FHI 059, Version 13		Issued by: FHI	Date of issue: 12/05/2020				
Case No: 2023-0237			Date of visit: 01/08/2023				
Time spent on site:	5 hours	Main Inspecto	r:				
Site No: FS0892 Business No: FB0061	Site Name: Business Name:	Clachbreac Landcatch Natural Selection Lt	d				
Case Types: 1 DIA 2	REP 3	4 5	6				
Water Temp (°C): 15.5	Thermometer No:	Site	FHI 045 completed N/A				
Observations:	Region: ST	Water type: F	CoGP MA:				
Dead/weak/abnormally behaving fish present?  Clinical signs of disease observed?  Gross pathology observed?  Diagnostic samples taken?  If yes, see additional information/clinical score sheet.  Y  If yes, see additional information/clinical score sheet.  Y  If yes, see additional information/clinical score sheet.  Y							
UNI/REG only - if unable to carry out intended visit detail reason below:							

#### Additional Case Information:

FHI was notified in wk 29 that site was experiencing increased mortalities in recently vaccinated stock. 8 tanks were vaccinated and graded into outdoor tanks on 10th July, with mortalities first observed on the evening of the 14th July. Fish were presenting with bloodshot eyes and reddened vents, both observed by husbandry staff and internal & external vets.

Stock origin: Stofinfiskur (organic)

Indoor tanks (3/12) are stocked with fish at 30g, 15883, unvaccinated

Outdoor tanks (8/9) are stocked with fish at 40g, 176538, vaccinated (planned move out of facility in Wk35)

Fish moved from Ormsary at 10g to Clachbreac in Wk 20 2023.

Mortality since input to site in Wk 20, up until Wk28 very low.

Site uses flow through system. Water quality monitoring indicated that all parameters were within acceptable limits (DO, Temp).

Vaccine used: Microjet 6 and PD1 in combination

Vaccination audit indicated the depth of needle penetration was satisfactory, however blood was observed at entry point of needle.

From the vaccination record, calibration comments described depth and site of vaccination and indicated no issues. Mortalities have been observed to have severly eroded fins and fungus.

Treatment records indicate that formalin was last used 25/7/2023 to flush fish for fungus signs following vaccination (post vaccination plan). Formalin administered in all stocked vaccinated tanks.

Vaccinated fish are due to go to sea in 4 weeks time. Internal and external health checks will be conducted prior to output. Fish vet checks only occur at site when necessary/issues arise with health of fish.

Fish health reports seen following histology and bacteriology samples taken on 17/07/2023. No positive samples found and Saprolegnia suggested as primary cause for fish sampled in tanks B1 and B7.

Two moribund fish with severe loss of equilibirum were observed in tanks B4 and B7 respectively and removed for diagnostic sampling.

No other moribund fish observed during site inspection.

Site thermometer used for biosecurity reasons.

FHI 059, Vers	ion 13		Is	sued by: FHI			Date of issue:	12/05/2020
Case No:	2023-0237	]	Site No:	FS0892				
Date of Visit:		01/08/2023			Inspector(s):			
Registration	/Authorisation	Details						
		mary checked l	by site represe	ntative?			Υ	1
2. Changes m	nade to details	?					N	]
Site Details (	include clean	er fish for all s	ections)					
Total No facil		24	Facilities stock	ked	11	No facilities i	nspected	
Species	SAL						T	1
Age group	2023							1
No Fish	192,421							1
Mean Fish Wt	37g							1
Next Fallow D	ate (Site)	End February	2024	Next Input Da	te (Site)	May 2024		ı
	wks) disease		2024	_	Any escapes	_	it)?	1
		ion damage, Sa	aprolegnia sp		rany escapes	(Sirioc last vis	н., .	•
ii yoo, actaii.	r oot vaconiat	ion damago, o	aprologilia op.					
Movement Records  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?								
	•	l correctly enter introductions (d		ailable?				
Transport Re	cords							
•		ed out by (or or	behalf) of the	business (not	using a STB)?	•		
If yes, is there	e a system in p	lace for mainte	nance of trans	portation recor	ds?			
Mortality Red	cords							
1. Mortality re	cords available	e for inspection	?					
2. How are m	ortalities dispo	sed of?			Other (detail)			
If other detail:		jed and frozen	and then incine	erated at Orms	ary Site (week	ly)		
3. Mortality re	cords complete	e and correctly	entered?					
			2023: Wk30, 2	2495, 1.28%; V	V29, 28771, 1	2.94%; Wk28,	, 10117, 4.44%;	
	rtality (last 4 w	,	0.06%;					
5. Evidence of recent increased/atypical mortalities?								
		ty per facility/no						
outside tanks							g all other tanks ck respectively	
	eaks in mortal	ity during perio	d checked?					
If yes, detail:		N						
7. Have increased (unexplained) mortalities been reported to vet or FHI?								
If yes, detail a		on reported to	EUI2 If no and	or dotaile an	ortolity overt-	choot		1
o. Have mort	anty events be	en reported to	rmić ii no, ent	er details on m	ortality events	sneet.		I

FHI 059, Version 13	Issued by: FHI	Date of issue: 12/05/2020
Treatments and Medicines Records  1. Recent treatments (see comment)?		
Formalin,		

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)?

Formalin, T.M.S

If other, detail:

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:

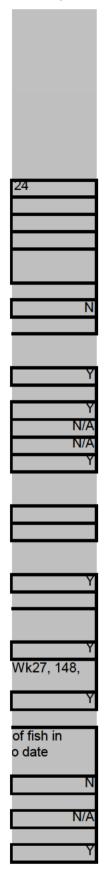
#### Results of Surveillance

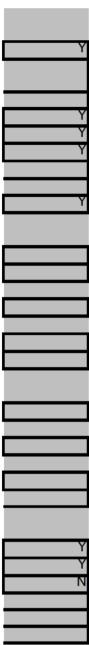
- 1. Has any animal health surveillance been carried out by, or on behalf of, the business?
- 2. If yes, are results available for inspection?
- 3. Any significant results?

If yes, detail (if not detailed under recent disease problems).

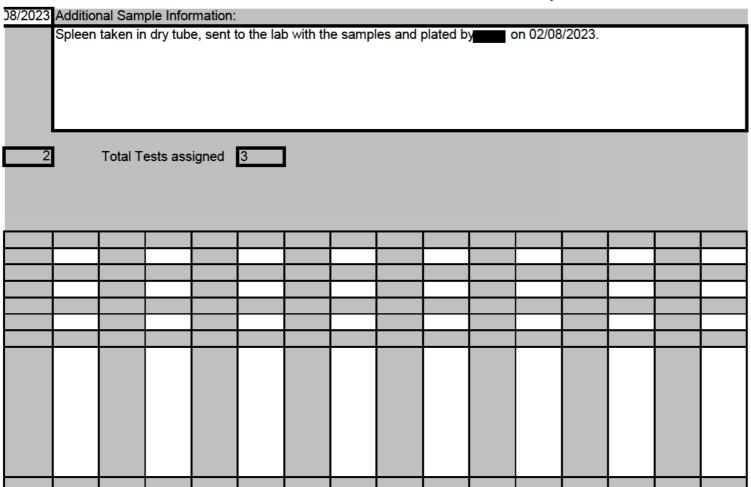
Records checked between:

15/05/2023-01/08/2023





Г	HI 059, Version 13							155	ued by: Fr	11			
	Case no:	2023-02	237	Site No:		FS0892			Date of vis Sampling:		01/0	08/2023	01/0
	Priority samples:	VI		ВА		PA		MG	- Campinig.	н			
	Time sampling starts/ends:	11:0	4:00	11:5	0:00		Inspecto	r:			VMD No	). <b>[</b>	0
	Environmental conditions:	1	Indoors	2		3		4		5			
	Summary samples	HIST	Y	ВА	Y	MG	Y	VI		PA	Y	Total Sa	mples
Δ	dd Fish/Pools - click												
Г	Pool/Fish No	F1	F2										
Г	Fish nos	1	2										
	Pool Group												
Г	Species	SAL	SAL										
п	Average weight	37g	37g										
п	Sex	N/A	N/A										
п	Water Type	FW	FW										
Stock Details		P Ormsary Hatchery (FS0681)	U Ormsary Hatchery (FS0681)										
V.	T domey 140	D4	וט										



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

Case no: 2023-0237 Site No: FS0892 Method of killing: Percussive

Case no:	2023-0237		Site No:		FS089	2	Me	ethod of	f killing:	Percus	sive
Date of visit:	01/08/2023	3	Inspecto	or(s):				s	heet Re	elevant:	Υ
S for strong preser	nce: M for medium presence: W for	weak pre	sence								
Fish Number	ice. In for modulin presence. W for	wouk pro	1 2								
	er death (if > 45 minutes)		_								
External Signs	, , , , , , , , , , , , , , , , , , , ,										
Behaviour	Moribund	W	W								
	Lethargic	S	S								
	Hanging vertical										
	Spiralling		_								
	Flashing Loss of equilibrium	S	s								
Body	Dark	3	-								
Войу	Distended abdomen		_								
	Anorexic										
	Scale Oedema										
Opercula	Shortened										
	Flared										
Haemorrhaging	Throat										
	Ventrum		$\vdash$								
	Base of fins		-								
FVes	Elsewhere Exophthalmic										
Eyes	Enophthalmic (sunken)										
	Cataract										
	Haemorrhagic		_								
Gills	Pale		S								
	Zoned										
	Necrotic										
Lesions	Flank										
	Elsewhere	W	+								
Vent	Inflamed	W	_								
Lice Load	Trailing faeces Estimate numbers		_								
Lice Load	Estimate numbers										
Internal Signs											
Ascites	Clear										
	Bloody										
Oedema	In tissues										
Heart	Pale/anaemic		-								
	Granulomas		-								
Liver	Deformed		_								
Liver	Petechial haem Gross haem										
	Tissue breakdown										
	Enlarged										
	Colour number(s)										
	Granulomas										
	Lesions										
Pyloric caeca	Petechial haem										
	Tubules mauve		I <sub>M</sub>								
Culass	Lack of fat	W	W								
Spleen	Enlarged	VV	-								
Gut	Granulomas No food present										
out	Yellow pseudo-faeces	w	<del>w</del>								
	External haem										
	Internal haem										
Body wall	Haemorrhaging										
Swim bladder	Haemorrhaging										
	Fluid filled										
Kidney	Swollen		I I								
	Grey		W								
	Granular										
General	Liquefied Parasites present		+ +								
General	Anaemia										
	7 inwoning										

Case no: 2023-0237

Date of visit: 01/08/2023

	01100/2020						
	ce: M for medium presence: W for	M					
Fish Number							
	r death (if > 45 minutes)						
External Signs							
Behaviour	Moribund						
	Lethargic						
	Hanging vertical						
	Spiralling						
	Flashing	-					
	Loss of equilibrium						
Body	Dark						
	Distended abdomen	-					
	Anorexic	-					
Operaula	Scale Oedema Shortened						
Opercula		-					
Usamarrhaging	Flared	-					
Haemorrhaging	Throat Ventrum						
	Base of fins						
	Elsewhere						
Eyes	Exophthalmic						
Lyco	Enophthalmic (sunken)						
	Cataract						
	Haemorrhagic						
Gills	Pale						
Ollis	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						
0.1	Lack of fat						
Spleen	Enlarged						
Cost	Granulomas						
Gut	No food present						
	Yellow pseudo-faeces						
	External haem Internal haem						
Pody well							
Body wall Swim bladder	Haemorrhaging						
Swilli biadder	Haemorrhaging Fluid filled						
Kidnov							
Kidney	Swollen						
	Grey Granular						
General	Liquefied Parasites present						
General	Anaemia						
	Allasillia						

FHI 059, Version 13	Issued by: FHI	Date of issue: 12/05/202
Additional comments:		
		l
		l
		<b>I</b>
		l
		l

Case No: 2023-0237 Date of visit: 01/08/2023 Site No: FS0892 Inspector: Results Summary Freq. Date of Notification 2<sup>nd</sup> Insp Writing Database Insp Phone Insp Insp 04/08/2023 MG IPN 04/10/2023 2/2 04/08/2023 MG VHS 0/2 04/08/2023 04/08/2023 04/10/2023 04/08/2023 04/08/2023 MS IHN 0/2 04/10/2023 04/10/2023 MG SAV 0/2 04/08/2023 04/08/2023 LPAT 04/10/2023 2/2 10/08/2023 10/08/2023 10/08/2023 SPAT 1/2 04/10/2023 10/08/2023 04/10/2023 10/08/2023 **HPAT** 1/2 10/08/2023 14/08/2023 SAPR 2/2 14/08/2023 04/10/2023 22/08/2023 **AERO** 2/2 22/08/2023 04/10/2023 04/10/2023 NSIG 1/2 22/08/2023 22/08/2023 04/10/2023 **GSAL** 0/2 14/08/2023 14/08/2023 Report Summary 2<sup>nd</sup> Insp Case Type Date Insp DIA, REP 04/10/2023



## FISH HEALTH INSPECTORATE VISIT REPORT

#### **SUMMARY FOR INFORMATION OF SITE OPERATOR**

 Business No
 FB0061
 Date of Visit
 01/08/2023

 Site No
 FS0892
 Site Name
 Clachbreac

 Case No
 20230237
 Inspector

#### **Section 1: Summary**

The above site was inspected following a report of increased mortality, observed in all vaccinated tanks on site. During the physical inspection, two Atlantic salmon parr were removed for diagnostic sampling.

Histopathological examination revealed mild hepatitis and myocarditis which was very mild and multifocal.

The sampled fish tested positive using qPCR for infectious pancreatic necrosis virus (IPNV).

DNA sequence analysis was performed on a suspected colony of *Saprolegnia parasitica*. Results showed the isolate to be *Saprolegnia parasitica*.

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**

Following a report of increased mortality observed in tanks that had recently been vaccinated, an inspection was conducted. During the site inspection, it was noted that the highest increased mortalities were observed in tanks 1, 6, 7, with increased mortalities affecting all other tanks of fish in vaccinated stock. Only two fish were found to be moribund and were removed from B4 and B7 respectively.

Fungus-like growth were observed on both fish removed for sampling; fish 1 was observed to have it on the dorsal fin and the mouth of fish 2. The gills of fish 2 were found to be significantly pale. The spleen of fish 1 was seen to be enlarged and the pyloric caeca of fish 2 had a lack of fat. In addition, the kidney of fish 2 was found to be slightly grey in colour. Lastly, yellow pseudo-faeces was present in both fish.

