require the submission of an NIS by the applicant<sup>69</sup>.

Regulation 16 of the 2011 Regulations provides that a public authority<sup>70</sup>:

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65. Further information available here - <https://www.npws.ie/protected-sites/conservation-management-planning>

66. Case C-418 / 04

67. The 2011 Regulations

68. Available here - [https://www.npws.ie/sites/default/files/publications/pdf/NPWS\\_2009\\_AA\\_Guidance.pdf](https://www.npws.ie/sites/default/files/publications/pdf/NPWS_2009_AA_Guidance.pdf)

69. As provided for by regulation 42(3)(a) of the 2011 Regulations



*"...shall give consent for a plan or project...only after having determined that the plan or project shall not adversely affect the integrity of a European Site."*

An NIS is defined<sup>71</sup> as:

*"...a report comprising the scientific examination of a plan or project and the relevant European Site or European Sites, to identify and characterise any possible implications of the plan or project individually or in combination with other plans or projects in view of the conservation objectives of the site or sites, and any further information, including, but not limited to, any plans, maps or drawings, scientific information or data required to enable the carrying out of an Appropriate Assessment."* (emphasis added)

"Conservation objectives" are defined<sup>72</sup> as:

*"...in relation to a European Site, means the maintenance and restoration of the habitat and species in respect of which the site has been identified as a European Site at favourable conservation status or their restoration to favourable conservation status, and shall include such particular objectives as the Minister may from time to time establish for those purposes under Regulation 26."* (emphasis added)

### 6.3 Can generic objectives be used for the purposes of NIS and Appropriate Assessment?

It is clear that an NIS must be prepared: "...in view of the conservation objectives of the site or sites" and the Appropriate Assessment must be based on those objectives. Where detailed site-specific objectives have been established by the NPWS, those objectives must be used.

However, based on a reasonable interpretation of European law and on the Irish legislative definition of conservation objectives if there are no detailed site-specific objectives for the relevant site, then we do not believe that there is any legal bar to using the generic objectives. The definition of "conservation objectives" makes it clear that the objectives "include" (but are not limited to) any particular objectives, but the generic objectives meet the legislative definition and requirements.

By way of back-up to this position, the generic objectives are used by environmental regulators in the Appropriate Assessment process for other industries in Ireland, apart from aquaculture licensing. The guidance issued by the Commission<sup>73</sup> regarding aquaculture provides that:

*"If no specific conservation objectives have been set then it can be taken that the conservation objective is to prevent further deterioration of the site and its target features from the time it was included in the Natura 2000 network."*

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70. As defined in regulation 2 of the 2011 Regulations, which includes the Minister and ALAB

71. In regulation 2 of the 2011 Regulations

72. In regulation 2 of the 2011 Regulations

73. "Guidance on Aquaculture and Natura 2000 – Sustainable aquaculture activities in the context of the Natura 2000 Network" - European Commission – 2012, available here - <http://ec.europa.eu/environment/nature/natura2000/management/docs/Aqua-N2000%20guide.pdf>

Accordingly, it appears to be acceptable for an NIS and Appropriate Assessment to be carried out by reference to generic conservation objectives, which are available for all Natura 2000 sites. Aquaculture licensing should not be held up by delays in setting detailed site-specific objectives for Natura 2000 sites.



## 7 Licence Fees and Funding Structure

### 7.1 Road block: perceived funding or resource constraint with the licensing authority

In many environmental licensing regimes the objectives of the licensing authority, interested parties and of the industry to achieve prompt decision-making can be met by difficulties of a lack of funding or resources for the licensing authority to process applications.

Section 64 of the 1997 Act permits the Minister to set fees for aquaculture licence applications and renewals. The fees are set out in Fees Regulations<sup>74</sup> and vary from approximately €63 to approximately €635. Obviously, these levels of fee bear no relation to the resources in processing the licensing applications. Section 64(3) of the 1997 Act states that: "*Every fee received by the Minister under this section shall be paid into, and be disposed of for the benefit of, the Exchequer in such manner as the Minister for Finance shall direct.*"

In considering the funding of an environmental licensing regime, questions arise as to:

- whether it is appropriate to alter the licence fees and to direct that those fees be used for the benefit of the aquaculture licensing process, to ensure prompt, robust decision-making?
- whether it is appropriate for strategic or other complex projects to be levied with a higher licence fee that better reflects the cost of processing the licence in return for prompt, robust decision-making?

