THE RYA'S POSITION ON MARINE AQUACULTURE
MARCH 2012

Executive Summary

This paper sets out the RYA position in relation to the development of *marine aquaculture*. It is intended to enable developers accurately to take account of recreational boating concerns when planning marine aquaculture developments and developing their applications for consent.

In summary, the RYA believes that the impact that marine aquaculture development has on recreational boating can be minimised provided developers fully consider the following key points which are drawn from the paper below:

- **Collision risk**. The RYA believes that the threat to recreational yachts can be minimised by consulting the RYA at an early stage and by following General Lighthouse Authority guidelines for marking hazards.

- **Marking and Lighting**. The RYA supports the guidance provided by the General Lighthouse Authorities and works with them to identify site specific issues that may occur.

- **Navigational and communication equipment**. Any proposed development should account for the effect on small craft navigation and communication equipment in detail.

- **Location**. Recreational routes, general sailing areas and anchorages must be considered when examining the impacts of aquaculture developments.

- **Sailing and racing areas**. Any interference created by an aquaculture development in a sailing or racing area would create a significant negative impact on the site and diminish its value.

The Royal Yachting Association – who we are

The RYA is the national body for all forms of recreational and competitive boating. It represents dinghy and yacht racing, motor and sail cruising, RIBs and sportsboats, powerboat racing, windsurfing, inland cruising and personal watercraft. The RYA manages the British sailing team and Great Britain was the top sailing nation at the 2000, 2004 and 2008 Olympic Games.

The RYA is recognised by all Government offices as being the negotiating body for the activities it represents; as such, it takes an active role in influencing policy and has been a voice for recreational boating for more than a century.

The RYA currently has over 100,000 personal members, the majority of whom choose to go afloat for purely recreational non-competitive pleasure on coastal and inland waters. There are an estimated further 500,000 boat owners nationally who are members of over 1,500 RYA affiliated clubs and class associations.

The RYA also sets and maintains an international standard for recreational boat training through a network of over 2,200 RYA Recognised Training Centres in 20 countries. On average, approximately 160,000 people per year complete RYA training courses. RYA training courses form the basis for the small craft training of lifeboat crews, police officers and the Royal Navy and are also adopted as a template for training in many other countries throughout the world.

The RYA Position

Our primary purpose in engaging with the marine aquaculture industry is to secure navigational safety and to ensure that recreational boating interests are not unreasonably affected. As the aquaculture industry has grown and evolved it has become clear that both sectors can co-exist provided that appropriate actions are taken. In that light we have reviewed our position on fish farms and aquaculture. We recognise the importance of marine aquaculture for the rural economy and that the aquaculture industry can improve local infrastructure such as slipways, quays and jetties to the benefit of recreational sailors.

This position paper sets out our concerns from a general perspective and should enable developers and statutory agencies to take appropriate account of recreational boating concerns in planning marine aquaculture developments.

In summary the concerns of recreational boating and aquaculture developments relate to:

1. Navigational safety
    a. Collision risk
    b. Risk management
    c. Weather
    d. Marking and lighting

2. Location
    a. Loss of cruising routes and impact on offshore racing
    b. Loss of anchorages and ports of refuge
    c. Effect on sailing and racing areas
    d. Cumulative effects

3. End of life
    a. Dereliction
    b. Decommissioning
4. Consultation

Types of Aquaculture

We recognise that there are currently three types of aquaculture development, each with its own particularities.

Fin fish aquaculture
Fin fish aquaculture involves the use of cages in the sea. Provided these are adequately marked and do not block access to anchorages, there should not be a problem with this type of aquaculture. There is now considerable experience of interactions between recreational boaters and fin fish farmers on the west coast of Scotland and the Northern Isles and an appreciation by both sides of the requirements of the other.

Shellfish cultivation
Shellfish cultivation is focussed on mussels, and to a lesser extent oysters. Oyster farms do not generally pose a problem, being in shallow water. However, the lines of buoys from which mussel ropes are suspended can be difficult to see, particularly at night, and if inappropriately planned, can cut off access to large areas of sailing water or lead to a risk of collision. We recognise the essential importance of clean water with low counts of coliform bacteria for shellfish cultivation. However, although recreational vessels are permitted to discharge 'blackwater' we consider that the risk to shellfish farms is low compared with other sources. Nevertheless, through The Green Blue initiative of the RYA and BMF we seek to minimise any risk to water quality.

Marine algae cultivation
Finally there are proposals for the cultivation of marine algae. Such farms will be similar to mussel farms with buoys connected together with ropes hanging beneath them. As these schemes would be likely to cover large areas of sea and may be located further offshore than mussel farms, they are potentially likely to pose significant hazards to recreational sailors.

1 Navigational Safety

Prior to departure, mariners are required to make a passage plan based on assessments of weather, tides, limitations of the vessel and crew, and navigational dangers. Offshore and near shore developments, such as fish farms, become an additional potential navigational hazard to the mariner. If well designed, marked and maintained, aquaculture developments should not be a navigational hazard for recreational boating.

