Scottish Salmon Watch, 11 February 2020

Big in Japan: Lousy Tartan Salmon

SCOTTISH SALMON WATCH

DISEASES

- New photos reveal welfare abuse at The Scottish Salmon Company in Sound of Gigha
- 100,000+ dead fish due to Pancreas Disease, gill diseases & mechanical treatments
- Lice loads of over 30 parasites per fish at Druimyeon Bay salmon farm
- Salmon Gill Poxvirus, Winter Ulcer, Proliferative Gill Disease & Amoebic Gill Disease
- Scottish Government shamelessly promotes disease-ridden 'Tartan Salmon' in Japan

Photos published by the Scottish Government's Fish Health Inspectorate reveal the dark underbelly of the UK's number one food export. An inspection of The Scottish Salmon Company's Druimyeon Bay salmon farm in the Sound of Gigha in November 2019 (published online on 7 February 2020) reveals over 100,000 dead Scottish salmon due to Pancreas Disease, Proliferative Gill Disease, Amoebic Gill Disease and Thermolicer/ Hydrolicer treatments since June 2019 **[1]** with over 3.7 million dead farm salmon in 469 'Mortality Event Reports' at The Scottish Salmon Company since 2017 **[2]**.

"Druimyeon Bay was visited following reports from the business that mortality levels at the site had been high," stated the Fish Health Inspectorate visit report dated 7 January 2020. "This increase had been attributed to Pancreas Disease and gill health challenges including Proliferative Gill Disease and Amoebic Gill Disease. Handling and post treatment losses were also reported."

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FISH HEALTH INSPECTORATE VISIT REPORT

SUMMARY FOR INFORMATION OF SITE OPERATOR

BUSINESS NO	FB0169	DATE OF VISIT	06/11/2019
SITE NO	FS0336	SITE NAME	Druimyeon Bay
INSPECTOR	[redacted]	CASE NO	20190666

Section 1: Summary

Druimyeon Bay was visited following reports of increased mortalities attributed to pancreas disease and gill health issues. During the site inspection five moribund salmon were removed for diagnostic examination.

Histopathology examination revealed multifactorial gill pathology which included occasional epitheliocystis and the presence of amoebic cells suggestive of amoebic gill disease. The samples tested positive for *Neoparamoeba perurans* by QPCR. F5 also displayed bacterial granulomatous interstitial nephritis. Mild multifocal hepatic necrosis was also noted in F3 and F5. F1 and F5 had skin lesions which may impact on the osmotic balance of the fish.

Due to gill health issues observed on site samples were screened for salmon gill poxvirus and *Paranucleospora theridion* (syn, *Desmozoon lepeotherii*). Samples tested positive for both pathogens.

Vibrio sp. and *Moritella viscosa* were identified from the samples taken. The level of growth observed on plates taken from lesion material of fish 1 and 5 would likely be implicated in the health of those fish however the mixed nature of growth would not suggest it was the primary source of morbidity.

The Fish Health Inspectorate 'Case Information' detailed ten mortality events totalling over 100,000 dead farmed salmon between June and October 2019 at Druimyeon Bay.

Additional Case Information:

03/06/2019 09/06/2019 1.5 PD 11,000
10/06/2019 16/06/2019 2 PD 14,000
17/06/2019 23/06/2019 2.01 PD 14000
24/06/2019 30/06/2019 1.90 PD 13000
01/07/2019 07/07/2019 1.27 PD 8628
08/07/2019 14/07/2019 1.02 PD 6854
22/07/2019 28/07/2019 1.00 PD/Handling 6591
23/09/2019 29/09/2019 1.36 Explained Gill 7451
07/10/2019 13/10/2019 1.04 Explained Gill health challenge (PGD) and some handling for harvest 5586
14/10/2019 20/10/2019 3.64 Explained Gill health challenge (AGD) & treatment 18,777

According to the Fish Health Inspectorate report, all five samples of farmed salmon tested by inspectors in November 2019 were severely moribund with some fish reporting a strong presence of haemorrhaging on the ventrum, extremely pale gills, lesions and yellow pseudo-faeces in the gut. Two of the farmed salmon sampled had lice loads of over thirty.

Case no:	2019-0666	Site No:	FS0336	Method of killing:	Percussive
Date of visit:	06/11/2019	Inspector(s):	[redacted]	Sheet Relevant:	Y

S for strong presence: M for medium presence: W for weak presence

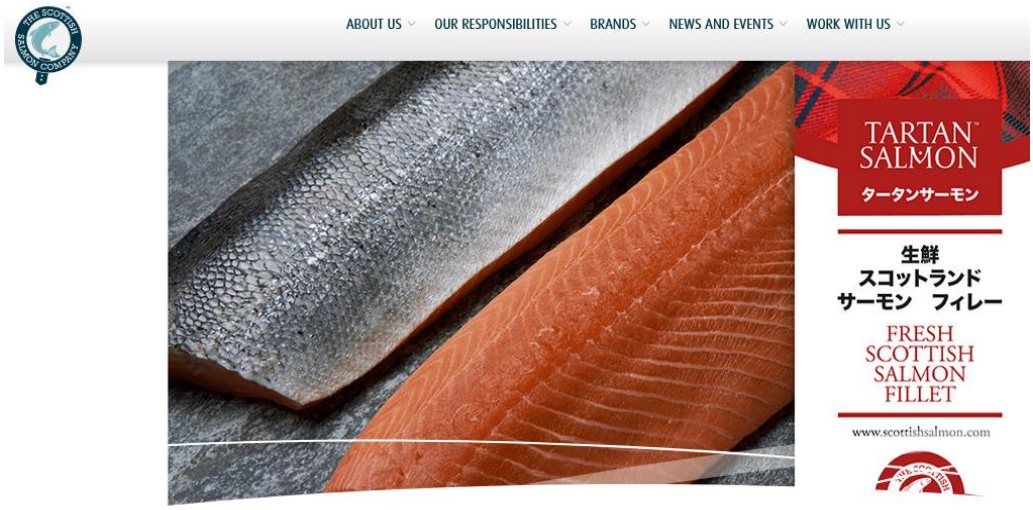
Fish Number		1	2	3	4	5					
Time sampled after death (if > 45 minutes)											
External Signs											
Behaviour	Moribund	S	S	S	S	S					
	Lethargic										
	Hanging vertical										
	Spiralling										
	Flashing										
	Loss of equilibrium										
Body	Dark										
	Distended abdomen										
	Anorexic					S					
	Scale Oedema										
Opercula	Shortened										
	Flared										
Haemorrhaging	Throat										
	Ventrum				S	S					
Gills	Pale	S	S	S	S	M					
	Zoned		S								
	Necrotic			M							
Lesions	Flank	S									
	Elsewhere					S					
Vent	Inflamed										
	Trailing faeces										
Lice Load	Estimate numbers		10+	30+		30+					
Gut	No food present	S				S					
	Yellow pseudo-faeces		S	S	S						
	External haem										
	Internal haem										
Body wall	Haemorrhaging										
Swim bladder	Haemorrhaging										
	Fluid filled										
Kidney	Swollen					S					
	Grey					M					
	Granular					M					
	Liquefied										
General	Parasites present										
	Anaemia										

Last year, The Scottish Salmon Company targeted the Japanese market via their 'Tartan Salmon' brand (supported by the Scottish Government and Scottish Development International).