#### Samples

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

Fish number	Facility number	Species	Stage	Origin
1	B4	Atlantic Salmon	37g 2023	Ormsary Hatchery (FS0681)
2	B7	Atlantic Salmon	37g 2023	Ormsary Hatchery (FS0681)

#### **Results**

**Microbiology:** Kidney, spleen and lesion material from two fish were inoculated onto appropriate media for the isolation of microbes.

The following were isolated from F1 and F2:

Aeromonas sp.: F1 & F2 (Kidney), F1 (Lesion)
 Saprolegnia sp.: F1 (Lesion)

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

Infectious pancreatic necrosis virus (IPNV)

Fish Numb	control Ch		Cp Values				
F1	15.11	35.63	37.19	36.51	POSITIVE		
F2	14.37	33.66	33.63	35.00	POSITIVE		

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

Parasitology: Fins were collected to determine the presence of Gyrodactylus salaris using light microscopy.

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

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

Histopathological examination revealed the following:

Gill: Within normal range.

Skin & Muscle: Within normal range.

Heart: Very mild, multifocal myositis (F2), epicarditis, moderate (F2).

Gut and pyloric caeca: Minor peritonitis (F2).

Pancreas: Within normal range.

Liver: Capsulitis and cuffing (F1), minor cuffing in F2.

Kidney: Minor the interstitial cell (haemopoietic) necrosis (F2).

Spleen: Cuffing, multifocal (F2).

Signed:

Fish Health Inspector

The Fish Health Inspectorate Service Charter detailing standards of service is available on the Scottish Government website at Fish Health Inspectorate Service Charter - gov.scot (www.gov.scot)

Date: 04/10/2023

RO9 UKAS accredited testing laboratory No. 1964
Marine Laboratory, 375 Victoria Road, Aberdeen, AB11 9DB

Tel - 0131 244 3498 Fax - 0131 244 0944 Email - ms.fishhealth@gov.scot

Website - www.gov.scot/Topics/marine/science

# **Diagnostic Samples Photos: 2023-0237**



Figure 1 Overview of a) fish 1 and b) fish 2. Scalpel for scale



Figure 2 Underside of fish 1



Figure 3 Underside of fish 2



Figure 4 Gill of fish 1



Figure 6 Internal view of fish 1



Figure 5 Internal view of fish 2 (post sampling)

FHI 059, Version 13		Issued by: FHI	Date of issue: 12/05/2020			
Case No: 2023-0365			Date of visit: 22/08/2023			
Time spent on site:	3hrs	Main I	nspector:			
Site No: FS1198 Business No: FB0095	Site Name: Business Name:	South Cava Cooke Aquaculture Sco	otland Ltd			
Case Types: 1 DIA	2 STI 3	4 5	6			
Water Temp (°C): 14.24	Thermometer No:	T308	FHI 045 completed N/A			
Observations:	Region: OR	Water type: S	CoGP MA: O-3			
Dead/weak/abnormally behaving fish present?  Clinical signs of disease observed?  Gross pathology observed?  Diagnostic samples taken?  Y If yes, see additional information/clinical score sheet.  Y If yes, see additional information/clinical score sheet.  Y If yes, see additional information/clinical score sheet.  Y						
UNI/REG only - if unable to carry out intended visit detail reason below:						

#### Additional Case Information:

Stock on site from Pegal Bay and Kirk Noust. (Stofnfiskur and Aquagen stock). Site transferred fish on in Wk30 2023.

Organic site.

Hydrolicer treatment conducted in March 2023, before end of crop (previous production cycle fallowed wk 24). Fish transferred from Pegal via FW.

Only T.M.S used so far on site as a medicinal treatment.

Site was inspected following confirmation of BKD at Chalmer's Hope, which is within one tidal excursion for inspected site. The purpose of the inspection was to determined whether any fish were presenting with signs of clinical BKD. No fish were seen with signs of clinical BKD.

During site inspection, it was difficult to see the fish as water was dark and fish lower down in the water column. Two moribund fish were observed on the day of the inspection. These were removed and sampled for diagnostics.

FHI 059, Version 13	<b>,</b>		Issu	ed by: FHI			Date of issue	e: 12/05/2020	
Case No:	2023-0365		Site No:	FS1198					
Date of Visit:		22/08/2023	]		Inspector(s):			l	
Registration/Author	orisation Deta	ails							
1. Business/site det			ite representa	ative?			Υ		
2. Changes made to	o details?						N		
Site Details (include	de cleaner fis	h for all secti	ions)						
Total No facilities		16	Facilities sto	cked	16	No facilitie	s inspected	16	
Species	SAL								
Age group	2022 S0								
No Fish	471,529								
Mean Fish Wt	1.59kg								
Next Fallow Date (S	•	End June/Ju	ly 2024	Next Input Da	_ ` ′	August 20			
Recent (last 4 wks)	disease probl	ems?		N	Any escapes	(since last	visit)?	N	
If yes, detail:									
Movement Record	le								
	Movement records available for inspection?  Y								
2. Date of last inspe		i inopodiori.					07/02/2023		
3. Are records comp		ectly entered?	•				0170272020	Y	
4. Are movement re		•		•				Y	
5. Are records comp								Y	
6. Are health certific		•		able?				N/A	
Transport Books	_								
<ul><li>Transport Records</li><li>1. Are any moveme</li></ul>		t by (or on bol	half) of the bu	icinoss (not us	ing a STR\2				
If yes, is there a sys									
ii yes, is there a sys	sterri iri piace i	or maintenant	ce of transpor	rtation records					
<b>Mortality Records</b>									
1. Mortality records	available for i	nspection?						Y	
2. How are mortaliti	es disposed o	f?			Other (detail)				
If other detail:	Pelagia								
3. Mortality records	complete and	correctly ente						Y	
				, 0.14%, 670; \	Nk33, 0%,0; \	Vk32, 0.15%	%, 408; Wk 31	1, 0%, 0;	
4. Recent mortality	` ,		Wk30, 0.149	%, 393					
5. Evidence of recent increased/atypical mortalities?									
If yes, facility nos/no mortality per facility/no stock per facility/reason:									
6. Any other peaks in mortality during period checked?									
6. Any other peaks in mortality during period checked?  N  If yes, detail:									
If yes, detail action:									
8. Have 'mortality e	vents' been re	ported to FHI	? If no, enter	details on mort	tality events sl	neet.		N/A	
z				511 111011				111	

FHI 059, Version 13	Issued by: FHI	Date of issue: 12/05/2020
Treatments and Medicines Record	ds .	
1. Recent treatments (see comment	?	Y
If yes detail:	MC	

Treatments and Medicines Records	
1. Recent treatments (see comment)?	Y
If yes, detail: T.M.S,	
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)? T.M.S	
If other, detail:	
6. Are medicines stored appropriately?	Y
Biosecurity Records	
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?	N
2. If yes, are results available for inspection?	Y
3. Any significant results?	N
If yes, detail (if not detailed under recent disease problems).	

07/02/2023-25/08/2023

Records checked between:

	mi uba, version 13		issued by. FHI										
	Case no:	2023-03	365	Site No:		FS1198			Date of Samplin		22/	08/2023	22/0
	Priority samples:	VI		ВА		PA		MG		   HI		1	
	Time sampling starts/ends:	15:1	7:00	16:1	0:00		Inspecto	or:			VMD No	o.	
	Environmental conditions:	1	Windy	2	Cloudy	3		4		5			
	Summary samples	HIST	Y	ВА	Y	MG	Y	VI		PA		Total Sa	amples
A	dd Fish/Pools - click												
	Pool/Fish No	F1	F2										
	Fish nos	1	2										
	Pool Group	P1	P2										
	Species	SAL	SAL										
	Average weight	1.3kg	1.3kg										
	Sex	N/A	N/A										
	Water Type	SW	SW										
Stock Details		Kirk Noust (FS0645)	91 Kirk Noust (FS0645)										
V.	I acility No	5	10										

2 Total Tests assigned 2	1 1 11 000, VC1010	J.1. 10					100000 by. 1 111								
Total Tests assigned 2	D8/2023 Additional Sample Information:														
	2 Total Tests assigned 2														
		_													

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

Case no: 2023-0365 Site No: FS1198 Method of killing: Percussive

Case no:	2023-0365		Site No:	FS1198	Metho	Method of killing: Percussive			
Date of visit:	22/08/20	023	Inspecto	or(s):		Sheet Relev	vant: Y		
S for strong prese	nce: <b>M</b> for medium presence: <b>W</b>	for weak n	resence						
Fish Number	nee. III for mealant processes.	ioi iroait p	1 2						
	ter death (if > 45 minutes)		-						
External Signs	( )		_						
Behaviour	Moribund	М	М						
	Lethargic	М	s						
	Hanging vertical								
	Spiralling								
	Flashing								
	Loss of equilibrium								
Body	Dark		S						
	Distended abdomen								
	Anorexic								
	Scale Oedema								
Opercula	Shortened								
	Flared								
Haemorrhaging	Throat								
	Ventrum								
	Base of fins								
-	Elsewhere								
Eyes	Exophthalmic								
	Enophthalmic (sunken)								
	Cataract								
Cillo	Haemorrhagic								
Gills	Pale	W	М						
	Zoned Necrotic	VV	141						
Lesions	Flank		_						
Lesions	Elsewhere								
Vent	Inflamed								
Vent	Trailing faeces								
Lice Load	Estimate numbers		_						
Lioc Loud	Estimate numbers								
Internal Signs									
Ascites	Clear								
	Bloody								
Oedema	In tissues								
Heart	Pale/anaemic	W							
	Granulomas								
	Deformed								
Liver	Petechial haem								
	Gross haem								
	Tissue breakdown								
	Enlarged								
	Colour number(s)		4 4						
	Granulomas								
	Lesions								
Pyloric caeca	Petechial haem								
	Tubules mauve								
01	Lack of fat	N/	64						
Spleen	Enlarged	М	M						
O4	Granulomas	-	9						
Gut	No food present	S	S						
	Yellow pseudo-faeces	3	3						
	External haem Internal haem								
Body wall									
Swim bladder	Haemorrhaging Haemorrhaging								
Swiiii Diaudei	Fluid filled								
Kidney	Swollen								
radiicy	Grey								
	Granular								
	Liquefied								
General	Parasites present								
	Anaemia								

Case no: 2023-0365

Date of visit: 22/08/2023

Date of visit:	22/08/2023						
S for strong proson	nce: <b>M</b> for medium presence: <b>W</b> for v						
Fish Number	ice. Wi for medium presence. W for V	\	1				
	er death (if > 45 minutes)						
External Signs	er death (ii > 45 minutes)						
Behaviour	Moribund						
Dellavioui	Lethargic						
	Hanging vertical						
	Spiralling						
	Flashing						
	Loss of equilibrium						
Body	Dark						
Douy	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						
. yioiio caeca	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						

Case No: Date of visit: 22/08/2023 2023-0365 Site No: FS1198 Inspector: Results Summary Date of Notification Freq. Database Phone Writing 2<sup>nd</sup> Insp Insp Insp Insp 25/08/2023 IHNP 04/10/2023 0/2 25/08/2023 **IPNM** 0/2 25/08/2023 25/08/2023 04/10/2023 PMVP 0/2 04/10/2023 25/08/2023 25/08/2023 SALP 2/2 25/08/2023 25/08/2023 04/10/2023 25/08/2023 25/08/2023 04/10/2023 VHSP 0/2 PNST 2/2 04/10/2023 04/09/2023 04/09/2023 04/10/2023 SPVP 0/2 04/09/2023 04/09/2023 AGDQ 0/2 04/09/2023 04/09/2023 04/10/2023 05/09/2023 05/09/2023 04/10/2023 PRV 1/2 0/2 04/10/2023 ISAQ 25/08/2023 25/08/2023 Report Summary 2<sup>nd</sup> Insp Case Type Date Insp STI 25/08/2023 DIAG 04/10/2023



## FISH HEALTH INSPECTORATE VISIT REPORT

#### SUMMARY FOR INFORMATION OF SITE OPERATOR

Business No FB0095 Date of Visit 22/08/2023
Site No FS1198 Site Name South Cava
Case No 20230365 Inspector

**Section 1: Summary** 

South Cava was visited for a statutory inspection following confirmation of bacterial kidney disease (BKD) at a site within 1 tidal excursion. No clinical signs for BKD were observed during the physical inspection, however two moribund and lethargic fish were removed for diagnostic sampling.

Histopathological examination revealed features consistent with chronic pancreas disease and mild hyperplasic branchitis. These results were confirmed by using qPCR and fish were found to be positive for salmonid alphavirus (SAV), as well as *Paranucleospora theridion*. F2 was also positive for piscine reovirus (PRV).

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

Site was inspected following confirmation of BKD at Chalmer's Hope, which is within one tidal excursion of the inspected site. The purpose of the inspection was to determine whether any fish were displaying signs of clinical BKD. No fish were seen with signs of clinical BKD.

During site inspection, it was difficult to see the fish since the water was dark and fish were lower down in the water column. Two moribund fish were observed on the day of the inspection. Both fish were seen to be lethargic and gills were observed to be zoned. The overall appearance of F2 was dark and the spleen was observed to have a rough, dry looking texture. Furthermore, both fish displayed enlarged spleens, yellow pseudo-faeces in addition to no food being present in the gut.

#### Samples

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

Fish number	Facility number	Species	Stage	Origin		
1	5	Atlantic salmon	1.3kg 2022 S0	Kirk Noust (FS0645)		
2	16	Atlantic salmon	1.3kg 2022 S0	Kirk Noust (FS0645)		

#### Results

**Bacteriology:** Kidney, gill, spleen and lesion material from F1 and F2 were inoculated onto appropriate media for the isolation of bacteria.

No significant bacteria were isolated.

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

Salmonid alphavirus (SAV)

Fish Number	Endogenous control Cp value		Reported Result (PCR)		
F1	15.46	27.70	27.88	27.43	POSITIVE
F2	15.76	24.73	24.47	24.39	POSITIVE

Piscine reovirus (PRV)

Fish Number	Endogenous control Cp value		Reported Result (PCR)		
F1	-	-	-	-	Negative
F2	18.02	36.57	36.08	36.65	POSITIVE

The samples tested negative for infectious haematopoietic necrosis virus (IHNV), infectious pancreatic necrosis virus (IPNV), infectious salmon anaemia virus (ISAV), viral haemorrhagic septicemia virus (VHSV), piscine myocarditis virus (PMCV) and salmon gill poxvirus (SGPV).

