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9 October 2020

Dear Ms Davies,

Response to Mowi's North Kilbrannan Fish Farm Planning Application ref. 20/01345/MFF

We write to **object** to Mowi's proposal to install a salmon farm in the Kilbrannan Sound.

Summary of Objection

Scotland's wild salmon and sea trout are at crisis point with many populations, particularly on the West Coast within the 'Aquaculture zone', below conservation limits. Whilst wild salmon face a range of pressures, specific pressures from the aquaculture industry include impacts from escapes and sea lice.

Mowi have had three major escapes in the last year all at high energy sites like the one proposed. In the light of these incidents, we do not consider that Mowi have demonstrated their ability to maintain farmed fish within their production facilities. Fish which recently escaped from Mowi's nearby North Carradale site have shown up in around 15 different rivers across the West Coast of Scotland and North-West England. The full environmental and economic impact of this escape is not yet clear, and the results of work designed to quantify any genetic impact on wild salmon arising from the escape will not be known for at least 12 months.

Sea lice arising from fish farms have the potential to negatively impact wild salmon. Even if the farm manages sea lice to the extent described in the application, up to 250,000 additional sea lice will be present on the likely migratory path that wild salmon take from numerous rivers in Loch Fyne, West Arran and East Kintyre and possibly the Kyles of Bute and the Clyde Estuary. Given the concerns stated above the precautionary principle should be followed and we **object** to the proposed development.

Introduction

Fisheries Management Scotland is the representative body for District Salmon Fishery Boards and Fisheries Trusts. District Salmon Fishery Boards are statutory consultees in the aquaculture planning process. Fisheries Trusts undertake annual monitoring of wild fish, in order to understand and quantify impacts. We work closely with Scottish Government, Agencies, Crown Estate Scotland and the aquaculture industry to ensure that wild salmonid fish are protected from the environmental effects of aquaculture. Fisheries Management Scotland recently participated in the Salmon Interactions Working Group, which was established to make recommendations for a future approach to managing interactions between wild and farmed fish. We also sit as observers on the Strategic Farmed Fish Health Framework Working Group, and previously sat on the Ministerial Group for Sustainable Aquaculture.

The current regulatory system does not sufficiently protect wild fish and we consider that a new regulatory system, as recommended by the Salmon Interactions Working Group, should be put in place prior to any growth in consented biomass. Provision for a Technical Standard for Scottish Finfish Aquaculture was included in the Aquaculture & Fisheries (Scotland) Act 2013. The standard was published in June 2015 but has never been made a legal requirement. The 2015 Standard is now being further reviewed and we believe that this process must be completed before further developments are granted planning consent in high energy locations, such as the Kilbrannan Sound.

Across Scotland, wild salmon populations are in crisis, and face a range of pressures, some of which are under human control. Where salmon populations are below their conservation limits, any additional pressure, including from sea lice and/or genetic introgression, cannot be considered sustainable. It is notable that escaped farmed salmon, salmon lice and infections related to salmon farming are considered to be the greatest anthropogenic threats to Norwegian wild salmon[1].

In addition, District Salmon Fishery Boards have a statutory obligation to protect sea trout. The marine phases of both Atlantic salmon and sea trout have also been included on the draft list of Priority Marine Features drawn together by SNH - the habitats and species of *greatest conservation importance* in inshore waters.

The proposed biomass of 2475 tonnes of farmed salmon will add approximately 500,000 farmed salmon to the area in addition to the nearby North and South Carradale farms. These locations in the Kilbrannan Sound are highly likely to be on the migration route of wild salmon smolts emanating from numerous rivers in Loch Fyne, West Arran and East Kintyre and possibly the Kyles of Bute and the Clyde Estuary.

Impacts arising from salmon farming have the potential to further threaten wild salmon and sea trout populations emanating from rivers in these areas. Any additional impacts arising from the North Kilbrannan farm must be interpreted in the light of the conservation status of wild fish and the any impacts arising from existing fish farms in the Firth of Clyde.

Scottish salmon rivers are categorised by Marine Scotland Science under the salmon conservation regulations according to the likelihood of them meeting their conservation limits. The proposed gradings of rivers has been published for 2021. There are now 104 rivers across Scotland graded as Category 3, meaning there is a less than 60% probability of meeting their conservation limit. Within Loch Lomond, Clyde, Ayrshire and the relevant parts of Argyll, 15 out of 20 rivers have been assessed for 2021 by Marine Scotland Science as category 3 (See **Appendix 1**). One of these rivers, the Endrick Water which is part of the Loch Lomond system, is a Special Area of Conservation (SAC) for Atlantic Salmon.

We note that SEPA have not objected to this application, but we emphasise that SEPA ***do not*** consider sea lice, escapes or interactions with wild fish under their current statutory remit.

Containment and Escapes

Escapes of farmed salmon are shown to have negative impacts on wild salmon populations through genetic impacts arising from interbreeding. In addition to changing the genetic makeup of salmon

[1] Forseth, T., Barlaup, B.T., Finstad, B., Fiske, P., Gjøsæter, H., Falkegård, M., Hindar, A., Mo, T.A., Rikardsen, A.H., Thorstad, E.B., Vøllestad, A. & Wennevik, V. 2017. The major threats to Atlantic salmon in Norway. ICES Journal of Marine Science 74: 1496-1513.

populations, hybridization between wild and escaped farmed salmon is also shown to reduce salmon production and survival, in addition to direct ecological interactions such as competition for resources. These impacts are particularly important in the current context of adapting to rapid climate change. For Scottish populations already below their conservation limits, even a small number of farmed fish interbreeding with the wild population can have a huge impact.

As a signatory to the North Atlantic Salmon Conservation Organisation (NASCO), Scotland has committed to the international obligation to meet the following NASCO goal: "100% farmed fish to be retained in all production facilities". Placing salmon farms in high energy areas carries a level of risk which must be fully considered in the light of our national and international obligations prior to consent being granted. The past record of the company regarding containment is pertinent to this consideration.

In the last 12 months, Mowi have had three large-scale escapes. 23,970 farmed salmon escaped from the Hellisay farm in October 2019, 73,684 farmed salmon escaped from Colonsay in January 2020, and most recently 48,834 farmed salmon escaped from Carradale North (Eilean Grianain) in August 2020. In addition to these major incidents, there have been 10 further events that could have led to an escape from Mowi/Marine Harvest sites. These have been caused mainly by weather conditions, equipment failures or human error (Table 1). Of the 15 escape situations recorded, eight events were at one site (Eilean Grianain) and four at Colonsay – both high energy similar to the type being proposed here.