From left: Stephen Baker, SDI; Makoto Takeda, Shokuryu (suppliers); Cabinet Secretary Fiona Hyslop; Takashi Houshito, CEO, Genki Sushi; Caroline Craggs, SDI food and drink specialist. Photo: Scottish Government.

Scotland's External Affairs Secretary Fiona Hyslop said in October 2019 via a Scottish Government news release:

"Scotland's reputation for quality extends across our entire food and drink sector. Along with salmon, our seafood fits well with the demands of discerning Japanese customers."



The Scottish Salmon Company targets Japan with Tartan Salmon brand

"Discerning customers - be they from Japan, China or other export markets - should avoid 'healthy' Scottish salmon like the proverbial plague," said Don Staniford, Director of Scottish Salmon Watch. "If Asian consumers knew the whole truth about Scottish salmon, 'Tartan Salmon' would be about as welcome as Coronavirus."

"Scotland's reputation for quality food is being dragged through the mud by disease-ridden Scottish salmon," continued Staniford, author of 'Scottish Scamon'. "Dare to look under Scottish salmon's tartan kilt and consumers are in for a nasty shock. Scottish salmon is a lousy choice for environmental, welfare and health reasons. Please boycott Tartan Salmon!"

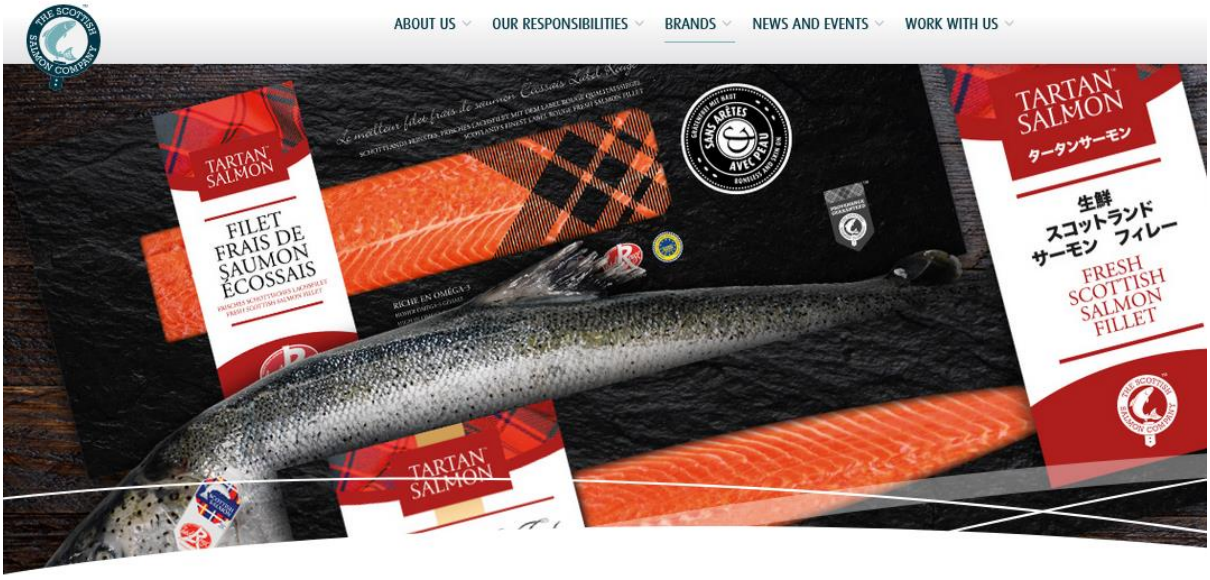
New mortality data published last week (7 February 2020) by the Scottish Government's Fish Health Inspectorate reveals that The Scottish Salmon Company (recently bought by Faroese/Norwegian-owned Bakkafrost) has reported over 300,000 dead farmed salmon in 27 separate 'Mortality Event Reports' at Druimyeon Bay alone since 2017 (in total The Scottish Salmon Company has reported over 3.7 million dead farm salmon in 469 'Mortality Event Reports' since 2017).