#### Parasitology:

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		Reported Result (PCR)		
F1	18.88	25.27	25.35	25.52	POSITIVE
F2	18.74	24.29	24.53	24.42	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 two fish. The tissue samples were fixed in 10% neutral buffered formalin.

Histopathological examination revealed the following:

Tissues from 2 Atlantic salmon were examined by light microscopy. The following histopathological changes were observed:

Gill: Filament hyperplasia, mild, multifocal, mainly at the tips (F1 & F2). Some aneurysmal dilation/telangiectasia (F1), free blood among gill filament observed in all fish (like due to persecutive stunning).

Skin & Muscle: Skeletal red muscle degeneration, moderate, multifocal (F1, F2).

Heart: Necrotising myocarditis, mild, multifocal (F1 & F2) and moderate, multifocal, peritonitis (F1 & F2).

Gut and pyloric caeca: Absence of adipose tissues observed in F1 and some peritonitis observed in both fish.

Pancreas: Moderate inflammation of the pancreatic periacinar tissue (F1).

Liver: Minor area of necrosis (F1).

Kidney: Within the normal range

Spleen: Slightly congested in all fish.

Brain: Not sampled.

Eye: Not sampled.



Signed:

Fish Health Inspector

The Fish Health Inspectorate Service Charter detailing standards of service is available on the Scottish Government website at Fish Health Inspectorate Service Charter - gov.scot (www.gov.scot)

Date: 04/10/2023



## FISH HEALTH INSPECTORATE VISIT REPORT

#### SUMMARY FOR INFORMATION OF SITE OPERATOR

 Business No
 FB0095
 Date of Visit
 22/08/2023

 Site No
 FS1198
 Site Name
 South Cava

 Case No
 20230365
 Inspector

#### Statutory Inspection

The above site was inspected as it is located within one tidal excursion of a site where the presence of bacterial kidney disease (BKD) has been confirmed.

All epidemiological units were inspected. No clinical signs associated with BKD were observed.

If clinical signs of BKD are observed on the site, the Inspectorate must be informed immediately.

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: 25/08/2023

The Fish Health Inspectorate Service Charter detailing standards of service is available on the Scottish Government website at <u>Fish Health Inspectorate Service Charter - gov.scot (www.gov.scot)</u>

## Diagnostic Sampling Photos: 20230365



Figure 1 Overview of Fish 1



Figure 2 Internal view of fish 1



Figure 3 view of gills of fish 1



Figure 4 Overview of fish 2. Eye damage due to percussive method of killing.



Figure 6 View of gills of fish 2



Figure 5 internal view of fish 2

FHI 059, Version 13	Issu	ed by: FHI	Date of issue: 12/05/2020							
Case No: 2023-0370			Date of visit: 29/08/2023							
Time spent on site: 4.	5 hrs	Main Inspecto	or:							
Site No: FS0903 Business No: FB0125	Site Name: Business Name:	Swining Voe 3 Scottish Sea Farms Ltd								
Case Types: 1 ECI 2	2 CNI 3 SLI	4 VMD 5	6							
Water Temp (°C): 12.2	Thermometer No:	T148	FHI 045 completed N/A							
Observations:	Region: SH	Water type: S	CoGP MA: S-4							
Dead/weak/abnormally behaving fish present?  Clinical signs of disease observed?  Gross pathology observed?  Diagnostic samples taken?  If yes, see additional information/clinical score sheet.  N  If yes, see additional information/clinical score sheet.  N  N										
UNI/REG only - if unable to carry	UNI/REG only - if unable to carry out intended visit detail reason below:									

#### **Additional Case Information:**

Only 3 pens currently stocked with locally caught wild wrasse but remaining pens will be stocked in the coming months. Weights range from 22g to 336g. Wrasse first brought on site week 34 (21/08) 2023.

Stock on site looking in good condition with only 1 lethargic fish observed. Fish removed for vmd sampling showed no clinical signs of disease or gross pathology.

Three pieces of information found to be missing from the FMS:

Circumstances under which biological controls and cleanerfish are to be used.

Dates by which the area or individual farm will be fallow and the earliest date when a farm or area may be restocked.

Whether one or more year classes may be stocked onto sites covered by the agreement or statement.

This information was however available in the sites VHWP and husbandry manual.

FHI 059, Version 13			Issu	ed by: FHI		Date of issue: 12/05/2020		
Case No:	2023-0370		Site No:	FS0903	3			
Date of Visit:		29/08/2023	3		Inspector(s):			1
Registration/Autho	risation Deta	ails						
1. Business/site deta	ails summary	checked by s	site representa	ative?			Υ	
2. Changes made to		•	·				N	
Site Details (includ	e cleaner fis	h for all sect	ions)					
Total No facilities		12	Facilities sto	cked	12	No facilitie	s inspected	12
Species	SAL	WRS		1			1	
Age group	2022 S0	wild				_		
No Fish	528,572	5,321						
Mean Fish Wt								
	1.93kg	0.08kg		Nove Input De	oto (Cito)	Con/Oct 2	024	
Next Fallow Date (Si	•	May 2024		Next Input Da	_ ` '	Sep/Oct. 2		
Recent (last 4 wks)	disease probi	ems?		IN	Any escapes	(since last	VISIT) ?	N
If yes, detail:								
Movement Records	3							
1. Movement records	s available fo	r inspection?						Y
2. Date of last inspec	ction:						21/07/2021	
3. Are records comp		ectly entered?	?					N
4. Are movement red		•						Y
5. Are records comp								Y
6. Are health certification		•		able?				N/A
Transport Records							,	
1. Are any movemen		t by (or on bo	half) of the hu	icinoce (not ue	ing a STR\2			N
If yes, is there a syst		• •		· ·	•			14
ii yes, is there a syst	leni in piace i	OI IIIaliileilaii	ice oi transpor	italion records	f			
Mortality Records								
1. Mortality records a	available for i	nspection?						Y
2. How are mortalitie	es disposed c	f?			Incinerated -	Shetland W	aste to Energ	JY
If other detail:								
3. Mortality records of	complete and	correctly enter	ered?					Y
			Wk 31 - 302	(0.01%), wk 3	2 - 460 (0.1%	), wk 33 -64	6 (0.1%), wk	34 - 300
4. Recent mortality (	last 4 wks):		(0.1%)	,	•		, , , ,	
5. Evidence of recen	nt increased/a	typical mortal	lities?					N
If yes, facility nos/no		• •		/reason:				
6. Any other peaks in	n mortality du	ring period ch	necked?					N
If yes, detail:								
7. Have increased (u	unexplained)	mortalities be	en reported to	vet or FHI?				N/A
If yes, detail action:								
8. Have 'mortality ev	ents' been re	ported to FHI	? If no, enter	details on mor	tality events sl	neet.		Y

Treatments and Medicines Records	
1. Recent treatments (see comment)?	Y
If yes, detail: Slice, T.M.S	
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)? Slice, T.M.S	
If other, detail:	
6. Are medicines stored appropriately?	Y
Biosecurity Records	N/
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	V
increased (unexplained) mortality at the site been included?	1
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 <i>how</i> and <i>when</i> that will be notified to Scottish Ministers?	V
5. Has the health status of aquaculture animals being stocked on the farm site been covered (equal or higher	
health status, certification if required)?	1
Tioditi Status, Softinoation in 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: 27/07/2021 - 29/08/2023	

Case no:  Priority sam Time samp starts/ends Environmen Summary s  Add Fish/Poo  Pool/Fish N Fish nos Pool Group Species	FHI 059, Version 13					ISSUEG DY: FHI							
Time samp starts/ends Environmen Summary s  Add Fish/Pool Pool/Fish N Fish nos Pool Group		2023-03	370	Site No:		FS0903			Date of v		29/0	08/2023	29/0
starts/ends Environmen Summary s  Add Fish/Pod Pool/Fish N Fish nos Pool Group	nples:	VI		ВА		PA		MG		g. HI			
Add Fish/Pool Pool/Fish N Fish nos Pool Group			0:00		0:00		Inspecto	or:			VMD No	).	20
Add Fish/Pool Pool/Fish N Fish nos Pool Group	ntal conditions:	1	Indoors	2		3		4		5			
Pool/Fish N Fish nos Pool Group	amples	HIST		ВА		MG		VI		PA		Total Sa	mples
Fish nos Pool Group													
Pool Group		1	2	3	4								
			_	0	Т								
		SAL	SAL	SAL	SAL								
Average we		1.9300			1.9300								
Sex				N/A	N/A								
Water Type	)	SW	SW	SW	SW								
Stock Origi Facility No	n	Gletness (FS1099)	ത Gletness (FS1099)	ω Gletness (FS1099)	Gletness (FS1099)								

08/2023	08/2023 Additional Sample Information:													
0	0 Total Tests assigned 0													

FHI 059, Version 13		Issued by: FHI			Date of	of issue	: 12/05/2020
Case Number:	2023-0370		Site No:	FS0903		Insp:	
Date of Visit	29/08/2023		No of mo	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 acluding third country	0	9	18	26	0
·	Number of supp		0			14	0
Movements off	Frequency of m	novements off	0	3	6	10	10
Wovernerits on	Number of dest		0			10	3
Exposure via water		Site contacts	0	1-5	6-10	<del></del> !	
Water contacts with other farms (holding species	disinfection or b	•	0				
susceptible to same diseases)	farms upstream	or in a coastal zone with category I or within 1 tidal excursion	1	2	4		4
	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				0
	Processing own	n fish (re-cycling risk)	1				
	Processing fish	from MS of equivalent status	2				
	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 wast	e only processed.	0				0
products	Common proce	sses with other farms	3				
	Collection point	for waste from other farms	5				
Use of unpasteurised feeds	No feeding of u	npasteurised feed	0	1			0
	Feeding unpast	teurised feed	5				
Biosecurity		Number of sites	1	2 or 3	≥ 4		
Contacts with other sites	Sites operating	from single shorebase	0	1	2		0
	Sites sharing st	aff and equipment	0	1	2		0
Disinfection of equipment between sites, use of	Yes		0				0
footbaths etc	No		1				
CoGP/Regulator				_			
Practices in accordance with regulator or industry	Yes		0				0
code of practice	No		3				
Platform access to cages	Yes		0	1			
	No		2				
				•			
					<b>Total</b> Rank		MEDIUM

FHI 059, Version 13	Issued by: FHI	Date of issue: 12/05/2020
Case No: 2023-0370	Site No:	FS0903
3. Does the site have access to a range of	or equivalent) fallowed synchronously on a single your equivalent) fallowed synchronously on a single you licenced in-feed and bath sea lice medications (included as well as access to suitable biological and/or mechanisms.	cluding deltamethrin,
4. Is there a signed documented farm man	nagement agreement or statement relevant to the si	ite and CoGP Farm
Management Area (or equivalent)?  5. Are sea lice count records available for  6. Do records adequately reflect the requir	inspection? (Legal SSI, CoGP Annex 6) ed standard specified in the SSI and the CoGP? (Le	egal SSI, CoGP Annex 6)
7. Are sea lice ( <i>L. salmonis</i> ) record levels records are inspected? (CoGP Annex 6)	below the suggested criteria for treatment in the Co	oGP during the period that
	salmonis) numbers per fish been at a level of 3 or a eriod that records are inspected?	above (prior to w/b 10/6/19) or N
	h Health Inspectorate? If no, FHI see comment. ich is considered to cause significant welfare proble	N/A N N
suggested criteria for treatment or where ( 11. Has any other action been taken (when 12. Have therapeutic treatments or the act 13. Are treatments, where conducted, carr	ninistered or other actions taken when <i>L. salmonis I C. elongatus</i> is considered to have welfare implication re applicable)? ions taken had a significant impact upon the lice levied out in cooperation between participating farms? te, where fewer populations or part populations are	vels recorded?  N/A  N/A  Y
15. Is there a site specific written lice mana	agement procedure with waypoints describing set a ce infestation?	actions to deal with recognised Y
16. Do the sea lice levels observed on stor	cks reflect sea lice count data? If no please detail re	easons.
	mage due to predators in the current or previous pro st the predation experienced on site? (Detail below) p Nets, Tensioned Nets	
If Yes proceed with questions 4 – 9. If No s 4. Have these been reported to Scottish M 5. Have these been reported to local DSFE		17)
7. Were methods (if any) used to recover	escapees? If yes give detail	
Ministers? (Legal, CoGP – 4.4.38, 5.4.18) 9. What action was taken to prevent and n be considered under satisfactory mea	n agreed with local wild fish interests and was perminimise the risk of further escapes? (Not covered in sures of the Act)  h regards to containment? If no, please detail reasons	n code but could

FHI 059, Version 13	Issued by: FHI	Date of issue: 12/05/2020
Case No: 2023-0370	Site No: FS0903	
Date of Visit: 29/08/2023	Inspector:	
Point of Compliance		
1. Is the farm under inspection located	within a farm management area?	Y
If N, no further questions require comp	letion.	
<ol> <li>Has a current farm management agr</li> <li>Is the current FMAg/S available for in</li> <li>Does the FMAg/S identify the relevance</li> <li>Does the FMAg/S identify the fish fance</li> </ol>	Int farm management area?  Irm site(s) to which it applies?  If commencement of the agreement or staten	ed? Y Y Y Y
farm? 9. Does the FMAg/S identify the vaccin 10. Does the FMAg/S identify the spec	um health standards for the stocks to be intro nation requirements for stocks held in the area ies of fish which may be stocked into the area	a or farm?  Y  Y  Y  Y
individual farm?	mum stocking density of any pen on any farm ngements for the storage and disposal of any arm?	
Arrangements for The Management 13. Does the FMAg/S identify arrangen	of Sea Lice ments for the sharing of data on sea lice numl	bers and treatments?
14. Does the FMAg/S identify the available of statement?	ability and the use of medicines on farms cov	vered by the agreement Y
lice on farms in the area or individual fa		
used on farms in the area or individual		d cleaner fish are to be
17. Does the FMAg/S identify the arran	ngements for synchronous treatments on farm	ns within the area?
<b>Live Fish Movements</b> 18. Does the FMAg/S identify the circu area or farm?	mstances when live fish may be introduced o	or removed from the
19. Does the FMAg/S identify the arran	ngements for the movement of live fish on and	d off sites in the area

Harvesting 20. Does the FMAg/S identify acceptable harvest practices on farms in the area or individual farms?	Υ
Fallowing 21. Does the FMAg/S identify the dates by which the area or individual farm will be fallow and the earliest date when a farm or area may be restocked?	N
<ul><li>22. Does the FMAg/S identify whether one or more year classes may be stocked onto sites covered by the agreement or statement?</li><li>23. Does the FMAg/S identify whether broodstock or potential broodstock are to be kept on any site covered by the agreement or statement?</li></ul>	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,	N/A
parties to the agreement?  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?  08/07/2023	Υ
FMS doesn't specify circumstances for bringing cleanerfish onto site but it does in the VHWP. FMS doesn't infor fallow periods but is in the sites VHWP. FMS also doesn't include whether it's a single yearclass area or not the Salmon Husbandry Manual.	

