

# **Aquaculture Licences Appeals Board**

## **Report of Oral Hearing Chair**

**Reference:** AP2/2013

**Title:** Appeal against the Decision of the Minister for Agriculture, Food and the Marine to grant the renewal of Aquaculture Licences and grant Foreshore Licences to certain applicants for the cultivation of mussels using longlines in Killary Harbour, Co. Galway.

**Location:** Westport Plaza Hotel, Westport, Co. Mayo.

**Appellant:** Mr. Simon Kennedy, Killary Fjord Shellfish Ltd.

**Date of Oral Hearing:** 19<sup>th</sup> January, 2015

**Chair:** Dr Owen McIntyre, Aquaculture Licences Appeals Board  
(School of Law, University College Cork)

22<sup>nd</sup> March, 2015

## 1. Introduction

This Appeal under section 40(1) of the Fisheries (Amendment) Act 1997 objecting to the renewal of 19 shellfish aquaculture licences in Killary Harbour covering a total of 31 individual sites, specifically the licences renewed in respect of site reference numbers T9/296, T9/313, T9/317, T9/361, T9/366, T9/372, T9/385, T9/388, T9/389, T9/391, T9/392, T9/394, T9/397, T9/398A, T9/399, T9/400, T9/401, T9/408 and T9/422. The Appellant argues that the decision to renew these licences fails to address the acknowledged problem of unsustainable over-licensing of shellfish aquaculture in Killary Harbour and, further, that it will result in inequitable access among shellfish growers to the diminished nutrients available for shellfish production. The Appellant claims that the decision to renew these licences will perpetuate current problems relating to reduced shellfish aquaculture productivity.

### Legal Context

Due to the scientific complexity of the issues raised in this Appeal and the public importance of its outcome, the Board decided to hold an oral hearing pursuant to section 49 of the Fisheries (Amendment) Act 1997, in order to benefit from the participation of the key stakeholders and from having the relevant technical submissions presented and examined.

Under section 61 of the 1997 Act, the Board is required to take account, as appropriate, of a range of factors, including:

- the suitability of the place or waters in question;
- other beneficial uses of the place or waters concerned;
- the likely effects of the proposed aquaculture on the local economy; and
- the likely environmental or ecological effects of the proposed aquaculture.

Under section 40(4) of the 1997 Act, the Board shall determine an appeal by:

- (a) confirming the decision or action of the Minister;
- (b) determining the application for the licence as if the application had been made to the Board in the first instance; or
- (c) in relation to the revocation or amendment of a licence, substituting its decision on the matter for that of the Minister.

In accordance with section 59 of the 1997 Act, the present report has been prepared and submitted to the Board for its consideration in advance of its determination of the present Appeal.

## **2. Background**

The Appellant, who currently holds a shellfish aquaculture licence, purchased his existing farm in 1989, which he has operated since. In 2000 the Department of Agriculture, Food and the Marine issued a significant number of new licences, increasing the area licensed for shellfish production by 70 per cent. At that time the Appellant had objected to the issuing of these licences on the grounds that it would result in serious overstocking of the Harbour. The present appeal concerns the decision by the Minister for Agriculture, Food and the Marine to renew these licences.

### Grounds of Appeal

At a general level, the Appellant argues that the current shellfish aquaculture regime in Killary Harbour is unsustainable. He contends that the productivity of shellfish aquaculture in Killary is vastly reduced in recent years, largely due to over-licensing leading to a 70 per cent increase in the licensed area since 2000. The Appellant argues that such over-licensing has resulted in over-stocking by shellfish growers, leading to an inequitable reduction in access to phytoplankton food supply for certain growers. Specifically, he contends that due to 'this proliferation of licences some farms have been surrounded by others and are severely deprived of nutrients while the more recent farms on the periphery have suffered little if at all'. He claims that older licences applying to 'inner' sites have experienced a slowdown in mussel growth from 18 months to 36 months, resulting in lower meat yields and poor quality and fouled mussels which are more difficult to market. The relocation of existing shellfish farms to new sites on the north side of Killary Harbour is not an option as Department policy dictates that the north side of the Harbour is to be kept open for navigation and other local water-based activities.

The Appellant contends that the conditions stipulated under the renewed licences in order to address such over-stocking will not be effective in improving productivity or equitable access to nutrients. Schedule 4 of each of the renewed licences stipulates a 15 per cent reduction in flotation to be phased-in over a three-year period and standard condition 3.3 of the renewed licences states that '[t]he Licensee shall ensure that the equipment (including all flotation, mooring and anchoring devices) is placed within the licensed area only'.