Mortality Event No	Site Name	Date reported	Mortality rate recorded (%)	Explained reasons	Total mortality during event	Additional information
MRT00636	Druimyeon Bay	15/05/2018	1.02	Strong tides/ physical damage	not disclosed	Site due to harvest
MRT00637	Druimyeon Bay	15/05/2018	1.62	Strong tides/ physical damage	not disclosed	Site due to harvest
MRT00529	Druimyeon Bay	23/11/2017	8.69	post treatment hydrolicer losses, handling, CMS.	45089	further hydroliser treatment planned, fish on functional feed, harvesting.
MRT00483	Druimyeon Bay	02/11/2017	2.81	PGD and handling/grading	30,015	Company biologist informed
MRT00514	Druimyeon Bay	13/11/2017	4.44	post treatment hydrolicer losses.	25607	further hydroliser treatment planned, fish on functional feed.
MRT01360	Druimyeon Bay	25/10/2019	3.64	Gill health challenge (AGD) & treatment	18,777	Monitoring gills
MRT00491	Druimyeon Bay	06/11/2017	2.64	PGD handling and grading	17209	Full diagnostic tests taken last week awaiting results
MRT00424	Druimyeon Bay	16/10/2017	1.8	PGD and handling/grading	14,149	Company biologist informed
MRT01086	Druimyeon Bay	30/06/2019	2.01	PD	14000	
MRT01079	Druimyeon Bay	24/06/2019	2	PD	14,000	
MRT01101	Druimyeon Bay	07/07/2019	1.90	PD	13000	Different pens have been affected at different rates, with some pens are in the process of recovery, while other are just starting to see a rise in cases.
MRT00545	Druimyeon Bay	14/12/2017	4.65	CMS, handling	11,346	Site partially harvested to remove worst affected fish
MRT01072	Druimyeon Bay	24/06/2019	1.5	PD	11,000	
MRT00462	Druimyeon Bay	27/10/2017	1.27	PGD and handling/grading	9484	Company biologist informed - should be in attendance in next couple of weeks. Gill pathogens present but not contributing to mortality currently.
MRT00423	Druimyeon Bay	16/10/2017	1.12	PGD and handling/grading	9,305	Company biologist informed
MRT01114	Druimyeon Bay	16/07/2019	1.27	PD	8628	Mortalities are reducing.
MRT01305	Druimyeon Bay	10/10/2019	1.36	Gill health - bleeding gills occuring, which led to some handling mortality	7451	Treatment stopped, and options reviewed. Reverting to low stress bath treatment
MRT00549	Druimyeon Bay	21/12/2017	4.11	CMS, handling, treatment	7,199	Site partially harvested to remove worst affected fish - remainder of site due to fallow by end of January 2018.
MRT01116	Druimyeon Bay	18/07/2019	1.02	PD	6854	Mortalities are reducing.
MRT01137	Druimyeon Bay	02/08/2019	1.00	PD/Handling	6591	Fish were treated for AGD, no further action
MRT01375	Druimyeon Bay	01/11/2019	1.04	Post treatment (Thermolicer) and challenged gills	5586	
MRT01329	Druimyeon Bay	18/10/2019	1.04	Gill health challenge (PGD) and some handling for harvest	5586	
MRT01431	Druimyeon Bay	15/11/2019	1.55	Poor gill health and ongoing handling for harvest	5433	Harvesting ongoing, lice treatment planned, then AGD/gill treatment to be explored.
MRT01472	Druimyeon Bay	13/12/2019	1.39	Gill Health/Post Treatment	5241	
MRT01457	Druimyeon Bay	06/12/2019	1.04	Gill health and treatment	3960	
MRT00568	Druimyeon Bay	03/01/2018	2.41	CMS, handling, treatment	3,419	Harvesting to reduce biomass
MRT00569	Druimyeon Bay	03/01/2018	2.08	CMS, handling, treatment	3,251	Harvesting to reduce biomass

Watch video footage of mass mortalities inside a skip at the nearby Strondoir Bay salmon farm also operated by The Scottish Salmon Company:

Here's the true faces of 'Tartan Salmon' which consumers at Genki Sushi in Japan will not be familiar with.

The marketing image of "responsibly sourced" Tartan Salmon presented by The Scottish Salmon Company is certainly a different one.



Photographs taken by the Scottish Government's Fish Health Inspectorate - published in April 2019 - reveal severely damaged farmed salmon at The Scottish Salmon Company's Strondoir Bay salmon farm in Loch Fyne in February 2019.

Additional comments:

F1 matured male in poor condition, fins very damaged. Damage to the head and snout. 18 lice of different stages observed. F2 with damage to the eyes and some damage to the snout. F3 damage to fins and head. Matured male. F4 dorsal fin reduced to cartilidge, caudal fins severely damaged. Damage to snout. F5 mature male in general good condition. Some fin damage but not significant. Damage to snout.

Here's mouth-watering nay award-winning 'Tartan Salmon' farmed by The Scottish Salmon Company at Maaey in the Outer Hebrides (the photos were published on 15 October 2019 by the Scottish Government's Fish Health Inspectorate).

And more freshly sampled 'Tartan Salmon' from The Scottish Salmon Company's salmon farm at nearby Maragay Mor in June 2019 (photos published on 15 October 2019 by the Scottish Government's Fish Health Inspectorate).

In June 2019, STV News broadcast gruesome video footage of diseased and deformed fish at The Scottish Salmon Company's farm at Aird in Loch Shieldaig.

In September 2018, the BBC 'One Show' broadcast shocking video footage of lice-infested fish at The Scottish Salmon Company's farm at Vacasay in Loch Roag.

Given the shocking welfare abuse on Scottish salmon farms it is not surprising that lawyers acting for The Scottish Salmon Company tried desperately to block publication (unsuccessfully as it turned out)!

Earlier this month, Scottish Salmon Watch published a Photo Dossier of Diseased, Deformed & Abused Scottish Salmon (including 'Tartan Salmon' farmed by The Scottish Salmon Company - previously owned by Swiss/Ukrainian financial interests).

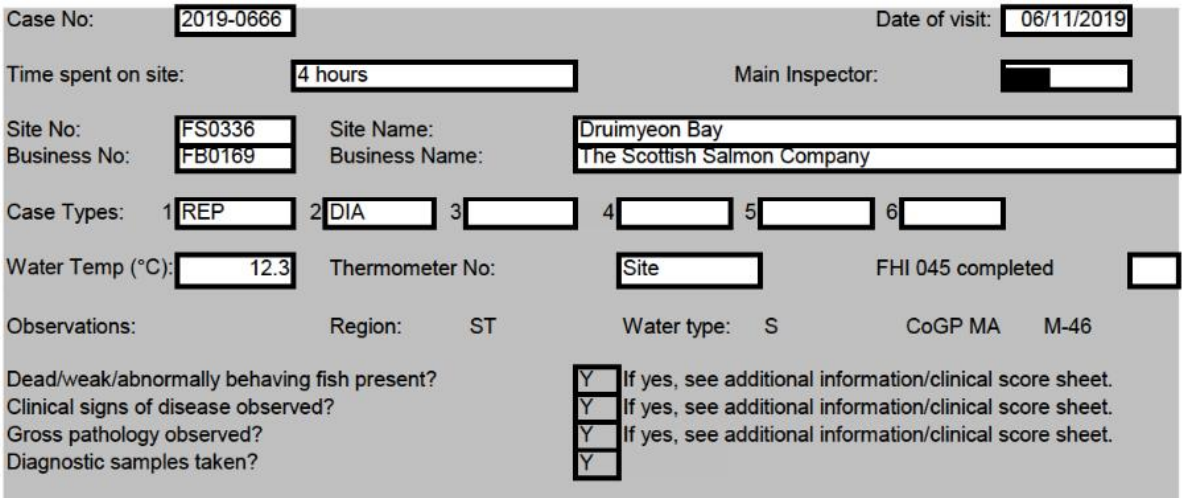
Read more via:
The Faces of Scottish Salmon - the Ugly Truth Exposed
The Case Against Scottish Salmon
Maaey Day for The Scottish Salmon Company
The Severely Damaged Scottish Salmon Company - For Sale Now!
Scottish Salmon's Mort Mountain Piles Ever Higher in 2019
Mmmm Blind Scottish Salmon with Boils, Anyone?
'Abuse' video sparks major investigation at fish farm
STV News on Scottish Salmon's Welfare Nightmare - watch online now!
‘Sick’ salmon film prompts government probe into Scottish fish farm
Frankenfish Video - The Ugly Face of Lousy Scottish Salmon
Disease-ridden Scottish Salmon
New Report - "The State of Scottish Salmon Farming in 2018"

