FHI 059, Version 13	Iss	sued by: FHI	Date of issue: 12/05/2020
Case No: 2021-0167			Date of visit: 08/06/2021
Time spent on site:	working days	Main Inspect	or:
Site No: FS1240	Site Name:	Highland	
Business No: FB0544	Business Name:	Scotland	
Case Types: 1 STS	2 DIA 3 OTH	4 5	6
Water Temp (°C): 17.5	Thermometer No:	T173	FHI 045 completed
Observations:	Region: HI	Water type: B	CoGP MA
Dead/weak/abnormally behaving	•		rmation/clinical score sheet.
Clinical signs of disease observe	d?		rmation/clinical score sheet.
Gross pathology observed? Diagnostic samples taken?		Y If yes, see additional info	rmation/clinical score sheet.
UNI/REG only - if unable to carry	out intended visit detail re	eason below:	

Additional Case Information:

Accompanied by and

Screening of 150 juvenile salmon from the River Forss for pathogens following reports of a collapse of recruitment last year. 150 fish were caught by electro fishing over two days, 8th and 9th of June 2021 (ND058639).

Two adult salmon with clinical signs of disease were observed and removed from the the river north of the Forss House Hotel (ND035686 and ND034687) and diagnostic samples were taken.

Numerous moribund and dead adult salmon were reported observed in the river last year and the year before however due to travel restrictions the FHI were not able to investigate and take samples in 2020.

Due to potential adult salmon diagnostic samples the following samples were pooled and plates split to keep back media for an additional five fish diagnostic F141 and F142, F143 and F144, F145 and F146, F147 and 148, F149 and F150.

On 8/6/2021 - sampled 91 - 95 (histo and GS) sampled 96 to 100 (histo and GS), F1-14 (Molgen/GS/Plates)
F15-50 (Molgen,/GS/Plates)
On 9/6/2021 - 101 to 123 (histo and GS), 124 to 134 (Histo and GS), 135 to 150 (Histo and GS), 151 to 90 (GS, Molgen, plates)
On 10/6/2021 - sampled F151 and 152

	Case no:	2021-0°	167	Site No:		FS1240)	100	Date of		08/	06/2021	03/0
									Samplin				
	Priority samples:	VI		BA		PA		MG		HI			
	Ti	44.0	0.00	40.0	0.00		1			•	V/MD NI		
	Time sampling starts/ends:	11:0	00:00	16:0	00:00		Inspect	or:			VMD N	0.	\Box
	Environmental conditions:	1	Dry	2	Wet	3	Sunny	4	Cloudy	5			
	Environmental conditions.		Diy	_	*****	ľ	Curiny		Cloudy	ľ			
	Summary samples	HIST	Y	BA	Y	MG	Y	VI		PA	Y	Total Sa	amples
A	dd Fish/Pools - click												
	Pool/Fish No	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11	F12
	Fish nos	1	2	3	4	5	6	7	8	9	10	11	12
	Pool Group												
	Species	SAL	SAL	SAL	SAL	SAL	SAL	SAL	SAL	SAL	SAL	SAL	SAL
	Average weight	25g	25g	25g	25g	25g	25g	25g	25g	25g	25g	25g	25g
	Sex	N/A		N/A		N/A	N/A	N/A		N/A		N/A	N/A
	Water Type	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW
S		Forss	SS	Forss	Forss	SS	Forss	Forss	Forss	Forss	Forss	Forss	SS
Details		Ē	P.	<u>R</u>	<u>R</u>	<u>R</u>	<u> </u>	<u>R</u>	Po Io	<u>R</u>	<u> </u>	Ē	P.
۵		River	River Forss	ē	ē	River Forss	ē	ē	ē	ē	ē	ē	River Forss
엉		Ϋ́S	Α̈́ς	River	River	ΑŠ	River	River	River	River	River	River	Şi
Stc	Facility No												

1111000	11 000, Version 10 Issued by 1111														
06/2021	06/2021 Additional Sample Information:														
	2 pots of formalin, dry tube of kidney and scale sample also included.														
152	152 Total Tests assigned 21														
F13	F14	F15	F16	F17	F18	F19	F20	F21	F22	F23	F24	F25	F26	F27	F28
13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
SAL	SAL	SAL	SAL	SAL	SAL	SAL	SAL	SAL	SAL	SAL	SAL	SAL	SAL	SAL	SAL
25g	25g	3g	3g	3g		3g		3g	3g		3g	3g			3g
N/A		N/A	N/A	N/A		N/A		N/A		N/A	N/A	N/A	N/A	N/A	N/A
FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW
River Forss	River Forss	River Forss	River Forss	River Forss	River Forss	River Forss	River Forss	River Forss	River Forss	River Forss	River Forss	River Forss	River Forss	River Forss	River Forss

FHI 059, Version 13 Issued by: FHI Date of issue: 12/05/2020

Case no:	2021-0167		Site No):	FS124)	Me	ethod of	killing:	Anaest	hetic
Date of visit:	08/06/2021	l	Inspect	or(s):				s	heet Re	elevant:	Y
S for strong present	ce: M for medium presence: W for v	veak pres	sence								
Fish Number	·	F151	152								
	r death (if > 45 minutes)										
External Signs	,										
Behaviour	Moribund	S	S								
	Lethargic	S	S								
	Hanging vertical										
	Spiralling										
	Flashing										
	Loss of equilibrium										
Body	Dark										
	Distended abdomen										
	Anorexic		W								
	Scale Oedema										
Opercula	Shortened										
	Flared	_			_						
Haemorrhaging	Throat	S	S								
	Ventrum	S	S								
	Base of fins	S	S								
	Elsewhere	S	s								
Eyes	Exophthalmic										
	Enophthalmic (sunken)										
	Cataract										
0.111-	Haemorrhagic										
Gills	Pale	S	S								
	Zoned										
Lasiana	Necrotic	6									
Lesions	Flank	s s	S								
Vant	Elsewhere	S	S								
Vent	Inflamed Trailing faeces	3	3								
Lies Lood	Estimate numbers										
Lice Load	Estimate numbers										
Internal Signs											
Ascites	Clear										
Action	Bloody										
Oedema	In tissues										
Heart	Pale/anaemic	w									
	Granulomas										
	Deformed										
Liver	Petechial haem										
	Gross haem										
	Tissue breakdown										
	Enlarged										
	Colour number(s)										
	Granulomas										
	Lesions										
Pyloric caeca	Petechial haem										
	Tubules mauve										
	Lack of fat	m	m								
Spleen	Enlarged	S	m								
	Granulomas										
Gut	No food present										
	Yellow pseudo-faeces										
	External haem										
	Internal haem										
Body wall	Haemorrhaging										
Swim bladder	Haemorrhaging										
	Fluid filled										
Kidney	Swollen										
	Grey	W									
	Granular	W									
	Liquefied										
General	Parasites present										

Case no: 2021-0167

Date of visit: 08/06/2021

Date of visit.	00/00/202	<u></u>					
S for strong prese	nce: M for medium presence: W fo	ги					
Fish Number							
Time sampled af	ter death (if > 45 minutes)						
External Signs	-						
Behaviour	Moribund						
	Lethargic						
	Hanging vertical						
	Spiralling						
	Flashing						
	Loss of equilibrium						
Body	Dark						
·	Distended abdomen						
	Anorexic						
	Scale Oedema						
Opercula	Shortened						
	Flared		_			-	
Haemorrhaging	Throat						
	Ventrum						
	Base of fins						
	Elsewhere						
Eyes	Exophthalmic						
_,	Enophthalmic (sunken)						
	Cataract						
	Haemorrhagic						
Gills	Pale						
Ullia	Zoned						
	Necrotic						
Lesions	Flank		_				
Lesions	Elsewhere						
Vent	Inflamed						
Vent							
Lina Land	Trailing faeces		_				
Lice Load	Estimate numbers		_				
l							
Internal Signs	la:		_				
Ascites	Clear						
0 1	Bloody		_	_			
Oedema	In tissues						
Heart	Pale/anaemic		_				
	Granulomas						
	Deformed		_				_
Liver	Petechial haem						
	Gross haem		_				\vdash
	Tissue breakdown						
	Enlarged						
	Colour number(s)						
	Granulomas					<u> </u>	
	Lesions						
Pyloric caeca	Petechial haem						
	Tubules mauve						
	Lack of fat						
Spleen	Enlarged						
	Granulomas						
Gut	No food present						
	Yellow pseudo-faeces						
	External haem						
	Internal haem						
Body wall	Haemorrhaging						
Swim bladder	Haemorrhaging						
	Fluid filled						
Kidney	Swollen						
	Grey						
	Granular						
	Liquefied						
General	Parasites present						
	Anaemia						
	. Jiwaiiiiw						

FHI 059, Version 13	Issued by: FHI	Date of issue: 12/05/202
Additional comments:		
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 Case No:
 2021-0167
 Date of visit: 08/06/2021

 Site No:
 FS1240
 Inspector:

Results Summary	Freq.	Date of Notification								
· · · · · · · · · · · · · · · · · · ·		Database	Insp	Phone	Insp	Writing	Insp	2 nd Insp		
MG - Piscine	0/90			23/06/202	1					
myocarditis virus						29/09/2021				
MG - piscine Reovirus	0/90			23/06/202	1	29/09/2021	1			
MG - Salmonid	0/92			23/06/202	1					
alphavirus						29/09/2021				
MG - VHS	0/92			23/06/202	1	29/09/2021	1			
MG- IPN	0/92			23/06/202	1	29/09/2021				
GS	0/152			29/06/202	1	29/09/2021	1			
G.derjavinoides	25/152			29/06/202	1	29/09/2021				
Saprolegnia sp.	2/152			29/06/202	1	29/09/2021	1			
Anisakis sp.	1/152			29/06/202	1	29/09/2021				
IHNQ	0/92	21/07/2021		23/07/202	1	29/09/2021	1			
GPAT	5/62	21/07/2021		23/07/202	1	29/09/2021				
ANIH	3/62	21/07/2021		23/07/202	1	29/09/2021	1			
CEST	2/62	21/07/2021		23/07/202	1	29/09/2021				
LPAT	6/62	21/07/2021		23/07/202	1	29/09/2021	1			
COCC	4/62	21/07/2021		23/07/202	1	29/09/2021				
NSIG	3/92	21/07/2021				29/09/2021	1			
FSPE	1/92	21/07/2021		23/07/202	1	29/09/2021				
PSPE	4/92	21/07/2021		23/07/202	1	29/09/2021	1			
PSFL	7/92	21/07/2021		23/07/202	1	29/09/2021				
FSPE	5/92	21/07/2021		23/07/202	1	29/09/2021	1			
Plesiomonas	33/92	21/07/2021		23/07/202	1					
shigelloides						29/09/2021				
Citrobacter sp.	5/92	21/07/2021		23/07/202	1	29/09/2021	1			
AERO	9/92	21/07/2021		23/07/202	1	29/09/2021				
Onchrobacterium sp.	4/92	21/07/2021		23/07/202	1	29/09/2021	1			
SAPR	2/92	21/07/2021		23/07/202	1	29/09/2021				
MG_SYNG_SAL	0/1	21/07/2021				29/09/2021	1			
MG_BRAN_CYS	0/1	21/07/2021				29/09/2021				
AGDQ	0/90	21/07/2021				29/09/2021	1			
Paranucleospora	0/90									
theridion						29/09/2021				
Salmon gill poxvirus	1/90					29/09/2021				
MG_CLAV_CH_SAL	1/1	21/07/2021		23/07/202		29/09/2021				
MG_PIS_CH_SAL	1/1	21/07/2021		23/07/202		29/09/2021				
FPSY	2/92	21/07/2021		23/07/202	1	29/09/2021				
Kocuria sp.	1/92	21/07/2021		23/07/202	1	29/09/2021	1			

Report Summary			
Case Type	Date	Insp	2 nd Insp
STS, OTH	29/09/2021		
DIA,	29/09/2021		

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BUSINESS NO FB0544 **SITE NO** FS1240 **CASE NO** 20210167

DATE OF VISIT 08/06/2021
SITE NAME River Forss
INSPECTORS

Results Summary

When conducting a statutory 150 fish sample of juvenile salmonids in the River Forss, two moribund adult Atlantic salmon with clinical signs of disease were observed and removed from the river for further examination and subsequent diagnostic sampling.