Issued by: FHI

FHI 059, Version 13

Date of issue: 12/05/2020

Site No: FS0903

Case No: 2023-0370

Nature of non-compliance:
Action taken (FHI):
Non-compliance relevant to (delete): VirologyMolGen/Bacteriology/Histology/Parasitology

Case No:	2023-0370			Date of visit:	29/08/2023	3		
Site No:	FS0903	1		Inspector:		ı		
Results Summary	Freq.			Da	te of Notifica	ntion		
,		Database	Insp	Phone	Insp	Writing	Insp	2 <sup>nd</sup> Insp
Report Summary								
Case Type ECI, CNI, SLI, VMD	Date	Insp	2 <sup>nd</sup> Insp					
ECI, CNI, SLI, VMD	12/09/2023							
Case competion	13/10/2023							
	1							
	<del>1</del>							



# FISH HEALTH INSPECTORATE VISIT REPORT

#### SUMMARY FOR INFORMATION OF SITE OPERATOR

 BUSINESS NO
 FB0125
 DATE OF VISIT
 29/08/2023

 SITE NO
 FS0903
 SITE NAME
 Swining Voe 3

 CASE NO
 20230370
 INSPECTOR

# **Case completion report**

Recommendations in relation to the above case were made for implementation by 12/10/2023. Following submission of the required documentation, evidence has now been provided to the Fish Health Inspectorate to demonstrate that the recommendations have been implemented.

This case will now be closed. This site may be subject to further audit and recommendations in the future.

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

Signed: Date: 13/10/2023
Fish Health Inspector

The Fish Health Inspectorate Service Charter detailing standards of service is available on the Scottish Government website at Fish Health Inspectorate Service Charter - gov.scot (www.gov.scot)



# FISH HEALTH INSPECTORATE VISIT REPORT

#### SUMMARY FOR INFORMATION OF SITE OPERATOR

 Business No
 FB0125
 Date of Visit
 29/08/2023

 Site No
 FS0903
 Site Name
 Swining Voe 3

 Case No
 20230370
 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

R25

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 found to be inadequately maintained.

Mortality records were inspected and found to be adequately maintained.

Mortality levels had exceeded the reporting criteria since the last inspection and had been reported to the Fish Health Inspectorate as required.

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

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

The following points were raised with the site representative during the inspection:

 FS numbers must be recorded in the source/destination section of the movement record book, to allow for better traceability of stocks. The source site is to be recorded for movements onto site while the final destination is to be recorded for movements off of site. It was discussed with the site representative that this would be recorded in future. No further action is required.

# 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 and containment and escapes.

The farm management statement was inspected and found to be inadequately maintained. Please see the attached annex detailing the points that must be addressed.

Please ensure that these points have been addressed by 12/10/2023. Records or documentation demonstrating that these points have been addressed should be sent to the Fish Health Inspectorate (contact details below). The site may be subject to further inspection or enforcement action should the appropriate action regarding the above points not be taken within the time period stipulated.

Please contact myself or the duty inspector should you require any assistance or clarification in implementing any requirement or recommendation detailed in this report.



The Fish Health Inspectorate Service Charter detailing standards of service is available on the Scottish Government website at Fish Health Inspectorate Service Charter - gov.scot (www.gov.scot)

# Annex - The Aquaculture and Fisheries (Scotland) Act 2007

To ensure compliance with the Aquaculture and Fisheries (Scotland) Act 2007, as amended, the following points must be addressed in the farm management statement

The statement or agreement must include arrangements for;

- The management of parasites<sup>(2)</sup>
  This must include arrangements for the use of biological controls and cleaner fish.
- Fallowing of the farms after harvesting
   This must include the dates for fallowing of the area, the earliest date of restocking, identify whether one or more year classes may be stocked onto sites covered.

<sup>(1)</sup> Farm management area means an area specified as such in the Code of Good Practice for Scottish Finfish Aquaculture

<sup>(2)</sup> Parasites as defined in The Aquaculture and Fisheries (Scotland) Act 2007 which means *Caligus elongatus* and *Lepeophtherius salmonis* 

FHI 059, Version 13	I	ssued by: FHI	Date of issue: 12/05/2020						
Case No: 2023-0371			Date of visit: 23/08/2023						
Time spent on site: 4h	1	Main Inspe	ector:						
Site No: FS0134 Business No: FB0134	Site Name: Business Name:	Glenkens Kames Fish Farming Ltd							
Case Types: 1 REG 2	DIA 3 REP	4 5	6						
Water Temp (°C): 16.2	Thermometer No:	T173	FHI 045 completed						
Observations:	Region: DG	Water type: F	CoGP MA:						
Dead/weak/abnormally behaving Clinical signs of disease observed Gross pathology observed? Diagnostic samples taken?	•	y If yes, see additional information/clinical score sheet. y If yes, see additional information/clinical score sheet. y If yes, see additional information/clinical score sheet. y							
UNI/REG only - if unable to carry out intended visit detail reason below:									
	water temperature too	high and ECI not due until next y	ear						

#### Additional Case Information:

Site inspected following reports of increased mortality due to PKD and RTFS. Mortalities had been relatively low since the last inspection however in week 29 mortalities became elevated and have remained high since.

Peaks in mortality: week 29 2477 (1.59%), wk 30 5709 (2.29%), wk 31 2811 (0.92%), wk 32 12768 (4.3%), wk 33 17717 (6.28%) wk 34 (to 22/8/2023) 6197 (2.29%).

Site will fallow all but one pen in May 2024. One pen used for restocking loch.

Kilcalmonell stock received for the first time and are the only stock affected by the PKD.

2023 stock treated for RTFS with florocol, this has been confirmed as effective but PKD still an issue

Site is being morted three times a day, on inspection of pens double digit mortality was observed on some pens. Numerous fish were lethargic with distended abdomens. Five fish were removed for diagnostic sampling.

The site is now being used for the supply of stock to Kames sea sites as well as to the local angling club in the loch.

FHI 059, Version 13			Issu	ed by: FHI			Date of issue	e: 12/05/2020
Case No:	2023-0371		Site No:	FS0134				
Date of Visit:		23/08/2023	]		Inspector(s):			
Registration/Author	isation Deta	ails						
1. Business/site detail	ils summary	checked by s	ite representa	itive?			у	
2. Changes made to	details?						У	
Site Details (include	e cleaner fis	h for all sect	ions)					
Total No facilities		19	Facilities sto	cked	10	No facilitie	s inspected	19
Species	RTR	RTR	RTR					
Age group	2023	2022	2020					
No Fish	259,551	5,700	128					
	50g	962g	3.7kg					
Next Fallow Date (Sit		on-going cyc		Next Input Da	te (Site)	no plans c	urrently	
Recent (last 4 wks) d	•				Any escapes			N
` _	PKD and RT				, ,	`	,	
Movement Records								
Movement records		r inspection?						Y
2. Date of last inspec		i inspection:					12/10/2021	
3. Are records complete		actly entered?	•				12/10/2021	Y
4. Are movement rec		•						N/A
								N/A
<ul><li>5. Are records comple</li><li>6. Are health certification</li></ul>		•		blo2				N/A
o. Are rieditir certifica		iuctions (outw	niii Gb) avalla	ible :				IN//A
Transport Records							,	
1. Are any movement		• •		,	•			Y
If yes, is there a syste	em in place f	or maintenan	ce of transpor	tation records?	?			Y
Mortality Records								
1. Mortality records a	vailable for in	nspection?						Y
2. How are mortalities	s disposed o	f?			Incinerated -	on site		
If other detail:								
3. Mortality records c	omplete and	correctly ente	ered?					Y
4. Recent mortality (la	ast 4 wks):		see additiona	al information				
5. Evidence of recent	increased/a	typical mortal	ities?					Y
If yes, facility nos/no	mortality per	facility/no sto	ck per facility/	reason:				
see additional commo								
6. Any other peaks in	mortality du	ring period ch	ecked?					N
If yes, detail:								
7. Have increased (u	nexplained) i	mortalities be	en reported to	vet or FHI?				Y
(3)				er contacted, s	amples sent to	Esox labo	ratory PKD R	TFS
If yes, detail action:		identified,						-
8. Have 'mortality eve	ents' been re		? If no, enter of	details on mort	ality events sh	eet.		Y

FHI 059, Version 13		Issued by: FHI	Date of issue: 12/05/2020
Treatments and Medi	cines Records		
1. Recent treatments (s	see comment)?		Y
If yes, detail:	florocol		

Treatments and Medicines Records	
1. Recent treatments (see comment)?	Y
If yes, detail: florocol	
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)? florocol	
If other, detail:	
6. Are medicines stored appropriately?	Y
Biosecurity Records	
Biosecurity records available for inspection?	Y
2. Has the manner and frequency of mortality removal, recording and safe disposal been considered?	У
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?	У
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?	У
5. Has the health status of aquaculture animals being stocked on the farm site been covered (equal or higher	У
health status, certification if required)?	
_	
6. Have the husbandry and biosecurity measures implemented between each epidemiological unit to minimise	У
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	У
aquaculture animals held on site?	
8. Have the biosecurity procedures been adequately implemented on site?	У
If no, detail:	
Results of Surveillance	
1. Has any animal health surveillance been carried out by, or on behalf of, the business?	У
2. If yes, are results available for inspection?	Y
3. Any significant results?	Y
If yes, detail (if not detailed under recent disease problems).  as above PKD and RTFS	

12/10/2021 to 23/8/2023 Records checked between:

ГГ	al 059, version 13				188	ued by. r	П						
	Case no:	2023-03	371	Site No:		FS0134			Date of v		23/0	08/2023	23/(
	Priority samples:	VI		ВА		РА		MG	Sampling	g: HI			
	Time sampling starts/ends:		00:00		0:00		Inspecto	or:		_	VMD No	). 	0
	Environmental conditions:	1	Indoors	2		3		4		5			
	Summary samples	HIST	Y	ВА	Y	MG	Y	VI		PA	Y	Total Sa	imples
Α	dd Fish/Pools - click												
	Pool/Fish No	F1	F2	F3		F5							
	Fish nos	1	2	3		5							
	Pool Group	P1	P1	P1	P1	P1							
	Species	RTR	RTR	RTR		RTR							
	Average weight	60g	60g	60g		60g							
	Sex	N/A	N/A	N/A		N/A							
	Water Type	FW	FW	FW	FW	FW							
(0		<del>=</del>	<del> </del>	е	e e	<u>=</u>							
Details		Kilcalmonell	Kilcalmonell	Kilcalmonell	Kilcalmonell	Kilcalmonell							
Det		ml <sub>K</sub>	<u>ڀ</u>	alm	alm	ml <sub>E</sub>							
		310	🚆	3100	<u> </u>	][S							
Stock	Facility No	14	14			8							
(0)	I domey 140	14	14	17	U	U							

TITIOSS, VEISIC	11 13								100	ueu by.	1 1 11		
08/2023 Additional Sample Information:													
		•											
5	Total To	ests ass	igned	4									

FHI 059, Version 13 Issued by: FHI Date of issue: 12/05/2020 Method of killing: Percussive Case no: FS0134 2023-0371 Site No: Inspector(s): Sheet Relevant: Y Date of visit: 23/08/2023 S for strong presence: M for medium presence: W for weak presence Fish Number Time sampled after death (if > 45 minutes) External Signs Behaviour Moribund s Lethargic S S Hanging vertical Spiralling Flashing Loss of equilibrium Body Dark Distended abdomen Anorexic Scale Oedema w Opercula Shortened Flared Haemorrhaging Throat Ventrum Base of fins Elsewhere Eyes Exophthalmic W Enophthalmic (sunken) Cataract Haemorrhagic Gills Pale Zoned Necrotic Flank Lesions Elsewhere Vent Inflamed Trailing faeces Lice Load Estimate numbers Internal Signs Clear S **Ascites Bloody** Oedema In tissues Pale/anaemic W W W W m Heart Granulomas Deformed S Liver Petechial haem Gross haem Tissue breakdown

Enlarged Colour number(s) Granulomas Lesions

Case no: 2023-0371

Date of visit: 23/08/2023

Date of visit:	23/08/2023					
	ce: <b>M</b> for medium presence: <b>W</b> for w					
Fish Number						
	er death (if > 45 minutes)					
External Signs						
Behaviour	Moribund					
	Lethargic					
	Hanging vertical					
	Spiralling					
	Flashing Loss of equilibrium					
Body	Dark					
Восту	Distended abdomen					
	Anorexic					
	Scale Oedema					
Opercula	Shortened					
·	Flared					
Haemorrhaging	Throat					
	Ventrum					
	Base of fins					
	Elsewhere					
Eyes	Exophthalmic					
	Enophthalmic (sunken)					
	Cataract					
Gillo	Haemorrhagic					
Gills	Pale Zoned					
	Necrotic					
Lesions	Flank					
Lesions	Elsewhere					
Vent	Inflamed					
	Trailing faeces					
Lice Load	Estimate numbers					
Internal Signs						
Ascites	Clear					
	Bloody					
Oedema	In tissues					
Heart	Pale/anaemic					
	Granulomas					
Liver	Deformed Petechial haem					
Livei	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					
Body wall	Internal haem					
Swim bladder	Haemorrhaging Haemorrhaging					
Swiiii biauder	Fluid filled					
Kidney	Swollen					
radioy	Grey					
	Granular					
	Liquefied					
General	Parasites present					
	Anaemia					

FHI 059, Version 13	Issued by: FHI	Date of issue: 12/05/202
Additional comments:		