Contact:

Don Staniford: 07771 541826 (salmonfarmingkills@gmail.com)

Notes to Editors:

[1] 'Case Information' published online on 7 February 2020 by the Scottish Government's Fish Health Inspectorate includes:



Case No:	2019-0666						Date of visit:	06/11/2019	
Time spent on site:	4 hours					Main Inspector:	[redacted]		
Site No:	FS0336	Site Name:	Druimyeon Bay						
Business No:	FB0169	Business Name:	The Scottish Salmon Company						
Case Types:	1 REP	2 DIA	3	4	5	6			
Water Temp (°C):	12.3	Thermometer No:	Site				FHI 045 completed		
Observations:		Region:	ST	Water type:	S	CoGP MA	M-46		
Dead/weak/abnormally behaving fish present?	Y	If yes, see additional information/clinical score sheet.							
Clinical signs of disease observed?	Y	If yes, see additional information/clinical score sheet.							
Gross pathology observed?	Y	If yes, see additional information/clinical score sheet.							
Diagnostic samples taken?	Y								

Additional Case Information:

03/06/2019 09/06/2019 1.5 PD 11,000
10/06/2019 16/06/2019 2 PD 14,000
17/06/2019 23/06/2019 2.01 PD 14000
24/06/2019 30/06/2019 1.90 PD 13000
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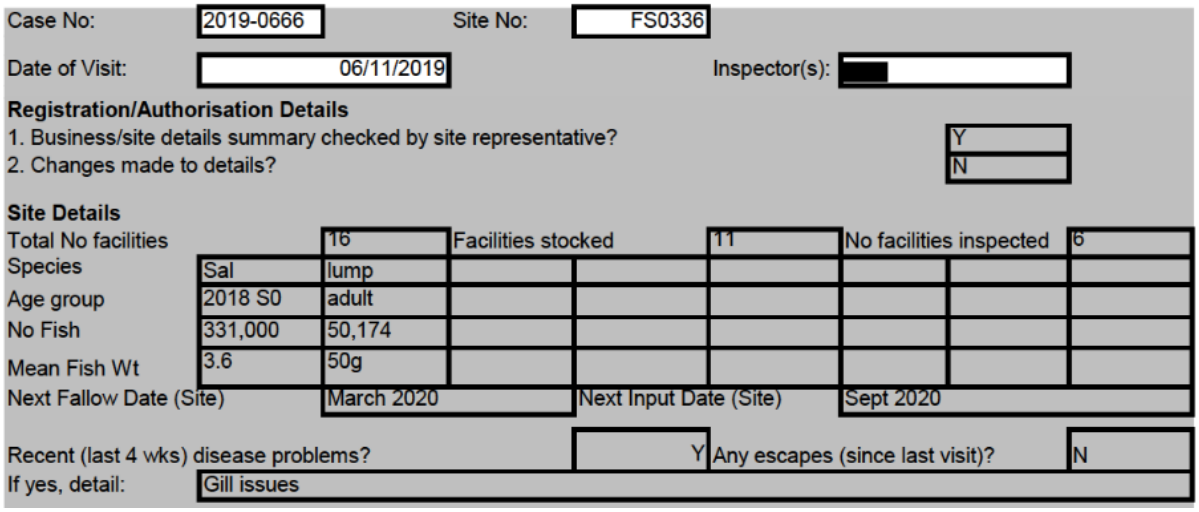

Case No:	2019-0666	Site No:	FS0336					
Date of Visit:	06/11/2019				Inspector(s):	[redacted]		
Registration/Authorisation Details								
1. Business/site details summary checked by site representative?	Y							
2. Changes made to details?	N							
Site Details								
Total No facilities	16	Facilities stocked	11	No facilities inspected	6			
Species	Sal	lump						
Age group	2018 S0	adult						
No Fish	331,000	50,174						
Mean Fish Wt	3.6	50g						
Next Fallow Date (Site)	March 2020	Next Input Date (Site)	Sept 2020					
Recent (last 4 wks) disease problems?	Y	Any escapes (since last visit)?	N					
If yes, detail:	Gill issues							

Mortality Records

1. Mortality records available for inspection? Y
2. How are mortalities disposed of? Whole fish - Dundas Chemicals
If other detail:
3. Mortality records complete and correctly entered? Y
4. Recent mortality (last 4 wks): see additional info
5. Evidence of recent increased/atypical mortalities? Y
If yes, facility nos/no mortality per facility/no stock per facility/reason:
across site - all facilities - Gill issues and post treatments - PGD. Drop in temp has coincided with improved mort figures
6. Any other peaks in mortality during period checked? Y
If yes, detail: PD in summer - see addional information.
7. Have increased (unexplained) mortalities been reported to vet or FHI? N/A
If yes, detail action:
8. Have 'mortality events' been reported to FHI? If no, add MRT case and enter on mortality events sheet. Y

1. Recent treatments (last 4 wks)? Y
If yes, detail:
If other, detail: Hydrolicer and thermolicer

Case no: 2019-0666 Site No: FS0336 Method of killing: Percussive

Date of visit: 06/11/2019 Inspector(s): [redacted] Sheet Relevant: Y

S for strong presence: **M** for medium presence: **W** for weak presence

Fish Number		1	2	3	4	5					
Time sampled after death (if > 45 minutes)											
External Signs											
Behaviour	Moribund	S	S	S	S	S					
	Lethargic										
	Hanging vertical										
	Spiralling										
	Flashing										
	Loss of equilibrium										
Body	Dark										
	Distended abdomen										
	Anorexic					S					
	Scale Oedema										
Opercula	Shortened										
	Flared										
Haemorrhaging	Throat										
	Ventrum				S	S					
Gills	Pale	S	S	S	S	M					
	Zoned		S								
	Necrotic			M							
Lesions	Flank	S									
	Elsewhere					S					
Vent	Inflamed										
	Trailing faeces										
Lice Load	Estimate numbers		10+	30+		30+					
Gut	No food present	S				S					
	Yellow pseudo-faeces		S	S	S						
	External haem										
	Internal haem										
Body wall	Haemorrhaging										
Swim bladder	Haemorrhaging										
	Fluid filled										
Kidney	Swollen					S					
	Grey					M					
	Granular					M					
	Liquefied										
General	Parasites present										
	Anaemia										

