

## INTRO

2006 – took 3.5 years, a single person

2009 – placed over mainland electric cable

TODAY – 6 new proposals and enlargement of Ardyne by Scottish Salmon Company and Carradale by MOWI

Near Carradale, a MOWI salmon farm site is proposed; MOWI

already has a site at Carradale (16000 salmon worth £240,000 escaped from a cage when a storm hit in June 2015)

Northeast of Arran, a 20 cage salmon farm is proposed by

Scottish Salmon Company – this is essentially TWO large farms being proposed as one MEGA farm

Senior Nature Conservation Advisor to NTS Dr Luxmore is quoted as saying that ‘A moderately large fish farm will dump the same amount of sewage as a town twice the size of Oban and, unlike human sewage, it is entirely untreated.’ Approx. 34,000 people

Ardentinny, about half way up Loch Long, a beautiful currently

unspoilt spot, is a site proposed by Dawn Fresh Farms for a trout farm even though the site is within the boundaries of the Loch Lomond and Trossachs National Park

Ardyne, currently applying to increase the number of cages  
from 8 to 14

The Cumbraes, DFF proposes two 10 cage fish farms, one

between Great Cumbrae and the mainland and the other off the northwest of Wee Cumbrae. Both border chartered navigation channels.

On the 23 February the Largs and Millport News ran an article about a £100m Ayrshire Growth Deal saying that ‘Turning Cumbrae into a major sailing centre is one of the specific projects listed and will provide berthing for a community-run facility, supporting the local economy. Enhancing marine tourism to benefit both Largs and Cumbrae is also highlighted as a priority within the proposals.’

Lastly, the proposed farm site here on Bute at Hawks Neb. A 10

cage fish farm close in to the shore, running directly alongside and clearly visible from the West Island Way.

Each cage would have a diameter of 38m or a 120m circumference. Each cage would sit within a 75x75m grid. The area of the grid and cages altogether would be 150m wide by 375m long. You would see these structures as you walk along the West Island Way.

The CalMac ferry Bute has a beam of 15.3m and a length of 72m. Within the grid structure you would be able to fit 50 ferries, 10 across by 5 end-to-end. If we look at the mooring and anchors beneath the water surface we are now looking at an area 550m wide and 880m in length. As most vessels, even sailboats would not want to risk ensnaring themselves on lines that makes a no-go area of a size that would hold 446.5 ferries.

The footprint would mean that sailing boats and kayaks could not come within almost a kilometre of the shore at the south end of the island, which is what boats and kayaks normally do, particularly if seeking shelter and safety.

In addition there would be a permanently moored feed barge and there would be other vessels that would operate at various times for feed delivery, daily removal of mortalities, net cleaning, chemical treatments of fish for parasites and when harvesting.

### **What's so bad about fish farms? Why are we opposing fish farming?**

Unfair – use of our natural resources – if you as an individual can be prosecuted for accidentally allowing a septic system to overflow into a watercourse why can an entire industry use our seas as a dumping ground with no penalties?

Look at the regulations farmers face - would they be allowed to let parasites eat through their livestock's skins? Would they be allowed to dump animal faeces into nearby burns or into the sea? Not a chance. Yet this is what is happening at fish farms.

So, besides me saying that fish farming is unfair what are the documented impacts.

An amount of waste equivalent to that of over half the population of Scotland (according to the ECCLR report)

Unsustainability of producing feed for farmed fish

Escapes of farmed fish

Medicines and toxic chemicals polluting the environment

Animal welfare issues

Spread of disease and lice to wild populations of salmon and trout

Lack of oversight and accountability in the industry

Loss of jobs

Impacts on Tourism

Impacts on visual landscapes

### **An amount of waste equivalent to that of over half the population of Scotland**

Each farm that produces 2500 tonnes of fish puts 1000 tonnes of waste into the sea each year. There are approximately 250 farms in Scotland so that makes 250,000 tonnes of waste per year. Going back to figures used at the start of this presentation, each farm producing the waste equivalent to a town twice the size of Oban, this is the waste equivalent of 4,250,000 people – 80% of the population of Scotland. Untreated waste carrying medicines, chemicals and bacteria.

### **Unsustainability of producing feed for farmed fish**

It takes just over 3kg of wild fish to produce 1kg of farmed salmon. This is the figure arrived at by WWF on their Norwegian site. Some of these fish are also farmed and these farms have hit their capacities. A very important report put together in 2018 by the Environment Climate Change and Land Reform committee of the Scottish Parliament raised the question of how Scottish fish farmers were intending to feed the increased numbers of fish they want to farm. To be fair, the industry has tried to move to more plant based products in the feed for farmed fish but it lessens the nutritional value of the farmed fish – natural fish eat other fish and gain omega oils from this feeding and that

is why salmon is promoted as a healthy food. However, putting plant oils into their feed doesn't give them the benefit of omega 3. It is one of the most amazing marketing jobs I have ever been made aware of – I looked up sources of omega 3 in our food. Mackerel was top of the list followed by salmon but if you went down the list you reached at number 10 you reached chia seeds which actually has 800mg more omega 3 per serving than mackerel. Walnuts and flaxseed were very high in omega3 as well. In fact, if you used flaxseed oil in your cooking you would get over 3000mg more per serving of omega 3 than if you eat a portion of mackerel!