Table 1 – incidences of escapes across Argyll (from Scotland's Aquaculture website – downloaded Oct 2020)

Escape Start Date	Final Number Escaped	Final Escape Reason	Site Name
02-Jun-15	16,000	Hole in Net - HOL	Eilean Grianain
15-Sep-15	1	Human Error - HUM	Ardmaddy
02-Mar-17	283	Human Error - HUM	Poll Na Gille
19-Jun-17	0	Human Error - HUM	Poll Na Gille
20-Oct-17	0	Other - OTH	Colonsay
08-Mar-18	0	Hole in Net - HOL	Eilean Grianain
18-Mar-18	0	Predator - PRD	Eilean Grianain
30-Jul-18	0	Hole in Net - HOL	Eilean Grianain
02-Aug-18	0	Hole in Net - HOL	Eilean Grianain
18-Oct-19	none	Predator - PRD	Colonsay
08-Nov-19	none	Predator - PRD	Colonsay
17-Jan-20	73,684	Pen Failure - PEN	Colonsay
02-Feb-20	0	Equipment damage - EQD	Eilean Grianain
24-Feb-20	0	Equipment damage - EQD	Eilean Grianain

20-Aug-20	48834	Mooring Failure - MOO	Eilean Grianain

The most recent escape from the Eilean Grianain site (North Carradale), as a result of a mooring failure, has seen escaped farmed salmon turn up in multiple rivers through formal reporting channels and an additional 6 rivers across the region which have not been reported but photographic evidence has been seen (Table 2).

Table 2 – locations where farmed fish have been officially recorded by Fisheries Management Scotland (in bold) and those through anecdotal sources with photographic evidence.

River	Region
Black Cart	**Renfrewshire**
Leven	**Lomond**
Garnock	**Ayrshire**
Girvan	**Ayrshire**
Laggan	**Argyll**
Stinchar	**Ayrshire**
Doon	**Ayrshire**
Kelvin	Clyde
Derwent	Cumbria
Eden (SAC)	**Cumbria**
Border Esk	Dumfries and Galloway
Eachaig	Argyll
Annan	Dumfries and Galloway
Ehen	Cumbria

Fisheries Management Scotland have coordinated the response to this escape and have collated information on captures of escapes in real time. Significant numbers of escaped farmed salmon have been captured in Ayrshire and the Loch Lomond system, which includes the Endrick Water Special Area of Conservation for Atlantic salmon. Farmed salmon have also been caught on Islay and as far south as the River Derwent and River Eden in Cumbria, the latter also being an SAC for Atlantic salmon. The environmental impact of this escape is as yet unknown but the economic impact on fisheries, including additional enforcement costs, awareness raising, and nuisance are already considerable. Mowi have agreed to cover some of these costs but they still represent an opportunity cost for the Boards, Trusts and proprietors affected. We are also working with Marine Scotland and Mowi to design a genetic monitoring project which will allow us to determine the impact of the escape on the genetic integrity of the wild salmon population. The potential impact of this single escape is considerable and, in line with the precautionary principle, there should be no further development in this area until the serious risk to the environment has been quantified and mitigated.

The proposed site for this farm is the Kilbrannan Sound between Arran and the Mull of Kintyre. As we understand it, the environmental conditions at this site are very similar to the North Carradale site. These sites have been chosen In line with Mowi's policy to avoid low-energy sites and progressively move into higher energy locations. With this comes risks, and the equipment deployed must be adequate to withstand these conditions, including storms. This is particularly relevant in the light of climate change, and the predicted increase in strength and frequency of serious storm events. It is Mowi's responsibility to audit their suppliers and ensure the equipment deployed can withstand the conditions in the area. Given Mowi's recent record, we do not believe that Kilbrannan Sound is appropriate for further development.

Marine Scotland Science note that a site-specific contingency plan detailing actions to be taken in the event of an escape or suspected escape event has been submitted and is deemed satisfactory in principle. However, given the large number of rivers in which escaped farmed salmon have appeared following the North Carradale escape, we consider that in the event of an escape, Mowi should contact all District Salmon Fishery Boards and Fisheries Trusts covering the Firth of Clyde directly. The site-specific contingency plan contains a site-specific action plan which describes the measures used to maintain the integrity of the holding structures. Despite the term *site-specific* we have reviewed a number of these documents for other Mowi sites and they are generic in nature.

Mowi include an equipment attestation as part of their application. As Marine Scotland Science also note, geographical location, wind and wave analysis, and hydrographic and bathymetric data are considered with appropriate equipment chosen based on these criteria in accordance with the minimum standard of the Scottish Technical Standard. However, it is not clear if this attestation, or Marine Scotland Science's associated comments, differ from the equivalent document for the North Carradale site, as we were unable to locate this on the planning portal. However, given that the North Carradale site presumably met the same criteria, and given the failing of the moorings on that site, we consider that further assurance is required before planning permission can be granted.

Though we understand the Carradale North escape was as a result of a mooring failure, we have not yet seen the final written report and root cause analysis of the escape. This information should be made available to all stakeholders ahead of this development progressing. We note that Marine Scotland Science have also requested *further detailed information to demonstrate that appropriate environmental site surveys, calculations and considerations have been made to ensure that the documented equipment specification for this site will ensure that satisfactory measures are in place for the containment of fish and the prevention of escapes*. This information should be provided and agreed ***in advance*** of planning consent being considered further.

Both Mowi and Marine Scotland Science make reference to the Scottish Technical Standard. Provision for a Technical Standard for Scottish Finfish Aquaculture was included in the Aquaculture & Fisheries (Scotland) Act 2013. The standard was published in June 2015 but has never been made a legal requirement. We do not believe that any farm in a high energy site such as Kilbrannan Sound should be granted planning permission until the Scottish Technical standard for Finfish Aquaculture is finalised, fit-for-purpose, and made a legal requirement through regulations under the Aquaculture and Fisheries (Scotland) Act 2013.

Sea lice

Marine Scotland Science have summarised the information relating to impacts of salmon lice from fish farms on wild Scottish sea trout and salmon. This summary discusses the effect of salmon lice on wild salmon at the population level. The studies quoted in this summary show that a small increase in mortality of wild fish, due to sea lice arising from fish farms, may be the difference between a river meeting its conservation limit or not.

In line with this threat, we are concerned that the increase of almost 2,500 tonnes in the area will negatively impact nearby salmon populations. Putting this into perspective, we estimate that the proposed additional 2,500 tonnes of production will add an estimated 500,000 farmed salmon to the area. If sea lice levels are controlled at the levels which Mowi set out in their application (industry Code of Good Practice levels) up to 250,000 *additional* adult female lice may be added to the Kilbrannan Sound. We maintain that ***any*** increase in sea lice load resulting from increased biomass in Kilbrannan Sound will increase the threat to wild salmonids passing through the area. As detailed above the populations of these wild salmonids are already vulnerable.