Case No:	2019-0666	Date of visit:	06/11/2019
Site No:	FS0336	Inspector:	AJW

Results Summary	Freq.	Date of Notification						
		Database	Insp	Phone	Insp	Writing	Insp	2nd Insp
MG BKD, IHN, IPN, ISA, VHS	0/1	13/11/2019	[redacted]	13/11/2019	[redacted]	07/01/2020	[redacted]	
MG AGD	4/5	13/11/2019	[redacted]	13/11/2019	[redacted]	07/01/2020	[redacted]	
MG Para Ther	5/5	13/11/2019	[redacted]	13/11/2019	[redacted]	07/01/2020	[redacted]	
MG SAV	1/1	13/11/2019	[redacted]	13/11/2019	[redacted]	07/01/2020	[redacted]	
MG Sal Pox	1/5	13/11/2019	[redacted]	13/11/2019	[redacted]	07/01/2020	[redacted]	
AMGD	2/5	29/11/2019	[redacted]	06/12/2019	[redacted]	07/01/2020	[redacted]	
CGDH	3/5	29/11/2019	[redacted]	06/12/2019	[redacted]	07/01/2020	[redacted]	
GPAT	3/5	29/11/2019	[redacted]	06/12/2019	[redacted]	07/01/2020	[redacted]	
GRAN	1/5	29/11/2019	[redacted]	06/12/2019	[redacted]	07/01/2020	[redacted]	
KPAT	1/5	29/11/2019	[redacted]	06/12/2019	[redacted]	07/01/2020	[redacted]	
VSPE	2/5	29/11/2019	[redacted]	06/12/2019	[redacted]	07/01/2020	[redacted]	
VVIS	1/5	29/11/2019	[redacted]	06/12/2019	[redacted]	07/01/2020	[redacted]	
MG Pisci	0/1	29/11/2019	[redacted]	06/12/2019	[redacted]	07/01/2020	[redacted]	

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FISH HEALTH INSPECTORATE VISIT REPORT

SUMMARY FOR INFORMATION OF SITE OPERATOR

BUSINESS NO FB0169
SITE NO FS0336
INSPECTOR [redacted]

DATE OF VISIT 06/11/2019
SITE NAME Druimyeon Bay
CASE NO 20190666

Section 1: Summary

Druimyeon Bay was visited following reports of increased mortalities attributed to pancreas disease and gill health issues. During the site inspection five moribund salmon were removed for diagnostic examination.

Histopathology examination revealed multifactorial gill pathology which included occasional epitheliocystis and the presence of amoebic cells suggestive of amoebic gill disease. The samples tested positive for *Neoparamoeba perurans* by QPCR. F5 also displayed bacterial granulomatous interstitial nephritis. Mild multifocal hepatic necrosis was also noted in F3 and F5. F1 and F5 had skin lesions which may impact on the osmotic balance of the fish.

Due to gill health issues observed on site samples were screened for salmon gill poxvirus and *Paranucleospora theridion* (syn, *Desmozoon lepeotherii*). Samples tested positive for both pathogens.

Vibrio sp. and *Moritella viscosa* were identified from the samples taken. The level of growth observed on plates taken from lesion material of fish 1 and 5 would likely be implicated in the health of those fish however the mixed nature of growth would not suggest it was the primary source of morbidity.

Section 2: Case Detail

Observations

Druimyeon Bay was visited following reports from the business that mortality levels at the site had been high. This increase had been attributed to pancreas disease and gill health challenges including proliferative gill disease and amoebic gill disease. Handling and post treatment losses were also reported. For the two weeks prior to this visit mortality levels had been 1.04% (4960 fish) and 0.48% (2021 fish) respectively.

During the site inspection 5 moribund fish were removed from the pens for diagnostic examination. All fish five had pale gills. F2 had zoned gills and F3 had necrotic gills. F1 and F5 had external skin lesions. Internally F5 had bloody ascites and a swollen, grey and granular kidney.

Samples

Samples were collected from five fish according to the table below:

Fish number	Pool number	Facility number	Species	Stage	Origin
1-5	1	9,11,14	Atlantic Salmon	2018 S0 -3kg	Russel Burn

Results

Bacteriology: Kidney, gill and spleen material from five fish and lesion material from F1 and F5 were inoculated onto appropriate media for the isolation of bacteria.

The following bacteria were isolated;

- *Vibrio* spp. (isolates A and B) 2 separate isolates from the kidney of F5
- *Vibrio* sp. (isolate c) isolated from the lesions of F1 and F5
- *Moritella viscosa* Isolate from the lesion of F1

The level of growth of *Vibrio* sp. (isolate C), observed on plates taken from lesion material of fish 1 and 5 would likely be implicated in the health of those fish. The mixed nature of growth would not suggest it was the primary source of morbidity. *Moritella viscosa* identified in lesion material of F1 would likely be significant in that fish.

SAV

Pool Number	Endogenous control Cp value	Cp Values			Reported Result (PCR)
P1	18.36	28.14	28.22	27.97	POSITIVE

SGPV

Fish Number	Endogenous control Cp value	Cp Values			Reported Result (PCR)
F1	22.45	-	-	-	Negative
F2	22.20	-	-	-	Negative
F3	22.54	-	-	-	Negative
F4	22.47	-	-	-	Negative
F5	22.59	33.88	33.84	33.60	POSITIVE

Neoparamoeba perurans (AGD)

Fish Number	Endogenous control Cp value	Cp Values			Reported Result (PCR)
F1	22.45	31.64	31.92	31.51	POSITIVE
F2	22.20	32.52	32.63	32.45	POSITIVE
F3	22.54	31.98	31.95	32.10	POSITIVE
F4	22.47	-	-	-	Negative
F5	22.59	28.11	28.15	28.22	POSITIVE

Paranucleospora theridion

Fish Number	Endogenous control Cp value	Cp Values			Reported Result (PCR)
F1	22.45	34.72	35.60	35.44	POSITIVE
F2	22.20	32.24	32.09	32.66	POSITIVE
F3	22.54	37.11	36.60	36.57	POSITIVE
F4	22.47	37.39	40.00	38.53	POSITIVE
F5	22.59	31.80	31.42	31.81	POSITIVE

Histology: Tissue samples of gill, skin and skeletal muscle, heart, pyloric caeca, pancreas, hind gut, liver, spleen and kidney were taken from five fish. The tissue samples were fixed in 10% neutral buffered formalin.