Tissue material was inoculated onto appropriate media for the isolation of bacteria. Flavobacterium psychrophilum, which is known as a primary fish pathogen was observed at a significant level in fish 152. Aeromonas sp. (likely A. sobria) was overall the most predominant bacterium observed in both fish. Although there were primary and opportunist fish pathogens identified, the highly mixed nature of the growth observed would not suggest they would be implicated as primary pathogens.

A significant level of fungus-like growth was observed on plates taken from lesion material of both fish this was confirmed as being *Saprolegnia parasitica* by DNA sequencing.

Histopathology examination revealed mild bacterial branchitis in fish 152 and the presence of some parasites within the gut and the kidney, which are commonly found in wild fish.

Salmon gill poxvirus was identified from both fish using real-time PCR (qPCR),

Fin samples were tested for the presence of *Gyrodactylus salaris*, the result of this test was negative. A single *G.derjavinoides* was identified by QPCR on the fin of F152.

Two Anisakid worms consistent with *Anisakis* sp., were observed free in the musculature around the vent opening.

Whilst a number of pathogens were identified from the samples taken, a specific causative agent has not been identified. The evidence suggests that the cause of the morbidity observed would most likely be the external lesions and associated secondary opportunistic infection with Saprolegnia parastica, however the cause of the lesions in the first instance cannot be determined.

Please contact myself or the duty inspector should you require any further information, have any queries regarding this report or if any problems develop.

Case detail

The Fish Health Inspectorate (FHI) have received reports of spring-run adult salmon in the River Forss displaying clinical signs of disease since 2019. The results from diagnostic samples taken from 5 fish in 2019 did not identify a primary pathogen. In 2020 additional reports were received however, due to Covid-19 travel restrictions no further investigative work or sampling could be conducted by the FHI. Juvenile recruitment data, received by the FHI in September 2020, indicate a significant reduction from 2018 onwards. Reductions of juvenile recruitment can be an indicator R09

of the presence of disease, therefore a 150 fish sample was organised in 2020 to test for the presence of listed disease and also to perform a general health screen on the population. Due to weather conditions and further travel restrictions this was delayed and completed over a two day period beginning on the 8th June 2021. Please see the separate report that has been issued for the full results.

Whilst conducting the 150 fish sample, it was reported that moribund adult salmon had been observed downstream. On inspection of the river two were observed, the first at ND 03450 68688 and the second at ND 03583 68659. Both were removed from the river for further examination and subsequent diagnostic sampling and added to the statutory sample that had been taken.

Both fish were moribund and lethargic and F152 appeared anorexic. Both fish had haemorrhaging on the throat, ventrum, the base of the fins and also on the flanks. Lesions were also present on the flank, head and fins of both fish with fungus-like structures also evident.

Internally, F151 had a pale heart and a grey and granular kidney, while both fish lacked fat on the pyloric caeca and displayed splenomegaly.

Samples

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

Fish number	Location	Stage	Origin
F151	River Forss (ND03450 68688)	Adult	Wild
F152	River Forss (ND03583 68659)	Adult	Wild

Results

Bacteriology: Kidney, gill, spleen and lesion material from F151 and F152 were inoculated onto appropriate media for the isolation of bacteria.

The following bacteria was isolated from fish 151:

- Aeromonas sp (likely sobria) (kidney, spleen and lesion)
- Flavobacterium sp. (spleen, lesion and gill)
- Kocuria sp. (kidney)

The following bacteria were isolated from fish 152:

- Flavobacterium psychrophilum (lesion and gill);
- Aeromonas sp (likely sobria) (kidney and lesion)
- Flavobacterium sp. (spleen)

In addition to the bacteria identified, fungus-like structures were observed on plates taken from lesion material from both fish, this was identified as *Saprolegnia* sp. by light microscopy, samples and sequencing confirmed this to be *Saprolegnia parasitica*.

Virology: Tissue samples were tested for segments of nucleic acid indicative of the presence of the pathogens specified below using real-time PCR (qPCR).

Salmon gill poxvirus (SGPV) R09

Fish Number	Endogenous control Cp value		Reported Result (PCR)		
F151	20.02	23.52	23.52	23.6	Positive
F152	19.88	23.79	23.83	24.0	Positive

The samples tested negative for infectious haematopoietic necrosis virus (IHNV), infectious pancreatic necrosis virus (IPNV), infectious salmon anaemia virus (ISAV), salmonid alphavirus (SAV) and viral haemorrhagic septicemia virus (VHSV).

Parasitology: Fins were collected to determine the presence of *Gyrodactylus salaris* using light microscopy and molecular techniques (PCR).

No *G. salaris* parasites were detected in the samples examined.

A single *G.derjavinoides* was removed from the fin of F152 and identified by QPCR.

A sample of vent was collected to determine the presence of parasites. Two white Anisakid worms, consistent with *Anisakis* sp., were observed free in the musculature around the vent opening.

Gill tissue samples were tested for segments of nucleic acid indicative of the presence of parasites using real-time PCR (qPCR).

The samples tested negative for Neoparamoeba perurans (AGD) and Paranucleospora theridion.

Histology: Tissue samples of gill, skin and skeletal muscle, heart, pyloric caeca, pancreas, hind gut, liver, spleen and kidney were taken from F151 and 152. The tissue samples were fixed in 10% neutral buffered formalin.

Histopathological examination revealed the following:

Gill: Presence of aggregates of bacteria free among the lamellae and colonizing the lamellar surface. The bacteria shows affinity to the hypertrophic chloride cells (F152). Some bluntness on gill filament (F151);

Skin & Muscle: Some individual muscular fibre degeneration (F151 & F152);

Heart: Within normal range;

Gut and pyloric caeca: Presence of Cestoda parasite within the gut lumen and Nematoda resembling Anisakid parasites (F152). Hindgut with some congested folds (F151);

Pancreas: Within normal range;

Liver: Within normal range;

Kidney: Some dilation of the lumen of renal tubes and some exhibited presence low intensity focal intratubular myxosporidiosis with early spore formation and no host response (F152). F151 displayed focal areas of reduction of haematopoietic tissue;

Spleen: Foci of haematopoietic tissue reduction (F152).



Fish Health Inspector

The Fish Health Inspectorate Service Charter detailing standards of service is available on the Marine Scotland website at https://www.gov.scot/publications/fish-health-inspectorate-service-charter/

Date: 29/09/2021





FISH HEALTH INSPECTORATE VISIT REPORT

SUMMARY FOR INFORMATION OF SITE OPERATOR

Business No FB0544 Date of Visit 08/06/2021 Site No FS1240 Site Name River Forss

Case No 20210167 Inspectors

Results Summary

One hundred and forty eight juvenile Atlantic salmon and two juvenile brown trout were tested for the presence of listed disease and to conduct a general health screen.

Fin samples from F1-150 were tested for the presence of *Gyrodactylus salaris*, the result of this test was negative. Forty seven *G. derjavinoides* were identified by QPCR on the fins of 24/150.

Kidney and spleen material from F1-90 were inoculated onto appropriate media for the isolation of bacteria.

Plesiomonas shigelloides was the most predominant bacteria observed (29/90) with Aeromonas sp. (with characteristics most similar to A. sobria) also observed at a slightly higher level (7/90) than the other bacteria. The bacteria identified were most likely of environmental origin.

The growth observed was overall light to moderate and very mixed, suggesting that the bacteria identified would not be implicated in the health of the population.

Histopathological examination of tissue samples from F91-100 (parr) revealed very minimal gill pathology and one fish displayed some epitheliocystis (F98). Additional screening by QPCR identified *Candidatus piscichlamydia salmonis* and *Candidatus clavochlamydia salmonicola*.

Several fish exhibited coccidian sporozoites and meronts in the intestine but with no inflammation associated. Myxosporidiosis is likely incidental.

Histopathological examination of F101 to F150 (fry) revealed very minimal hepatitis and peritonits. Several fish exhibited different parasites (nematode, trematode metacercariae and coccidian sporozoites and meronts in the intestine with no inflammation associated). These parasites are commonly found in wild salmonids.

Salmon gill poxvirus was identified using real-time PCR (qPCR), (F2,14 and 73).

The results indicate that there was no evidence of underlying health issues in the juvenile population that would be implicated in the reduced recruitment levels recorded. It is unlikely that the pathogens identified would be implicated in the health issues affecting the spawning population.

Case detail

The Fish Health Inspectorate (FHI) have received reports of spring-run adult salmon in the River Forss displaying clinical signs of disease since 2019. Diagnostic samples taken from 5 fish in 2019 failed to isolate a specific causative agent. In 2020 additional reports were received however, due to Covid-19 travel restrictions no further investigative work or sampling could be conducted by the FHI. Juvenile recruitment data, received by the FHI in September 2020, indicate a significant reduction from 2018 onwards. Reductions of juvenile recruitment can be an indicator of the presence of disease therefore a 150 fish sample was organised in 2020 to test for the presence of listed disease and also to perform a general health screen on the population however, due to weather conditions and further travel restrictions this was delayed and completed over a two day period beginning on the 8th June 2021.

One hundred and forty eight juvenile Atlantic salmon and two juvenile brown trout were caught using electrofishing equipment over a ~400m stretch or river starting at ND 05767 63941 and terminating at ND 05594 63679. Of the 150 fish sampled no clinical signs of disease or gross pathology was observed.

Two moribund adult salmon with clinical signs of disease were removed from the river for further examination and subsequent diagnostic sampling, a separate report will be is sued detailing the results of these tests.

Samples

Samples were collected according to the table below:

Fish number	Location	Stage	Origin
F1-14, F51-F100	River Forss (ND058639)	Parr	Wild
F15-50, F101-150	River Forss (ND058639)	Fry	Wild

Results

Bacteriology: Kidney and spleen material from F1 – F90 were inoculated onto appropriate media for the isolation of bacteria.

The following bacteria were isolated.

- Pseudomonas aeruginosa, two isolates 2/90 and 2/90;
- Flavobacterium sp., three isolates 1/90, 5/90 and 1/90;
- Pseudomonas fluorescens, two isolates, 3/90 and 2/90;
- Plesiomonas shigelloides, four isolates, 29/90;
- Citrobacter sp.one isolate 5/90;
- Aeromonas sp. (sobria), three isolates 7/90;
- Ochrobactrum anthropi, one isolate 4/90;
- Flavobacterium psychrophilumn one isolate 1/90.

Following observations made during histopathological examination, QPCR analysis was performed on gill tissue from F98. The following pathogens were identified:

Candidatus piscichlamydia salmonis

Fish Number	Endogenous control Cp value		Cp Values		Reported Result (PCR)
F98	24.84	38.87	38.27	40.11	Positive

Candidatus clavochlamvdia salmonicola

Fish Number	Endogenous control Cp value		Cp Values		Reported Result (PCR)
F98	24.84	31.24	31.40	31.28	Positive

The samples tested negative for Candidatus branchiomonas cysticola and Candidatus Syngnamydia salmonis.

Virology: Tissue samples were tested for segments of nucleic acid indicative of the presence of the pathogens specified below using real-time PCR (qPCR).