Impacts on wild fish are a function of both the number of lice per farmed fish, and the overall number of farmed fish in the area. It is this 'area lice load' which is important to wild fish, as it represents the additional number of lice present in the natural environment as a consequence of fish farming activity.

Mowi have agreed to the principle of an area lice load in Environmental Management Plans for other areas and prior to the current application, this was discussed with regard to an EMP for Carradale North. Clearly, for an area lice load to make any sense, in the event of a proposed increase in production within an existing farm management area, requires the maintenance of the original 'sea lice load' established for the area (or connected area). In other words, there should be no increase in overall sea lice load as a result of any increased production.

The proposed consolidated Environmental Management Plan for the farm management area (the North Kilbrannan farm and the North and South Carradale sites), includes the principle of an overall area lice load (based on 0.5 adult female lice per fish multiplied by the total number of farmed fish). However, we are strongly of the view that the lice load for this area (which is subject to adaptive management based on the results of wild fish monitoring) should be set ***prior*** to taking into account the additional biomass associated with the current application. On that basis, the lice per fish used to calculate the area lice load must be reduced from 0.5 lice per fish in order that the area lice load is not elevated.

In their response, Marine Scotland Science note that in the most recent production cycle, numbers of adult female sea lice have remained below Code of Good Practice suggested criteria and Marine Scotland reporting levels. Marine Scotland Science also noted that this is an improvement from the previous cycle which rose above the Code of Good Practice suggested criteria for a 4-month period at the end of the production cycle between December 2018 and March 2019. It is important to emphasise that these comments do not relate to wild fisheries interactions, which are covered in a separate section of their response. However, what Marine Scotland Science fail to highlight is that the period in which farm lice levels rose above the Code of Good Practice suggested criteria also correspond to the period of greatest sensitivity for wild salmon and sea trout.

The Marine Scotland Science comments appear only to relate to the Mowi Scotland farms in the Kilbrannan Sound. In the context that Marine Scotland Science offered these comments this is understandable, but in the context of wild-farmed interactions it is important to consider the cumulative effect of multiple farms, including those operated by other companies in adjacent farm management areas. The Kilbrannan Sound is highly likely to be on the migration route of wild salmon smolts emanating from numerous rivers in Loch Fyne, West Arran and East Kintyre and possibly the Kyles of Bute and the Clyde Estuary. There is the potential for wild salmon to pass as many as 11 farms before they reach the new proposed development. As highlighted in Appendix 1 the majority of these rivers are currently assessed by Marine Scotland as having less than 60% probability of meeting their conservation limit (Grade 3).

It is important to consider the cumulative impact of sea lice on salmon smolts arising from other rivers in the Firth of Clyde before they pass through the Kilbrannan Sound. Sea lice arising from any proposed new development must therefore be considered as an additional pressure, above and beyond any impacts arising from existing farms. The graphs in **Appendix 2** demonstrate that in the last production cycle many of the farms in the Firth of Clyde had lice levels which were more than double the Code of Good Practice suggested criteria during the last production cycle. Between January 2018 and June 2020, there have been 71 occasions where farms in the Firth of Clyde region had sea lice counts over Code of Good Practice Levels (0.5 or 1, depending on the time of year). Fourteen of these occurrences were over the Marine Scotland reporting level of two. In many cases wild fish were potentially exposed to elevated levels of sea lice in multiple locations as several farms experienced levels of sea lice above Code of Good Practice or Marine Scotland levels at the same time. Whilst we recognise that Mowi cannot control the performance of other farming companies, wild migratory salmonids do not recognise boundaries between different farm management areas, and therefore the proposed development cannot be viewed in isolation.

Fisheries Management Scotland have coordinated a programme of sweep netting to monitor juvenile sea trout and record the infestation pressure of sea lice. This work, which is funded by Marine Scotland, is undertaken by the Fisheries Trusts and the techniques used now form the basis of monitoring as part of some EMPs in Scotland.

As part of this national programme, three sites in the Clyde estuary have been monitored by the Argyll Fisheries Trust: Carradale, Loch Riddon, and Loch Fyne. It is important to note that the original basis of the monitoring work was to understand the impact of sea lice on wild sea trout at a range of distances from salmon farms, and therefore it was not designed specifically to monitor the impacts of specific farming operations. In future, it is anticipated that new sampling locations will be identified following detailed sea lice dispersal modelling. As can be seen below (Table 3), at some sites, in some years, a significant proportion of samples sea trout carry sea lice burdens that have been demonstrated to cause mortality. The threshold lice levels used to identify these impacts are based on the work of Taranger *et al*. (2014) in Norway and are replicated on page 17 of the draft EMP for the current proposal.

Table 3 - Predicted mortality of sea trout smolts based on sweep netting surveys at three locations

2017	**% Mortality of samples smolts**
Carradale	0%
Loch Fyne	7.4%
Loch Riddon	6.7%
2018	
Carradale	0%
Loch Fyne	0%
Loch Riddon	12.3%
2019	
Carradale	0%
Loch Fyne	29.0%
Loch Riddon	1.1%

These results emphasise the need to fully consider the cumulative impacts of all farms in the area, including those in other farm management areas.

The Scottish Government has established a Technical Working Group which was tasked with developing a practical framework for assessing the level of risk posed to wild salmon and sea trout from aquaculture developments. This will take into account the best available scientific understanding and the precautionary principle. The technical group comprises experts from the regulators - Marine Scotland, SEPA, SNH and representatives of local authorities. This process is now well-advanced, and a risk assessment framework has been developed using the best available science to determine the added risk from new farm developments, taking into account the pressure from existing developments and the sensitivity of wild fish.

An important component of the risk assessment framework is the need for all new fish farms to develop a sea lice dispersal model in advance of the site being consented. The Argyll District Salmon Fishery Board requested information on sea lice dispersal at the Screening and Scoping Stage, but no such information has been provided. We note the Environmental Management Plan for the area also includes a commitment to produce such a model, but this should be provided in advance of determining the current application and should include lice dispersal from the proposed and existing sites. We are strongly of the view that Argyll and Bute Council contact SEPA and Marine Scotland Science to specifically ask about the suitability of the proposed location is for wild fish, using the best currently available scientific evidence.

