

# Mussel Farming in the Menai Strait

## The Menai Strait East Fishery Order: Update, March 2021

### Background

The eastern Menai Strait is the most important aquaculture site in all of Wales, and the single largest mussel farming area in the whole of the UK. The success of this area is due to the unique natural environment that is perfect for mussels; and also the legal protection (known as a “Fishery Order”) that allows local mussel farmers to cultivate mussels here without the fear that they will be stolen by others. Hand gathering of wild mussels within the area is also covered by the Order.

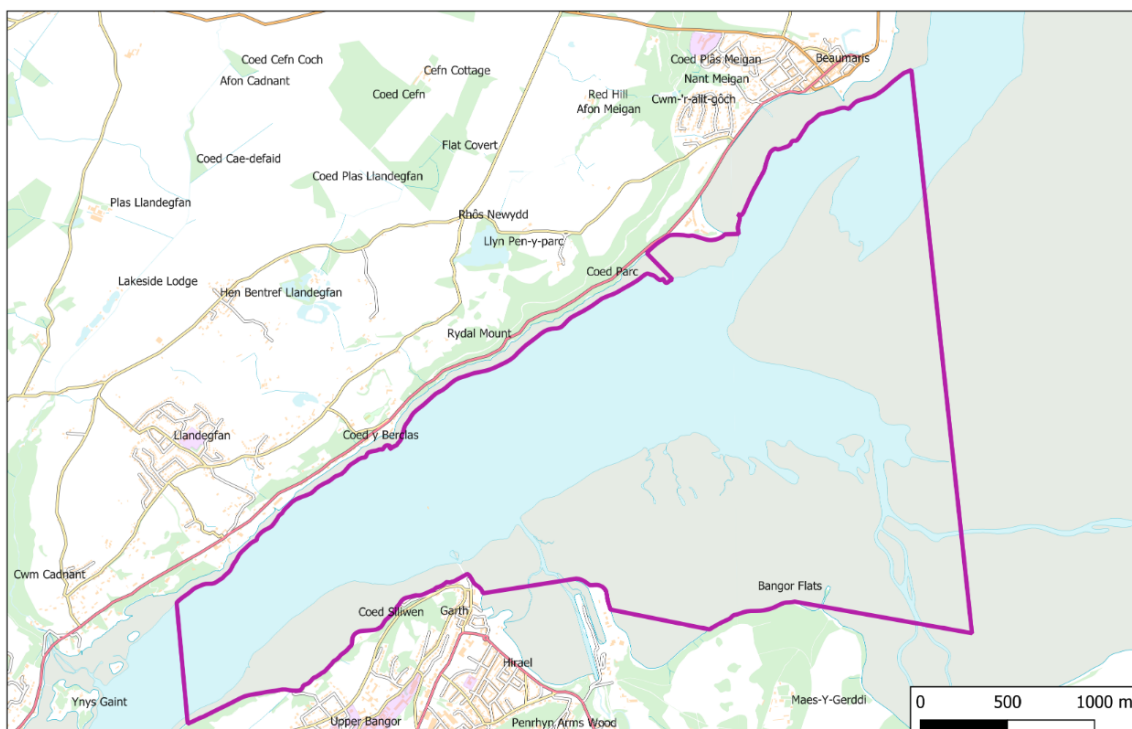
Since devolution, the mussel fishery in the Menai Strait has been managed by the Menai Strait Fishery Order Management Association (MSFOMA), which was granted these powers by the Welsh Government in 2010. In March 2022 the “Fishery Order” for the Menai Strait is due to expire. The replacement of this Fishery Order will help Wales to maintain its leading place in UK aquaculture, and to secure long-term jobs and businesses in the local economy.

The new Order only applies to shellfish farming. It will not impose any new restrictions or controls on other existing day-to-day activities in the area. For shellfish farmers this new Fishery Order is vital for their future. For everyone else in the area it will be very much "business as usual".