Salmon gill poxvirus (SGPV)

Fish Number	Endogenous control Cp value		Reported Result (PCR)		
F2	18.77	32.27	31.82	32.03	Positive
F14	20.10	37.06	37.37	36.07	Positive
F73	19.18	32.27	32.10	32.16	Positive

The remaining fish were negative for SGPV.

Samples tested negative for infectious haematopoietic necrosis virus (IHNV), infectious pancreatic necrosis virus (IPNV), salmonid alphavirus (SAV) and viral haemorrhagic septicemia virus (VHSV), piscine reovirus (PRV), and piscine myocarditis virus (PMCV).

Parasitology: Fins were collected to determine the presence of *Gyrodactylus salaris* using light microscopy and molecular techniques (PCR).

No *G. salaris* parasites were detected in the samples examined.

Forty seven G.derjavinoides were identified by QPCR on the fins of 24/90 fish.

Tissue samples were tested for segments of nucleic acid indicative of the presence of the parasites specified below using real-time PCR (qPCR).

The samples tested negative for Neoparamoeba perurans (AGD) and Paranucleospora theridion.

Histology: Tissue samples of gill, skin and skeletal muscle, heart, pyloric caeca, pan creas, hind gut, liver, spleen and kidney were taken from Fish 91-100. The tissue samples were fixed in 10% neutral buffered formalin.

Histopathological examination revealed the following:

Gill: Very small focal areas of hyperplasia (F91), five small focal areas of necrosis of the lamellae vessels (vasculitis), some cellular inflammatory infiltrate (F94) and several basophilic epithelial

inclusions (likely epitheliocystis). F98 displayed very mild cellular inflammatory infiltrate in the gill filament.

Skin & Muscle: very small area of cellular inflammatory infiltrate on the adipose tissue between the red and white muscle(F98).

Heart: Within normal range.

Gut and pyloric caeca: some coccidian sporozoite stages (F94, F96, F99) and meronts (F 97, F98, F99) embedded in the intestinal folds. No inflammation noted. F94 & F100 also had some nematodes (likely Anisakid parasites) present within the gut. F95 no pyloric caeca in section.

Pancreas: Within normal range. F95 not in section.

Liver: Three small focal areas of sinusoidal congestion (F91).

Kidney: Some dilation of the lumen of renal tubes and some exhibited presence low intensity focal intratubular myxosporidiosis with early spore formation and no host response (F93, F95, F97, F98, F99 and F100). F100 also displayed some occasional tubular dilation. F94 not in section.

Spleen: Within normal range

The bodies of fish 101- 150 were fixed in 10% neutral buffered formalin.

101 - 117 fish

The fish did not displayed tissue alterations on the different organs, however:

F05 and F107 displayed some meronts embedded in the intestinal folds, F13 exhibited one foci of inflammatory cell infiltration on the liver and F5 displayed mild, diffuse vacuolation (macrovesicles) of hepatocyte (liver).

118-150 fish

The fish did not displayed tissue alterations, however:

F123 and F124 - displayed a trematode parasite within the intestinal lumen, F126 - displayed some focal hepatic vacuolation. F123 and F127 - eye displayed trematode metacercariae. F128, F138 and F142 - the liver exhibited a small focal area of cellular infiltration. F136 and F142 - exhibited adipose tissue surrounding pancreas with focal inflammatory cell infiltration and haemorrhage. F144 - some coccidian sporozoite stages.

Please contact myself or the duty inspector should you require any further information or have any queries regarding this report.

Signed:

Fish Health Inspector

The Fish Health Inspectorate Service Charter detailing standards of service is available on the Marine Scotland website at https://www.gov.scot/publications/fish-health-inspectorate-service-charter/

Date: 29/09/2021

R16

FHI 059, Version 13		Issued by: FHI	Date of issue: 12/05/2020			
Case No: 2021-0208			Date of visit: 15/06/2021			
Time spent on site:	hours	Main Inspe	ctor:			
Site No: FS1067 Business No: FB0456	Site Name: Business Name:	Inverawe (East) Etive 2 Dawnfresh Farming Ltd				
Case Types: 1 ECI	2 CNI 3 SLI	4 VMD 5	6			
Water Temp (°C): 12.3	Thermometer No:	T155	FHI 045 completed			
Observations:	Region: ST	Water type: S	CoGP MA: M-36			
Dead/weak/abnormally behaving fish present? Clinical signs of disease observed? Gross pathology observed? Diagnostic samples taken? N If yes, see additional information/clinical score sheet. N If yes, see additional information/clinical score sheet. N If yes, see additional information/clinical score sheet.						
UNI/REG only - if unable to carry	out intended visit deta	il reason below:				

Additional Case Information:

All fish sampled for VMD appeared healthy and showed no clinical signs of disease.

Water was very murky, lots of fresh water present in the loch. Fished looked to be in good condition.

FHI 059, Version 13	13 Issued by: FHI						Date of issu	ie: 12/05/2020
Case No:	2021-0208		Site No:	FS1067				
Date of Visit:		15/06/2021]		Inspector(s)	:		
Registration/Author	orisation Deta	ails						
1. Business/site det			ite representa	ative?			Υ	7
2. Changes made to	*	,	·				N]
Site Details (includ	de cleaner fis	h for all sect	ions)					
Total No facilities		6	Facilities sto	cked	6	No faciliti	es inspected	6
Species	RTR						T	
Age group	2021							
No Fish	114,697							
Mean Fish Wt	227g							
Next Fallow Date (S		24 October 2	<u> </u>	Next Input Da	ate (Site)	June/July	21	
Recent (last 4 wks)					Any escape			I N
If yes, detail:	discase probl	CITIO:			Arry Cocapc	3 (31100 1831	i visit):	IN
4. Are movement re 5. Are records comp 6. Are health certific Transport Records 1. Are any moveme If yes, is there a sys	plete and corr cates for introd s nts carried ou	ectly entered? ductions (outv	? vith GB) availa half) of the bu	able? usiness (not us	_			Y
Mortality Records								
1. Mortality records		•						Y
How are mortaliti If other detail:	es disposed c	f?			Whole fish -	Dundas Ch	nemicals	
3. Mortality records	complete and	correctly ent	ered?					Y
4. Recent mortality	•	Ť		s mortality - 11	19 fish. Low	mortality po	st input.	•
5. Evidence of rece		typical morta		 				l N
If yes, facility nos/no		* *		/reason:				
6. Any other peaks	in mortality du	ring period ch	necked?					N
If yes, detail:								
7. Have increased (unexplained)	mortalities be	en reported to	o vet or FHI?				N/A
If yes, detail action: 8. Have 'mortality e	vente! been re	ported to EUI	2 If no onter	details on more	tality evente e	hoot		N/A
o. Have mortality ev	vents been re	porteu to FAI	: II no, enter	uetalis on mon	ianty events s	neet.		IN/A

Treatments and Medicines Records	
1. Recent treatments (see comment)?	Y
If yes, detail: TMS	
If other, detail:	
2. Medicines records available for inspection?	Y
3. Are records complete and correctly entered?	Y
4. Are fish in a withdrawal period?	Y
5. If yes, what treatment(s)?	
If other, detail:	
6. Are medicines stored appropriately?	Y
., ,	
Biosecurity Records	
1. Biosecurity records available for inspection?	Y
2. Has the manner and frequency of mortality removal, recording and safe disposal been considered?	Y
3. Has the manner and period in which the APB will notify Scottish Ministers or veterinary professional of any	
increased (unexplained) mortality at the site been included?	Y
4. Has the action that will be taken in the event that the presence or suspicion of the presence of a listed disease	
is detected been included and how and when that will be notified to Scottish Ministers?	Y
5. Has the health status of aquaculture animals being stocked on the farm site been covered (equal or higher	Y
health status, certification if required)?	
6. Have the husbandry and biosecurity measures implemented between each epidemiological unit to minimise	Y
transmission of disease been covered (movement of staff, visitors, equipment, live or dead fish etc.)?	
7. Is documentation available regarding the measures in place to maintain the physical containment of	Y
aquaculture animals held on site?	
8. Have the biosecurity procedures been adequately implemented on site?	Y
If no, detail:	
Results of Surveillance	
1. Has any animal health surveillance been carried out by, or on behalf of, the business?	Y
2. If yes, are results available for inspection?	Y
3. Any significant results?	N
If yes, detail (if not detailed under recent disease problems).	
Records checked between: 27/06/2019-15/06/2021	

٠.	ni 059, version 15							155	ueu by.				
	Case no:	2021-02	208	Site No:		FS1067			Date of Samplin		15/0	06/2021	15/0
	Priority samples:	VI		ВА		PA		MG	Samplin	g. HI			
	Time sampling starts/ends:	12:0	0:00	12:3	0:00		Inspecto	or:			VMD No).	1
	Environmental conditions:	1	Calm	2		3		4		5			
	Summary samples	HIST		ВА		MG		VI		PA		Total Sa	mples
A	Add Fish/Pools - click Pool/Fish No												
H	Fish nos	1											
H		I											
	Pool Group	DTD											
	Species	RTR											
	Average weight	227g											
	Sex	N/A											
	Water Type	SW											
Ctock Details		New farm (selcoth)											
U	or active No	⊏4											

06/2021 Additional Sample Information:													
	all fish	sampled	for VM	D appea	red hea	lthy and	showed	d no clin	ical sign	s of dise	ease.		
0	0 Total Tests assigned 0												

FHI 059, Version 13		Issued by: FHI			Date	of issue	: 12/05/2020
Case Number:	2021-0208		Site No:	FS1067		Insp:	
Date of Visit	15/06/2021		No of m	ovements/s	supp./dest.		Score
Live fish movements			0	1-5	6-10	>10	
Movements on (from out	Frequency of m	novements on from equivalent MS	0	5	10	14	5
with GB) of susceptible species		novements on from equivalent zone or			4.0		
species	·	ncluding third country	0			26	
	Number of sup	pilers	0	5	10	14	5
Movements off	Frequency of n		0			10	10
	Number of des		0			10	3
Exposure via water		Site contacts	0	1-5	6-10		
Water contacts with other farms (holding species	disinfection or l	•	0				
susceptible to same diseases)	farms upstrean	or in a coastal zone with category I n or within 1 tidal excursion	1	2	4		2
		or in a coastal zone with category III or within 1 tidal excursion	1	3	6		
		or in a coastal zone with category V n or within 1 tidal excursion	1	4	8		
Management practices			None	Secure	Unsecure		
Water contacts with processors	Any processing	plant discharging into adjacent waters	0	1	2		0
On farm processing within the rules of the directive	No on farm pro	cessing	0				
	Processing own	n fish (re-cycling risk)	1				1
	Processing fish	from MS of equivalent status	2				
	Processing fish equivalent state	from zone or compartment of	4				
	Processing fish	from Category III farm	8				
	Processing fish	from Category V farm	10				
Disposal of fish and fish by-	Site's own was	te only processed.	0				
products	Common proce	esses with other farms	3				3
	Collection poin	t for waste from other farms	5				
Use of unpasteurised feeds	No feeding of u	inpasteurised feed	T 0	1			0
·	Feeding unpas	teurised feed	5				
Biosecurity		Number of sites	1	າ 2 or 3	≥ 4		
Contacts with other sites	Sites operating	from single shorebase		1	2		2
	Sites sharing s	taff and equipment	0		2		2
Disinfection of equipment	Yes		0				
between sites, use of footbaths etc	No		1				1
CoGP/Regulator				_			
Practices in accordance	Yes		0				0
with regulator or industry code of practice	No		3]			
Platform access to cages	Yes		0]			0
	No		2]			
					Total		34
					Rank		HIGH