Marine Scotland Science then go on to discuss wild fisheries interactions and highlight that adherence to the suggested criteria for treatment of sea lice stipulated in the industry Code of Good Practice may not necessarily prevent release of substantial numbers of lice from aquaculture installations. It is important to emphasise that the Code of Good Practice suggested criteria for

treatment relate solely to farmed fish and are not designed to protect wild fish. Citing these levels and being part of the Code of Good Practice process is not sufficient to be able to offer assurance that sea lice levels will not be damaging to nearby populations. Again, we emphasise that all local rivers, and the majority of rivers draining into the Firth of Clyde are below their conservation limits.

Marine Scotland Science make clear that this development ***has the potential to increase the risks to wild salmonids***.

Marine Scotland Science state that the applicant has informed Marine Scotland Science that they currently have no intentions of proceeding with submitted planning applications for the proposed modifications at the Eilean Grianain site(s) (addition of a further 2500t biomass). Should the proposed site be granted planning permission despite objections from wild fish interests, we strongly believe that it should be made a condition of consent that no further increases in biomass should be allowed at the Eilean Grianain site(s).

We welcome the inclusion of a draft Environmental Management Plan, and we recognise that the level of engagement that Mowi have put into the development of this, and other EMPs, is commendable. However, we have detailed some concerns about the content of the EMP above. It is also important to note that such engagement by wild fish interests does not imply support for this, or any other, application. Whilst we recognise that Local Authorities have introduced EMPs as conditions of consent in an attempt to try to manage interactions between wild and farmed fish, we also recognise that this process is imperfect and cannot be properly enforced through the planning system. On that basis, we are strongly of the view that an appropriate regulatory regime, with suitable adaptive management feedback to farm practices must be introduced before such significant new developments are consented.

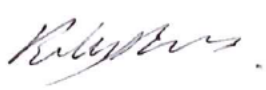
Conclusion

In summary, we **object** to this development for the following reasons:

1. The current planning and regulatory system does not sufficiently protect wild fish and a new regulatory system, as recommended by the Salmon Interactions Working Group, should be put in place prior to any growth in consented biomass
2. Recent history of escapes in high energy locations which offers no assurance of containment in the pens for the new proposal
3. The conservation status of local salmon populations which may suffer permanent adverse damage from aquaculture related additional pressures.
4. This farm sits on a likely migratory path for wild salmon from numerous rivers in Loch Fyne, West Arran and East Kintyre and possibly the Kyles of Bute and the Clyde Estuary, increasing the potential for negative interactions.

We look forward to hearing your response to this objection and will happily discuss further as needs be.

Yours sincerely,



Polly Burns

Aquaculture Interactions Manager, Fisheries Management Scotland

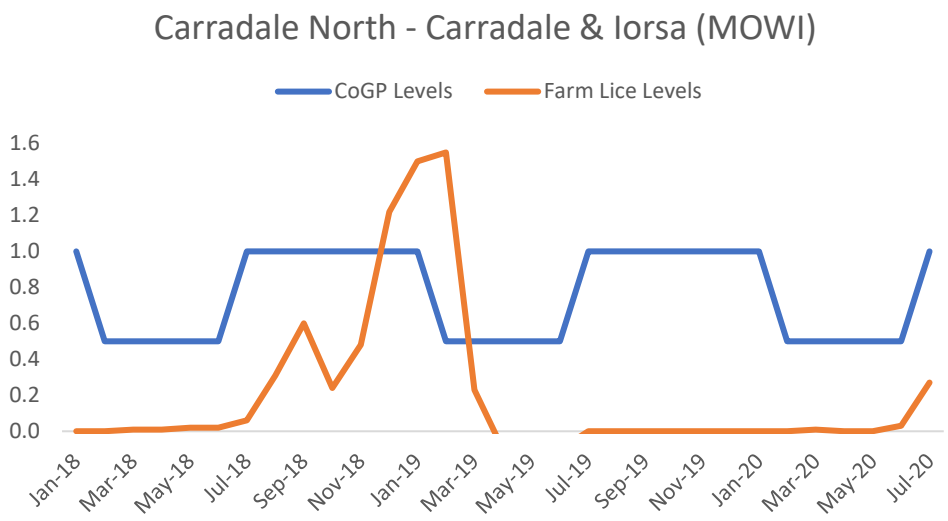
Appendix 1 – Proposed river gradings for 2021 season[2]

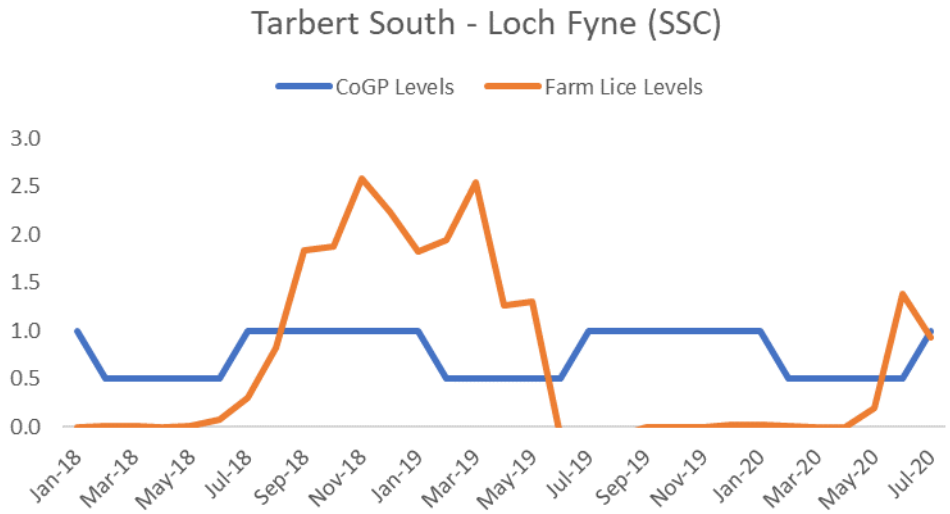
River	Proposed 2021 Conservation Grading
Glenlussa Water	Grade 3
Carradale Water	Grade 3
Machrie Water	Grade 3
Iorsa Water	Grade 3
Glenrosa Water	Grade 3
Cuilarstich Burn	Grade 3
River Aray	Grade 3
Kinglas Water	Grade 3
River Ruel	Grade 3
River Eachaig	Grade 3
River Goil	Grade 3
River Leven (Dunbartonshire)	Grade 2
Endrick Water SAC	Grade 2
River Clyde	Grade 3
River Garnock	Grade 2
River Irvine	Grade 3
River Ayr	Grade 3
River Doon	Grade 2
Water of Girvan	Grade 3
River Stinchar	Grade 2