In addition, the Appellant argues that the 2010 UISCE Report on shellfish carrying capacity in Killary Harbour, on which the decision to renew the licences at issue is based, is flawed as it takes the year 2000 (when the additional licences were first issued) as its starting point rather than 1990, when the Appellant claims that aquaculture in the Harbour was sustainable.

### Submission of the Minister of Agriculture, Food and the Marine



Neither the Minister nor any officials of the Department of Agriculture, Food and the Marine made submissions or observations in writing to the Board within one month of the date on which a copy of the notice of appeal was sent out, as provided for under section 44(2) of the Fisheries (Amendment) Act 1997. However, further to a request by the Board for submissions or observations from the Department made under section 46, a letter from the Department dated 19<sup>th</sup> September 2015 was taken into account in the preparation of the present report and, under section 48, may be considered by the Board in making its determination of this Appeal.

#### Submission of the Licensees

None of the holders of the renewed aquaculture licences at issue in this appeal made submissions or observations in writing to the Board within one month of the date on which a copy of the notice of appeal was sent out, as provided for under section 44(2) of the Fisheries (Amendment) Act 1997.

#### Technical Reports

The key technical report which informed the Department's decision to renew the aquaculture licences in question is the *Understanding Irish Shellfish Culture Environments* (UISCE) Report from August 2010 prepared by Bord Iascaigh Mhara (BIM). The UISCE Project was intended to develop a computer system which could model shellfish aquaculture and water quality scenarios in order to calculate a scientific estimate of the production potential (carrying capacity) for a shellfish producing farm or bay. The Project examined three different types of growing methods in three types of bay systems – fjord (Killary Harbour), shallow estuary (Wexford Harbour) and open bay (Dungarvan Harbour). However, only the first phase of a planned larger, multiphase project has been realised to date. Prior to renewing the aquaculture licences at issue in the present Appeal, the Department requested that BIM analyse the situation in Killy Harbour using the UISCE system in order to advise the Department by making recommendations on how the various issues relating to aquaculture production in the Harbour could be resolved and, more specifically, what issues could be improved by means of the licensing process. This BIM analysis of the situation in Killy Harbour produced the seminal UISCE Report (August 2010).

In summary, with a view to addressing the problems of over-cultivation of shellfish in Killy Harbour and the consequent reduction in phytoplankton food supply for some producers, the UISCE Report recommended the following measures:

- moving all longlines and anchors to within the relevant licensed sites;
- reducing drop rope density to a limit of 800 per hectare;
- reducing flotation to a limit of 18,000 litres per hectare;
- encouraging thinning and repacking OR reducing the density of collection per meter of drop line;
- moving some sites from the southern side of the Harbour to the northern side (at least in Middle Killy Harbour), without increasing overall production capacity;

- changing the dimensions of certain (1 ha<sup>3</sup>) sites in Inner Killary to 200m long by 50m wide to facilitate the placing of two longlines in each;
- denying licence renewal or new licence applications in respect of sites that are currently unused;
- removing any equipment not associated with current or renewed licences;
- establishing a monitoring programme in respect of growth rates and production in order to measure the outcomes of any changes made; and
- requiring growers to provide a detailed, time-bound work programme for the movement of longlines and for altering the layout of their sites, where required.

In order to inform its determination of the present Appeal, the Board has commissioned a study of the issues by its own technical advisors, Aquafact International Services Ltd., whose report examines the renewed licences in question, and the conditions attached thereto, in light of the recommendations contained in the 2010 UISCE Report and several other studies (Keady, 2015; Forde, 2009; Nunes *et al*, 2011). Generally, the Aquafact Report concludes that the recommendations contained in the UISCE Report are very modest, having regard to the apparent seriousness of the current problems of overstocking and falling productivity. For example, it points out that the reduction of 15 per cent in flotation to 18,000 litres per hectare, recommended in the UISCE Report and stipulated in the renewed licences in question, involves a significant overestimate of the degree of flotation necessary for the existing level of shellfish production. Similarly, the Aquafact Report notes that some mussel farms in Middle Killary, the area worst affected by overstocking, have already reduced the number of droppers deployed to 24 per cent below the limit of 800 per hectare recommended in the UISCE Report. It further concludes that, as the recommended limits regarding flotation and droppers are to be applied to all sites equally, these will not address the fact that some farms located in inner shore sites will not have equal access to the phytoplankton food source. The Aquafact Report notes that the UISCE Report recommends that a reconfiguring of all licenced sites in Middle Killary should be considered. Most significantly, the Aquafact Report notes that the engineers' reports produced prior to the decision to renew the licences at issue (Keady, 2015; Forde, 2009) included recommendations for measures to address overstocking and inequitable access to nutrients additional to those contained in the UISCE Report. Notably, such measures included stipulation of a spacing regime between longlines and between adjacent sites, reduction in the length of longlines, and establishment of a monitoring programme to assess the actual results of any changes in practice.