### What is proposed?

We are proposing a like-for-like replacement of the existing “Fishery Order”. Experience and science tell us that areas that are suitable for mussel farming are few and far between. Over the past 59 years since the existing Fishery Order was established, Welsh mussel farmers have identified the best places to farm and harvest mussels in the Menai Strait. No changes to the extent of mussel farming or hand gathering are being proposed.

The location of the existing mussel farming area in the eastern Menai Strait is shown in the map below.



## **What is the timetable?**

MSFOMA submitted a formal application to the Welsh Government for the replacement of the current Fishery Order in August 2018. We have been working closely with Welsh Government officials and providing them with further information since that time. Welsh Government are producing a draft Order, and in spring 2021 this will be advertised as part of a formal public consultation.

MSFOMA are keen to consult with local community and stakeholder groups to raise awareness and encourage a favourable response to the new Fishery Order. Any representations received will be considered by both MSFOMA and Welsh Government before a decision on approving the Order is made by the Minister for Environment, Energy and Rural Affairs.

## **What will happen in the Order area?**

Mussels have been cultivated in the Menai Strait since 1962. Mussels are farmed in areas that are leased to each mussel farmer. Each farmer harvests small “seed” mussels and puts them on the shore in the sheltered waters of the Menai Strait. The mussels grow fast here, and within 2-3 years they are big enough to harvest and eat. Mussel farming is done directly on the seabed – no nets or equipment are placed on the shore. Over the years the hand-gathering of mussels by licenced fishermen has also taken place from time to time when wild mussel numbers have reached harvestable levels.

## **Are the mussels chemical free?**

Yes. There is no need to treat farmed mussels with chemicals to control pests. They don't need to be fed either – they filter their food from the seawater, cleaning the water in the process. In Sweden and Denmark, mussel farming is being used to clean up polluted waters. Mussels are good for water quality and fix carbon dioxide to produce their shells.

## **Do the mussel farmers use boats?**

Yes. Mussel farmers use boats but are only on site when re-laying and harvesting mussels. Vessel operations are limited to high water periods, mainly in the autumn-spring period, and generally between Monday and Friday.

## **How are seed mussels collected?**

Small “seed” mussels are collected from ephemeral mussel beds that can be found in most years in Morecambe Bay and also from time to time at Caernarfon Bar. The seed mussels are collected using dredges.

Seed mussels settle from the plankton at these locations on to the cobbles and rocks left behind from the last Ice Age. To avoid damaging these vital seabed habitats, the mussel farmers wait until the young mussels have built up a layer of mud beneath themselves. This is typically in the period from August-October. After October the young mussels are swept away by stormy weather in the autumn and winter, leaving the cobbles and rocks exposed and ready for a new settlement of mussels the next year.

This process has repeated year after year for the past 50 years. In recent years the recruitment of seed mussels on the wild beds in Morecambe Bay and Caernarfon Bar has become less predictable, possibly as a result of climate change.

Mussel farmers are working with scientists here in North Wales to develop other ways of collecting seed mussels, which has proved to be a more reliable source of seed mussels in other countries – the pictures below show some of these mussels growing on ropes near to Puffin Island.



<https://twitter.com/Wjj66W/status/1336724417628561417>

### **How are mussels farmed?**

Mussels are farmed by taking small (“seed”) mussels from ephemeral mussel beds and transporting them to the Menai Strait using specially designed mussel farming vessels. In the Menai Strait the seed mussels are returned to the sea (a process called “relaying”) in the farmed areas (called “lays”).

It usually takes 2 years for these seed mussels to reach market size. During this time the mussels may be moved from intertidal areas to subtidal areas by the mussel farmers to optimise their survival, growth, and quality.

A video showing mussel farming in operation can be found [here](#).

### **Is this sustainable?**

Yes. Mussel farming in the Menai Strait has been independently certified as a sustainable fishery by the Marine Stewardship Council. In fact it was the first mussel farming area in the world to be certified as sustainable. Mussel farmers are constantly working with scientists from Bangor University’s Shellfish Centre and Centre for Applied Marine Sciences to improve farming methods and ensure that the sustainability of the fishery is always improving.