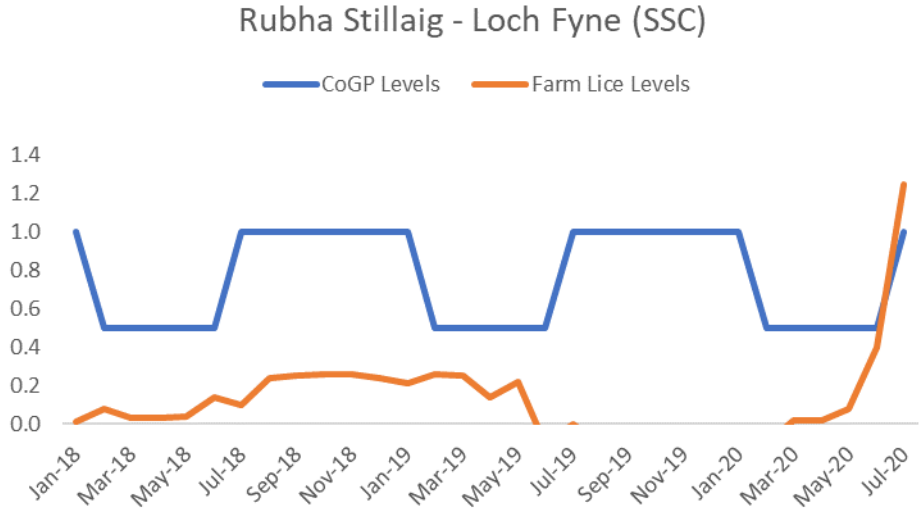
[2] https://www.gov.scot/publications/salmon-fishing-proposed-river-gradings-for-2021-season/

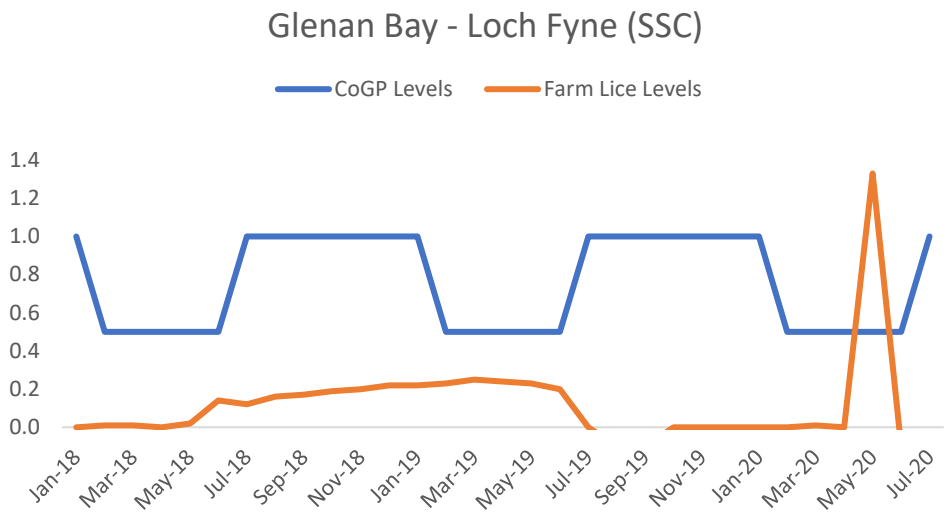
Appendix 2 – Sea lice levels at salmon farms across the Clyde

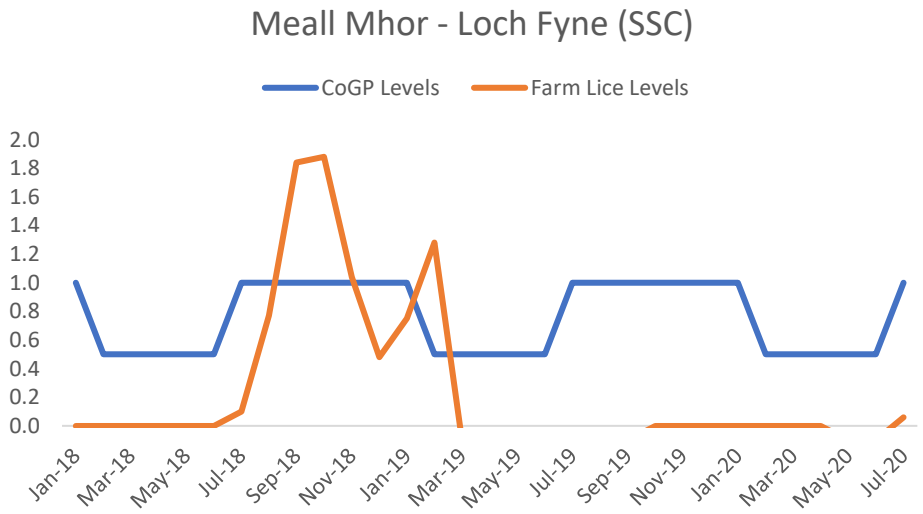
SSC = Scottish Salmon Company








Glenan Bay - Loch Fyne (SSC)
CoGP Levels
Farm Lice Levels
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
Jan-18
Mar-18
May-18
Jul-18
Sep-18
Nov-18
Jan-19
Mar-19
May-19
Jul-19
Sep-19
Nov-19
Jan-20
Mar-20
May-20
Jul-20


Meall Mhor - Loch Fyne (SSC)
CoGP Levels
Farm Lice Levels
2.0
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
Jan-18
Mar-18
May-18
Jul-18
Sep-18
Nov-18
Jan-19
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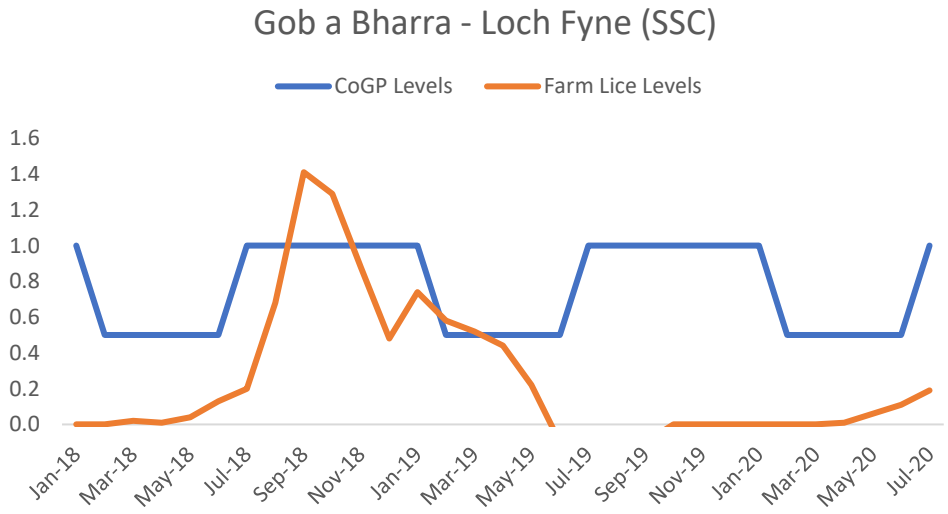
Jul-20