### **Escapes of farmed fish**

Farmed fish are genetically engineered. It can be disastrous for wild fish if they escape and inter-breed. In each area of the world where salmon and trout run they have adapted genetically over millennia to be able to thrive in the conditions they face. Escaped farmed fish dilute these long established gene pools. The farmed fish also compete with the natural fish for food and habitat.

Examples

21700 from salmon farm on Skye in Feb 2018

11040 from salmon farm on Mull in September 2017

### **Medicines and toxic chemicals polluting the environment**

Fish are given antibiotics to fight various diseases – one report I read said that there are approximately 9 diseases commonly occurring in the densely populated farm cages. One that has particularly plagued the west coast of Scotland is gill disease. Fish are also given dyes in their feed to produce flesh colour – this usually comes naturally through the diet of wild fish. Chemicals are used to treat parasites like sea lice. Sea lice are crustaceans. The chemical being used currently is SLICE or emamectin benzoate. It is a neuro-toxin, does not dissolve well in water, is ingested in fish feed and works its way out to the skin of the fish while also be excreted through their faeces. It has been found to disperse to a wider area than previously thought and to persist longer in the environment than previously thought. It is known to have a big impact on crustaceans and the ECCLR has asked that studies be done to determine the possible longer term impacts on other sea life.

Paragraph 166 of the ECCLR report: John Aitchison referred to an internal document from SEPA accessed via a freedom of information request which states: 'Fish farming is unique in that it is a sector which is allowed to discharge substantial quantities of biocides, some of them Priority Substances in terms of the Water Framework Directive and all at least List II substances in terms of the old EU 'Dangerous Substances Directive....the waters in which salmon farming is practiced are usually the same waters in which Scotland's valuable crustaceans fisheries are located....it is not tenable for SEPA to adopt a position where commercial shellfish species are impacted by the day-to-day activities of fish farms.'

As sea lice have been building up immunity to SLICE/emamectin benzoate, hydrogen peroxide is being used more and more frequently as a bath treatment for farmed fish. No agency has data on the amounts of hydrogen peroxide being used. The ECCLR has asked that data held on the use of hydrogen peroxides, other disinfectants, antibiotics and anti-fouling paints should be made publicly available to promote industry transparency.

### **Animal welfare issues**

Currently, Scotland's fish farms mortality rate is 20% per year. Again, what would happen if 20% of all cattle, pigs, sheep etc die on farms each year? There would be an uproar!

## **Lack of oversight and accountability in the industry**

Slides

Paragraph 116 of the ECCLR report: The Committee asked SEPA how many unannounced visits it had made to fish farms. In revised follow up evidence SEPA provided percentages in relation to the total number of unannounced visits which translate into the following numbers which shows a decline in the annual number of both visits and unannounced visits since 2015:

In 2015, 14% of 174 visits were unannounced (24 unannounced visits)

In 2016, 13% of 152 visits were unannounced (20 unannounced visits)

In 2017, 9% of 160 visits were unannounced (14 unannounced visits)

## **Loss of jobs**

DFF is telling us that the farm will bring 6 jobs immediately to the island as a minimum and that there will be many ancillary jobs created. First, let's acknowledge that two lobstermen use the proposed site and their jobs will go right away – so 4 jobs.

Now let's look at the Clyde Marine Regional Assessment of 2017.

In section 6.3 Aquaculture of the CMRA 2017, it is stated that "The sector remains important for supporting rural and coastal communities both directly and through supply chain linkages, however, there has been an overall decline in employment." Several paragraphs later, "the sector is a relatively small employer in absolute terms, however, provides year round employment for fragile rural communities in the region. Total direct employment is 160 jobs." (In the A&BC LDP Bute is not designated an Economically Fragile Area). The report then goes on to say that since 2009 there are indications of an increase in productivity, "driven by the increase in turnover but a decrease in employment i.e. businesses are growing turnover but with less employees. This is likely to be due to greater levels of automation across the sector." So, will the promised 6 jobs materialise? If so, will they remain as automation to drive down costs becomes the norm?

Also, the financial viability of Dawn Fresh Foods Ltd must be questioned: Turnover up but Dawn fresh still makes £7.7m loss. The article goes on to say that the previous year, 2015 – 16, an £8.1m loss had been reported.

Let's look at what an article in the Sunday Post on 5 May this year said:

First and foremost, our government and tourist organisations should do more to acknowledge the contribution that salmon angling, and country pursuits in general, make to the rural economy of Scotland. Maybe then people will sit up and take notice.

The general consensus amongst anglers is that an industry worth over £120m to the economy, supporting in excess of 3,000 jobs and generating an average spend on fishing trips to Scotland by tourists of around £5,000 per trip is largely being ignored. That has to end.

This is an excellent segue into the topic of tourism.