Histopathological examination revealed the following:

Gill: Mild multifocal interlamellar hyperplasia and lamellar fusion (F2, F3, F5) and focal area of hyperplasic plaques with delated vessels filled with neutrophil-like cells (F3). Scatter lamellae with epithelial thickness, multifocal adherence of secondary lamellae (synechiae) and lacunae filled with cell debris and occasional amoebic cell-like. Occasional basophilic epithelial inclusions (likely epitheliocystis) (F5) and few to several amoebic cells resembling Neoparamoeba perurans (F3 & F5). Scattered aneurysmal dilation/telangiectasia and lamellar thrombosis noted in all fish and free blood among gill filaments.

Skin & Muscle: partial absence of epidermal layer, dermal oedema and mild inflammatory cell infiltration which reaches the upper layer of the hypodermis. The lesion showed presence of bacteria that stained Gram-negative associated with dermal layer.

Heart: Mild pericarditis (F5) and small foci of inflammatory cell infiltration (F1, F4). Sections generally difficult to read; F2 heart tissue almost inexistent.

Gut and pyloric caeca: Within normal range.

Pancreas: Within normal range.

Liver: Mild multifocal hepatic necrosis (F3, F5) and F4 displayed mild multifocal inflammatory cell infiltration, mild diffuse hepatic vacuolation (F1, F3).

Kidney: Approximately 80% of the normal renal parenchyma is filled with multiple granuloma-like structures which display infiltration of polymorphonuclear cells in the centre, few multinucleated giant cells associated and some deposits of amorphous eosinophilic material (F5). Few renal tubules exhibited dilated lumen filled with cells debris and Gram-negative bacteria, some of the bacteria were also associated with lining tubular epithelium. These bacteria were noted in some glomeruli (F5).

Spleen: Within normal range.

Signed: [redacted]

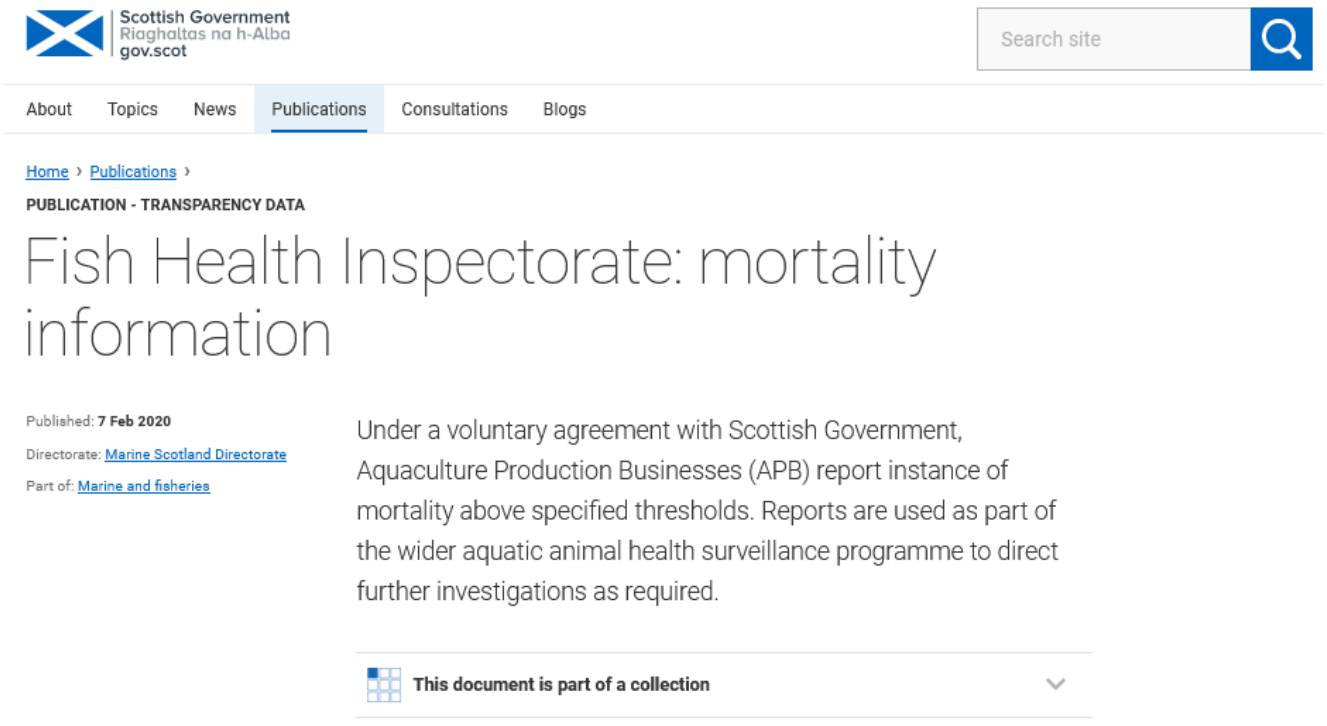
Fish Health Inspector

Date: 07/01/2020


F4

Download the Fish Health Inspectorate's 'Case Information' in full online here (from p13)

[2] The Scottish Government published updated mortality data for salmon farms up to the end of December 2019 online on 7 February 2020.



Mortality information - until end December 2019.