Gob a Bharra - Loch Fyne (SSC)
CoGP Levels
Farm Lice Levels
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
Jan-18
Mar-18
May-18
Jul-18
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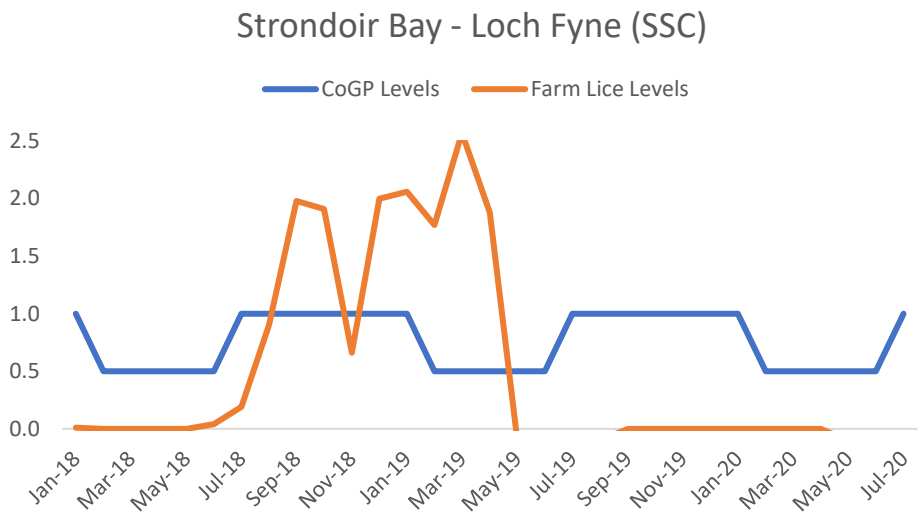
May-20
Jul-20


Strondoir Bay - Loch Fyne (SSC)
CoGP Levels
Farm Lice Levels
2.5
2.0
1.5
1.0
0.5
0.0
Jan-18
Mar-18
May-18
Jul-18
Sep-18
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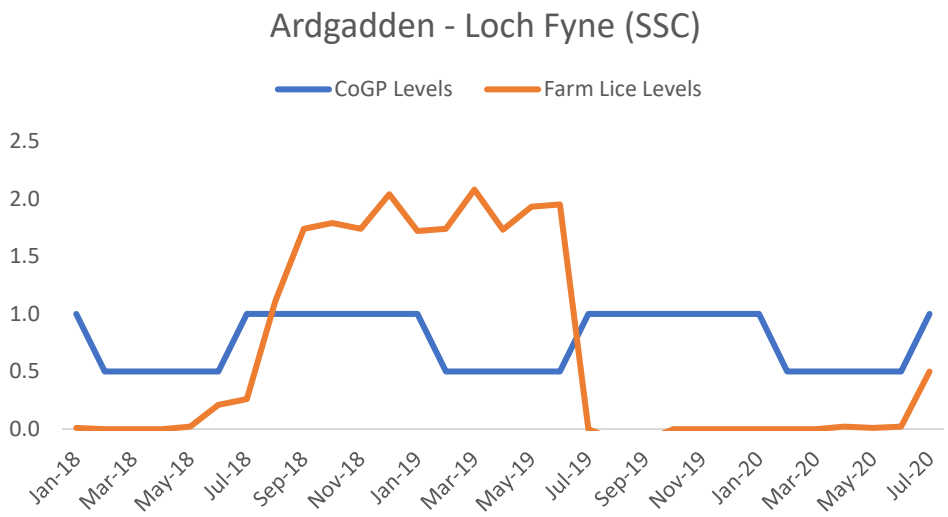
Mar-20
May-20
Jul-20