FHI 059, Version 13		Issued by: FHI			Date of	of issue	: 12/05/2020
Case Number:	2023-0371		Site No:	FS0134		Insp:	
Date of Visit	23/08/2023		No of mo	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	
with GB) of susceptible species		novements on from equivalent zone or	0	0	10	26	
	Number of sup	ncluding third country	0		18 10	26 14	
							40
Movements off	Frequency of m		0	3	6 6	10	10
Exposure via water	Indifficer of desi	Site contacts			6-10	10	<u> </u>
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	1	2	1		1
uiseases)		or within 1 tidal excursion or in a coastal zone with category III	<u> </u>	۷	4		-
		or within 1 tidal excursion	1	3	6		
		or in a coastal zone with category V					
	farms upstream	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	No on farm pro	cessina	<del></del>				=
the rules of the directive			0				0
		n fish (re-cycling risk)	1				
		from MS of equivalent status	2				
	Processing fish equivalent statu	from zone or compartment of	1				
		from Category III farm	8				
		from Category V farm	10				
Disposal of fish and fish by-	Site's own wast	to only processed	1				
products		* *	0				0
		esses with other farms t for waste from other farms	3				
	Collection point	tior waste from other farms	5				
Use of unpasteurised feeds		•	0				0
	Feeding unpas		5				
Biosecurity		Number of sites	1	2 or 3	≥ 4		
Contacts with other sites		from single shorebase	0	1	2		1
	Sites sharing s	taff and equipment	0	1	2		
Disinfection of equipment	Yes		0				0
between sites, use of footbaths etc	No		1				
CoGP/Regulator	<u> </u>						
Practices in accordance	Yes		T 0	1			0
with regulator or industry	No		2				
code of practice				l T			
Platform access to cages	Yes		0				0
	No		2				
					_ , .		
					Total		15
					Rank		LOW

FHI 059, Version 13 Issued by: FHI Date of issue:					
Case No:	2023-0371		Site No:	FS0134	
Sea Lice Inspection (Se	eawater Sites Only)				
		in the previous 4 years?			
·	•	quivalent) fallowed synchronously	on a single	vear class basis?	
	-	enced in-feed and bath sea lice med			
	mectin benzoate) as	well as access to suitable biological			
4. Is there a signed docu Management Area (or ed	•	ement agreement or statement rele	vant to the	site and CoGP Farm	
		pection? (Legal SSI, CoGP Annex 6 standard specified in the SSI and the	•	Legal SSI, CoGP Annex 6)	
7. Are sea lice ( <i>L. salmo</i> records are inspected?		ow the suggested criteria for treatm	ent in the C	CoGP during the period that	
		monis) numbers per fish been at a lead that records are inspected?	evel of 3 or	above (prior to w/b 10/6/19) or	
•	•	lealth Inspectorate? If no, FHI see of is considered to cause significant w		lems? (CoGP 4.3.81, 5.3.50)	
		stered or other actions taken when elongatus is considered to have well			
11. Has any other action	been taken (where a	ipplicable)?			
12. Have therapeutic trea	atments or the action	s taken had a significant impact upo	on the lice le	evels recorded?	
13. Are treatments, when	re conducted, carried	out in cooperation between particip	ating farms	?	
14. Is there a harvesting sea lice?	strategy for the site,	where fewer populations or part pop	oulations ar	e held without treatment for	
15. Is there a site specifi scenarios during the esc		ment procedure with waypoints des nfestation?	cribing set	actions to deal with recognised	
16. Do the sea lice levels	s observed on stocks	reflect sea lice count data? If no ple	ease detail	reasons.	
Containment Inspectio					
·		ge due to predators in the current or	•	•	N
•		he predation experienced on site? (		•	Υ
	s bird nets, tensione	ed nets, anti predator nets (on th	e top two i	meters three panels of net)	
If other, detail below:					
·	·	perienced on or in the vicinity of the	site since th	ne last FHI inspection?	N
If Yes proceed with ques	•	·			
4. Have these been repo			4 4 07 .	4.47)	
•		rthwith (where they exist)? (CoGP -		·	
o. Have these been repo	orted to the SSPO and	d local fisheries trusts forthwith (whe	ere they exi	SI)? (COGP – 4.4.37, 5.4.17)	
7. Were methods (if any)	) used to recover esc	apees? If yes give detail			
8. If gill nets were deploy Ministers? (Legal, CoGP		greed with local wild fish interests ar	nd was perr	mission given by Scottish	
9. What action was take	n to prevent and mini	mise the risk of further escapes? (N	ot covered	in code but could	
be considered under	•		o dotail ross	202(0)	
ro. is the site inspected	as satisfactory with re	egards to containment? If no, please	detail reas	5011(5)	

Date of issue: 12/05/2020

 Case No:
 2023-0371
 Date of visit:
 23/08/2023

 Site No:
 FS0134
 Inspector:

Results Summary	Freq.	Date of Notification								
		Database	Insp	Phone	Insp	Writing	Insp	2 <sup>nd</sup> Insp		
BKD Renibacterium	0/5	29/08/2023		29/08/2023	•	Ü	·	2 11100		
salmoninarium (PCR) -										
BKDP						03/10/2023				
Gyrodactylus salaris -	0/5	29/08/2023		29/08/2023						
GSAL						03/10/2023				
IHN (PCR) - IHNP	0/5	29/08/2023		29/08/2023		03/10/2023				
IPN (PCR) - IPNM	0/5	29/08/2023	_	29/08/2023		03/10/2023				
Salmonid alphavirus	0/5	29/08/2023		29/08/2023						
(SAV) (PCR) - SALP						03/10/2023				
VHS (PCR) - VHSP	0/5	29/08/2023		29/08/2023		03/10/2023				
Flavobacterium	0/5	30/08/2023		30/08/2023						
psychrophilum (PCR) -						00/40/0000				
FPSP	0/5	40/00/0000		40/00/0000		03/10/2023				
Pseudomonas fluroescens (PCR) -	2/5	12/09/2023		12/09/2023						
PSFL						03/10/2023				
Gill pathology - GPAT	5/5	19/09/2023		19/09/2023		03/10/2023				
Kidney pathology -	5/5	19/09/2023		19/09/2023		00/10/2020				
KPAT	0/0	10/00/2020		13/03/2020		03/10/2023				
Spleen pathology -	5/5	19/09/2023		19/09/2023						
SPAT						03/10/2023				
Proliferative kidney	5/5	19/09/2023		19/09/2023	3					
disease										
(PKD)(histology)-PKDH										
						03/10/2023				
PKD PCR	5/5	03/10/2023				03/10/2023				

Report Summary			
Case Type	Date	Insp	2 <sup>nd</sup> Insp
DIAG	03/10/2023		

	i	_		



# FISH HEALTH INSPECTORATE VISIT REPORT

## SUMMARY FOR INFORMATION OF SITE OPERATOR

 Business No
 FB0134
 Date of Visit
 23/08/2023

 Site No
 FS0134
 Site Name
 Glenkens

 Case No
 20230371
 Inspector

**Section 1: Summary** 

This site was inspected following reports of increased mortality occurring at the site, five moribund fish were removed from the pens for further examination and subsequent diagnostic sampling.

Histopathology examination revealed pathology consistent with proliferative kidney disease (PKD) which was confirmed from kidney imprints and PCR testing positive for *Tetracapsuloides* bryosalmonae.

Pseudomonas fluorescens was identified, the level and purity of growth would likely not suggest this bacterium would be implicated as the primary cause of morbidity.

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 site was inspected following reports from the business of significant elevated mortalities occurring, samples taken by the business had identified PKD as the cause. On inspection of the site lethargic, moribund and dead fish were observed, five fish were removed for diagnostic sampling.

Externally all fish were moribund and lethargic with distended abdomens, pale gills, with mild exophthalmia; the opercula of F5 was slightly shortened.

Internally all fish had clear ascites, splenomegaly, swollen grey granular kidneys and also pale hearts; which was also deformed in F5. Yellow pseudo faeces was also present in F5.

#### Samples

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

Fish number	Facility number	Species	Stage	Origin
1-3	14	Rainbow trout	2023 @50g	Kilcalmonell
4-5	8	Rainbow trout	2023 @50g	Kilcalmonell

## Results

**Bacteriology:** Kidney and spleen material from F1-F5 were inoculated onto appropriate media for the isolation of bacteria.

The following bacteria were isolated:

Pseudomonas fluorescens (spleen F1 and F2)

Tissue samples were tested for the presence of *Renibacterium salmoninarum* (the causative agent of bacterial kidney disease (BKD)) and *Flavobacterium psychrophilum* (the causative agent of rainbow trout fry syndrome RTFS), the result of these tests were negative.

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

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

# Parasitology:

Fins were collected to determine the presence of *Gyrodactylus salaris* using light microscopy. No *G. salaris* parasites were detected in the samples examined.

Kidney imprints were taken to test for the presence of for *Tetracapsuloides bryosalmonae*, the causative agent of PKD. *Tetracapsuloides bryosalmonae* was identified in F1, F2, F3 and F5.

Tissue samples were tested for segments of nucleic acid indicative of the presence of the *Tetracapsuloides bryosalmonae* using real-time PCR (qPCR).

Tetracapsuloides bryosalmonae

Fish Number	Endogenous control Cp value		Cp Values	Reported Result (PCR)	
F1	21.30	21.38	21.62	21.53	POSITIVE
F2	20.90	18.85	18.78	18.75	POSITIVE
F3	20.83	20.25	20.26	20.17	POSITIVE
F4	20.62	18.90	18.92	18.95	POSITIVE
F5	20.10	20.54	20.78	20.51	POSITIVE

**Histology:** Tissue samples of gill, skin and skeletal muscle, heart, pyloric caeca, pancreas, hind gut, liver, spleen and were taken from F1-F5. The tissue samples were fixed in 10% neutral buffered formalin.

Histopathological examination revealed the following:

Gill: Hyperplasia lamellar branchitis, some to mild, multifocal observed in all fish. F5 displayed foci of necrosis and F4 an occasional ciliate parasite.

Skin & Muscle: Myiosites, mild, multifocal with few structures consistent with Tetracapsuloides bryosalmonae. F3 and F4 also displayed mild to moderate epidermal spongiosis.

Heart: Some minor, multifocal myocarditis (F1, F5) with foci of necrosis (F5).

Gut and pyloric caeca: Within normal range.

Pancreas: Within normal range.

Liver: Hepatitis, mild, multifocal (F1, F3, F4, F5), hepatocellular necrosis with structures consistent with *Tetracapsuloides bryosalmonae*, mild, multifocal, (F2). Hepatocellular vacuolation (macrovesicles), diffuse, mild (F1-F5).

Kidney: Interstitial cell (haemopoietic) necrosis, severe, diffuse observed in all fish. Several structures consistent with *Tetracapsuloides bryosalmonae* also observed.

Spleen: Necrotizing splenitis, focal to diffuse, mild to moderate observed in all fish. Several structures consistent with *Tetracapsuloides bryosalmonae* also observed.

Signed:pp Date: 03/10/2023
Fish Health Inspector

The Fish Health Inspectorate Service Charter detailing standards of service is available on the Scottish Government website at Fish Health Inspectorate Service Charter - gov.scot (www.gov.scot)

FHI 059, Version 13	Iss	ued by: FHI	Date of issue: 12/05/2020				
Case No: 2023-0372			Date of visit: 24/08/2023				
Time spent on site: 5h	1	Main Inspecto	or:				
Site No: FS0423 Business No: FB0169	Site Name: Business Name:	Lamlash Bakkafrost Scotland					
Case Types: 1 REP 2	REG 3 DIA	4 5	6				
Water Temp (°C): 15.5	Thermometer No:	T173	FHI 045 completed				
Observations:	Region: ST	Water type: S	CoGP MA M-48				
Dead/weak/abnormally behaving fish present?  Clinical signs of disease observed?  Gross pathology observed?  Diagnostic samples taken?  Y If yes, see additional information/clinical score sheet.  Y If yes, see additional information/clinical score sheet.  Y If yes, see additional information/clinical score sheet.  Y							
UNI/REG only - if unable to carry	out intended visit detail re	ason below:					
	Water temp too	high and ECI not due					

#### **Additional Case Information:**

Site inspected following mortality notifications received by the FHI. Elevated morts have been recorded on site since May

Peaks in mortality above reporting threshold: 2023, wk 18 3139 (1.92%) wk 19 2909 (2.04%), wk 22 757 (4.68%), wk 24 566 (2.18%), wk 25 (2.75%), wk 26 325 (2.12%), wk 30 11692 (9.80%), wk 31 8281 (7.70%), wk 32 13992 (14.09%), wk 33 8793 (10.31%). week 34 (to date), 3098 (4.05%).

Site received additional stock from Sgeir Dughall in Feb/March, Maaey in May and Geasgill in July. Site was fallowed for 10 days prior to the Geasgill input. Gill issues have been the main issue.

Recent health report details that AGD scores were low, PGD scoring between 1-3, with moderate gill damage noted.

Peaks in mortality 2022 wk 43 3018 (1.61%), wk 44 4869 (2.63%), wk 45 9330 (5.18%), wk 46 5514 (3.23%), gill health the main cause but some external lesions were reported.

Recent treatments have been the FW FLS (15/8/2023) system only which has been effective for lice control.

On inspection of stocks two moribunds were observed however these were too deep in the water column to remove, a number of lethargic fish were observed five were selected and removed for diagnostic sampling.

Wrasse mortalities for the last four weeks: wk 31 0, wk 32 14 (0.59%), wk 33 32 (1.35%) and wk 34 7 (0.30).