### **What are the economic benefits to the local economy from the mussel industry?**

The most obvious economic benefits are that more than 20 people are directly employed by the companies farming shellfish in the Menai Strait. There are then the many dozens of jobs that are partly dependent on shellfish farming: support services such as marine engineers, hauliers and local chandleries.

On top of this, the mussels farmed in the Menai Strait are destined for export, so their sale helps with the UK’s foreign trade and brings revenue into the local economy.

### **Would I still be able to....?**

#### **Sail in the area?**

Yes. There are no restrictions on sailing over the shellfish farming areas. The farmers liaise closely with sailing organisations to ensure that work is planned to allow the marking of courses and avoid key sailing events (such as races).

### **Continue to use boat moorings in the area?**

Yes. The Fishery Order does not restrict access to the existing moorings in the area.

### **Walk on the beach or foreshore?**

Yes. The Fishery Order does not restrict access to the beach or foreshore. You will still be able to walk on the shore.

### **Beach a boat on the shore?**

Yes. The Fishery Order does not prevent or interfere with beaching of boats whether for picnics or for maintenance.

### **Go angling in the Menai Strait?**

Yes. The Fishery Order is only concerned with shellfish, so you can fish from the shore or a boat as you always have, and can continue to gather worms or crabs for bait as before.

### **What is the Menai Strait Fishery Order Management Association?**

The Menai Strait Fishery Order Management Association (MSFOMA) was set up in 2010 to oversee the management of the shellfish farming areas in the eastern Menai Strait. It is an independent not-for-profit organisation. Its membership comprises 2 representatives of the fishing industry, and 1 representative from each of Natural Resources Wales, Gwynedd County Council, Ynys Mon County Council, Beaumaris Town Council, Bangor City Council and the University of Bangor. Welsh Government also attend the quarterly meetings and it is chaired by Alan Winstone, an independent fisheries expert from Anglesey.

### **What is a “Fishery Order”?**

In Wales, a “Fishery Order” is an Order made by the Welsh Ministers that assigns the existing public fishing rights in the sea for certain species of shellfish to an individual or organisation.

A Fishery Order does not create any new fishing rights, but by privatising the fishing rights it allows for proactive management and cultivation of shellfish. It also can regulate the hand-gathering of wild mussels through a licensing system with appropriate conditions, such as minimum sizes and where and when harvesting takes place. This does not affect anglers fishing on the shore or from boats, nor does it stop you from gathering worms or crabs to use as bait.

### **Can the existing Order be extended beyond March 2022?**

No. Legislation prevents an Order for lasting more than 60 years. That’s why MSFOMA has applied for a new Order to ensure shellfish farmers can continue to operate without interruption.

### **What would happen if the Order were not replaced?**

Jobs would be lost and the careful regulation of shellfish harvesting in the area would come to an end. The area would return to the public fishery, reliant on unpredictable wild mussel stocks, and typically fished by itinerant gangs of shell fishermen from outside the area.

### **How and why were the boundaries of the Order determined?**

The boundaries were determined after experiments conducted by scientists from the fisheries laboratory in Conwy in the 1950s had identified the best areas for cultivating shellfish.

### **What species of shellfish can be farmed?**

Blue mussels (*Mytilus edulis*) are the only species farmed in the eastern Menai Strait at the moment. Elsewhere in the Menai Strait oyster farming has been successful. Oyster farming is not planned for the eastern Menai Strait at the moment, but it could be a possibility in the future.



### How does hand gathering of mussels take place?

Hand gathering is very simple. Mussel fishermen walk down the shore and either pick individual mussels by hand or use a short handled rake to gather them, put them in sacks, and then transport them back up the shore.

### Will I be able to apply for a licence to hand gather mussels?

Yes, hand gathering licence application forms can be downloaded from our website, and you can also apply online (both downloadable forms and the on-line application are [here](#)). Licences are only issued when there are sufficient mussels in the Fishery Order area outside the farmed areas. MSFOMA have not issued any licences for several years. If conditions change, licences would be issued on a first-come-first-served basis in accordance with formal procedures agreed by the Association (available [here](#)).