XLSX | 847.1 kB

Download

Since 2017, The Scottish Salmon Company has reported over 3.7 million dead farmed salmon in 469 'Mortality Event Reports' (for 96 events numbers of dead fish were "not provided" or "not disclosed" so the figure could be over 5 million). Here's the top 100 'Mortality Event Reports':

Mortality Event No	Reporting Business Name	Site Name	Date reported	Mortality rate recorded(%)	Explained reasons	Total mortality during event
MRT00360	The Scottish Salmon Company	Vuiabeag	11/09/2017	10.37	AGD, PD, Treatment	97534
MRT01010	The Scottish Salmon Company	Barvas Hatchery	29/04/2019	4.5	Poor ova quality	90,000
MRT00179	The Scottish Salmon Company	Sgian Dubh	02/03/2017	6.1	treatment	68123
MRT01075	The Scottish Salmon Company	Maaey	24/06/2019	13.84	PD	67,014
MRT00290	The Scottish Salmon Company	Loch Odhairn(Gravir)	11/08/2017	9.64	AGD, Complex gill issues, Treatment	64872
MRT00296	The Scottish Salmon Company	Loch Odhairn(Gravir)	11/08/2017	9.64	AGD, Complex gill issues, Treatment	64872
MRT00979	The Scottish Salmon Company	Geocrab Hatchery	15/04/2019	2.1	Fungus	58000
MRT00177	The Scottish Salmon Company	Meall Mhor Loch Fyne	02/03/2017	4.1	PD, Treatment	49116
MRT01062	The Scottish Salmon Company	Maaey	07/06/2019	8.65	PD	48,500
MRT01435	The Scottish Salmon Company	Strone Point	22/11/2019	7.57	Low DO event and poor gill health	48051
MRT00205	The Scottish Salmon Company	Taranaish	02/03/2017	3.12	Treatment	46000
MRT00529	The Scottish Salmon Company	Druimyeon Bay	23/11/2017	8.69	post treatment hydrolicer losses, handling, CMS.	45089
MRT00218	The Scottish Salmon Company	North Uiskevagh	02/03/2017	2.5	AGD, Treatment	41000
MRT00292	The Scottish Salmon Company	Russel Burn	28/07/2017	4.42	Fungus	40873
MRT00195	The Scottish Salmon Company	Kyles of Vuia	02/03/2017	12.5	AGD, Treatment	40000
MRT01309	The Scottish Salmon Company	Taranaish	10/10/2019	4.37	AGD	39460
MRT00180	The Scottish Salmon Company	Strondoir Bay	02/03/2017	2.97	Algal bloom, Treatment	39011
MRT00980	The Scottish Salmon Company	Geocrab Hatchery	15/04/2019	1.5	Fungus	39000
MRT00488	The Scottish Salmon Company	Strone Point	02/11/2017	6.27	Ongoing bacterial challenge. Vibrio anguillarum identified as primary	38,694
MRT00291	The Scottish Salmon Company	Loch Odhairn(Gravir)	11/08/2017	6.34	AGD, Complex gill issues, Treatment	38530
MRT00297	The Scottish Salmon Company	Loch Odhairn(Gravir)	11/08/2017	6.34	AGD, Complex gill issues, Treatment	38530
MRT00204	The Scottish Salmon Company	Reibinish	02/03/2017	3.5	Treatment	37600

MRT00354	The Scottish Salmon Company	Loch Tuath	11/09/2017	14.2	AGD, Algal bloom, Complex gill issues, Jellyfish	36422
MRT00182	The Scottish Salmon Company	Strondoir Bay	02/03/2017	2.9	treatment	36103
MRT00175	The Scottish Salmon Company	Meall Mhor Loch Fyne	02/03/2017	2.88	PD, Treatment	32859
MRT00464	The Scottish Salmon Company	Vuia Mor	17/10/2017	4.13	AGD, Complex gill issues, Treatment	32487
MRT00403	The Scottish Salmon Company	Vuia Mor	10/10/2017	6.24	PD detected, severe AGD and complex gill issues	31,099
MRT00512	The Scottish Salmon Company	Strone Point	13/11/2017	5.45	Vibrio anguillarum, low dissolved oxygen,AGD	30064
MRT00483	The Scottish Salmon Company	Druimyeon Bay	02/11/2017	2.81	PGD and handling/grading	30,015
MRT00203	The Scottish Salmon Company	Portree	02/03/2017	2.2	AGD, Treatment	30000
MRT01080	The Scottish Salmon Company	Maaey	24/06/2019	7.38	PD	29,631
MRT00166	The Scottish Salmon Company	Geocrab Hatchery	28/02/2017	7.14	HSS	29417
MRT00387	The Scottish Salmon Company	Kyles of Vuia	02/10/2017	6.93	AGD, Treatment, Complex gill issues	29165
MRT00168	The Scottish Salmon Company	Geocrab Hatchery	28/02/2017	7.65	HSS	28675
MRT01063	The Scottish Salmon Company	Maaey	07/06/2019	5.43	PD	27,780
MRT00495	The Scottish Salmon Company	Strone Point	06/11/2017	4.66	Vibrio anguillarum, low dissolved oxygen,AGD	26980
MRT00305	The Scottish Salmon Company	Loch Odhairn(Gravir)	16/08/2017	4.74	Complex gill issues, Treatment	26960
MRT00514	The Scottish Salmon Company	Druimyeon Bay	13/11/2017	4.44	post treatment hydrolicer losses.	25607
MRT01084	The Scottish Salmon Company	Maaey	27/06/2019	7.79	PD	25264
MRT00531	The Scottish Salmon Company	Strone Point	23/11/2017	4.69	Vibrio anguillarum, low dissolved oxygen,AGD	24457
MRT00317	The Scottish Salmon Company	Inch Kenneth	23/08/2017	21.43	AGD, Treatment	23117
MRT01264	The Scottish Salmon Company	Loch Damph	27/09/2019	3.88	Fungus	22489
MRT00394	The Scottish Salmon Company	Loch Tuath	02/10/2017	16.55	Complex Gill issues, Plankton	22131
MRT00211	The Scottish Salmon Company	Vuia Mor	02/03/2017	5	Treatment	22000
MRT01041	The Scottish Salmon Company	Maragay Mor	22/05/2019	3.18	Post treatment	21297
MRT01229	The Scottish Salmon Company	Loch Damph	20/09/2019	3.51	Fish smolting and fungus on site	21,078
MRT00197	The Scottish Salmon Company	Kilerivagh / Petersport	02/03/2017	2.5	AGD, Treatment	21000
MRT00198	The Scottish Salmon Company	Kilerivagh / Petersport	02/03/2017	2.5	AGD, Treatment	21000
MRT00173	The Scottish Salmon Company	Gob a Bharra Loch Fyne	02/03/2017	3	Treatment	20718
MRT00986	The Scottish Salmon Company	Loch Langavat	16/04/2019	2.61	Fungus	20000
MRT00377	The Scottish Salmon Company	Loch Tuath	27/09/2017	10.03	Gill health, water quality issues	19178
MRT00208	The Scottish Salmon Company	Vacasay	02/03/2017	3	AGD, Treatment	19000
MRT00202	The Scottish Salmon Company	Portree	02/03/2017	2.88	AGD, Treatment	18874
MRT00349	The Scottish Salmon Company	Loch Odhairn-Gravir	11/09/2017	3.79	AGD, Complex gill issues	18784
MRT01360	The Scottish Salmon Company	Druimyeon Bay	25/10/2019	3.64	Gill health challenge (AGD) & treatment	18,777