### 7.2 How have other licensing regimes adapted their fees?

In the planning regime, in 2006, the application fees for certain strategic infrastructure projects were raised. Those increased fees are directed to the costs of processing the application. In that regime, the applicant pays an additional amount if the cost of processing the application is greater than the application fee. If the cost of processing the application is less than the application fee a refund of the unused amount is paid to the applicant. This change in licensing fees was combined with setting an objective of decision-making to within 18 weeks of the date of receiving the public submissions (which is generally approximately seven weeks from the date of publication of the notice of application). That 18-week objective is often, though not always, met.

While the levels of fees are high, and are not suggested here, the costs incurred by both applicants and licensing authorities in processes where applications take a number of years can greatly increase over time. For example, during a multi-year process, regulation moves on and applications may need to be reassessed imposing costs on the applicant, interested observers and on the licensing authority.

It is open to the Minister under section 64 of the 1997 Act to increase the licensing fees for certain categories of aquaculture licence or for activities of certain degrees of magnitude. Scaled fees could also be applied, as the EPA does for small and large activities. However, if the industry was to be levied with such fee increases, in order to achieve fairness of approach, the fees would have to be directed to fund the application process and be accompanied by measurable improvements in processing time.

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74. The Aquaculture (Licence Application and Fees) Regulations 1998

## 8 Foreshore and Aquaculture Licensing

### 8.1 Road block: the requirement to obtain a foreshore licence

Under the Foreshore Acts 1933 – 2014 (the “**Foreshore Acts**”) a lease or a licence must be obtained from the Minister for works undertaken on the foreshore which are deemed to be any function in respect of an activity which is wholly or primarily for the use, development or support of aquaculture. In aquaculture, the type of activity which takes place on the foreshore can involve the placement of permanent equipment, such as anchors or navigational buoys, or the placement of temporary equipment, for example, a water pipe<sup>75</sup>, on the foreshore. The perceived requirement that the operator of an aquaculture facility must obtain a separate foreshore licence for placement of any equipment, even a temporary freshwater pipe, creates an additional administrative burden. The imposition of this requirement by the authority is not required by the legislation and causes further unnecessary expense and delay in the operation of aquaculture facilities.

### 8.2 The solution

#### Short Term

Section 3(3) of the Foreshore Acts allows the Minister to grant a foreshore licence by way of written permission where the licence is trivial in character. It is clearly the case that the placement of temporary equipment on the foreshore, for example running a water pipe to a boat, is trivial and accordingly there is no requirement for the holder of an aquaculture licence holder to apply for, and obtain, a full foreshore licence for this type of activity. The Independent Licensing Review Group could recommend that the Minister automatically issue the written permission referred to in section 3(3) of the Foreshore Acts at the same time as the granting of an aquaculture licence by the licensing authority.

#### Long Term

The General Scheme of Maritime Area and Foreshore (Amendment) Bill 2013 (the “**2013 Bill**”) proposes to combine the planning permission and foreshore licensing regimes.

Given that the Minister is responsible for issuing foreshore licences to the operators of aquaculture facilities, it would be more efficient for any conditions pertaining to aquaculture, that are currently dealt with by foreshore licensing, to be addressed in the aquaculture licence itself. The 2013 Bill is an opportunity for the necessary legislative framework to combine the aquaculture and foreshore licensing regimes into a single process to be put in place or, at the very least, for provision to be made for the placement of temporary equipment on the foreshore to be permitted under the terms of an aquaculture licence alone.

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75. In the same way that a farmer might run a water hose across a public road from one field to another on a temporary basis.