### Will I be able to apply for a lease to farm mussels?

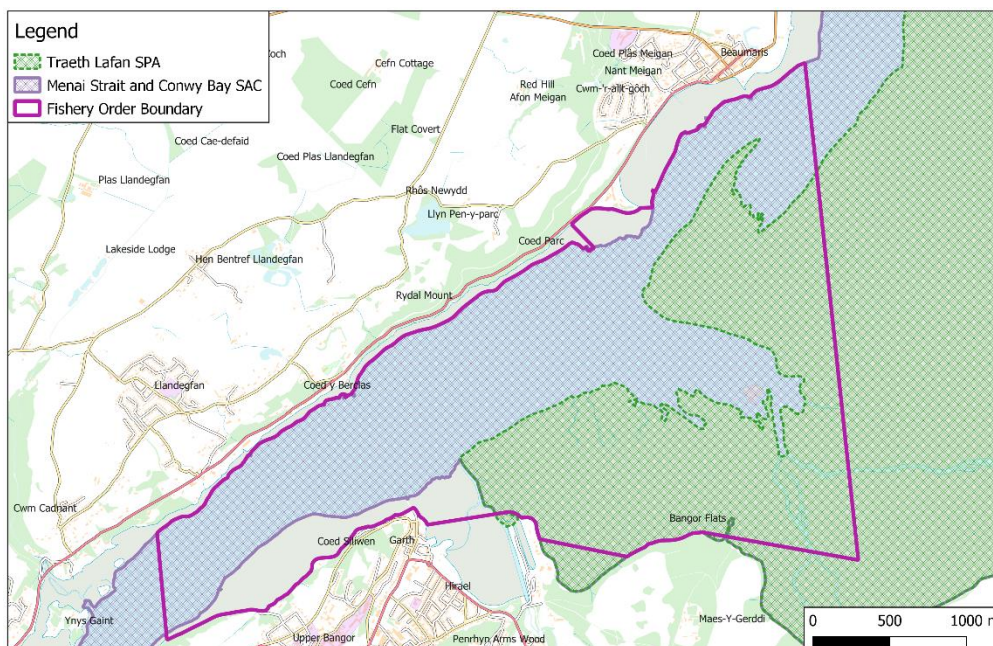
Yes, lease application forms can be downloaded from our website, and you can also apply online (both downloadable forms and the on-line application are [here](#)). Leases are only issued when an existing leased area becomes vacant. Leases are issued on a first-come-first-served basis in accordance with formal procedures agreed by the Association (available [here](#)).

### Will I be able to collect mussels for my personal consumption?

Most of the cultivated mussels in the Menai Strait are in hard-to-reach areas of the shore. If you gather mussels from easier to access areas you are unlikely to be taking farmed mussels, so you can continue to enjoy gathering small quantities for personal consumption.

### Interactions with the marine environment

The Menai Strait is a nationally and internationally important site for marine wildlife and for coastal bird populations. The Fishery Order is located within the Menai Strait and Conwy Bay Special Area of Conservation (SAC) and overlaps with the Traeth Lafan Special Protection Area (SPA). The extent of these areas is shown in the map below.



MSFOMA and the shellfish farmers work closely with Natural Resources Wales to ensure that mussel farming is compatible with the legal requirements to protect wildlife and habitats within the SPA and SAC areas. We also work with scientists from the University of Bangor to study the potential impacts of mussel farming on

the marine environment. Many of these studies have been published in scientific journals, and give mussel farming a clean bill of health.

### **Does mussel farming benefit bird populations on the Menai Strait?**

Yes. Observations in the late 1990s found that oystercatchers from nearby Traeth Lafan were feeding on the commercial mussel beds in the Menai Strait, and trials carried out by scientists found that mussel cultivation benefitted birds, with increased diversity observed in areas where mussels were being farmed.