FHI 059, Version 13			Issu	ed by: FHI			Date of issu	ıe: 12/05/2020
Case No:	2023-0372	]	Site No:	FS0423				
Date of Visit:		24/08/2023	3		Inspector(s	):		
Registration/Autho			:4	- <del>1</del> 0			V	,
<ol> <li>Business/site deta</li> <li>Changes made to</li> </ol>	•	checked by s	site representa	ative?			Y	1
Site Details (includ	le cleaner fis	h for all sect	ions)					
Total No facilities		14	Facilities sto	cked	6	No facilitie	es inspected	14
Species	SAL	WRA					1	
Age group	2022 Q3	wild						
No Fish	73,430	1,553						
Mean Fish Wt	2.8kg	N/A						
Next Fallow Date (S		December 2	023	Next Input Da	ate (Site)	2024 Q2		•
Recent (last 4 wks)	disease prob	ems?			_ ` ′	s (since last	visit)?	N
If yes, detail:	Gill health is					,	,	
<ul> <li>3. Are records comp</li> <li>4. Are movement re</li> <li>5. Are records comp</li> <li>6. Are health certific</li> <li>Transport Records</li> <li>1. Are any movement</li> <li>If yes, is there a system</li> </ul>	cords availab plete and corr ates for introd s nts carried ou	le for dead fis ectly entered' ductions (outv	sh and waste? ? vith GB) availa half) of the bu	able? usiness (not us				Y Y N/A
Mortality Records								
1. Mortality records	available for i	nspection?						Y
2. How are mortalities	es disposed d	f?			Whole fish	- Dundas Ch	emicals	
If other detail:								
3. Mortality records	complete and	correctly ent	ered?					Y
4. Recent mortality (	last 4 wks):		see additiona	al information				
5. Evidence of recer	nt increased/a	itypical morta	lities?					Y
If yes, facility nos/no	mortality per	facility/no sto	ock per facility	/reason:				
see additional comm	nents							
6. Any other peaks i			necked?					Y
If yes, detail:	see addition							
7. Have increased (	unexplained)	mortalities be	en reported to	o vet or FHI?				N/A
If yes, detail action:								
8. Have 'mortality ev	ents' been re	ported to FHI	? If no, enter	details on mor	tality events	sheet.		Y

FHI 059, Version 13	Issued by: FHI	Date of issue: 12/05/2020
Treatments and Medicines Records		

Treatments and Medicines Records	
1. Recent treatments (see comment)?	Y
If yes, detail: Optomease	
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)?  Optomease	
If other, detail:	
6. Are medicines stored appropriately?	N/A
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?	Y
2. If yes, are results available for inspection?	Y
3. Any significant results?	Y
If yes, detail (if not detailed under recent disease problems).	
Pacarda chacked hatwan: 27/10/2022 to 24/08/2022	

27/10/2022 to 24/08/2023

FI	HI 059, Version 13							ISS	ued by: F	НΙ			
	Case no:	2023-03	372	Site No:		FS0423			Date of vi		24/0	08/2023	24/(
	Priority samples:	VI		ВА		PA		MG	Sampling	HI			
	Time sampling starts/ends:		0:00		0:00		Inspecto	or:			VMD No	о.	0
	Environmental conditions:	1	Dry	2	Cloudy	3	Sunny	4		5			
	Summary samples	HIST	Y	ВА	Y	MG	Y	VI		РА		Total Sa	mples
Α	dd Fish/Pools - click												
	Pool/Fish No	F1	F2	F3	F4	F5							
	Fish nos	1	2	3	4	5							
	Pool Group	P1	P1	P1	P1	P1							
	Species	SAL	SAL	SAL	SAL	SAL							
	Average weight	2.8000	2.8000	2.8000		2.8000							
	Sex	N/A	N/A	N/A		N/A							
	Water Type	SW	SW	SW	SW	SW							
Details		_	_	_	_	_							
ets		iĝ	iĝ	iĝ	igi	iĝ							
		Geasgill	Geasgill	Geasgill	Geasgill	Geasgill							
Stock	Stock Origin												
Ċ,	Facility No	3	3	4	4	4							

08/2023	3/2023 Additional Sample Information:													
5		Total Te	ests ass	igned	5									

FHI 059, Version 13 Issued by: FHI Date of issue: 12/05/2020 Method of killing: Percussive Case no: FS0423 2023-0372 Site No: Inspector(s): Sheet Relevant: Y 24/08/2023 Date of visit: S for strong presence: M for medium presence: W for weak presence Fish Number Time sampled after death (if > 45 minutes) External Signs Moribund Behaviour Lethargic S S Hanging vertical Spiralling **Flashing** Loss of equilibrium Body Dark Distended abdomen m **Anorexic** Scale Oedema Opercula **Shortened** Flared Haemorrhaging **Throat** Ventrum Base of fins Elsewhere Exophthalmic Eyes Enophthalmic (sunken) Cataract Haemorrhagic W Gills Zoned w m **Necrotic** m w W Lesions Flank Elsewhere Vent Inflamed Trailing faeces Estimate numbers 0 0 0 0 Lice Load Internal Signs **Ascites** Clear Bloody Oedema In tissues m m m Heart Pale/anaemic Granulomas М Deformed m m m m Liver Petechial haem Gross haem Tissue breakdown

Enlarged
Colour number(s)
Granulomas
Lesions
Petechial haem

Enlarged Granulomas

Tubules mauve Lack of fat

No food present
Yellow pseudo-faeces
External haem
Internal haem

Haemorrhaging Haemorrhaging

Fluid filled

Swollen Grey Granular Liquefied

Pyloric caeca

Spleen

Body wall

Kidney

Swim bladder

Gut

w

W

W

W

Case no: 2023-0372

Date of visit: 24/08/2023

0 (	Z I/OG/ZGZ								
S for strong preser Fish Number	nce: M for medium presence: W fo	rw	_	_	1		ı	1	
	on dooth (if : 45 minutes)	_		_					
	er death (if > 45 minutes)								
External Signs Behaviour	Moribund								
benaviour	Lethargic								
	Hanging vertical			_					
				_					
	Spiralling			_					
	Flashing Loss of equilibrium			_					
Dody	Dark	_		_					
Body	Distended abdomen			_					
	Anorexic	_		_					
	Scale Oedema								
Oneneule		_		_					
Opercula	Shortened								
l la aura a unh a min ar	Flared			_					
Haemorrhaging	Throat								
	Ventrum								
	Base of fins								
Eves	Elsewhere								
Eyes	Exophthalmic								
	Enophthalmic (sunken)								
	Cataract								
Cilla	Haemorrhagic								
Gills	Pale								
	Zoned								
Lasiaw -	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								

HI 059, Version 13	Issued by: FHI	Date of issue: 12/05/20
additional comments:		
		<b>I</b>
		<b>I</b>
		<b>I</b>

FHI 059, Version 13		Issued by: FHI			Date of	Date of issue: 12	
Case Number:	2023-0372		Site No:	FS0423		Insp:	
Date of Visit	24/08/2023		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
•	Number of supp	cluding third country	0			14	0
Movements off	Frequency of m		0	3	6	10	10
Movements on	Number of dest		0			10	3
Exposure via water		Site contacts	0	1-5	6-10		
Water contacts with other farms (holding species	Farm is protect disinfection or b	ed (secure water supply through porehole)	0				
susceptible to same diseases)	farms upstream	or in a coastal zone with category I or within 1 tidal excursion	1	2	4		1
		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	]			0
	Processing own	n fish (re-cycling risk)	1				
	Processing fish	from MS of equivalent status	2				
	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 wast	e only processed.	0				0
products	Common proce	sses with other farms	3				
	Collection point	for waste from other farms	5				
Use of unpasteurised feeds	No feeding of u	npasteurised 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		0
	Sites sharing st	aff and equipment	0	1	2		
Disinfection of equipment between sites, use of	Yes		0	]			0
footbaths etc	No		1				
CoGP/Regulator				_			
Practices in accordance	Yes		0				0
with regulator or industry code of practice	No		3				
Platform access to cages	Yes		0	1			0
	No		2				
					Total		14
					Rank		LOW

 Case No:
 2023-0372
 Date of visit: 24/08/2023

 Site No:
 FS0423

Inspector:

Results Summary	Freq.			Dat	te of Notificat	tion		
,		Database	Insp		Insp		Insp	2 <sup>nd</sup> Insp
AGD (Neoparamoeba	3/5	29/08/2023		29/08/2023				
perurans) (PCR) -								
AGDQ						03/10/2023		
IHN (PCR) - IHNP	0/5	29/08/2023		29/08/2023		03/10/2023		
IPN (PCR) - IPNM	0/5	29/08/2023		29/08/2023		03/10/2023		
ISA (real time qPCR -	0/5	29/08/2023		29/08/2023				
heart & kidney) - ISAQ						03/10/2023		
Paranucleospora	5/5	29/08/2023		29/08/2023				
theridion (PCR) - PNST						03/10/2023		
Piscine myocarditis	0/5	29/08/2023		29/08/2023				
virus (CMS) (PCR) -								
PMVP						03/10/2023		
Salmon gill poxvirus	5/5	29/08/2023		29/08/2023		00/40/0000		
(PCR) - SPVP						03/10/2023		
VHS (PCR) - VHSP	0/5	29/08/2023		29/08/2023		03/10/2023		
Salmonid alphavirus	1/5	30/08/2023		30/08/2023		00/40/0000		
(SAV) (PCR) - SALP	4 / =	0=/00/0000		07/00/0000		03/10/2023		
Aeromonas	4/5	07/09/2023		07/09/2023				
salmonicida						03/10/2023		
(Furunculosis) - ASAL	4/5	07/00/0000		07/00/0000		03/10/2023		
Aeromonas spp - AERO	4/5	07/09/2023		07/09/2023		03/10/2023		
Vibrio species (culture) · VSPE	1/5	07/09/2023		07/09/2023		03/10/2023		
Epitheliocystis - EPIT	1/5	19/09/2023		19/09/2023		03/10/2023		
Gill pathology - GPAT	5/5	19/09/2023		19/09/2023		03/10/2023		
Aeromonas (histology) -		19/09/2023		19/09/2023				
AERH	0,0	10,00,2020		10,00,2020		03/10/2023		
		<del>                                     </del>						
		<del>                                     </del>						
		<del>                                     </del>						
		<del>                                     </del>						
*communicated by		<del>                                     </del>						
email								
an								

Report Summary			
Case Type	Date	Insp	2 <sup>nd</sup> Insp
DIA	03/10/2023		
REG	11/10/2023		




# SUMMARY FOR INFORMATION OF SITE OPERATOR

 Business No
 FB0169
 Date of Visit
 24/08/2023

 Site No
 FS0423
 Site Name
 Lamlash

 Case No
 20230372
 Inspector

**Section 1: Summary** 

This site was inspected following reports of increased mortality, five lethargic fish were removed from the pens for further examination and subsequent diagnostic sampling.

Histopathology examination revealed features consistent with *Aeromonas salmonicida* (furunculosis) which was also identified from plates taken from kidney and lesion material. The level and purity of growth of this bacterium suggest it would be implicated as a primary cause of morbidity.

Also observed was mild, hyperplasic branchitis and two fish displayed bacterial necrotising branchitis. One fish also displayed areas of light H&S stain in the compactum stratum. Hepatocellular necrosis also observed.

Aeromonas sp. was identified on plates taken from lesion material and *Vibrio* sp. was identified on plates taken from kidney material. The level and purity of growth would suggest neither bacteria were implicated as the primary cause of the pathologies observed.

Samples tested positive for Salmonid alphavirus (SAV) and the gill related pathogens: *Paranucleospora theridion*, salmon gill poxvirus (SGPV) and *Neoparamoeba perurans* (AGD).

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

Elevated mortalities in the current crop of fish have been reported to the FHI since the start of August 2023, the cause being attributed to gill health and furunculosis. Due to the high levels of mortality reported a site inspection was conducted. The week prior to the inspection the mortality rate was 10.31% (8793 fish).

On inspection of the site two moribund fish were observed, these were deep in the water column so could not be caught however a number of lethargic fish were observed, five of which were removed for further examination and subsequent diagnostic sampling.

Externally F3 appeared anorexic and F1 displayed bilateral exopthalmia. The gills of all fish were pale and necrotic and flank lesions were present on F1, F2, F4 and F5.

Internally the hearts of all fish appeared deformed and pale with granulomas present on F4. Splenomegaly was evident in all fish and a distinct lack of fat was noted on the pyloric caeca of F4.

# Samples

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

Fish number	Facility number	Species	Stage	Origin
1-2	3	Atlantic salmon	2.8 kg 2022 Q3	Geasgill
3-5	4	Atlantic salmon	2.8 kg 2022 Q3	Geasgill

# Results

**Bacteriology:** Kidney and gill material from F1 - F5 and lesion material from F1, F2, F4 and F5 were inoculated onto appropriate media for the isolation of bacteria.

The following bacteria were isolated:

- Aeromonas salmonicida (kidney (F1, F2, F3 and F4) lesion (F2 and F4));
- Aeromonas sp. (lesion F1, F2, F4 and F5);
- Vibrio sp. (kidney F5).

From the tests conducted we do not have evidence of resistance to amoxycillin, sulphamethoxazole/trimethoprim or florfenicol.

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

Salmonid alphavirus

Fish Number	Endogenous control Cp value	Cp Values			Reported Result (PCR)
F1	-	-	-	-	Negative
F2	-	-	-	-	Negative
F3	-	-	-	-	Negative
F4	17.10	34.56	34.47	34.58	POSITIVE
F5	-	-	-	-	Negative

Salmon gill poxvirus

Fish Number	Endogenous control Cp value	Cp Values			Reported Result (PCR)
F1	22.91	36.53	38.28	38.99	POSITIVE
F2	23.13	28.27	28.29	28.28	POSITIVE
F3	22.58	28.35	28.52	28.50	POSITIVE
F4	20.92	33.85	34.00	33.73	POSITIVE
F5	21.76	25.08	25.10	25.05	POSITIVE

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

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

Neoparamoeba perurans (AGD)

Fish Number	Endogenous control Cp value	Cp Values			Reported Result (PCR)
F1	-	-	-	-	Negative
F2	23.13	31.96	31.82	31.98	POSITIVE
F3	22.58	31.05	30.95	31.04	POSITIVE
F4	-	-	-	-	Negative
F5	21.76	31.78	31.79	32.03	POSITIVE

Paranucleospora theridion

Fish Number	Endogenous control Cp value	Cp Values			Reported Result (PCR)
F1	22.91	35.98	35.74	35.73	POSITIVE
F2	23.13	25.89	25.95	25.94	POSITIVE
F3	22.58	29.69	29.74	29.69	POSITIVE
F4	20.92	33.33	33.41	33.24	POSITIVE
F5	21.76	24.07	24.07	24.09	POSITIVE

**Histology:** Tissue samples of gill, skin and skeletal muscle, heart, pyloric caeca, pancreas, hind gut, liver, spleen and kidney taken from F1-F5. The tissue samples were fixed in 10% neutral buffered formalin.

Histopathological examination revealed the following:

Gill: Filament branchitis, mild, multifocal (F1), F2 displayed lamellar hyperplasic branchitis with areas of haemorrhage, mainly at the tip filaments, chronic, multifocal. F3 and F5 displayed necrotising bacterial (mixed Gram-negative bacteria) branchitis, marked, focal. F3 exhibited few aggregates of Gram-negative rod-shaped bacteria, filament hyperplasic brachitis, mild, multifocal, and occasional basophilic epithelial inclusions (likely epitheliocystis). Aneurysmal dilation/telangiectasia observed among all fish and free blood among gill filaments Features of autolysis observed on F2-F5.

Skin & Muscle: Dermatitis with several aggregates of aggregates of Gram-negative rod-shaped bacteria, mild, multifocal (F1, F4). F5 displayed a mild dermatitis.

Heart: Several small dense aggregates of Gram-negative bacteria (F2). Some light H&E stain observed in the compact layer (F5). Epicarditis (F3, F5).

Gut and pyloric caeca: Marked cell sloughing (potentially associated with post-mortem artefact) observed in F2-F5.