Collision risk
Provided that a fish farm is well marked by day and by night (the General Lighthouse Authorities have responsibility for this), it should not pose a threat to navigation. Navigating around static hazards is part of sailing and only in rare situations, such as near narrow channels with strong tidal flows, do such installations pose a threat. However there are some recommendations the RYA would make to developers to ensure navigation is unaffected.

Underwater obstructions are a particular concern. These include anchor chains and ropes between mussel buoys. In some circumstances, feed for fish cages can be cost-effectively piped from shore to the cages. As these pipes float at the surface of the water they are a hazard to craft that would otherwise be able to pass between the farm and the shore, for example to reach an anchorage. In these cases, it is important that the location and marking of the pipes is discussed with the RYA in order to minimise potential danger. Any impediment to navigation will be the subject of a Marine

Licence under the Marine and Coastal Access Act 2009 and the Marine (Scotland) Act 2010 and it would be helpful if this could be discussed before submission of the application to ensure appropriate permission is granted. Recent experience has shown the importance of the coordinates of fish farming sites sent to the UK Hydrographic Office conforming to the WGS-84 datum, as the use of another datum can lead to significant errors in the position marked on charts.

The RYA believes that the threat to recreational yachts can be minimised by consulting the RYA at an early stage and by following General Lighthouse Authority guidelines for marking hazards.

Risk management

Risk management provisions should be formulated from the results of a site specific risk assessment that accounts for small craft of less than 24m LOA recognising the significant differences between small and large vessels. This distinction is important when it comes to equipment and other requirements for small and large craft. Furthermore, it must be understood that the total number of vessels is not necessarily the important factor during any traffic survey; it is the number in the area during adverse conditions that may have the predominant impact on hazard and risk.

For recreational craft, assessing navigational impacts should take into account the following parameters:

- The number, size and type of local vessels
- The number, size and type of national and international vessels
- Annual events that are not covered in a short term monitoring
- Wave height and sea state conditions
- Seasonal variations including weather conditions
- Proximity to ports of refuge
- A range of possible incidences

Risk assessment consists of an objective evaluation of concrete and potential hazards and subsequent evaluation of any associated risks, during the assessment, assumptions and uncertainties must be clearly considered and presented. Part of the difficulty in risk management is that measurement of both of the quantities in which risk assessment is concerned - potential loss and probability of occurrence - can be very difficult to measure and the chance of error in measuring these two concepts is large. Risk assessments should consider the worst case, i.e. a vessel under sail approaching a fish farm in stormy conditions at night. This might be, for example, a vessel seeking shelter.

Although commercial fish farms have been in UK waters for more than 40 years, rather few incidents with recreational craft have been reported to the Marine and Coastguard Agency or the Royal National Lifeboat Institution. The main thing is for a risk assessment to be carried out by people with experience of the area and its sea conditions. This experience should be fed into any risk assessment to provide an accurate and realistic predicted level of risk and ensure a proportionate and practical set of measures to address dangers.

Weather

Current fish farms are generally located in sheltered inshore waters which also, by their nature, act as refuges for recreational craft in poor weather conditions. The local weather conditions should therefore be examined in the risk assessment and measures to reduce the effects of poor conditions, low visibility and fog should be included in the risk management plan. The key issue is the exact layout of the fish farm within the leased area. Offshore fish farms will result in different and significant risks in adverse conditions.

Marking and lighting

Much work has been done to achieve consistency in marking and lighting marine aquaculture sites and guidance supported by the RYA is available from the Northern Lighthouse Board or Trinity House as appropriate. In the IALA Recommendation O-139 on *The Marking of Man-Made Offshore Structures*, guidance is given to appropriate marking where an aquaculture farm is considered a 'danger to navigation'. We feel that all such farms should be considered a potential danger to navigation.

We recognise that these are only guidelines but strongly encourage adherence to them. Lines of mussel buoys that lie low in the water can be particularly hazardous to small boats, and effective marking and lighting of the ends of the lines of buoys is essential. Although fish farms are marked on charts, only the boundary of the active leased area is shown. It is difficult to keep the charts up to date as the actual location and extent of the farms may not match their charted positions, e.g. due to rotation of sites. It would therefore be more useful for information on 'as-laid' moorings to be made available, at least locally. We are aware that The Crown Estate encourages all farmers to do this on an informal basis and have also suggested to planning authorities that post-deployment notice of such equipment will be valuable to navigation and fishing interests. The RYA is supportive of this approach and would encourage its adoption more widely. Furthermore, all active fish-farming sites in Scotland are known to Marine Scotland and to The Crown Estate elsewhere in the UK; there is therefore scope for disseminating this information more widely.

There is also the issue of farms that are being fallowed; these may still have cages in place but are not always clearly marked in terms of lighting at sea and as navigation marks on admiralty charts.