Case No:	2021-0208	Site No: FS1067	
Sea Lice Inspection	(Seawater Sites Only)	
1. Has the site experi	enced sea lice problen	ns in the previous 4 years?	N
2. Is the CoGP Farm	Management Area (or	equivalent) fallowed synchronously on a single year class basis?	N
		icenced in-feed and bath sea lice medications (including deltamethrin, s well as access to suitable biological and/or mechanical control measures, and	Υ
4. Is there a signed do Management Area (o		gement agreement or statement relevant to the site and CoGP Farm	Υ
5. Are sea lice count	records available for in	spection? (Legal SSI, CoGP Annex 6)	Υ
6. Do records adequa	tely reflect the require	d standard specified in the SSI and the CoGP? (Legal SSI, CoGP Annex 6)	Υ
7. Are sea lice (<i>L. sal</i> records are inspected		elow the suggested criteria for treatment in the CoGP during the period that	Υ
8. Have average adul	t female sea lice (L. sa	almonis) numbers per fish been at a level of 3 or above (prior to w/b 10/6/19) or	N
If yes, have these bee	en reported to the Fish	Health Inspectorate? If no, FHI see comment.	N/A
9. Is C. elongatus info	estation at a level whic	h is considered to cause significant welfare problems? (CoGP 4.3.81, 5.3.50)	N
-		nistered or other actions taken when <i>L. salmonis levels</i> have exceeded the <i>elongatus</i> is considered to have welfare implications? (CoGP 4.3.82, 5.3.51)	N/A
11. Has any other act	ion been taken (where	applicable)?	Υ
12. Have therapeutic	treatments or the action	ons taken had a significant impact upon the lice levels recorded?	Υ
13. Are treatments, w	here conducted, carrie	ed out in cooperation between participating farms?	Υ
14. Is there a harvest	ing strategy for the site	e, where fewer populations or part populations are held without treatment for	Υ
15. Is there a site spe	cific written lice manag	gement procedure with waypoints describing set actions to deal with recognised	Υ
16. Do the sea lice le	vels observed on stock	s reflect sea lice count data? If no please detail reasons.	Υ
Containment Inspec			
•	• •	age due to predators in the current or previous production cycles?	N
		t the predation experienced on site? (Detail below)	Υ
Seal pro nets	top nets	weighted system	
If other, detail below	V:		
-	lents or events been exuestions 4 – 9. If No sk	xperienced on or in the vicinity of the site since the last FHI inspection?	N
	eported to Scottish Min		
		forthwith (where they exist)? (CoGP – 4.4.37, 5.4.17)	
	•	nd local fisheries trusts forthwith (where they exist)? (CoGP – 4.4.37, 5.4.17)	
7. Were methods (if a	ny) used to recover es	scapees? If yes give detail	
O If all note were dear	alouad was this setime	agreed with local wild fish interests and was remaining allocation by Contint	
Ministers? (Legal, Co	GP – 4.4.38, 5.4.18)	agreed with local wild fish interests and was permission given by Scottish	
	•	nimise the risk of further escapes? (Not covered in code but could	
	er satisfactory meas		
10. Is the site inspect	ed as satisfactory with	regards to containment? If no, please detail reason(s)	Υ

Issued by: FHI

FHI 059, Version 13

Date of issue: 12/05/2020

FHI 059, Version 13	Issue	d by: FHI	Date of	issue: 12/05/2020
Case No: 2021-0208	Site No: FS10	067		
Date of Visit: 15/06/2021	Inspector:			
Point of Compliance				
1. Is the farm under inspection located v	within a farm manager	nent area?		Υ
If N, no further questions require comple	etion.			
Points of Compliance for Both Farm	Management Agreen	nents and Statements		
2. Has a current farm management agre			J?	Υ
3. Is the current FMAg/S available for in	spection?			Y
4. Does the FMAg/S identify the relevan	it farm management a	rea?		Υ
Does the FMAg/S identify the fish far				Y
6. Does the FMAg/S identify the date of		e agreement or stateme	nt?	Y
7. Does the FMAg/S identify the date of	review?			Υ
Arrangements for Fish Health Manag				
8. Does the FMAg/S identify the minimufarm?	m health standards fo	r the stocks to be introd	uced to the area or	Y
Does the FMAg/S identify the vaccina	•			Υ
Does the FMAg/S identify the specie	•			Y
11. Does the FMAg/S identify the maxin individual farm?	num stocking density of	of any pen on any farm i	n the area or the	N
12. Does the FMAg/S identify the arrang fish farm in the area or the individual fa	_	e and disposal of any de	ead fish from any	Y
Arrangements for The Management of	of Sea Lice			
13. Does the FMAg/S identify arrangem	ents for the sharing of	data on sea lice numbe	ers and treatments?	Υ
14. Does the FMAg/S identify the availa of statement?	bility and the use of m	edicines on farms cover	ed by the agreement	Υ
15. Does the FMAg/S identify any requir		vity testing of available t	reatments for sea	Y
lice on farms in the area or individual fa				V
Does the FMAg/S identify the circun used on farms in the area or individual f		biological controls and o	cleaner fish are to be	Y
17. Does the FMAg/S identify the arrang	gements for synchrono	ous treatments on farms	within the area?	Υ
Live Fish Movements				
18. Does the FMAg/S identify the circun area or farm?	nstances when live fish	h may be introduced or i	removed from the	Y
19. Does the FMAg/S identify the arrangor individual farms?	gements for the mover	ment of live fish on and o	off sites in the area	Y

FHI 059, Version 13 Issued by: FHI Date	e of issue: 12/05/2020
Harvesting 20. Does the FMAg/S identify acceptable harvest practices on farms in the area or individual farms?	Y
Fallowing 21. Does the FMAg/S identify the dates by which the area or individual farm will be fallow and the earliest	Y
date when a farm or area may be restocked? 22. Does the FMAg/S identify whether one or more year classes may be stocked onto sites covered by the paragraph or statement?	e Y
agreement or statement? 23. Does the FMAg/S identify whether broodstock or potential broodstock are to be kept on any site covered by the agreement or statement?	Y
Point of Compliance for Farm Management Agreements Only 24. Does the farm management agreement include arrangements for persons to become, or cease to be, parties to the agreement?	Y
Management and operation 25. Is the fish farm being managed and operated in accordance with the agreement or statement? 26. What is the version no/date of issue of the FMAg/S? 06/05/2020 - no8	Y

		_				_		
Case No:	2021-0208			Date of visit:	15/06/2021			
Site No:	FS1067	1		Inoncotor		1		
Site No.	1 31007	J		Inspector:				
Results Summary	Freq.			Da	te of Notifica			
		Database	Insp	Phone	Insp	Writing	Insp	2 nd Insp
	1							
	1							
Report Summary				1				
Case Type	Date	Insp	2 nd Insp					
ECI, CNI, VMD, SLI	25/10/2021	шор	2 IIISP					





FISH HEALTH INSPECTORATE VISIT REPORT

SUMMARY FOR INFORMATION OF SITE OPERATOR

Business No FB0456 Date of Visit 15/06/2021

SITE No FS1067 SITE NAME Inverawe (East) Etive 2

Case No 20210208 Inspector

Inspection under the Aquatic Animal Health (Scotland) Regulations 2009

The above site was inspected, in accordance with the Aquatic Animal Health (Scotland) Regulations 2009.

All epidemiological units were inspected. On this occasion no samples were taken for disease analysis. The Inspector did not observe any clinical signs associated with the listed diseases as described in the Aquatic Animal Health (Scotland) Regulations 2009.

Records

The surveillance frequency category of the site was assessed as high. An inspection under the Aquatic Animal Health (Scotland) Regulations 2009 will be conducted annually. The category of the site will be reassessed on a routine basis and updated as required.

The information required for the public record of aquaculture production businesses regarding this site was verified and where necessary updated. The following records were also inspected to ensure that the conditions of authorisation for your Aquaculture Production Business (APB) are being met:

Aquaculture animal and aquaculture animal product movement records were inspected and appeared to be adequately maintained.

Mortality records were inspected and found to be adequately maintained.

No mortality levels exceeding the reporting criteria have been recorded since the last inspection.

Reports detailing the results of animal health surveillance carried out by or on behalf of the business and/or Marine Scotland were available for inspection.

The biosecurity measures plan for the site was inspected and found to be adequately maintained and implemented.

Inspection under the Animals and Animal Products (Examination for Residues and Maximum Residue Limits) (England and Scotland) Regulations 2015

Medicine records were inspected and found to be adequately maintained.

Samples were taken to be analysed for veterinary residues.

Inspection under the Aquaculture and Fisheries (Scotland) Act 2007

The site was also inspected in accordance with the Aquaculture and Fisheries (Scotland) Act 2007, as amended, with respect to section 3 regarding parasites (sea lice), section 4 A regarding fish farm management agreements and statements and section 5 regarding containment and escapes.

On this occasion the site was found to be satisfactory with regards to parasites, fish farm management agreements and statements and containment and escapes.

Please contact myself or the duty inspector should you require any further information or have any queries regarding this report.



Signed:

charter/

Fish Health Inspector

The Fish Health Inspectorate Service Charter detailing standards of service is available on the Marine Scotland website at https://www.gov.scot/publications/fish-health-inspectorate-service-

Date: 25/10/2021

FHI 059, Version 13	Iss	sued by: FHI		Date of is	sue: 12/05/2020
Case No: 2021-0209			·	Date of visit: 1	5/06/2021
Time spent on site:	hours	M	lain Inspector:		
Site No: FS1112 Business No: FB0456	Site Name: Business Name:	Etive 4 Dawnfresh Farmin	ig Ltd		
Case Types: 1 ECI 2	2 CNI 3 SLI	4 VMD 5	5	6	
Water Temp (°C): 12.5	Thermometer No:	T155] '	FHI 045 complet	ed
Observations:	Region: ST	Water type:	S	CoGP MA:	M-36
Dead/weak/abnormally behaving Clinical signs of disease observed Gross pathology observed? Diagnostic samples taken?	•	N If yes, see add	ditional informa	ation/clinical sco ation/clinical sco ation/clinical sco	re sheet.
UNI/REG only - if unable to carry	out intended visit detail re	eason below:			

Additional Case Information:

Peaks in mortality - week 38 2020 - 3421 - seal damage 0.9% week 45 - 3254 - Handling - 0.9%

Site is continously stocked from pens split at other sites in the loch.

Water very murky, lots of fresh water present. fish looked in good condition, observed one or two fish with fin/tail damage.

All fish sampled for VMD appeared healthy and showed no clinical signs of disease.

FHI 059, Version 13		_	Iss	sued by: FHI	_		Date of issue	e: 12/05/2020	
Case No:	2021-0209		Site No:	FS1112	2				
Date of Visit:		15/06/202	21		Inspector(s)	:			
Registration/Author	risation Det	ails							
1. Business/site deta	ails summary	checked by	site represer	ntative?			Υ		
2. Changes made to	details?						N		
Site Details (includ	lo cloanor fic	sh for all so	ctions)						
Total No facilities	ie Cleaner nis	10	Facilities s	tocked	9	No facilitie	s inspected	9	
Species	RTR	RTR	RTR	looked		140 Idollitic	этгорестеа		
Age group	2019	2020	2021						
No Fish	251,534	197,253	94,304						
Mean Fish Wt	2.4kg	827g	679g						
Next Fallow Date (S		13th march		Next Input Da	ate (Site)	Not known	- See additio	nal	
Recent (last 4 wks)	,				Any escape			N	
If yes, detail:							,		
1. Movement records available for inspection? 2. Date of last inspection: 3. Are records complete and correctly entered? 4. Are movement records available for dead fish and waste? 5. Are records complete and correctly entered? 6. Are health certificates for introductions (outwith GB) available? Transport Records 1. Are any movements carried out by (or on behalf) of the business (not using a STB)? If yes, is there a system in place for maintenance of transportation records?									
Mortality Records									
1. Mortality records	available for	inspection?						Y	
2. How are mortalities	es disposed o	of?			Whole fish -	Dundas Che	emicals		
If other detail:									
3. Mortality records	•	d correctly er						Y	
4. Recent mortality (•			ks mortality - 35	10 fish. Low n	nortality			
5. Evidence of recer		* *						N	
If yes, facility nos/no	mortality pe	r facility/no s	tock per facili	ty/reason:					
O. A	(- P)	2 2. 1	.110					V	
6. Any other peaks i		0 1						Ť	
If yes, detail:	see addition			to yet or FUIO				N/A	
7. Have increased (If yes, detail action:	uriexpiairied)	mortalities t	еен геропеа	to vet of FHI?				IV/A	
	rants' haan ra	norted to El	-II2 If no onto	ar details on mor	tality events o	hoot		Y	
8. Have 'mortality events' been reported to FHI? If no, enter details on mortality events sheet.									