Having regard to the matters to be considered under section 61 of the Fisheries (Amendment) Act 1997, and taking account of the degree of suitability of Killary Harbour for the licensed aquaculture activity in question, the adverse impact of this activity on other mussel farmers, and its positive effect on the local economy, the Aquafact report recommended that the licence renewal be subject to the following conditions:

- (1) All anchors and lines must be located entirely within the licensed site as per the Engineers' reports, including the spacing regime whereby individual longlines are



25m apart within the licensed site and there is a 50m distance between longlines of adjacent sites. (This may necessitate that site boundaries be withdrawn).

- (2) A reduction in the number and length of longlines as recommended within the Engineers' reports. Limit the total surface length of longlines within a site to 220m per hectare.
- (3) Reduction of the flotation within Killary Harbour to a maximum of 18,000 litres per hectare. However, it is recommended that this be implemented with immediate effect rather than a three year phased approach.
- (4) Reduction in the number of droppers to a maximum of 800 per hectare. This is recommended in addition to the reduction in flotation.
- (5) Thinning and repacking of mussel lines to be carried out across all licensed sites at least once per growing cycle.
- (6) An annual monitoring programme should be initiated to assess adherence to the licence conditions and measure stocking density, production values and growth rates.
- (7) It is recommended to reduce the duration for which a licence is valid from 10 years to 3 years and to subsequently renew licences subject to the results of the monitoring programme and adherence to the licensing conditions.

### 3. Oral Hearing

The Oral Hearing commenced with an introduction by the Chair setting out the purposes of an Oral Hearing held under section 49 of the Fisheries (amendment) Act 1997, the matters to which the Board is required to have regard in determining the Appeal under section 61 of the 1997 Act, and types of determination which the Board may make under section 40(4) of the 1997 Act. The Chair also outlined the format that the Oral Hearing would follow, the process for reporting back to the Board from the Oral Hearing, and the process which the Board would follow in making its final determination of the Appeal. The Chair then provided a brief summary of the Appeal, including the grounds of appeal and the supporting arguments and evidence, before inviting the Appellant or his representative to set out his concerns and to elaborate upon the grounds of the appeal.

#### Appellant

On behalf of the Appellant, Mr. Simon Kennedy, the solicitor for the Appellant, Mr. Gerard O'Donnell, outlined the Appellant's reasons for making the present Appeal, setting out the nature and scale of the negative impacts on his livelihood which he believes to be attributable to the renewed licences in question, which were first granted in 2000. Generally, the Appellant contends that there exists insufficient data on the availability of phytoplankton nutrients and on the impact of such availability on shellfish aquaculture productivity. He argues, therefore, that the Minister's decision to renew the licences in question, which impacts significantly on the Appellant's livelihood, was based on incomplete data. Mr. O'Donnell then introduced two technical experts who would give evidence in support of the Appellants arguments, Dr. Cillian Rodden and Mr. Fergal Guilfoyle, both marine biologists.

Referring to research dating back to the 1980s and 1990s, Dr. Rodden argued that anything up to 50 per cent of the phytoplankton nutrition may be removed from a current of water passing through longlines and that this research has long been publicly available in the scientific literature. The further argued that the maximum sustainable yield for Killary Harbour, of approximately 1,000 tonnes, had been reached in the mid/late-1990s. Therefore, he concluded that the decisions to grant and renew the licences in question in the present Appeal could only have been based on administrative considerations, rather than on scientific considerations. Taking account of the fact that the nutrients in Killary are principally delivered via the tidal intake of salt water along the central channel of the harbour, Dr. Rodden expressed the view that the original licence holders, who are mainly located close to the shore, have been rather badly treated.