The RYA supports the guidance issued by the relevant lighthouse authorities on these issues and works with them to identify site specific issues that may occur.

2 Location

The location of future fish farm structures can be critical for navigational safety. Whilst routes taken by recreational craft will vary, the RYA has collated them into the *UK Coastal Atlas of Recreational Boating* which is available from the RYA and details cruising routes, sailing areas and racing areas as well as the location of marinas, RYA affiliated clubs and recognised training centres. This document and the supporting GIS datasets should be consulted when considering future aquaculture developments and the locations for the associated structures. This will particularly be the case when offshore fish farms are being planned.

The RYA will engage constructively with the marine spatial planning process. We note, for example, the Loch Fyne ICZM plan which balances the interests of all stakeholders and to which RYA contributed and the aquaculture paper produced as part of the Wester Ross Marine Spatial Plan. Engagement with stakeholders such as the RYA at an early stage can help speed up the consenting process.

Recreational routes, general sailing areas and anchorages must be considered when examining the impacts of aquaculture developments.

Loss of cruising routes and impact on offshore racing

Marine aquaculture developments are unlikely to impact on cruising routes, except where they are offshore or in narrow channels used for passage making. Some routes, typically narrow channels with strong tidal flows, may already be hazardous at times to navigate through and adding hazards in these areas may seriously affect navigational safety, particularly for sailors unfamiliar with the waters.

Loss of anchorages and ports of refuge

Along many stretches of coast, recreational craft may need to seek shelter in poor weather. Sheltered harbours and anchorages and routes to these harbours of refuge should be protected. These are identified as essential routes in the Coastal Atlas. Anchorages are sheltered inshore areas, which provide either a refuge from bad weather or simply a secure stopping point for boats. However, we recognise that these sheltered areas may also provide good conditions for the aquaculture industry and it is vital that the recreational boating community do not lose these protected areas through intensive fish farm development. Although many anchorages have been used for centuries they may not be marked as such on nautical charts although they can be identified in the relevant sailing directions, nautical almanacs and through consultation with the local boating community. Anchorages need to be accessible and they should able to be entered under sail (at least by experienced sailors), as well as engine power. It is important to note that boats at anchor will swing around their anchor under the influence of the tide and wind and need sufficient room to do so safely – the swinging radius can be calculated as up to 6 times the water depth.

Effect on sailing and racing areas

Most of the general day sailing and racing areas are close to the shore and in sheltered waters. Recreational activity is important to the health and wellbeing of the community as well as providing economic support for the local coastal economies. Retaining the undisturbed remoteness of some waters will be important in terms of its wilderness and amenity value.

Any interference created by an aquaculture development in a sailing or racing area would create a significant negative impact on the site and diminish its value.

Cumulative effects

Although fish farming, particularly for salmon, is predicted to increase significantly, there has been a trend towards fewer but larger farms. However, expansion into new areas is possible and shellfish farming may not follow the same trend as finfish farming. The *cumulative effects* of the aquaculture industry and other developments on navigational routes, sailing areas and anchorages need to be taken into account. The space required for each aquaculture development will have to be considered on a site by site basis, taking onto consideration any other proposed developments within the area, such as offshore wind, tide and wave generators, to ensure there is still adequate provision for recreational boaters to safely access existing routes and harbours of refuge.

3 End of Life

Dereliction

Whilst we would hope that these installations remain economically viable for the lifetime of the structures, the RYA would like to ensure that prior to consents being given appropriate measures are taken to secure the removal of the structures at end of life. This will ensure that if a fish farm were to become redundant for any reason, it would not become derelict and unmarked or unlit, and thus a hazard to vessels.

Decommissioning

Equally, any decommissioning plan needs to ensure that the structures associated with aquaculture are completely removed. Any parts of the structure remaining after the commercial operation of the fish farm has ceased may pose a hazard to navigation and should be avoided. However, we recognise that secondary uses may be identified for some structures that would benefit recreational boating, such as jetties and pontoons. If structures remain in the water, navigational safety must be taken into account and structures should be appropriately marked and lit.

4 Consultation

The RYA's main office in Hamble is a primary point of contact for matters concerning the development of aquaculture sites and the recreational boating sector. Throughout the English regions, RYA Hamble maintains a network of Regional Planning and Environmental Co-ordinators (RPEC) who are able to provide more detailed site specific information for developments that fall within an RPEC's area of responsibility. Developers may find this a useful resource for timely site specific information, particularly at the start-up of any project.

In addition, the RYA's main office maintains close links with its Scottish, Welsh and Northern Irish offices, which work with the relevant jurisdictions and they can provide detailed site-specific information in the same way as the RPECs do for England. Due to the majority of UK marine aquaculture taking place in Scottish waters, RYA Scotland has considerable experience of working with The Crown Estate, developers and the Northern Lighthouse Board. Good working relationships have resulted in an effective marine aquaculture industry while preserving the rights of recreational boaters.

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