Treatments and Medic	cines Records				
1. Recent treatments (s					Y
If yes, detail:	TMS	Salmosan	Alphamax		_
If other, detail:	,	- Cammodan	7 11 11 11 11 11 11 11 11		
2. Medicines records av	ailable for inspection	?			Y
3. Are records complete	· · · · · · · · · · · · · · · · · · ·				Y
4. Are fish in a withdraw	•				Y
5. If yes, what treatmen	•		TMS	Salmosan	_
If other, detail:	-(0)			Camiledan	
6. Are medicines stored	l appropriately?				Y
0.740 11100101100 010100	appropriatory.				
Biosecurity Records					
Biosecurity records a	vailable for inspection	1?			Y
· ·	· ·		ording and sa	afe disposal been considered?	Ÿ
			_	sters or veterinary professional of any	,
increased (unexplained	•	•		icis of veterinary professional of any	Y
` .	•			picion of the presence of a listed dis-	
is detected been include					Y
				rm site been covered (equal or highe	r Y
health status, certification	•	alo belling stock	ica on the fai	mi site been covered (equal of highe	<u> </u>
modili otatao, commoditi	on in roganica).				
6. Have the bushandry	and hipsocurity mass	uras implaman	ated between	each epidemiological unit to minimi	Y Y
-	•	•		pment, live or dead fish etc.)?	
				ain the physical containment of	Y
aquaculture animals he		neasures in pia	ace to mainta	an the physical containment of	
8. Have the biosecurity		austely implem	nented on sit	to?	
If no, detail:	procedures been ade	quatery implem	nented on sit	1.6 :	
ii iio, actaii.					
Results of Surveilland					
1. Has any animal healt		arriad out by	or on bobalf o	of the business?	
·		•	or on benan c	or, the business?	<u> </u>
2. If yes, are results ava	·				N
3. Any significant results		aga problems)		_	IN
If yes, detail (if not deta	lied under recent dise	ase problems)			
	anda abaalis dheet		00/00/004	0.45/00/0004	
Rec	ords checked betwee	en.	28/03/2018	8-15/06/2021	

06/2021 Additional Sample Information:															
	all fish sampled for VMD appeared healthy and showed no clinical signs of disease.														
	0 Total Tests assigned 0														
0		Total Te	ests ass	igned	0										

FHI 059, Version 13		Issued by: FHI			Date of	of issue	: 12/05/2020
Case Number:	2021-0209		Site No:	FS1112		Insp:	
Date of Visit	15/06/2021		No of m	ovements/s	supp./dest.		Score
Live fish movements			0	1-5	6-10	>10	
Movements on (from out	Frequency of m	novements on from equivalent MS	0	5	10	14	0
with GB) of susceptible species		novements on from equivalent zone or	0	9	18	26	0
opened .	Number of sup	ncluding third country	0		10	14	0
Mariamanta aff							10
Movements off	Frequency of m		0		6	10	10
Exposure via water	Trambol of door	Site contacts			6-10		
Water contacts with other farms (holding species	Farm is protect disinfection or l	ed (secure water supply through porehole)	0				
susceptible to same diseases)		or in a coastal zone with category I n or within 1 tidal excursion	1	2	4		2
	farms upstream	or in a coastal zone with category III or within 1 tidal excursion	1	3	6		
		or in a coastal zone with category V or within 1 tidal excursion	1	4	8		
Management practices			None	Secure	Unsecure		
Water contacts with processors	Any processing	plant discharging into adjacent waters	0	1	2		0
On farm processing within the rules of the directive	No on farm pro	cessing	0				
	Processing own	n fish (re-cycling risk)	1				1
	Processing fish	from MS of equivalent status	2	1			
	Processing fish equivalent statu	from zone or compartment of us	4				
	Processing fish	from Category III farm	8				
	Processing fish	from Category V farm	10				
Disposal of fish and fish by-	Site's own was	te only processed.	0	1			
products	Common proce	esses with other farms	3				3
	Collection point	t for waste from other farms	5				
Use of unpasteurised feeds	No feeding of u	inpasteurised feed	0	,]			0
Too or anpaotounous roods	Feeding unpas		5				0
Biosecurity		Number of sites	1	J 2 or 3	≥ 4		
Contacts with other sites	Sites operating	from single shorebase	0	1	2		2
	Sites sharing s	taff and equipment	0	1	2		2
Disinfection of equipment between sites, use of	Yes		0				
footbaths etc	No		1				1
CoGP/Regulator							
Practices in accordance with regulator or industry	Yes		0				0
code of practice	No		3				
Platform access to cages	Yes		0]			0
	No		2				
					Total		24
					Rank		MEDIUM

Case No:	2021-0209	Site No: FS1112						
Sea Lice Inspection (Seawater Sites Only)							
1. Has the site experier	nced sea lice problems i	in the previous 4 years?	N					
2. Is the CoGP Farm M	lanagement Area (or equ	uivalent) fallowed synchronously on a single year class basis?	N					
		nced in-feed and bath sea lice medications (including deltamethrin, ell as access to suitable biological and/or mechanical control measures, and	Υ					
4. Is there a signed doo Management Area (or		ment agreement or statement relevant to the site and CoGP Farm	Υ					
5. Are sea lice count re	cords available for inspe	ection? (Legal SSI, CoGP Annex 6)	Υ					
6. Do records adequately reflect the required standard specified in the SSI and the CoGP? (Legal SSI, CoGP Annex 6)								
7. Are sea lice (<i>L. salmonis</i>) record levels below the suggested criteria for treatment in the CoGP during the period that records are inspected? (CoGP Annex 6)								
8. Have average adult female sea lice (<i>L. salmonis</i>) numbers per fish been at a level of 3 or above (prior to w/b 10/6/19) or N/A lf yes, have these been reported to the Fish Health Inspectorate? If no, FHI see comment.								
9. Is C. elongatus infes	station at a level which is	s considered to cause significant welfare problems? (CoGP 4.3.81, 5.3.50)	N					
-		tered or other actions taken when <i>L. salmonis levels</i> have exceeded the ongatus is considered to have welfare implications? (CoGP 4.3.82, 5.3.51)	Υ					
11. Has any other action been taken (where applicable)?								
12. Have therapeutic treatments or the actions taken had a significant impact upon the lice levels recorded?								
13. Are treatments, who	ere conducted, carried o	out in cooperation between participating farms?	Υ					
14. Is there a harvestin	g strategy for the site, w	here fewer populations or part populations are held without treatment for	Υ					
15. Is there a site spec	ific written lice managen	nent procedure with waypoints describing set actions to deal with recognised	Υ					
16. Do the sea lice leve	els observed on stocks r	eflect sea lice count data? If no please detail reasons.	Υ					
Containment Inspecti		a due to productore in the current or provious production evoluci	NI					
•		e due to predators in the current or previous production cycles?	IN V					
		e predation experienced on site? (Detail below)	Ī					
Top nets If other, detail below:	Seal pro nets	Dyneema nets Weighted down ropes						
ii otner, detail below.								
3 Have escape incide	nts or events been expe	erienced on or in the vicinity of the site since the last FHI inspection?	N					
	estions 4 – 9. If No skip t							
	ported to Scottish Minister	· ·						
•		thwith (where they exist)? (CoGP - 4.4.37, 5.4.17)						
		local fisheries trusts forthwith (where they exist)? (CoGP – 4.4.37, 5.4.17)						
7. Were methods (if an	y) used to recover escap	pees? If yes give detail						
8. If all note were deale	oved was this action par	eed with local wild fish interests and was permission given by Scottish						
Ministers? (Legal, CoG	iP – 4.4.38, 5.4.18)							
	•	nise the risk of further escapes? (Not covered in code but could						
	r satisfactory measure	•) /					
10. Is the site inspected	d as satisfactory with reg	gards to containment? If no, please detail reason(s)	Υ					

Issued by: FHI

FHI 059, Version 13

Date of issue: 12/05/2020

FHI 059, Version 13	Issued by: FHI	Date of issue: 12/05/2020
<u> </u>	Site No: FS1112	Date of 10000. 12/00/2020
2021 0200	Site No.	
Date of Visit: 15/06/2021	Inspector:	
Point of Compliance		
Is the farm under inspection located with the farm u	vithin a farm management area?	Y
If N, no further questions require complet		
•	Management Agreements and Statement	
2. Has a current farm management agree 3. Is the current FMAg/S available for ins	ement or statement (FMAg/S) been prepar	ed?
 Is the current FMAg/S available for its Does the FMAg/S identify the relevant 	•	V
5. Does the FMAg/S identify the fish farm	<u> </u>	У
- · · · · · · · · · · · · · · · · · · ·	commencement of the agreement or staten	nent? y
Does the FMAg/S identify the date of r	eview?	у
Arrangements for Fish Health Manage	ement	
	m health standards for the stocks to be intro	oduced to the area or y
farm?		
•	tion requirements for stocks held in the are	
	s of fish which may be stocked into the area	
individual farm?	um stocking density of any pen on any farn	n in the area or the
	ements for the storage and disposal of any	dead fish from any
fish farm in the area or the individual far	m?	
Arrangements for The Management of	f Sea Lice	
13. Does the FMAg/S identify arrangeme	ents for the sharing of data on sea lice num	bers and treatments?
14 Doos the EMAG/S identify the evailab	sility and the use of medicines on forms on	vored by the agreement
of statement?	oility and the use of medicines on farms cov	y the agreement
15. Does the FMAg/S identify any require	ements for the sensitivity testing of available	e treatments for sea
lice on farms in the area or individual farr		
Does the FMAg/S identify the circums used on farms in the area or individual fa	stances under which biological controls and	d cleaner fish are to be
	ements for synchronous treatments on farn	ns within the area?
2000 the Fifth 19, 0 facility the arrange	smerie for synomenous treatments on fam	j j
Live Fish Movements		
18. Does the FMAg/S identify the circums area or farm?	stances when live fish may be introduced of	
	ements for the movement of live fish on an	d off sites in the area
or individual farms?		<i>j</i>

FHI 059, Version 13	Issued by: FHI	Date of issue: 12/05/2020
Harvesting 20. Does the FMAg/S identify acceptable	harvest practices on farms in the area or indivi	idual farms?
Fallowing 21. Does the FMAg/S identify the dates b date when a farm or area may be restock	y which the area or individual farm will be fallowed?	w and the earliest y
22. Does the FMAg/S identify whether on agreement or statement?	e or more year classes may be stocked onto si	ites covered by the y
•	podstock or potential broodstock are to be kept	t on any site y
Point of Compliance for Farm Manager 24. Does the farm management agreeme parties to the agreement?	ment Agreements Only ent include arrangements for persons to becom	ne, or cease to be,
Management and operation 25. Is the fish farm being managed and o 26. What is the version no/date of issue of	perated in accordance with the agreement or so of the FMAg/S? 06/05/2020 - no8	statement? y

0 N	2004 2002	_			45/00/04	204		
Case No:	2021-0209	J		Date of vi	sit: 15/06/20	J21		
Site No:	FS1112]		Inspec	tor:			
Results Summary	Freq.				Date of Noti	fication		
results Summary	1 104.	Databas	e Insp	Phone	Insp	Writing	Insp	2 nd Insp
								2 11100
					_			
		1						
	-							
Report Summary								
Case Type	Date	Insp	2 nd Insp					
ECI CNI SLI VMD	25/10/2021							
	+							
Ì								





FISH HEALTH INSPECTORATE VISIT REPORT

SUMMARY FOR INFORMATION OF SITE OPERATOR

 Business No
 FB0456
 Date of Visit
 15/06/2021

 Site No
 FS1112
 Site Name
 Etive 4

 Case No
 20210209
 Inspector

Inspection under the Aquatic Animal Health (Scotland) Regulations 2009

The above site was inspected, in accordance with the Aquatic Animal Health (Scotland) Regulations 2009.