Pancreas: Within the normal range.

Liver: Hepatocellular necrosis, mild, multifocal with Gram-negative rod-shaped bacterial aggregates (F4). Hepatocellular necrosis, very mild to mild, multifocal (F2, F3, F5) with focal area of haemorrhage (F3). Mild, diffuse hepatocellular vacuolation (macrovesicles) observed in all fish.

Kidney: Foci of interstitial cell (haemopoietic) necrosis (F2, F3, F5) with few to several dense aggregates of Gram-negative rod-shaped bacteria in F2, F3, F4, F5.

Spleen: Necrotising splenitis with Gram-negative rod-shaped bacteria, multifocal, mild (F3), few aggregates of Gram-negative rod-shaped bacteria in F2, F3, F4. F5 exhibited cuffing (F4).



The Fish Health Inspectorate Service Charter detailing standards of service is available on the Scottish Government website at Fish Health Inspectorate Service Charter - gov.scot (www.gov.scot)



# SUMMARY FOR INFORMATION OF SITE OPERATOR

 Business No
 FB0169
 Date of Visit
 24/08/2023

 Site No
 FS0423
 Site Name
 Lamlash

 Case No
 20230372
 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.

Samples were taken for diagnostic purposes. A separate report will be issued detailing the results of these tests.

# Records

The information required for the public record of aquaculture production businesses regarding this site was verified and where necessary updated.

Medicine records were inspected and found to be adequately maintained.

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.

Mortality levels had exceeded the reporting criteria since the last inspection and had been reported to the Fish Health Inspectorate as required.

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

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: 11/10/2023

The Fish Health Inspectorate Service Charter detailing standards of service is available on the Scottish Government website at Fish Health Inspectorate Service Charter - gov.scot (www.gov.scot)

FHI 059, Version 13	Issu	ed by: FHI	Date of issue: 12/05/2020				
Case No: 2023-0374			Date of visit: 23/08/2023				
Time spent on site:	4hrs	Main Inspect	or:				
Site No: FS1244 Business No: FB0544	Site Name: Business Name:	Strathclyde Scotland					
Case Types: 1 DIA	2 REP 3 STI	4 5	6				
Water Temp (°C): 16.1	Thermometer No:	T309	FHI 045 completed				
Observations:	Region: ST	Water type: B	CoGP MA:				
Dead/weak/abnormally behaving fish present?  Clinical signs of disease observed?  Gross pathology observed?  Diagnostic samples taken?  If yes, see additional information/clinical score sheet.  Y  If yes, see additional information/clinical score sheet.  Y  If yes, see additional information/clinical score sheet.  Y  If yes, see additional information/clinical score sheet.							
UNI/REG only - if unable to carry out intended visit detail reason below:							

#### **Additional Case Information:**

Private pond in Clydebank, Glasgow, was inspected following notification of suspected KHV. Owner contact details:

Owner had noted a significant increase in mortalities and moribunds, demonstrating necrotic gills.

Koi only pond. Received an input of fish from Koi Fond Ltd (2023. Fish initially appeared to be doing well until around 10 days ago when they became noticeably lethargic and gills appeared pale and necrotic. The ponds first input of fish was from the same supplier in 2022 and that input have been healthy since input with ~20 mortalities removed following transfer but none following that.

Anti-fungal treatment was administered over 7 days at the onset of mortalities ~10days ago (active ingredients: acriflavine hydrochloride and malachite green oxalate). Owner reports that the treatment appeared to improve the health of the fish and they were more active in the pond until treatment stopped and health declined again within 24hrs.

Several mortalities (~10) have been removed daily since onset of issue.

10 moribund and lethargic fish displaying clinical signs of KHV (sunken eyes, lack of mucous membrane and necrotic gills) were removed and diagnostic samples taken.

Inspector explained options to owner following placement of an IDN on the address. He chose to humanely cull the remaining population and he will clean, disinfect and dry out the pond before any further inputs (subject to approval by FHI). Culled fish and fish waste from the diangostic sampling was all removed and disposed of by the inspector via clinical waste routes. Previously, owner had been bagging mortalities and disposing of them in domestic waste.

FHI 059, Version 13	Issued by	r: FHI		Date o	f issue: 12/05/2	020			
Case No:	2023-0374		Site No:	FS1244	4				
Date of Visit:		23/08/2023	3		Inspector(s):				
Registration/Authorisation Details  1. Business/site details summary checked by site is  2. Changes made to details?	representative?								
Site Details (include cleaner fish for all section	s)								
Total No facilities	•	1	Facilities sto	cked	1	ĺ			
Species	CAR	CAR							
Age group	2022	2023							
No Fish	125	25							
Mean Fish Wt	500g	300g							
Next Fallow Date (Site)		Now fallow.		Next Input Da	_ '				
Recent (last 4 wks) disease problems?					Y Any escapes				
If yes, detail:	Suspected K	HV							
6. Any other peaks in mortality during period chec <mark>l</mark> If yes, detail:	ked?								
7. Have increased (unexplained) mortalities been i	reported to vet	or FHI?							
If yes, detail action:									
8. Have 'mortality events' been reported to FHI? If	no, enter detail	s on mortality	events sheet.						

FHI 059, Version 13	Issued by: FHI	Date of issue: 12/05/2020
Treatments and Medicines Records  1. Recent treatments (see comment)?  If yes, detail:  If other, detail:	Anti-fungal	
<ul> <li>2. Medicines records available for inspection?</li> <li>3. Are records complete and correctly entered?</li> <li>4. Are fish in a withdrawal period?</li> <li>5. If yes, what treatment(s)?</li> <li>If other, detail:</li> </ul>		
6. Are medicines stored appropriately?		
Biosecurity Records  1. Biosecurity records available for inspection?  2. Has the manner and frequency of mortality remo  3. Has the manner and period in which the APB will included?	•	
4. Has the action that will be taken in the event that that will be notified to Scottish Ministers?	t the presence or suspicion of the p	presence of a listed disease is detected

5. Has the health status of aquaculture animals being stocked on the farm site been covered (equal or higher health status,6. Have the husbandry and biosecurity measures implemented between each epidemiological unit to minimise transmission

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

8. Have the biosecurity procedures been adequately implemented on site?

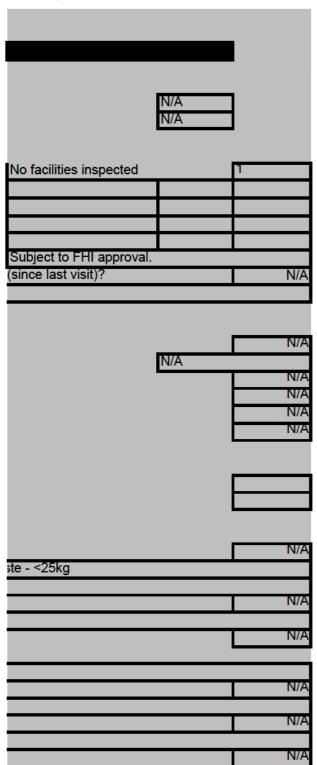
If no, detail:

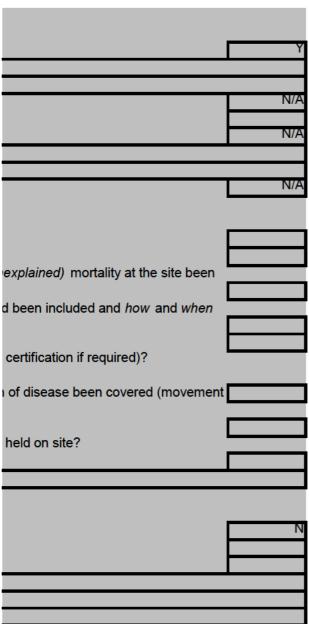
# **Results of Surveillance**

- 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





Case no:   2023-0374   Site No:   F\$1244   Date of visit/   23/08/2023   23/08/20	rni 059, version 13	)						153	su <del>c</del> u by.	ГПІ			
Priority samples:         VI         BA         PA         MG         HI           Time sampling starts/ends:         12:30:00         15:30:00         Inspector:         VMD No.         0           Summary samples:         1 Dry         2 Sunny         3 Cloudy         4 Calm         5           Summary samples:         HIST         Y BA         MG         Y VI         Y PA         Y Total Samples           Add Fish/Pools - click           Pool/Fish No         F1         F2         F3         F4         F5         F6         F7         F8         F9         F10	Case no:	2023-0	374	Site No:		FS1244					23/0	08/2023	23/0
Starts/ends:   Environmental conditions:   1   Dry   2   Sunny   3   Cloudy   4   Calm   5	Priority samples	V		ВА		PA		MG					
Summary samples	starts/ends:	_	30:00	15:3	0:00		Inspect	or:			VMD No	o. <b>[</b>	0
Pool/Fish No	Environmental c	onditions: 1	Dry	2	Sunny	3	Cloudy	4	Calm	5		1	
Pool/Fish No	Summary sampl	es HIST	Υ	ВА		MG	Y	VI	Y	PA	Y	Total Sa	imples
Pool/Fish No													
Fish nos	Add Fish/Pools - o	lick											
Pool Group	Pool/Fish No	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10		
Pool Group	Fish nos	1	2	3	4	5	6	7	8	9	10		
Species		P1						P7					
Average weight		CAR		CAR	CAR	CAR	CAR	CAR	CAR	CAR	CAR		
Sex		500g	500g	500g		500g			500g	500g			
Water Type  FW F		N/A	N/A	N/A		N/A	N/A		N/A	N/A			
Stock Origin	Water Type	FW	FW	FW	FW	FW	FW	FW	FW	FW	FW		
Stock Origin     Soliton     Soliton<													
Stock Origin													
Stock Origin		₽.	ţ.	ţţ.	ţ	td.	ţ	td.	ţ	ţ.	ţ		
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Calegranii (Cardoni Cardoni	¥ 041-0-i-i		<u>.</u>	0	0	$\circ$	0	0	0	0	0		,
		<u>.</u>											

08/2023	08/2023 Additional Sample Information:												
	Fish dispatched by percussive blow.												
10		Total To	ests ass	signed	3								

Case no:	2023-0374		Site No	o:	FS124	4	Method of killing: Percussive				sive
								_			
Date of visit:	23/08/2023	3	Inspec	tor(s):				5	Sheet Re	elevant:	Y
	ce: M for medium presence: W for			IE2	TE A	ILA	ILE	IL/	ILU	IE O	ILAN
Fish Number	r death (if > 45 minutes)	F1	F2	F3	F4	F5	F6	F/	F8	F9	F10
External Signs	r death (if > 45 minutes)										
Behaviour	Moribund	S	S	S	S	S	S	S	S	S	S
Dellavioui	Lethargic	S	S	S	S	S	S	S	S	S	S
	Hanging vertical										
	Spiralling										
	Flashing										
	Loss of equilibrium										
Body	Dark										
	Distended abdomen		_		_		_				
	Anorexic										
Opercula	Scale Oedema										
Opercuia	Shortened Flared										
Haemorrhaging	Throat										W
riacinormaging	Ventrum		_	w							-
	Base of fins										
	Elsewhere										
Eyes	Exophthalmic										
	Enophthalmic (sunken)	S		S	M	W	M		M		W
	Cataract										
	Haemorrhagic										
Gills	Pale	S		W	S		M	M	W	W	VA/
	Zoned	S	W	M	S		M	S	S	M	W
Lesions	Necrotic Flank	3	VV	IVI	3		3	3	3		
Lesions	Elsewhere										
Vent	Inflamed										
Vonc	Trailing faeces										
Lice Load	Estimate numbers										
Internal Signs											
Ascites	Clear										
	Bloody										
Oedema	In tissues			w		w			W		
Heart	Pale/anaemic		_	VV		VV			VV		
	Granulomas Deformed										
Liver	Petechial haem										
LIVEI	Gross haem		_								
	Tissue breakdown										
	Enlarged		_								
	Colour number(s)	4	4	3	3	3	4	5	3	4	4
	Granulomas										
	Lesions										
Pyloric caeca	Petechial haem		_								
	Tubules mauve	11/4		D.4		VAZ	107		107	N/A	107
0-1	Lack of fat	M	_	M	w	W	W	w	W	M	W
Spleen	Enlarged Granulomas				VV	VV		VV			VV
Gut	No food present			w				w			
out	Yellow pseudo-faeces	w	w		w	w	w		w	w	w
	External haem										
	Internal haem										
Body wall	Haemorrhaging										
Swim bladder	Haemorrhaging										
	Fluid filled										
Kidney	Swollen										
	Grey										
	Granular										
	Liquefied Parasites present										
General											

Case no: 2023-0374

Date of visit: 23/08/2023

S for strong presence: M for medium presence: W for v Fish Number Time sampled after 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 Exophthalmic Eyes Enophthalmic (sunken) Cataract Haemorrhagic Gills Pale Zoned Necrotic Lesions Flank Elsewhere Vent Inflamed Trailing faeces Lice Load Estimate numbers Internal Signs Ascites Clear Bloody In tissues Oedema 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: 12/05/202
Additional comments:		

Site No: FS1244

Case No: 2023-0374

Nature of non-compliance:
Action taken (FHI):
Non-compliance relevant to (delete): VirologyMolGen/Bacteriology/Histology/Parasitology

Case No:	2023-0374			Date of visit:	23/08/2023	3				
Site No:	FS1244	]		Inspector:						
Describe Commence	IГ	Date of Notification								
Results Summary	Freq.	Database	Insp	Phone	Insp	Writing	Insp	2 <sup>nd</sup> Insp		
KHV (PCR) - KHVP	10/10	28/08/2023		28/08/2023		21/09/2023		2 11100		
Cyprinid Herpes Virus (PCR) - CYHP	10/10	29/08/2023		29/08/2023		21/09/2023	3			
SVC (PCR) - SVCP	0/10	29/08/2023	3	29/08/2023		21/09/2023	3			
Acari	4/10	08/09/2023	3	08/09/2023		21/09/2023	3			
Centropyxis sp.	1/10	08/09/2023	3	08/09/2023		21/09/2023	3			
AERO	6/10	19/09/2023	3	19/09/2023		21/09/2023	3			
FLAV	2/10	19/09/2023	3	19/09/2023		21/09/2023	3			
Citrobacter sp	4/10	19/09/2023	3	19/09/2023		21/09/2023				
GPAT	9/10	19/09/2023	3	19/09/2023		21/09/2023				
SPAT	4/10	19/09/2023	3	19/09/2023		21/09/2023				
KPAT	4/10	19/09/2023	3	19/09/2023		21/09/2023	3			
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	1	1								
	†	†								
	1	1								
Report Summary										
Case Type	Date	Insp	2 <sup>nd</sup> Insp							
DIA	04/10/2023									
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#### SUMMARY FOR INFORMATION OF SITE OPERATOR

 BUSINESS NO
 FB0544
 DATE OF VISIT
 23/08/2023

 SITE NO
 FS1244
 SITE NAME
 Strathclyde

 CASE NO
 20230374
 INSPECTOR

**Section 1: Summary** 

A private garden pond located at a notification of the suspicion of koi herpesvirus (KHV) from a third party. Ten moribund fish displaying clinical signs of KHV were removed for diagnostic sampling.