Mr. Guilfoyle expressed the view that the 15 per cent total reduction in flotation (5 per cent per annum over three years) would not be enough to return all growers to a sustainable level of productivity, especially in the case of those farmers currently experiencing poor growth. He acknowledged that past attempts, made under the CLAMS process, had been unsuccessful in trying to achieve a consensus among all farmers in Killary on measures to improve productivity. Generally, he contended that there are simply too many growers in the harbour and suggested that the entire resource should be



managed holistically, but he acknowledged that such an approach, possibly employing independent arbitration, would not be possible under the existing legislative framework.

#### Department of Agriculture, Food and the Marine

On behalf of the Minister and Department of Agriculture, Food and the Marine, Mr. John Quinlan reminded the participants that the Minister's aim and the Department's policy is to promote the orderly and efficient development of shellfish aquaculture, particularly in a location like Killary Harbour, as an important mussel growing bay with in excess of 30 licence holders covering over 60 sites. He acknowledged that successive studies have identified adverse effects on mussel growth due to a reduction in the availability of phytoplankton nutrition, most notably the BIM UISCE carrying capacity study. However, he stressed that the decision to renew the licences in question was entirely compliant with the requirements of the Fisheries (Amendment) Act 1997 and that it was very carefully thought out, involving a great deal of technical and scientific consideration of all relevant issues and the fullest consultation with the people involved. He expressed concern that any deviation from the existing (standard) licence conditions for shellfish aquaculture in Killary might be regarded as inequitable. Mr. Quinlan also called upon his engineer colleagues from the Department, Mr. Whelton and Mr. McHale, to assist by elaborating upon some of the more technical aspects of the decision to renew, notably including the limitations on flotation and the regime for the inspection of sites.

Generally, in response to the grounds of appeal put forward by the Appellant, the Department officials contended that the licence conditions contained in the newly renewed licences in question are evidence-based and are considered to be fair and balanced. While they conceded that there is merit in the approach recommended by the Board's technical experts (Aquafact), they argued that this proposal is not feasible in view of the absence of consensus among the operators in the bay on the best way forward. The Department believes that the approach taken in the relicensing scheme represents a common sense and realistic approach in the absence of consensus amongst the growers and further argues that it incorporates the key elements recommended in the UISCE Report. It was pointed out that the UISCE Report does not recommend the moving of all the licensed areas boundaries within Killary Harbour, but rather suggests that moving all longlines and anchors to within the relevant licensed sites will increase channels between the lines which will improve water flow between the sites. The Department officials contended that this recommendation is reflected in standard condition 3.3 attached to each of the renewed licences, which stipulates that 'The Licensee shall ensure that the equipment (including all flotation, mooring and anchoring devices) is placed within the licence area only'. In addition, they pointed out that Schedule 4 of the renewed licences, which sets out the stocking and equipment deployment conditions, stipulates that the 15 per cent reduction in flotation recommended in the UISCE Report is to be implemented incrementally over a three year period (at the rate of 5 per cent per annum for three years from the date of renewal), in order that lines may be moved as the mussels are harvested. The Department officials rejected the recommendation of the Board's technical experts (Aquafact) that the renewed licences might be issued for a reduced period of three years, rather than the normal 10 year period, out of concern that such a short licence period



would cause commercial difficulties for the Licensees and would be highly unusual and likely to be regarded as unfair treatment of these growers.

#### Aquaculture Licences Appeals Board Technical Advisor (Aquafact)

On behalf of the Board's technical advisors, Aquafact International Services Ltd., Dr. Eddie McCormack outlined the background to the Aquafact Report and explained the findings and recommendations contained therein. Generally, he confirmed that there did exist some problems due to over-licensing, but expressed the view that rigorous implementation of all of the recommendations contained in the UISCE Report might (begin to) help to address the situation. In particular, Dr. McCormack highlighted the fact that only two out of a total of six recommendations set out among the range of studies on problems of overstocking and shellfish aquaculture husbandry in Killary Harbour were included as conditions in the renewed licences at issue in this Appeal. Dr McCormack expressed the view that the recommendations made in the Aquafact Report represent the minimum measures necessary to improve conditions in Killary Harbour.

#### Bord Iascaigh Mhara (BIM)

Mr. Ben Dallaghan of BIM, who was one of the authors of the seminal UISCE Report, outlined the background and purpose of the UISCE Project, *i.e.* to develop a science-based IT decision support tool for analysing the shellfish carrying capacity of a range of Irish coastal sites. As Killary Harbour was one of the three bays selected for analysis, Phase I of the Project created a computerised hydrodynamic model, water quality model and shellfish growth model of the bay. Phase II of the Project, which was never implemented, would have developed a farm-scale model capable of addressing the specific issue of percolation between farms. However, Mr. Dallaghan confirmed that it was nevertheless clear that the bay-scale model demonstrated the existence of competition between individual growers for phytoplankton nutrients.