All epidemiological units were inspected. On this occasion no samples were taken for disease analysis. The Inspector did not observe any clinical signs associated with the listed diseases as described in the Aquatic Animal Health (Scotland) Regulations 2009.

Records

The surveillance frequency category of the site was assessed as medium. An inspection under the Aquatic Animal Health (Scotland) Regulations 2009 will be conducted every second year. The category of the site will be reassessed on a routine basis and updated as required.

The information required for the public record of aquaculture production businesses regarding this site was verified and where necessary updated. The following records were also inspected to ensure that the conditions of authorisation for your Aquaculture Production Business (APB) are being met:

Aquaculture animal and aquaculture animal product movement records were inspected and appeared to be adequately maintained.

Mortality records were inspected and found to be adequately maintained.

Reports detailing the results of animal health surveillance carried out by or on behalf of the business and/or Marine Scotland were available for inspection.

The biosecurity measures plan for the site was inspected and found to be adequately maintained and implemented.

Inspection under the Animals and Animal Products (Examination for Residues and Maximum Residue Limits) (England and Scotland) Regulations 2015

Medicine records were inspected and found to be adequately maintained.

Samples were taken to be analysed for veterinary residues.

Inspection under the Aquaculture and Fisheries (Scotland) Act 2007

The site was also inspected in accordance with the Aquaculture and Fisheries (Scotland) Act 2007, as amended, with respect to section 3 regarding parasites (sea lice), section 4A regarding fish farm management agreements and statements and section 5 regarding containment and escapes.

On this occasion the site was found to be satisfactory with regards to parasites, fish farm management agreements and statements and containment and escapes.

Please contact myself or the duty inspector should you require any further information or have any queries regarding this report.

Signed:

Fish Health Inspector

Date: 25/10/2021

The Fish Health Inspectorate Service Charter detailing standards of service is available on the Marine Scotland website at https://www.gov.scot/publications/fish-health-inspectorate-service-charter/

FHI 059, Version 13		Issued by: FHI	Date of issue: 12/05/2020				
Case No: 2021-0210			Date of visit: 15/06/2021				
Time spent on site:	hours	Main Ir	nspector:				
Site No: FS1288 Business No: FB0456	Site Name: Business Name:	Etive 6 Dawnfresh Farming Ltd	1				
Case Types: 1 ECI	2 CNI 3 SLI	4 VMD 5	6				
Water Temp (°C): 12.2	Thermometer No:	T155	FHI 045 completed				
Observations:	Region: ST	Water type: S	CoGP MA: M-36				
Dead/weak/abnormally behaving Clinical signs of disease observe Gross pathology observed? Diagnostic samples taken?	•	N If yes, see addition	nal information/clinical score sheet. nal information/clinical score sheet. nal information/clinical score sheet.				
UNI/REG only - if unable to carry out intended visit detail reason below:							

Additional Case Information:

all fish sampled for VMD appeared healthy and showed no clinical signs of disease.

Peaks in mortality

Week 9 - 2020 - 4939 - Seal - 0.97% week 3 - 2020 - 4567 seal - 0.85%

Water was murky on site, lots of fresh water present in the loch. Fish appeared to be in good condition.

FHI 059, Version 13			Issu	ed by: FHI			Date of issu	e: 12/05/2020
Case No:	2021-0210		Site No:	FS1288				
Date of Visit:		15/06/2021]		Inspector(s)):		I
Registration/Author	risation Deta	ails						
1. Business/site deta			site representa	ative?			Υ	1
2. Changes made to	details?	·					Υ]
Site Details (includ	le cleaner fis	h for all sect	ions)					
Total No facilities	ic cicarici iis	10 411 300	Facilities sto	ocked	7	No faciliti	ies inspected	7
Species	RTR	RTR	i dominos sta	I		110 1001111		
Age group	2018	2019						
No Fish	305,180	254,082						
Mean Fish Wt	3.5jg	2.4kg						
Next Fallow Date (S		march 2022		Next Input Da	ate (Site)	Apr-20		
Recent (last 4 wks)					Any escape		t visit)?	N
If yes, detail:				•	,,	(- · · · · · · · · · · · · · · · · · · ·	
 Are movement re Are records comp Are health certific Transport Records Are any movement yes, is there a sys 	olete and corr ates for introd a ts carried ou	ectly entered ductions (outv	? vith GB) availa chalf) of the bu	able? usiness (not us	_			Y
Mortality Records								
Mortality records		•				<u> </u>		Y
2. How are mortalitie	es disposed d	f? 			Whole fish	- Dundas Ci	nemicals	
If other detail:			10					
3. Mortality records		correctly ent		. !!: 0000				Ŷ
4. Recent mortality (tuminal manuta		mortality 2032	2 - Iow mortal	ity		N
5. Evidence of recer		• •		//				N
If yes, facility nos/no	mortality per	Tacility/no sto	ock per facility	/reason:				
6. Any other peaks i	n mortality du	ring period cl	necked?					Y
If yes, detail:	see addition							
7. Have increased (unexplained)	mortalities be	en reported to	vet or FHI?				N/A
If yes, detail action:			10.16					N1/A
8. Have 'mortality ev	vents' been re	ported to FH	? If no, enter	details on mort	tality events s	sheet.		N/A

Treatments and Medic								
 Recent treatments (s If yes, detail: 		Alphamay						
If other, detail:	TMS Salmos	an Alphamax						
2. Medicines records av	vailable for inspection?							
	e and correctly entered?				Ÿ			
4. Are fish in a withdraw	•				Ÿ			
5. If yes, what treatmen	•	TMS	Salmosan	Alphamax				
If other, detail:	1(0):	TIVIO	Calliosan	Лірпаттах				
6. Are medicines stored	1 appropriately?				Y			
0.7110 111001011100 010.00	тарргора.с.у.							
Biosecurity Records								
1. Biosecurity records a	vailable for inspection?				У			
2. Has the manner and frequency of mortality removal, recording and safe disposal been considered?								
3. Has the manner and period in which the APB will notify Scottish Ministers or veterinary professional of any								
increased (unexplained) mortality at the site been included?								
4. Has the action that w	vill be taken in the event that the	presence or susp	oicion of the pre	sence of a listed disease	e			
is detected been include	ed and <i>how</i> and <i>when</i> that will	be notified to Scot	ttish Ministers?		у			
	s of aquaculture animals being s	tocked on the farr	m site been cov	rered (equal or higher	у			
health status, certification	on if required)?							
•	and biosecurity measures imple		•	_	У			
	been covered (movement of st			•				
	ailable regarding the measures i	n place to maintai	in the physical o	containment of	У			
aquaculture animals he		Tlamentad on site			V			
If no, detail:	procedures been adequately im	piernenteu on site	9?		У			
II IIo, uetaii.								
Results of Surveillance	•							
	th surveillance been carried out	by or on behalf o	f the business?	>	Y			
2. If yes, are results ava		by, c. c. c. bona. c	, 110 20011222		Y			
3. Any significant results	•				N			
	iled under recent disease proble	ems).						
Rec	cords checked between:	12/11/2018	-15/06/2021					

ы	HI 059, Version 13							ISS	uea by:	гпі			
	Case no:	2021-02	210	Site No:		FS1288			Date of Samplin		15/0	06/2021	15/(
	Priority samples:	VI		ВА		PA		MG		g. HI			
	Time sampling starts/ends:	12:0	0:00	12:3	0:00		Inspecto	or:			VMD No). [5
	Environmental conditions:	1	Calm	2		3		4		5			
	Summary samples	HIST		ВА		MG		VI		PA		Total Sa	mples
Α	dd Fish/Pools - click												
	Pool/Fish No												
	Fish nos	1											
	Pool Group												
	Species	RTR											
	Average weight	3.5kg											
	Sex	Mixed											
	Water Type	SW											
		Φ											
Details		rocks lodge											
je (0 8											
		8											
Stock	Stock Origin												
Ċ,	Facility No	S10											

06/2021	06/2021 Additional Sample Information:											
	all fish sampled for VMD appeared healthy and showed no clinical signs of disease.											
0	J	Total To	ests ass	igned	0							

FHI 059, Version 13		Issued by: FHI			Date of	of issue	: 12/05/2020
Case Number:	2021-0210		Site No:	FS1288		Insp:	
Date of Visit	15/06/2021		No of m	ovements/s	supp./dest.		Score
Live fish movements			0	1-5	6-10	>10	
Movements on (from out	Frequency of m	novements on from equivalent MS	0	5	10	14	5
with GB) of susceptible species		novements on from equivalent zone or	0	0	4.0	26	
Species	Number of sup	ncluding third country	0		18 10	26 14	5
				-	ļ		40
Movements off	Frequency of m		0		6 6	10	3
Exposure via water	Individues	Site contacts			6-10		
Water contacts with other	Farm is protect	ed (secure water supply through					
farms (holding species	disinfection or l	porehole)	0				
susceptible to same diseases)		or in a coastal zone with category I n or within 1 tidal excursion	1	2	4		2
		or in a coastal zone with category III or within 1 tidal excursion	1	3	6		
		or in a coastal zone with category V	1	4	8		
Managament prostings	namio apotroan	TOT WILLIAM T HACE OXOGIOION	None	Cagura			
Management practices Water contacts with	Any processing	plant discharging into adjacent waters	None	Secure	Unsecure		
processors	Any processing	g plant discharging into adjacent waters	0	1	2		0
On farm processing within the rules of the directive	No on farm pro	cessing	0				
	Processing own	n fish (re-cycling risk)	1				1
	Processing fish	from MS of equivalent status	2				
		from zone or compartment of					
	equivalent state	us n from Category III farm	4				
		n from Category V farm	8				
			10				
Disposal of fish and fish by- products			0				
products		esses with other farms	3				3
	Collection poin	t for waste from other farms	5				
Use of unpasteurised feeds	No feeding of u	inpasteurised feed	0	1			0
	Feeding unpas	teurised feed	5				
Biosecurity		Number of sites	1	2 or 3	≥ 4		
Contacts with other sites	Sites operating	from single shorebase	0	1	2		2
	Sites sharing s	taff and equipment	0	1	2		2
Disinfection of equipment	Yes		0				
between sites, use of footbaths etc	No		1				1
CoGP/Regulator							
Practices in accordance	Yes		0				0
with regulator or industry code of practice	No		3				
Platform access to cages	Yes		0				0
	No		2				
					Total Rank		34 HIGH