Ardgadden - Loch Fyne (SSC)
CoGP Levels
Farm Lice Levels
2.5
2.0
1.5
1.0
0.5
0.0
Jan-18
Mar-18
May-18
Jul-18
Sep-18
Nov-18
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Mar-19
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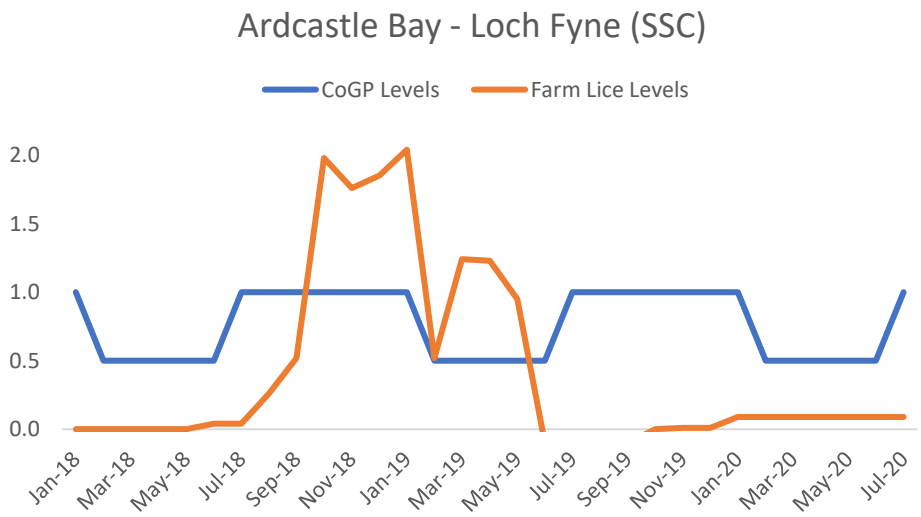
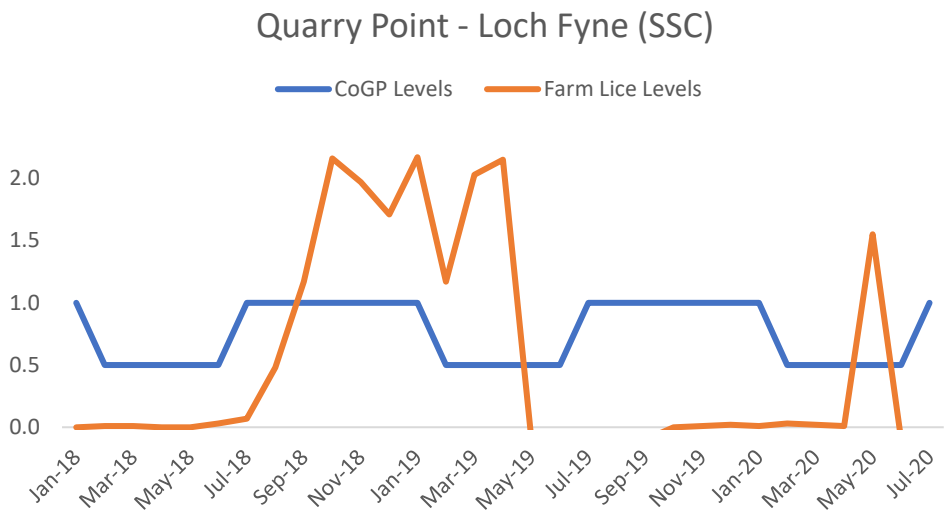
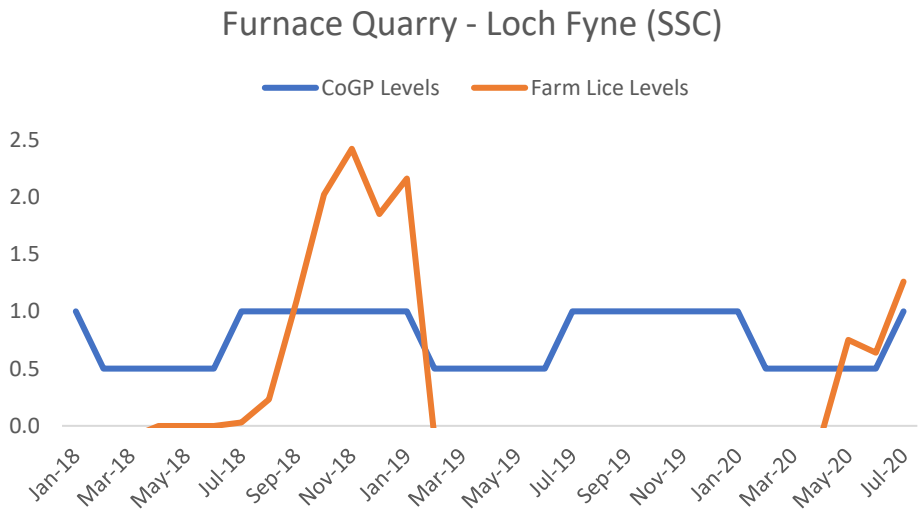
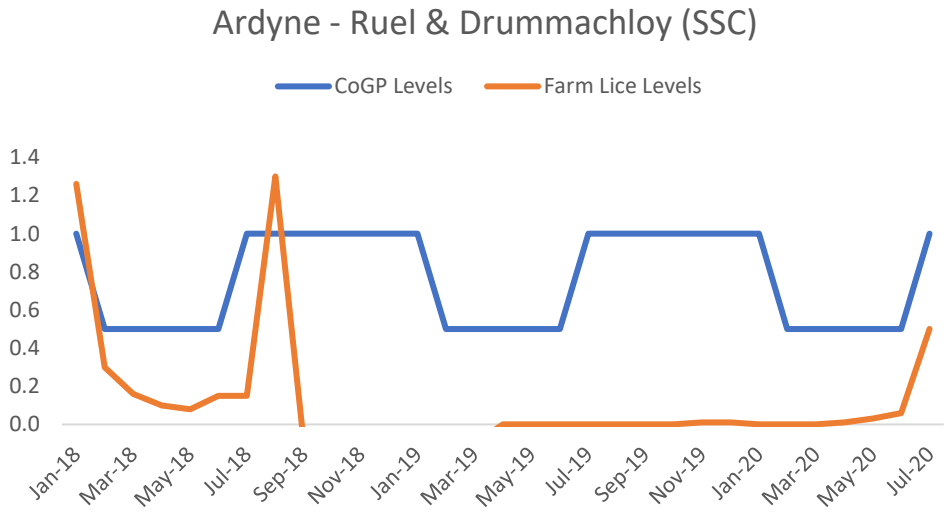
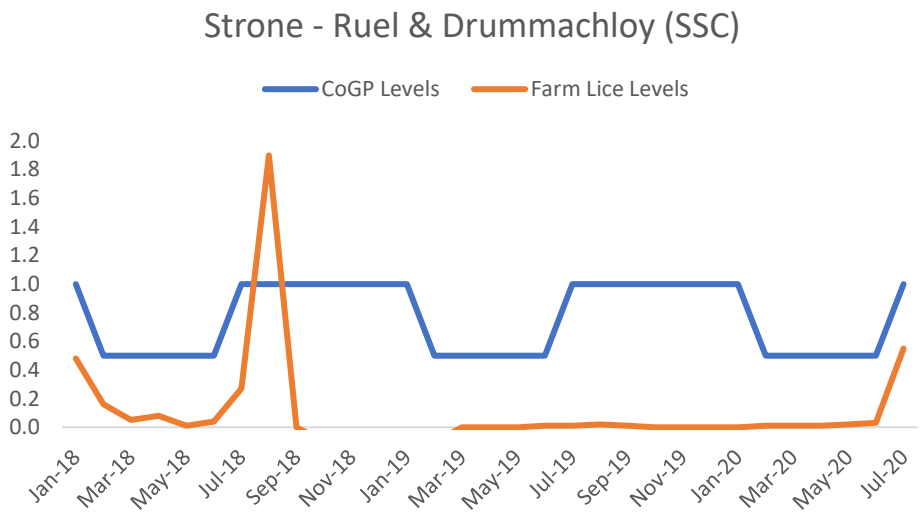
May-20
Jul-20