Mr. Terence O'Carroll of BIM further explained that Phase II of the UISCE Project, had it gone ahead, would have facilitated the assessment of impacts from farm to farm to farm and also the calculation of percentage reductions in productivity. Mr. O'Carroll also expressed the view that systematic thinning of mussels is required in Killary as a lot of mortality is occurring, perhaps as much as 80 per cent. He also explained that monitoring conducted under the auspices of the UISCE Project suggested that once the number of drop ropes exceeds a certain density this impacts upon productivity. In addition, due to longer growth cycles, growers must hold more stock, which exacerbates the problem of scarce nutrients yet further.

#### Licence Holders

On behalf of the holders of the renewed licences at issue, Ms. Catherine Nee reminded the hearing that these licences were granted subject to due process and that many of the growers concerned had been encouraged and grant-aided by BIM. She explained, however, that these licence holders recognised that some form of obligatory collective

responsibility for Killary is required and, further, accepted that the recommended conditions set out in the Aquafact Report should be applicable to all shellfish aquaculture licence holders in the Harbour. Ms. Nee informed the hearing that a group of producers, representing 70 per cent of all growers (including pre- and post-2000 licence holders), has been meeting since April 2014 and has now produced a set of detailed proposals for voluntary measures to improve the situation in Killary. These proposals address a range of problems, including markets, infrastructure, carrying capacity, and efficiency of production. Specifically, they propose reducing the intensity of farming, reducing the number of licences (in some cases by encouraging the surrender of licences), reducing flotation, improving husbandry and, ultimately, adopting the "New Zealand System" of shellfish farming. Ms. Nee explained that the same 70 per cent of producers all accept the specific recommendations set out in the Aquafact Report.

#### Marine Institute

Mr. Joe Silke of the Marine Institute, who has been involved in a programme for the monitoring of the safety of shellfish in Killary operating since the early 1990s, outlined his observations regarding the problem of over-stocking and access to phytoplankton nutrition. He explained that, due to the fact that Killary is a fjord, *i.e.* a long, narrow inlet, the pool of phytoplankton is limited with most occurring in the channel, there is little flushing of the water in the Harbour and so the water becomes depleted of nutrients quickly and takes a long time to regenerate in terms of nutrient content. He suggested that in such conditions certain licence sites could clearly have a "curtain" effect on others, which would be especially detrimental to those furthest from the channel. He expressed the view that the 15 per cent reduction in flotation could represent part of the solution to this problem.



#### 4. Conclusions

It should be noted that the conclusions set out below reflect the general findings of the Chair of the Oral Hearing in relation to the problems giving rise to the present Appeal and thus identify a broader set of measures which might be taken over time in an effort to address such problems. In contrast, the recommendations set out in Section 5 of this report contain detailed advice to the Board on the specific measures which the Board might choose to adopt having regard to the precise scope of its statutory powers and functions.

Ideally, the locations and boundaries of all licensed sites within Killary Harbour should be re-examined in a holistic and systematic manner, and be redrawn having full regard to the recommendations of the UISCE Report and to other studies relating to shellfish cultivation carrying capacity. In order to ensure equitable access to phytoplankton nutrients among licensees, the site layouts would be altered so that each licensed site would stretch from the shore out into the channel, where phytoplankton concentration is highest, in order that growers could rotate the longlines within their sites where necessary.

In the short term, all aquaculture licences should ideally stipulate a spacing regime requiring individual longlines to be laid out at least 25m apart within each licensed site with a 25m distance to the site boundary, so that there is a minimum 50m distance between longlines located in adjacent sites. One Engineering Report (Forde, 2009) notes that, applying the Flow-3D model developed by BIM under the UISCE Project, a “buffer zone” in Killary of 50m (*i.e.* the distance water is permitted to flow unimpeded after flowing through a mussel line, in order to allow food levels to recover) will result in a 90 per cent recovery in phytoplankton concentrations. While such a stipulation will be immediately applicable in relation to certain sites, including certain of the licensed sites which are the subject of the current appeal, some licence boundaries would need to be redrawn in order to accommodate such minimum spacing.