**TAB 7**

**LEGAL ADVICE**

**REDACTED**





An Roinn Talmhaíochta,  
Bia agus Mara  
Department of Agriculture,  
Food and the Marine



Mr. Jan Feenstra  
Chief Executive Officer  
Comhlucht Iascaireachta Fanad Teoranta  
MOWI Ireland  
Kindrum  
Letterkenny  
Co Donegal

**COPY**

sent by registered post

12<sup>th</sup> April 2019

**Re: Entitlement to continue aquaculture operations under the provisions of Section 19(A)4 of the 1997 Fisheries (Amendment) Act for the culture of salmon in cages at a site east of Deenish Island, Ballinskelligs Bay, Co Kerry (T06/202)**

Dear Mr. Feenstra,

I am to refer to the Department's previous correspondence and discussions concerning the above issue.

The Minister has considered all aspects of this case, including all arguments adduced by the Company and its legal representatives in support of the Company's position. The Minister's consideration of the case includes the following:

1. The licence conditions in question are clearly stated in the licence. The relevant condition is condition 2(e) which states:

*"the Licensee shall not harvest more than 500 tonnes (dead weight) of salmon in any one calendar year"*

It is noted that the Dead Weight Harvest for 2016 was 1,108.907.36kg (1,108.91 tonnes). This harvest figure is 121.78% in excess of what is permitted under licence condition 2(e). The Minister has noted the arguments adduced by the Company relating to harvesting in its letter and attachments of 3<sup>rd</sup> April 2017 and elsewhere.

2. The extent of the breach by the Company of condition 2(e) is significant. The breach of the licence condition (121.78% excess of authorised limit) is of such a scale that the decision to treat as discontinued the entitlement of the Company to continue aquaculture operations under the provisions of Section 19(A)4 of the 1997 Fisheries (Amendment) Act is warranted and proportionate. In this regard the Minister has given the fullest consideration to all arguments adduced by the



Company in its communications with the Department including supporting documentation/arguments from scientific experts forwarded by the Company.

3. The breach of the licence condition took place in circumstances where the Company was fully aware of the limits set by the specific condition of the licence governing harvest tonnage. The Company was also aware from communications with the Department relating to the temporary amendment of the licence to facilitate a pilot project in 2012, that such amendment was "a once off pilot for this site only" (Department's letter of 1<sup>st</sup> April 2011 and ALAB's licence of 31<sup>st</sup> October 2012 refer). In this regard also the Minister has noted the arguments adduced by the Company relating to harvesting in its letter and attachments of 3<sup>rd</sup> April 2017 and elsewhere.
4. Breaching licence conditions serves to undermine public confidence in the regulatory system and therefore enforcement by the Department of licence conditions is in the public interest. The reasons for this include the following:
  - An increase of 121% in the stock harvested from the site must increase the effluent discharge from the site. The extent of the discharge is open to argument. However it is not open to the Company to interpret the licence conditions any way it wishes.
  - Enforcement of the licence conditions by the Department serves, inter alia, to uphold the integrity of the State's regulatory regime in respect of food production from the marine environment.
  - The Company is aware of the terms and conditions of the licence it holds and must conduct its affairs in accordance with the law.

Following consideration of all the circumstances the Minister has determined that:

1. A breach of a licence condition 2(e) has occurred. Condition 2(e) of the licence states:  
  
*"the Licensee shall not harvest more than 500 tonnes (dead weight) of salmon in any one calendar year"*
2. The statutory entitlement of Silver King Seafoods Ltd. (a wholly owned Company of Cornhlucht Iascaireachta Fanad Teoranta (MOWI Ireland)) to continue aquaculture operations under the provisions of Section 19(A)4 of the 1997 Fisheries (Amendment) Act is discontinued for the following reason:

Breach of condition 2(e) of the applicable aquaculture licence.



A public notice of the Minister's decision will be made in accordance with the applicable legislation.