MRT00279	The Scottish Salmon Company	Inch Kenneth	28/07/2017	13.52	PD, Treatment	18611
MRT01331	The Scottish Salmon Company	Russell Burn	18/10/2019	4.50	Fungus	17826
MRT00167	The Scottish Salmon Company	Geocrab Hatchery	28/02/2017	4.68	HSS	17739
MRT00270	The Scottish Salmon Company	Loch Odhairn	17/07/2017	2.45	Treatment	17713
MRT00547	The Scottish Salmon Company	Sgian Dubh	14/12/2017	2.28	AGD diagnosed on site	17,571
MRT00201	The Scottish Salmon Company	Portree	02/03/2017	2.58	AGD, Treatment	17525
MRT00220	The Scottish Salmon Company	Gousam	02/03/2017	5	Treatment	17500
MRT00359	The Scottish Salmon Company	Vuiabeag	11/09/2017	1.82	AGD, PD	17449
MRT00463	The Scottish Salmon Company	Strone Point	27/10/2017	2.72	Complex gills and environmental with suspected bacterial infection.	17279
MRT00491	The Scottish Salmon Company	Druimyeon Bay	06/11/2017	2.64	PGD handling and grading	17209
MRT00313	The Scottish Salmon Company	Loch Odhairn(Gravir)	29/08/2017	3.35	AGD, Complex gill issues	17191
MRT00169	The Scottish Salmon Company	Ardcastle Bay	02/03/2017	1.9	AGD, Treatment	16506
MRT00184	The Scottish Salmon Company	Strone Point	02/03/2017	1.79	treatment	16268
MRT00295	The Scottish Salmon Company	Loch Odhairn(Gravir)	28/07/2017	2.33	AGD, Treatment	16072
MRT01434	The Scottish Salmon Company	Sgian Dubh	22/11/2019	1.76	Low DO event and poor gill health	15895
MRT00357	The Scottish Salmon Company	Sgian Dubh	11/09/2017	1.79	AGD, Algal bloom, Water quality	15377
MRT01099	The Scottish Salmon Company	Maaey	07/07/2019	5.10	PD	15000
MRT00316	The Scottish Salmon Company	Vuiabeag	29/08/2017	1.53	AGD, PD	14861
MRT01306	The Scottish Salmon Company	Geasgill	10/10/2019	2.05	Gill health and environmental conditions - high level of plankton and slack tide led to lower O2 and high	14527
MRT00427	The Scottish Salmon Company	Strone Point	16/10/2017	2.22	Complex gills and environmental	14,332
MRT00424	The Scottish Salmon Company	Druimyeon Bay	16/10/2017	1.8	PGD and handling/grading	14,149
MRT00987	The Scottish Salmon Company	Loch Langavat	16/04/2019	3.33	Fungus	14000
MRT01079	The Scottish Salmon Company	Druimyeon Bay	24/06/2019	2	PD	14,000
MRT01086	The Scottish Salmon Company	Druimyeon Bay	30/06/2019	2.01	PD	14000
MRT01002	The Scottish Salmon Company	Glenan Bay	16/04/2019	9.45	PD	13626
MRT01332	The Scottish Salmon Company	Loch Damph	18/10/2019	5.54	Fungus	13593
MRT00358	The Scottish Salmon Company	Sgian Dubh	11/09/2017	1.59	AGD, Algal bloom, Water quality	13425
MRT00376	The Scottish Salmon Company	Vuia Mor	27/09/2017	2.29	Gill health, treatment	13246
MRT01475	The Scottish Salmon Company	Sgian Dubh	13/12/2019	1.58	AGD	13048
MRT01101	The Scottish Salmon Company	Druimyeon Bay	07/07/2019	1.90	PD	13000
MRT00165	The Scottish Salmon Company	Geocrab Hatchery	28/02/2017	3.11	HSS	12984
MRT00353	The Scottish Salmon Company	Loch Tuath	11/09/2017	4.79	AGD, Algal bloom, Complex gill issues, Jellyfish	12919
MRT00171	The Scottish Salmon Company	Ardcastle Bay	02/03/2017	1.6	Treatment	12771
MRT00280	The Scottish Salmon Company	Portree	28/07/2017	2.17	Algal bloom, Gill issues	12683

MRT01096	The Scottish Salmon Company	Strone Point	12/12/2017	2.55	Vibrio splendidus, bacterial gill disease, moritella viscosa	12676
MRT01097	The Scottish Salmon Company	Strone Point	12/12/2017	2.61	CMS, Complex gill issues, Vibriosis	12664
MRT01004	The Scottish Salmon Company	Glenan Bay	16/04/2019	11.71	PD	12636
MRT00310	The Scottish Salmon Company	North Uiskevagh	21/08/2017	6.14	Gill issues	12392
MRT00286	The Scottish Salmon Company	Inch Kenneth	11/08/2017	10.57	Treatment	12159
MRT01123	The Scottish Salmon Company	Gob a Bharra Loch Fyne	12/12/2017	3.5	Post input losses, potential ERM in hatchery	12046
MRT00777	The Scottish Salmon Company	Eughlam	12/09/2018	4.02	Anaemia and handling	11943
MRT00401	The Scottish Salmon Company	Loch Tuath	10/10/2017	14.74	Gill health, water quality issues	11,929
MRT00221	The Scottish Salmon Company	Gousam	02/03/2017	3	Treatment	11500
MRT00545	The Scottish Salmon Company	Druimyeon Bay	14/12/2017	4.65	CMS, handling	11,346
MRT01113	The Scottish Salmon Company	Maaey	16/07/2019	4.02	PD	11192

Updated mortality data which will include January 2020 mortalities should be posted by the Scottish Government online in early March 2020

Read more background on mass mortalities on Scottish salmon farms via:
Update: Mass Mortalities Piling Up at Scottish Salmon
Update: Mortalities & Disease Decimating Scottish Salmon
Solving Scottish Salmon's Multi-Million Mortality Problem
Mass Mortalities & Disease Ravage Scottish Salmon Farms (& It's Going to Get Worse!)
Scottish Salmon's Mort Mountain Piles Ever Higher in 2019
Media Backgrounder: Scottish Salmon's Mort Mountain - Leaping to Record Levels in 2018?

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