## **Impacts on Tourism**

An Assessment of the Benefits to Scotland of Aquaculture

a report by Marine Scotland in 2014

185,900 jobs in 2014 across Scotland  
£3.1 billion

No, there's no way salmon farming is going to put any tourists off. I wouldn't say there was any adverse effect on tourism in the slightest.

Wildlife Photographer, Shetland

The qualitative research highlighted numerous examples throughout all the regions of local people benefiting from or considering the inclusion of aquaculture in tourism activities. In this case, the supply of tourism services and aquaculture products are no longer considered substitutes but complements....

there's no reason why some of these things couldn't actually have an attraction value... How fascinated would you be? Especially if you were in a country that didn't have a fish farm.

Tourism Representative, Argyll

Where aquaculture is already being incorporated into wildlife tours and tourism businesses, stakeholders have found that they have had quite varied responses from tourists.

There's some people take it or leave it, you know? Other people are very interested in the thing but the thing they are mostly impressed with is the amount of fish that are actually out there. You know, you tell them there is about 30-40 thousand fish per cage, you know and then they go 'oh!'. A lot of them like seeing them jump about like that. But other people make wee comments about them damaging the environment and that sort of stuff.

Tourism Representative, Skye

Employment was the most discussed topic when asking respondents about human capital. Jobs were the most recognised benefit of aquaculture in Scotland, and in two of the study locations (Western Isles and Skye) it was believed that aquaculture was one of the biggest employers in the area. However, although jobs were viewed as important, it was highlighted by a number of respondents that there are not as many job opportunities now as there were in the past.

Well, if we go back a few years when the fish farm was locally owned and locally managed there was an awful lot of jobs here. It's a lot more automated now. There's definitely not the amount of staff that there used to be.

Hotel Manager, Skye

This was suggested to be due to the automation of farm systems by some interview participants, and due to consolidation of the industry to larger companies and larger units leading to the reduction of labour by others.

### **Impacts on visual landscapes**

In paragraph 1.7.1, the Argyll and Bute Council Local Development Plan Written Statement lists one of the major challenges facing the Council to be the delivery of sustainable long-term economic growth that will *protect and enhance our outstanding natural and built environment and maintain and improve our quality of life.*

In regards to a proposal from Dawn Fresh Foods Ltd to place a fish farm adjacent to Hawk's Neb on Bute, the question must be asked "Will allowing such a farm protect and enhance our outstanding natural and built environment and improve our quality of life?"

Let's start with the entire island being designated a Tourism Development Area as well as an Area of Panoramic Quality. The Clyde Marine Region Assessment 2017 shows that the entire coast of Bute has heavy sailing activity. Hawks Neb has been development zoned a Very Sensitive Area as well as an Isolated Coast. The CMRA shows all waters around Bute designated an exercise area as well as an area that is heavily navigated. The West Island Way runs closely alongside the proposed fish farm site. The CMRA shows very heavy kayaking activity in the waters between Hawks Neb and the Cumbraes. Local members of the Clyde Fishermans' Association and 2 Lobster potters operate in the area where the fish farm would be sited. The local outdoor swimming society swims in the area and through its association with many other swimming groups in Scotland brings non-local swimmers to the area as well. With all the special designations given to the island and the Hawks Neb coastline in particular, how can a fish farm be an enhancement to the outstanding beauty of the area and how will degrading the visual enjoyment of the area and lessening the use of those waters to both existing commercial users and water sports enthusiasts improve our quality of life?

Using the SNH guidance for those considering the siting of a fish farm, the Hawks Neb site would be ruled out. The guidance document states that 'Areas which are unsuitable for development will include the isolated coast, which is distant from centres of population and lacks obvious signs of development and is of very significant environmental, cultural and economic value. The special characteristics of the isolated coast should be protected, and there is a presumption against development in these areas.' The advice for choosing an appropriate site in the council's own document, SG AQUA 1, should negate approval of Hawks Neb as a site: it is not a stretch of regular coastline set against the backdrop of an open sea, this lack of open sea making the farm appear larger, and in conjunction with the Dawn Fresh Food proposal for a farm off Little Cumbrae would have a cumulative visual impact on two isolated coastlines.

Remember above, the escapes at Carradale because of a storm in June. Imagine the weather that the Bute and Cumbrae sites would be open to. Marine Scotland Science

Environmental conditions likely to be encountered at the site should be considered in conjunction with the specifications of the equipment, to establish if the equipment can endure the conditions at the proposed site. Evidence that equipment (nets, cages and moorings) is suitable for purpose **on the site in question** is required in the form of a **site specific** attestation from the manufacturer or other suitably qualified person. In lieu of this, equipment specifications detailing the environmental conditions (current speed and wave height) the cages and moorings can withstand should be provided, in combination with details of the environmental conditions (current speed and wave height) experienced at the site location.

At the same time, DFF has said in their scoping application that 'Furthermore, the proposed farm is close to busy shipping lanes.....As mitigation for this proposed development DFF proposes to reduce mooring lengths to the shortest practicable to still provide the required security of the site.'