Further details can be found in

- Caldwell, R., H. A. Beadman, S. McGrorty, M. Kaiser, J. Goss-Custard, K. Mould, and A. Wilson. 2003. Effects of intertidal mussel cultivation on bird assemblages. *Marine Ecology-progress Series - MAR ECOL-PROGR SER* 259:173–183. [https://www.researchgate.net/publication/250217993\\_Effects\\_of\\_intertidal\\_mussel\\_cultivation\\_on\\_bird\\_assemblages](https://www.researchgate.net/publication/250217993_Effects_of_intertidal_mussel_cultivation_on_bird_assemblages)
- Atkinson, P. W., N. A. Clark, S. G. Dodd, and D. Moss. 2005. Changes in Survival and Recruitment of Oystercatchers *Haematopus ostralegus* at Traeth Lafan, North Wales, in Relation to Shellfish Exploitation:42. [https://www.bto.org/sites/default/files/shared\\_documents/publications/research-reports/2005/rr393.pdf](https://www.bto.org/sites/default/files/shared_documents/publications/research-reports/2005/rr393.pdf)

### **What precautions are taken to avoid spreading unwanted species into the Strait?**

The mussel farmers are aware that Invasive Non-Native Species (INNS) are one of the greatest potential threats to the marine environment. To minimise risks, they have drawn up a “Code of Conduct” in consultation with Natural Resources Wales (available [here](#)). This was first published in 2008 and revised in 2019 to take account of the most up-to-date scientific information.

### **What are the wider environmental benefits and risks from mussel farming?**

The environmental effects of mussel farming have been studied in detail by scientists from the Marine Centre of the University of Bangor in Menai Bridge. Mussels provide essential “ecosystem services” in the area including:

- Filtering seawater to make it cleaner (each mussel filters around 1 litre of seawater an hour, removing particles as small as 1 micron in diameter);
- Locking up carbon dioxide in their shells;
- Mopping up nutrients that can cause pollution problems;
- Providing valuable habitat for juvenile fish;
- Providing food for migrating birds; and
- Stabilising the shoreline to reduce rates of coastal erosion.

If you want to find out more, and how the “ecosystem services” of mussels and other shellfish in cultivation are valued around the world, the following publication may be of interest.

The role of mussels in the ecosystem means that mussel farming contributes to key Welsh Government strategies including the well-being of future generations, sustainable development, and the circular economy.

Further information about the benefits of mussel farming can be found in this review of the scientific literature:

- van der Schatte Olivier, A., L. Jones, L. L. Vay, M. Christie, J. Wilson, and S. K. Malham. 2018. A global review of the ecosystem services provided by bivalve aquaculture. *Reviews in Aquaculture* 12:3–25. <https://onlinelibrary.wiley.com/doi/full/10.1111/raq.12301>

## How can I raise any concerns or queries about the proposed new order or pledge my support?

You can contact MSFOMA and Welsh Government by e-mail or by post. There will be a formal period of consultation on the proposed new Fishery Order during the spring of 2021, when you will be able to inspect and respond to a draft of the proposed new Fishery Order.

Contact details for MSFOMA and Welsh Government are:-

- MSFOMA: [info@msfoma.org](mailto:info@msfoma.org) or by post to MSFOMA, Porth Penrhyn, Bangor, LL57 4HN.
- Welsh Government: [MarineandFisheries@gov.Wales](mailto:MarineandFisheries@gov.Wales) or by post to Menai Strait (East) Proposed Fishery Order, Marine & Fisheries Division, Welsh Government Office, Rhodfa Padarn, Llanbadarn Fawr, Aberystwyth, Ceredigion, SY23 3 UR.

## Where can I find out more?

There are several ways you can find out more about the proposal. There is some information on the internet at [www.msfoma.org](http://www.msfoma.org); and you can contact us by e-mail at [info@msfoma.org](mailto:info@msfoma.org). If you would prefer to talk to us in person, you can call Jim Andrews on 07908-225865.

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