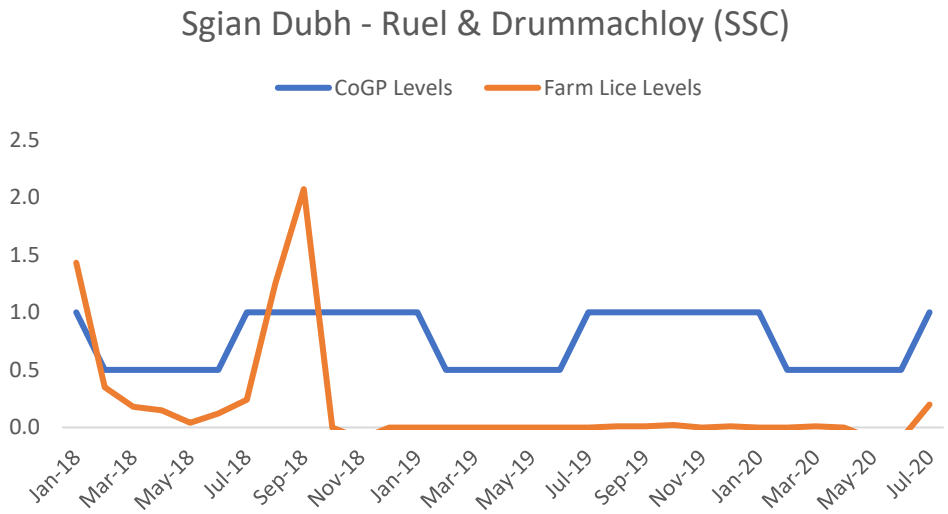

Ardcastle Bay - Loch Fyne (SSC)
CoGP Levels
Farm Lice Levels
2.0
1.5
1.0
0.5
0.0
Jan-18
Mar-18
May-18
Jul-18
Sep-18
Nov-18
Jan-19
Mar-19
May-19
Jul-19
Sep-19
Nov-19
Jan-20
Mar-20
May-20
Jul-20

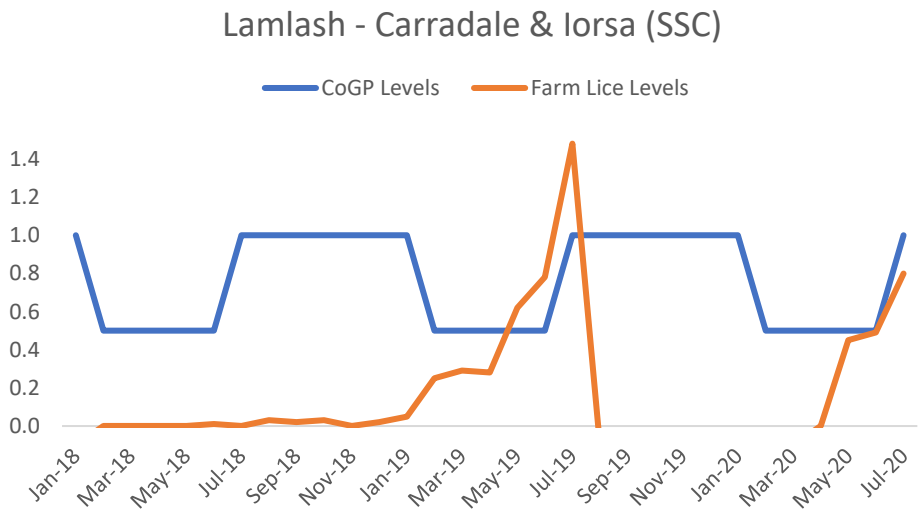

Quarry Point - Loch Fyne (SSC)
CoGP Levels
Farm Lice Levels
2.0
1.5
1.0
0.5
0.0
Jan-18
Mar-18
May-18
Jul-18
Sep-18
Nov-18
Jan-19
Mar-19
May-19
Jul-19
Sep-19
Nov-19
Jan-20
Mar-20
May-20
Jul-20

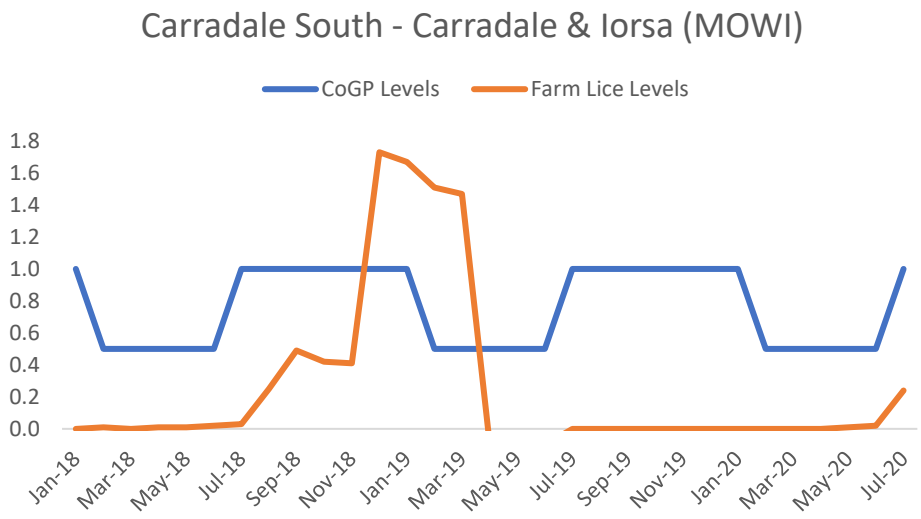

Furnace Quarry - Loch Fyne (SSC)
CoGP Levels
Farm Lice Levels
2.5
2.0
1.5
1.0
0.5
0.0
Jan-18
Mar-18
May-18
Jul-18
Sep-18
Nov-18
Jan-19
Mar-19
May-19
Jul-19
Sep-19
Nov-19
Jan-20
Mar-20
May-20
Jul-20


Ardyne - Ruel & Drummachloy (SSC)
CoGP Levels
Farm Lice Levels
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
Jan-18
Mar-18
May-18
Jul-18
Sep-18
Nov-18
Jan-19
Mar-19
May-19
Jul-19
Sep-19
Nov-19
Jan-20
Mar-20
May-20
Jul-20


Strone - Ruel & Drummachloy (SSC)
CoGP Levels
Farm Lice Levels
2.0
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
Jan-18
Mar-18
May-18
Jul-18
Sep-18
Nov-18
Jan-19
Mar-19
May-19
Jul-19
Sep-19
Nov-19
Jan-20
Mar-20
May-20
Jul-20


Sgian Dubh - Ruel & Drummachloy (SSC)
CoGP Levels
Farm Lice Levels
2.5
2.0
1.5
1.0
0.5
0.0
Jan-18
Mar-18
May-18
Jul-18
Sep-18
Nov-18
Jan-19
Mar-19
May-19
Jul-19
Sep-19
Nov-19
Jan-20
Mar-20
May-20
Jul-20


Lamlash - Carradale & Iorsa (SSC)
CoGP Levels
Farm Lice Levels
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
Jan-18
Mar-18
May-18
Jul-18
Sep-18
Nov-18
Jan-19
Mar-19
May-19
Jul-19
Sep-19
Nov-19
Jan-20
Mar-20
May-20
Jul-20


Carradale South - Carradale & Iorsa (MOWI)
CoGP Levels
Farm Lice Levels
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
Jan-18
Mar-18
May-18
Jul-18
Sep-18
Nov-18
Jan-19
Mar-19
May-19
Jul-19
Sep-19
Nov-19
Jan-20
Mar-20
May-20
Jul-20