FHI 059, Version 13	Issued by: FHI	Date of issue: 12/05/2020
Case No: 2021-0210	Site No:	FS1288
Sea Lice Inspection (Seawater Sites Only)		
1. Has the site experienced sea lice problems	in the previous 4 years?	N
·	quivalent) fallowed synchronously on a single ye	ear class basis?
3. Does the site have access to a range of lice	enced in-feed and bath sea lice medications (incl well as access to suitable biological and/or mech	uding deltamethrin,
4. Is there a signed documented farm management Area (or equivalent)?	ement agreement or statement relevant to the sit	e and CoGP Farm
5. Are sea lice count records available for ins	pection? (Legal SSI, CoGP Annex 6)	Y
6. Do records adequately reflect the required	standard specified in the SSI and the CoGP? (Le	egal SSI, CoGP Annex 6)
7. Are sea lice (<i>L. salmonis</i>) record levels bel records are inspected? (CoGP Annex 6)	ow the suggested criteria for treatment in the Co	GP during the period that N
8. Have average adult female sea lice (L. salı	monis) numbers per fish been at a level of 3 or al	bove (prior to w/b 10/6/19) or N
If yes, have these been reported to the Fish H	lealth Inspectorate? If no, FHI see comment.	N/A
9. Is C. elongatus infestation at a level which	is considered to cause significant welfare proble	ms? (CoGP 4.3.81, 5.3.50) N
·	stered or other actions taken when <i>L. salmonis le elongatus</i> is considered to have welfare implication	
11. Has any other action been taken (where a	applicable)?	Y
12. Have therapeutic treatments or the action	s taken had a significant impact upon the lice lev	els recorded?
13. Are treatments, where conducted, carried	out in cooperation between participating farms?	Y
14. Is there a harvesting strategy for the site,	where fewer populations or part populations are	held without treatment for Y
15. Is there a site specific written lice manage	ement procedure with waypoints describing set ac	ctions to deal with recognised Y
16. Do the sea lice levels observed on stocks	reflect sea lice count data? If no please detail re	asons. Y
Containment Inspection		dustion ovalog?
	ge due to predators in the current or previous pro	duction cycles?
	he predation experienced on site? (Detail below)	yueighted down rence
Seal pro nets dyneema nets If other, detail below:	ADD's top nets	weighted down ropes
ii otilei, detaii below.		
3 Have escape incidents or events been even	perienced on or in the vicinity of the site since the	last FHI inspection?
If Yes proceed with questions 4 – 9. If No skip	•	Task I I II II I I I I I I I I I I I I I I
4. Have these been reported to Scottish Minis		
·	orthwith (where they exist)? (CoGP - 4.4.37, 5.4.	17)
·	d local fisheries trusts forthwith (where they exist)	
7. Were methods (if any) used to recover esc	apees? If yes give detail	
8. If gill nets were deployed was this action ac Ministers? (Legal, CoGP – 4.4.38, 5.4.18)	greed with local wild fish interests and was permis	ssion given by Scottish
9. What action was taken to prevent and mini	mise the risk of further escapes? (Not covered in	code but could
be considered under satisfactory measur	res of the Act)	
	egards to containment? If no, please detail reaso	n(s)

FHI 059, Version 13	Issued by: FHI	Date of issue: 12/05/2020
·	Site No: FS1288	Date of 18848. 12/06/2020
2021 0210	ORE 140.	
Date of Visit: 15/06/2021	Inspector:	
Point of Compliance		
1. Is the farm under inspection located w	within a farm management area?	Y
If N, no further questions require comple		<u> </u>
·	Management Agreements and Stateme	
	eement or statement (FMAg/S) been prep	pared?
Is the current FMAg/S available for instance the current forms.Does the FMAg/S identify the relevant	•	y V
 Does the FMAg/S identify the fish farm 	_	у У
	commencement of the agreement or stat	tement?
7. Does the FMAg/S identify the date of	review?	У
Arrangements for Fish Health Manage	amant	
	m health standards for the stocks to be in	ntroduced to the area or
farm?		
•	ation requirements for stocks held in the a	
•	es of fish which may be stocked into the a	
11. Does the FMAg/S identify the maxim individual farm?	num stocking density of any pen on any fa	arm in the area or the
Does the FMAg/S identify the arrang fish farm in the area or the individual far	gements for the storage and disposal of a	ny dead fish from any
nsii iaiiii iii tile alea oi tile ilidividdal iai	1111 ?	
Arrangements for The Management o	of Sea Lice	
13. Does the FMAg/S identify arrangement	ents for the sharing of data on sea lice nu	umbers and treatments?
14. Does the FMAg/S identify the availab	bility and the use of medicines on farms o	covered by the agreement
of statement?		
	rements for the sensitivity testing of availa	able treatments for sea
lice on farms in the area or individual far		
16. Does the FMAg/S identify the circum used on farms in the area or individual fa	nstances under which biological controls a arms?	and cleaner fish are to be y
	gements for synchronous treatments on fa	arms within the area?
Live Fish Movements	notonogo whom live figh may be introduced	d or removed from the
18. Does the FMAg/S identify the circum area or farm?	nstances when live fish may be introduced	
	gements for the movement of live fish on a	and off sites in the area
or individual farms?		

FHI 059, Version 13 Issued by: FHI	Date of issue: 12/05/2020
Harvesting 20. Does the FMAg/S identify acceptable harvest practices on farms in the area or individual.	dual farms?
Fallowing 21. Does the FMAg/S identify the dates by which the area or individual farm will be fallow date when a farm or area may be restocked?	v and the earliest y
date when a farm or area may be restocked? 22. Does the FMAg/S identify whether one or more year classes may be stocked onto sit agreement or statement?	tes covered by the y
23. Does the FMAg/S identify whether broodstock or potential broodstock are to be kept covered by the agreement or statement?	on any site y
Point of Compliance for Farm Management Agreements Only 24. Does the farm management agreement include arrangements for persons to become parties to the agreement?	e, or cease to be,
Management and operation 25. Is the fish farm being managed and operated in accordance with the agreement or so 26. What is the version no/date of issue of the FMAg/S? 06/05/2020 no8	tatement? y

Case No:	2021-0210			Date of visit:	15/06/2021					
Site No:	FS1288]	Inspector:							
Results Summary	Freq.			Date of Notification						
,	,	Database	Insp	Phone	Insp	Writing	Insp	2 nd Insp		
							-			
Report Summary				1						
Case Type	Date	Insp	2 nd Insp							
ECI, SLI, CNI VMD	25/10/2021		2 11130							
, ,										





FISH HEALTH INSPECTORATE VISIT REPORT

SUMMARY FOR INFORMATION OF SITE OPERATOR

 Business No
 FB0456
 Date of Visit
 15/06/2021

 Site No
 FS1288
 Site Name
 Etive 6

 Case No
 20210210
 Inspector

20210210 mor 2010K

Inspection under the Aquatic Animal Health (Scotland) Regulations 2009

The above site was inspected, in accordance with the Aquatic Animal Health (Scotland) Regulations 2009.

All epidemiological units were inspected. On this occasion no samples were taken for disease analysis. The Inspector did not observe any clinical signs associated with the listed diseases as described in the Aquatic Animal Health (Scotland) Regulations 2009.

Records

The surveillance frequency category of the site was assessed as high. An inspection under the Aquatic Animal Health (Scotland) Regulations 2009 will be conducted annually. The category of the site will be reassessed on a routine basis and updated as required.

The information required for the public record of aquaculture production businesses regarding this site was verified and where necessary updated. The following records were also inspected to ensure that the conditions of authorisation for your Aquaculture Production Business (APB) are being met:

Aquaculture animal and aquaculture animal product movement records were inspected and appeared to be adequately maintained.

Mortality records were inspected and found to be adequately maintained.

Reports detailing the results of animal health surveillance carried out by or on behalf of the business and/or Marine Scotland were available for inspection.

The biosecurity measures plan for the site was inspected and found to be adequately maintained and implemented.

Inspection under the Animals and Animal Products (Examination for Residues and Maximum Residue Limits) (England and Scotland) Regulations 2015

Medicine records were inspected and found to be adequately maintained.

Samples were taken to be analysed for veterinary residues.

Inspection under the Aquaculture and Fisheries (Scotland) Act 2007

The site was also inspected in accordance with the Aquaculture and Fisheries (Scotland) Act 2007, as amended, with respect to section 3 regarding parasites (sea lice), section 4A regarding fish farm management agreements and statements and section 5 regarding containment and escapes.

On this occasion the site was found to be satisfactory with regards to parasites, fish farm management agreements and statements and containment and escapes.

Please contact myself or the duty inspector should you require any further information or have any queries regarding this report.

Ciab Haalth Inanaata

Signed:

Fish Health Inspector

The Fish Health Inspectorate Service Charter detailing standards of service is available on the Marine Scotland website at https://www.gov.scot/publications/fish-health-inspectorate-service-charter/

Date: 25/10/2021

FHI 059, Version 13		Issued by: FHI	Date of issue: 12/05/2020
Case No: 2021-0217			Date of visit: 22/06/2021
Time spent on site:	h	Main In:	spector:
Site No: fs1245 Business No: FB0544	Site Name: Business Name:	Tayside Scotland	
Case Types: 1 REP	2DIA 3	4 5	6
Water Temp (°C): 12.7	Thermometer No:	T173	FHI 045 completed
Observations:	Region: TA	Water type: B	CoGP MA
Dead/weak/abnormally behaving Clinical signs of disease observed Gross pathology observed? Diagnostic samples taken?		y If yes, see additiona	al information/clinical score sheet. al information/clinical score sheet. al information/clinical score sheet.
UNI/REG only - if unable to carry	out intended visit deta	il reason below:	

Additional Case Information:

The North Esk was visited following reports of a large number of dead salmon being observed in a stretch of river (NO 60127 70736)

Saprolegnia reported to be evident late April onwards. Three moribund fish were observed in the pool however only one could be caught for sampling.

Over 100 mortalities were counted the previous week but a high number have been predated on. Over a dozen dead fish were counted in the pools.

It was reported that saprolegnia was observed on many of the mortalities mainly around the mouth and gills, the fish that was sampled was lethargic with some haemorrhaging and lesions but only a minor saprolegnia infection was evident, the gill filaments were zoned in appearance with very pale tips. Internally the heart was slightly swollen and spleenomegally was evident.

FHI 059, Version 13	3		Issu	ed by: FHI			Date of issue	e: 12/05/2020		
Case No:	2021-0217		Site No:	fs1245						
Date of Visit:		22/06/2021	l		Inspector(s):					
Registration/Authornal 1. Business/site det 2. Changes made to	tails summary		ite representa	ative?						
Site Details (inclu	de cleaner fisl	n for all secti	ons)			_				
Total No facilities			Facilities sto	cked		No facilitie	s inspected			
Species										
Age group										
No Fish										
Mean Fish Wt										
Next Fallow Date (S				Next Input Da						
Recent (last 4 wks)	disease proble	ems?			Any escapes	(since last	visit)?			
If yes, detail:										
4. Are movement re 5. Are records com 6. Are health certific Transport Record 1. Are any moveme	Are records complete and correctly entered? Are movement records available for dead fish and waste? Are records complete and correctly entered? Are health certificates for introductions (outwith GB) available? Transport Records Are any movements carried out by (or on behalf) of the business (not using a STB)? Tyes, is there a system in place for maintenance of transportation records?									
Mortality Records										
Mortality records	available for in	spection?								
2. How are mortaliti		•								
If other detail:										
3. Mortality records	complete and	correctly ente	ered?							
4. Recent mortality	(last 4 wks):									
Evidence of rece	nt increased/a	typical mortal	ities?							
If yes, facility nos/no	o mortality per	facility/no sto	ck per facility	/reason:						
6. Any other peaks	in mortality du	ring period ch	ecked?							
If yes, detail:										
7. Have increased (nortalities be	en reported to	vet or FHI?						
If yes, detail action:										
8. Have 'mortality e	vents' been rep	orted to FHI	? If no, enter	details on mort	ality events sh	neet.				