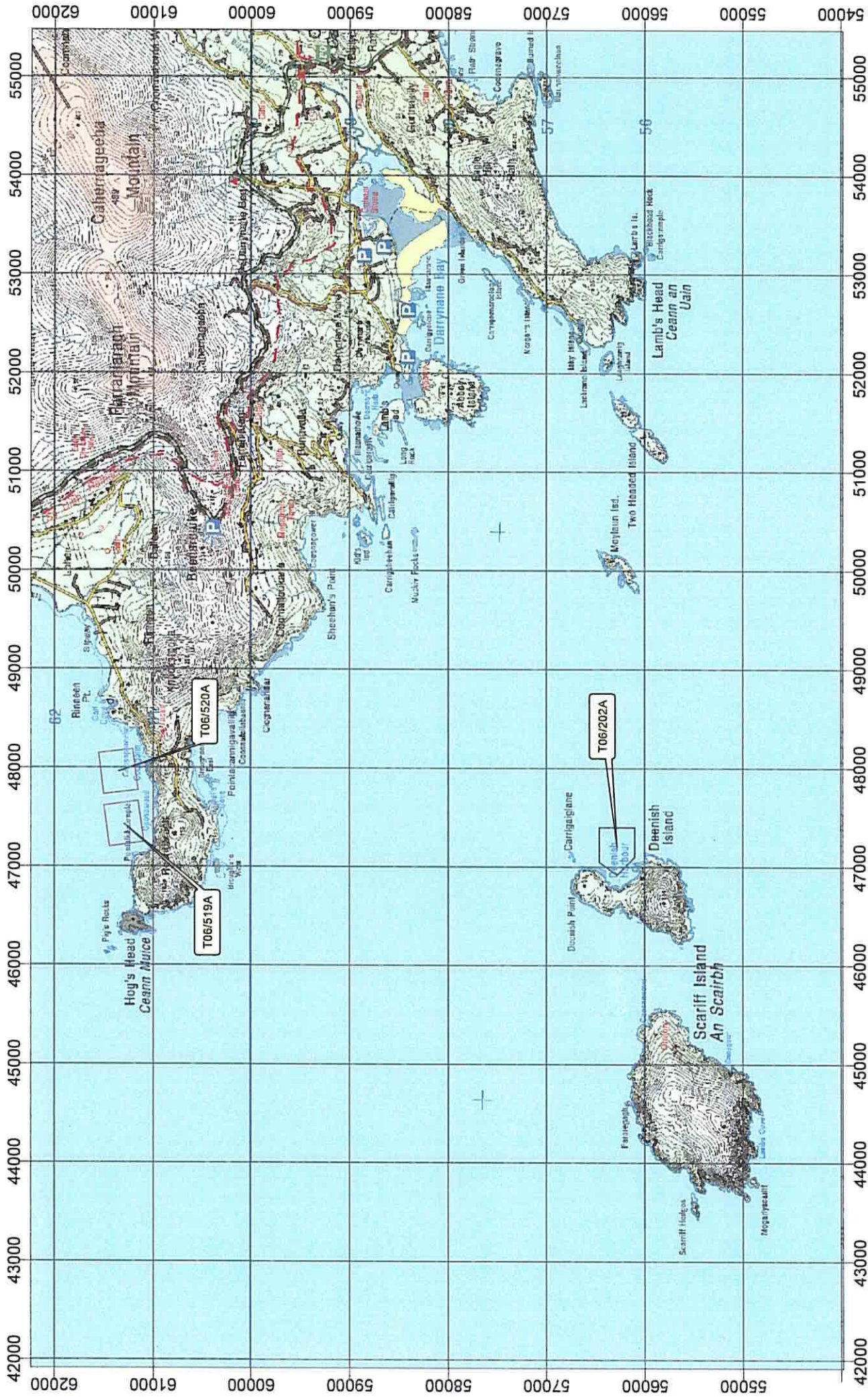
Under the provisions of Sections 40 and 41 of the Fisheries (Amendment) Act 1997, an appeal against the above decision may be made to the Aquaculture Licences Appeals Board. This appeal must be lodged within one month beginning on the date of the publication of the Minister's decision.

Yours Sincerely,

**John Quinlan**  
Principal Officer  
Aquaculture and Foreshore Management Division







Aqua Culture Sites  
 <all other values>  
 Site\_Status  
 Leased  
 Under Appeal  
 Application  
 Licensed

Scale = 1:35,000

Drawn : 10-12-2019

**AQUACULTURE SITES  
 @ DEENISH, CO. KERRY**

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An Roinn Talmhaíochta,  
 Bia agus Mara  
 Department of Agriculture,  
 Food and the Marine