In order to facilitate the eventual revision of the locations and boundaries of all licensed sites within Killary Harbour in a holistic and systematic manner, it will be necessary to ensure that the timing of subsequent renewals of all licences are brought “into phase”. In other words, it will be necessary to ensure that all licences, including the 19 licences which are the subject of the present appeal and the 12 original licences issued in Killary Harbour, will next become due for renewal at the same time. This would involve slightly altering the duration of the 19 licences which are the subject of the present appeal so that they would fall due for renewal on 4<sup>th</sup> April 2023, along with the other licences currently valid in Killary.

In order to optimise the phytoplankton nutrients available and improve productivity, the thinning of mussel lines should be required as a licence condition in all licensed sites at least once per growing cycle, with licence holders required to report annually to the Department on the steps taken to meet these requirements. A clear format for such reporting should be established. Thinning should be carried out following spat fall and

during the ongrowing phase to ensure the optimum stocking density, reduce unnecessary competition for food, and reduce mortality.

In order to minimise disruption to the holder of the licences at issue, the reduction of flotation within Killary Harbour to a maximum of 18,000 litres per hectare, along with any additional requirement to reduce the number of droppers to a maximum of 800 per hectare, should employ a three-year phased approach.

The Department should devise and establish an appropriate annual monitoring programme to assess adherence to the licence conditions imposed and to measure the impact of such measures on stocking density, productivity and growth rates.



## 5. Recommendations

Further to section 59 of the Fisheries (Amendment) Act 1997 (as amended), the Chair of the Oral Hearing recommends that the Board should, pursuant to section 40(4)(b) of the Fisheries (Amendment) Act 1997, issue new licences in place of the (renewed) licences which are the subject of the present appeal. The terms of such new licences issued in respect of site reference numbers T9/296, T9/313, T9/317, T9/361, T9/366, T9/372, T9/385, T9/388, T9/389, T9/391, T9/392, T9/394, T9/397, T9/398A, T9/399, T9/400, T9/401, T9/408 and T9/422 should substantially reflect the terms of the existing (renewed) licences, except for the addition of the following conditions:

- the duration of each licence should be slightly reduced so that all 19 licences would expire at the same time as the other 12 (original) shellfish aquaculture licences issued for Killary Harbour, which have recently been renewed, *i.e.* 3<sup>rd</sup> April 2023;
- each licence should include a condition requiring that, where the configuration of the sites concerned allows, individual longlines are to be a minimum of 25m apart within the licensed site and a minimum of 25m from the boundary of the site, so that there is a minimum 50m distance between the longlines of adjacent sites. Where the configuration of a particular site(s) does not allow for the maintenance of a minimum distance of 25m between individual longlines, the longlines must be arranged so as to ensure the greatest possible (internal) distance between the longlines of a particular site. In no circumstances may a 'buffer zone' of less than 50m be permitted between the longlines of adjacent sites.
- each licence should include a condition requiring that the licence-holder must comply fully with any requirements stipulated by the Department at any time during the period of validity of the licence regarding the thinning of mussel lines and regarding reporting on the steps taken to meet these requirements;
- in addition to the existing condition requiring reduction in flotation, each licence should include a condition requiring reduction of the number of droppers, also on the basis of a three-year phased approach, to a maximum of 800 per hectare;
- each licence should include a condition requiring that the licence-holder must comply fully with whatever monitoring and/or data gathering activities may be stipulated by the Department at any time during the period of validity of the licence.

The above recommendations take account of the matters to which the Board is required to have regard in determining aquaculture licence appeals pursuant to section 61 of the Fisheries (Amendment) Act 1997. In particular, the Oral Hearing Chair has considered that:

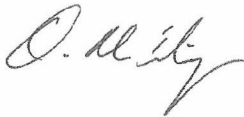
- the waters in which the licences in question are situated are not ideally suitable for sustainable mussel farming, which has resulted in increased competition for a limited resource of phytoplankton nutrition in Killary Harbour and has created particular

difficulties for those licensed sites situated on the inner shore or surrounded by other sites;

- the renewal of the licences in question will have a significant adverse impact on other beneficial uses, specifically the mussel farmers growing mussels in those licensed sites operating on the inner shore of Killary Harbour, thereby necessitating mitigation measures going beyond those set out in the renewed licences under appeal;
- the renewal of the licences in question will have a positive effect on the local economy, having the potential to create and/or safeguard over 30 full and part-time positions within four years of renewal, as well additional local jobs in support industries.

## **6. Acknowledgements**

The Chair of the Oral Hearing would like to thanks all of the participants who took the time and trouble to attend and to inform the Hearing of the current situation in Killary Harbour and, more generally, to contribute to the proceedings in a very positive and constructive manner.



22 March 2015