Treatments and Medicines Records								
1. Recent treatments (see comment)?								
If yes, detail:								
If other, detail:								
2. Medicines records available for inspection?								
3. Are records complete and correctly entered?								
4. Are fish in a withdrawal period?								
5. If yes, what treatment(s)?								
If other, detail:								
6. Are medicines stored appropriately?								
Biosecurity Records								
1. Biosecurity records available for inspection?								
2. Has the manner and frequency of mortality removal, recording and safe disposal been considered?								
3. Has the manner and period in which the APB will notify Scottish Ministers or veterinary professional of any								
increased (unexplained) mortality at the site been included?								
4. Has the action that will be taken in the event that the presence or suspicion of the presence of a listed disease								
is detected been included and how and when that will be notified to Scottish Ministers?								
5. Has the health status of aquaculture animals being stocked on the farm site been covered (equal or higher								
health status, certification if required)?								
6. Have the husbandry and biosecurity measures implemented between each epidemiological unit to minimise								
transmission of disease been covered (movement of staff, visitors, equipment, live or dead fish etc.)?								
7. Is documentation available regarding the measures in place to maintain the physical containment of								
aquaculture animals held on site?								
8. Have the biosecurity procedures been adequately implemented on site?								
If no, detail:								
Results of Surveillance								
1. Has any animal health surveillance been carried out by, or on behalf of, the business?								
2. If yes, are results available for inspection?								
3. Any significant results?								
If yes, detail (if not detailed under recent disease problems).								
Records checked between: n/a								

Г	HI 059, Version 13							iss	ued by: FH	ı			
	Case no:	2021-02	217	Site No:		fs1245			Date of visi Sampling:	it/	22/	06/2021	22/0
	Priority samples:	VI		ВА		PA		MG		HI			
	Time sampling starts/ends:		5:00		0:00		Inspecto	or:			VMD No	o.	
	Environmental conditions:	1	Sunny	2	Dry	3	Calm	4	_	5			
	Summary samples	HIST	Y	ВА	Y	MG	Y	VI		PA	Y	Total Sa	mples
A	dd Fish/Pools - click												
г	Pool/Fish No	F1	P1										
Г	Fish nos	1	1										
	Pool Group	P1	P1										
	Species	SAL	SAL										
	Average weight	3.5kg	3.5kg										
	Sex	N/A	N/A										
	Water Type	FW	FW										
<u></u>		쑰	l sk										
Details	1	T E	부										
×	Stock Origin	North Esk	North Esk										
Stock	Facility No	N/A	N/A										
U,	i domey 140	IN//	IN/A										

06/2021 Additional Sample Information: MG storage samples were taken as part of RSD sample: RNA 1 x sample of affected red skin through to muscle, 1 x gill sample and one duplicate kidney and heart sample. DNA 1 x gill sample and 1 x lesion sample through to muscle. Total Tests assigned 14

FHI 059, Version 13 Issued by: FHI Date of issue: 12/05/2020

Case no:	2021-0217]	Site No:		fs1245		Method of killing: P		Percus	Percussive		
Date of visit:	22/06/2021]	Inspect	tor(s):				Sheet Rele			evant: Y	
S for strong presen	ce: M for medium presence: W for	weak pres	ence									
Fish Number		1										
Time sampled after	er death (if > 45 minutes)											
External Signs					$\overline{}$							
Behaviour	Moribund	M S										
	Lethargic Hanging vertical	3										
	Spiralling											
	Flashing											
	Loss of equilibrium											
Body	Dark	M										
	Distended abdomen											
	Anorexic											
	Scale Oedema											
Opercula	Shortened											
Haemorrhaging	Flared Throat											
nacmonnaging	Ventrum											
	Base of fins	М										
	Elsewhere	M										
Eyes	Exophthalmic											
	Enophthalmic (sunken)											
	Cataract											
	Haemorrhagic											
Gills	Pale											
	Zoned	S W										
Lesions	Necrotic Flank	W										
Lesions	Elsewhere	W										
Vent	Inflamed											
	Trailing faeces											
Lice Load	Estimate numbers											
Internal Signs												
Ascites	Clear											
	Bloody											
Oedema	In tissues											
Heart	Pale/anaemic											
	Granulomas Deformed	W										
Liver	Petechial haem	VV										
LIVEI	Gross haem											
	Tissue breakdown											
	Enlarged											
	Colour number(s)	4										
	Granulomas											
Didanic	Lesions											
Pyloric caeca	Petechial haem											
	Tubules mauve Lack of fat											
Spleen	Enlarged	S										
	Granulomas	M										
Gut	No food present											
	Yellow pseudo-faeces											
	External haem											
	Internal haem											
Body wall	Haemorrhaging											
Swim bladder	Haemorrhaging Fluid filled											
Kidney	Swollen											
Mulicy	Grey											
	Granular											
	Liquefied											
General	Parasites present											
	Anaemia											

Case no: 2021-0217

Date of visit: 22/06/2021

Date of visit.	22/00/202	411				
S for strong prese	nce: M for medium presence: W fo	ги				
Fish Number	,	T T	_			Г
	ter death (if > 45 minutes)					
External Signs	tor usual (ii > 40 minutos)					
Behaviour	Moribund					
2011411041	Lethargic					
	Hanging vertical					
	Spiralling					
	Flashing					
	Loss of equilibrium					
Body	Dark					
	Distended abdomen					
	Anorexic					
	Scale Oedema					
Opercula	Shortened					
•	Flared					
Haemorrhaging	Throat					
	Ventrum					
	Base of fins					
	Elsewhere					
Eyes	Exophthalmic					
	Enophthalmic (sunken)					
	Cataract					
	Haemorrhagic					
Gills	Pale					
	Zoned					
	Necrotic					
Lesions	Flank					
	Elsewhere					
Vent	Inflamed					
	Trailing faeces					
Lice Load	Estimate numbers					
Internal Signs						
Ascites	Clear					
	Bloody					
Oedema	In tissues					
Heart	Pale/anaemic					
	Granulomas					
	Deformed					
Liver	Petechial haem					
	Gross haem					
	Tissue breakdown					
	Enlarged					
	Colour number(s)					
	Granulomas					
	Lesions					
Pyloric caeca	Petechial haem					
	Tubules mauve					
	Lack of fat					
Spleen	Enlarged					
	Granulomas					
Gut	No food present					
	Yellow pseudo-faeces					
	External haem					
	Internal haem					
Body wall	Haemorrhaging					
Swim bladder	Haemorrhaging					
	Fluid filled					
Kidney	Swollen					
	Grey					
	Granular					
	Liquefied					
General	Parasites present					
	Anaemia					

FHI 059, Version 13	Issued by: FHI	Date of issue: 12/05/2020
Additional comments:		
Small lesions on the tail, flank and around th	e head.	

Case No: 2021-0217 Date of visit: 22/06/2021 Site No: fs1245 Inspector: Results Summary Freq. **Date of Notification** Database Phone Insp Writing 2nd Insp Insp Insp 13/09/2021 MG IHN 0/0 29/06/2021 20/07/2021 29/06/2021 MG IPN 0/0 13/09/2021 20/07/2021 MG SAV 0/0 29/06/2021 20/07/2021 13/09/2021 13/09/2021 MG VHS 0/0 29/06/2021 20/07/2021 Anisakis sp. 1/1 29/06/2021 20/07/2021 13/09/2021 GS 0/1 29/06/2021 20/07/2021 13/09/2021 20/07/2021 13/09/2021 **PSFL** 1/1 07/07/2021 07/07/2021 **GPAT** 1/1 13/09/2021 20/07/2021 SKIN 1/1 07/07/2021 20/07/2021 13/09/2021 13/09/2021 MG AGD 0/1 01/09/2021 01/09/2021 MG Paranucleospora 1/1 01/09/2021 01/09/2021 13/09/2021 theridion MG Salmon gill 1/1 01/09/2021 01/09/2021 13/09/2021 poxvirus Report Summary 2nd Insp Case Type Date Insp 03/09/2021 DIA





FISH HEALTH INSPECTORATE VISIT REPORT

SUMMARY FOR INFORMATION OF SITE OPERATOR

 Business No
 FB0544
 Date of Visit
 22/06/2021

 Site No
 FS1245
 Site Name
 Tayside

 Case No
 20210217
 Inspector

Section 1: Summary

The North Esk river was visited due to reports of dead and moribund fish being observed. One fish was caught by hand net in a pool and removed for further examination and subsequent diagnostic sampling.

Histopathology examination revealed very mild, focal, proliferative gill pathology and mild ulcerative dermatitis. Gill tissue samples tested positive for *Salmon gill poxvirus* and *Paranucleospora theridion* by *QPCR*.

No parasites were observed on the fin but two white Anisakid worms, consistent with *Anisakis* sp., were observed free in the musculature and dermis around the vent opening.

Pseudomonas fluorescens was identified on plates taken from lesion and gill material, this bacterium would not be implicated in morbidity in this case.

Please contact myself or the duty inspector should you require any further information, have any queries regarding this report or if any problems develop.

Section 2: Case Detail

Observations

The North Esk was visited following reports of a large number of dead salmon being observed in a stretch of river (NO 60127 70736). A meeting was arranged with the director of the Esk River and Fisheries Trust to investigate the mortality event and attempt to catch and sample moribund fish.

Saprolegnia was reported to be evident from late April onwards. However, the majority of these fish had died and been predated on by the time of the inspection. On inspection of a stretch of river, a number of dead fish were observed along with three moribund fish in a pool, one was caught for further examination and subsequent diagnostic sampling.

The fish sampled was moribund, lethargic and appeared dark. There was haemorrhaging evident on the base of the fins and small lesions on the tail, flank and around the head. The gills appeared zoned and necrotic.

Internally, the heart appeared slightly deformed and splenomegaly was evident with some granulomas also present.

R09

Samples

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

r	Fish number	Species	Stage	Origin
	1	Atlantic Salmon	Grilse/Broodstock	North Esk

Results

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

The following bacteria were isolated from the fish:

Pseudomonas fluorescens

Virology: Tissue samples were tested for segments of nucleic acid indicative of the presence of the pathogens specified below using real-time PCR (qPCR).

Salmon gill poxvirus

Fish Number	Endogenous control Cp value		Reported Result (PCR)		
F1	19.9	34.75	34.56	34.88	Positive

Due to failure of the endogenous control, tests for the following pathogens were inconclusive, infectious haematopoietic necrosis virus (IHNV), infectious pancreatic necrosis virus (IPNV), salmonid alphavirus (SAV) and viral haemorrhagic septicemia virus (VHSV).

A general screen was conducted on tissue samples to test for the presence of viral pathogens by cell culture. The result of this test was negative.

Parasitology: A fin was collected to determine the presence of *Gyrodactylus salaris* using light microscopy. No *G. salaris* parasites were detected in the samples examined.

A sample of vent was collected to determine the presence of parasites. Two white Anisakid worms, consistent with *Anisakis* sp., were observed free in the musculature and dermis around the vent opening.

Gill tissue samples were tested for segments of nucleic acid indicative of the presence of the parasites specified below using real-time PCR (qPCR).

Paranucleospora theridion

Fish Number	Endogenous control Cp value	Cp Values			Reported Result (PCR)
F1	19.9	35.68	36.77	37.26	Positive

The samples tested negative for Neoparamoeba perurans (AGD).

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

R09

Tissues were examined by light microscopy. The following histopathological changes were observed:

Gill: Small focal area of interlamellar hyperplasia, lamellar fusion, several lacunae on the hyperplastic plaques, some spongiosis and some haemorrhage.

Skin & Muscle: Lesion: Absence of epidermal layer, mild inflammatory cell infiltration and some dermal haemorrhage noted on the dermis and hypodermis.

Heart: Within normal range.

Gut and pyloric caeca: Within normal range.

Pancreas: Within normal range.

Liver: Within normal range.

Kidney: Within normal range

Spleen: Slightly congested.

Signed:

Fish Health Inspector

The Fish Health Inspectorate Service Charter detailing standards of service is available on the Marine Scotland website at https://www.gov.scot/publications/fish-health-inspectorate-service-charter/

Date: 09/09/2021