Histopathology examination revealed marked filamentous bacterial branchitis and pathology consistent with koi herpesvirus, confirmed by positive qPCR and DNA sequencing analysis.

Aeromonas sp., Citrobacter youngae and Flavobacterium columnare were identified. Flavobacterium columnare is a known primary fish pathogen and its presence would be considered a risk to fish health, the low level of growth observed from the spleen does not necessarily suggest a low level of presence overall.

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

Externally, all ten fish were lethargic and moribund. F10 had haemorrhaging on the throat and F3 also had haemorrhaging along the ventrum. F1, F3-6, F8 and F10 all had enophthalmic eyes. The gills were pale in F1, F3-4 and F6-9, were zoned in F4, F6, F9-10 and were necrotic in F1-4, F6-8. Internally, the hearts of F3, F5 and F8 were pale/anaemic and there was a lack of fat on the pyloric caeca of F1, F3, F5-6 and F8-10. The spleens of F4-5, F7 and F10 were enlarged. No food was present in the gut of F3 and F7 and yellow pseudo-faeces were observed in the guts of F1-2, F4-6 and F8-10.

# Samples

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

Fish number	Pool number	Facility number	Species	Stage	Origin
F1-10	P1-10	Garden Pond	Koi Carp	2022/2023	Koi Fonds Ltd, Leeds

# Results

**Bacteriology:** Kidney and spleen material from F1-10 were inoculated onto appropriate media for the isolation of bacteria.

The following bacteria were isolated from fish:

- Aeromonas hydrophilia (Kidney: F1 F6)
- Citrobacter youngae (Spleen: F3, F4, F5 & F8 & Kidney: F3 and F5)
- Flavobacterium columnare (Spleen: F1 & F6)

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

Koi Herpesvirus (KHV)

Fish Number	Endogenous control Cp value		Cp Values	Reported Result (qPCR)	
F1	22.61	20.63	20.49	20.46	POSITIVE
F2	21.19	27.91	27.79	27.89	POSITIVE
F3	20.83	22.32	22.62	22.63	POSITIVE
F4	21.00	22.08	22.24	21.99	POSITIVE
F5	20.87	29.59	29.39	29.63	POSITIVE
F6	20.30	20.49	20.41	20.68	POSITIVE
F7	21.11	18.30	18.27	18.25	POSITIVE
F8	21.26	22.12	21.96	22.13	POSITIVE
F9	20.15	22.19	22.26	21.99	POSITIVE
F10	20.10	23.61	23.60	23.70	POSITIVE

Fish

Sequencing confirmed a 98.20% identity to cyprinid herpesvirus 3 strain GY-01.

Spring Viremia of Carp (SVC)

Fish

Number	(Conventional PCR)
F1	Negative
F2	Negative
F3	Negative
F4	Negative
F5	Negative

**Reported Result** 

Number	(Conventional PCR)
F0	Negative
F6	Negative
F7	Negative
F8	Negative
F9	Negative
F10	Negative

Reported Result



Parasitology: Ten gills were received in 70% ethanol for general parasitological examination.

Gills were in poor condition and necrotic with much blood/mucus present. No monogenean parasites were observed on the gills or in the transport tubes.

F1, F4, F6, F9 - Several mites (*Acari*) were observed attached to gill filaments. A spiked structure was also observed attached to a filament and identified as *Centropyxis* sp. lobose testate amoeba. Mites are likely feeding on fungi and bacteria associated with gill necrosis and not the cause of disease.

**Histology:** Tissue samples of gill, skin and skeletal muscle, heart, pyloric caeca, pancreas, hind gut, liver, spleen and kidney were taken from F1-10. The tissue samples were fixed in 10% neutral buffered formalin.

Histopathological examination revealed the following:

<u>Gill:</u> Necrotising branchitis, acute, severe, diffuse with filamentous Gram-negative bacteria aggregates (F1, F3, F4, F6, F8, F9) and less severe in F7. F1 & F3 displayed some intranuclear inclusions, chromatin margination. F2, F7 & F5 displayed multifocal to diffuse filament hyperplasia. F4 and F5 exhibited few dactylogyrus-like parasites. Free blood among gill filaments (F10).

Skin & Muscle: Within the normal range.

<u>Heart:</u> Minor myocarditis (F2) and presence of basophilic nuclei observed in atrium (F2), some focal to multifocal pericarditis (F1, F5, F10) and blood clot (F6).

<u>Gut and pyloric caeca:</u> Few individual cell necrosis observed on folds (F1-F10) and some inflammation (F6). Some congested folds (F5).

Pancreas: Within the normal range.

Liver: Hepatocytes displayed cloudy appearance (F1).

<u>Kidney:</u> Few renal tubular display hyaline droplets (F1-F10). F6 displayed few renal tubules filled with eosinophilic material (F6) and interstitial tissue displayed few scattered necrotic cells (F6, F8, F9). F7 exhibited some structures resembling intranuclear inclusions.

<u>Spleen:</u> Small area of necrosis (F1) and necrosis of few individual splenocyte (F9, F10), slightly congested (F1, F6).

Signed:

Fish Health Inspector

Date: 04/10/2023

The Fish Health Inspectorate Service Charter detailing standards of service is available on the Scottish Government website at <u>Fish Health Inspectorate Service Charter - gov.scot</u> (www.gov.scot)

R09

# F1 –





# F2 –











F4 –



F5 –





F6 –





F7 –





F8 –



F9 –





F10 –





FHI 059, Version 13		Issued by: FHI	Date of issue: 12/05/2020						
Case No: 2023-0377			Date of visit: 29/08/2023						
Time spent on site:	30 mins	Main	Inspector:						
Site No: SS0931 Business No: SB0556	Site Name: Business Name:	Oyster Holding Room The Roslin Institute							
Case Types: 1 REG	2 3	4 5	6						
Water Temp (°C):	Thermometer No:		FHI 045 completed						
Observations:	Region: LO	Water type: S	CoGP MA:						
Dead/weak/abnormally behaving Clinical signs of disease observed Gross pathology observed? Diagnostic samples taken?		N/A If yes, see addition	onal information/clinical score sheet. onal information/clinical score sheet. onal information/clinical score sheet.						
UNI/REG only - if unable to carry	y out intended visit deta	nil reason below:							
fallow									

# **Additional Case Information:**

Site currently fallow. Had Pacific oysters (12) on site earlier this year. Will be getting native oysters onto site in October from Craignish or Melfort. These will be held on site for about 2 weeks.

Stock is moved to disease challenge room for trials with OHV or vibrio.

Look to visit in October when stocked.

Mortalities are double bagged (yellow bags), autoclaved then incinerated as clinical waste.

Water sources; for larvae - sea water from St Abbs. Adults - artificial sea water. All discharge water is held in a bunded tank with hypochlorite for 24 hours prior to discharge into the drainage system.

No reported mortality issues since last inspection (9/11/23).

Case No:	2023-0377			Date of visit:	29/08/2023					
Site No:	SS0931	1		Inspector:		ı				
Results Summary	Freq.			Date of Notification						
,	i i	Database	Insp	Phone	Insp	Writing	Insp	2 <sup>nd</sup> Insp		
Report Summary				1						
Coop Type	Doto	Inon	ond I							
Case Type REG	Date 14/09/2023	Insp	2 <sup>nd</sup> Insp							
KLG	14/09/2023									



# **SUMMARY FOR INFORMATION OF SITE OPERATOR**

**BUSINESS NO** SB0556 **DATE OF VISIT** 29/08/2023

SITE NO SS0931 SITE NAME Oyster Holding Room
CASE NO 20230377 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.

On this occasion, the site was found to be fallow. We plan to revisit the site in October when it is stocked.

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 Scottish Government website at <u>Fish Health Inspectorate Service Charter - gov.scot</u> (www.gov.scot)

Date: 14/09/2023

FHI 059, Version 13	Issu	ed by: FHI	Date of issue: 12/05/2020
Case No: 2023-0378			Date of visit: 29/08/2023
Time spent on site:	20 mins	Main Inspect	tor:
Site No: SS0941 Business No: SB0556	Site Name: Business Name:	Disease Challenge Room 020 The Roslin Institute	050
Case Types: 1 REG	2 3	4 5	6
Water Temp (°C):	Thermometer No:		FHI 045 completed
Observations:	Region: LO	Water type: S	CoGP MA:
Dead/weak/abnormally behavin Clinical signs of disease observ Gross pathology observed? Diagnostic samples taken?	•	If yes, see additional info	ormation/clinical score sheet. ormation/clinical score sheet. ormation/clinical score sheet.
UNI/REG only - if unable to carr	· ·		
		fallow	

Site is currently fallow and has been since last inspection. It is not likely to be used again. The reason being they are in the process of completing a new disease challenge room along the corridor. This is a purpose built room with a sealed floor and tanks for a recurc system. Discharge water would be held in a tank for treatment on site prior to discharge. It has the capacity to hold live animals for longer an in larger volumes and is for use solely for disease challenge work. Work should be completed in October when they will be looking to inactivate this site and authorise the new Disease Challenge Room. Consideration will need to be given to the movement restrictions for Room 02.050 and these are likely to need to be withdrawn and replaced on the new site. Visit should be planned for October to inactivate Disease Challenge Room 02.050 and authorised new disease challenge room as well as visit the Oyster holding room and Shrimp aquarium room both of which should be stocked.

Case No:	2023-0378			Date of visit:	29/08/2023			
Site No:	SS0941	1		Inspector:		ı		
Results Summary	Freq.	Date of Notification						
,		Database	Insp	Phone	Insp	Writing	Insp	2 <sup>nd</sup> Insp
			-					
			-					
Report Summary				1				
Cose Type	Date	lnon	and I					
Case Type Reg	14/08/2023	Insp	2 <sup>nd</sup> Insp					
rtog	14/00/2023							



### SUMMARY FOR INFORMATION OF SITE OPERATOR

**BUSINESS NO SB0556 DATE OF VISIT 29/08/2023** 

SITE No SS0941 SITE NAME <u>Disease Challenge</u> Room 02.050

CASE NO 20230378 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.

On this occasion, the site was found to be fallow. I was informed that it was unlikely that the site will be used again as a new Disease Challenge Room is almost complete. A visit will be conducted in October to inspect this site as cleaned and disinfected and to inactivate it. Following this the Confirmed Designation Notices placed on Disease Challenge Room 02.050 for oyster herpes virus and white spot disease will be withdrawn.

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 Scottish Government website at <u>Fish Health Inspectorate Service Charter - gov.scot</u> (www.gov.scot)

Date: 14/09/2023

FHI 059, Version 13	Issu	ed by: FHI	Date of issue: 12/05/2020
Case No: 2023-0379			Date of visit: 29/08/2023
Time spent on site:	30 mins	Main Inspec	etor:
Site No: SS0936 Business No: SB0556	Site Name: Business Name:	Shrimp Aquarium Room The Roslin Institute	
Case Types: 1 REG	2 3	4 5	6
Water Temp (°C):	Thermometer No:		FHI 045 completed
Observations:	Region: LO	Water type: F	CoGP MA:
Dead/weak/abnormally behavin Clinical signs of disease observ Gross pathology observed? Diagnostic samples taken?	•	If yes, see additional info	ormation/clinical score sheet. ormation/clinical score sheet. ormation/clinical score sheet.
UNI/REG only - if unable to carr	· ·		
		fallow	

Currently fallow - planning to stock in October from St Andrews site Rastech Eden Campus (SF) SS0946 but originate from Texas. Was stocked last week but with only 3 shrimps which were culled. No mortality issues. Shrimp are held here prior to moving to Disease challenge room for research work

Plan to revisit in October when stocked and a new disease challenge room will be complete.

Any mortalities are bagged, autoclaved and then incinerated as clinical waste.

Case No:	2023-0379			Date of visit	: 29/08/2023	3			
Site No:	SS0936	)		Inspector	:				
Results Summary	Freq.			Date of Notification					
,		Database	Insp	Phone	Insp	Writing	Insp	2 <sup>nd</sup> Insp	
	_								
	+								
Report Summary				4					
Case Type REG	Date	Insp	2 <sup>nd</sup> Insp						
REG	14/09/2023								
	_								
	+								



#### **SUMMARY FOR INFORMATION OF SITE OPERATOR**

**BUSINESS NO** SB0556 **DATE OF VISIT** 29/08/2023

SITE NO SS0936 SITE NAME Shrimp Aquarium Room

CASE NO 20230379 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.

On this occasion, the site was found to be fallow. We plan to revisit the site in October when it is stocked.

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 Scottish Government website at <u>Fish Health Inspectorate Service Charter - gov.scot</u> (www.gov.scot)

Date: 14/09/2023

FHI 059, Version 13	I	ssued by: FHI	Date of issue: 12/05/2020
Case No: 2023-0380			Date of visit: 29/08/2023
Time spent on site:	20 mins	Main Ins	spector:
Site No: FS1353 Business No: FB0568	Site Name: Business Name:	AGRF (RAS B) The Roslin Institute	
Case Types: 1 REG	2 3	4 5	6
Water Temp (°C):	Thermometer No:		FHI 045 completed
Observations:	Region: LO	Water type: F	CoGP MA:
Dead/weak/abnormally behavin Clinical signs of disease observ Gross pathology observed? Diagnostic samples taken?	~ .	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 carr	y out intended visit detail	reason below:	
		fallow	

Site currently fallow and has never held stock. The 50 litre tanks at the site were not fit purpose so have been removed and are going to be replaced.

Hope to stock site in October with trout for IPN trials. - Look to visit in October if stocked.

	2222				00/00/000			
Case No:	2023-0380	J		Date of visit	t: 29/08/202	3		
Site No:	FS1353	1		Inspector	r:			
Results Summary	Freq.		_	Da	ate of Notific	ation	_	
		Database	Insp	Phone	Insp	Writing	Insp	2 <sup>nd</sup> Insp
					_			
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	_				-			
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	+				-			
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	+				-			
Report Summary			nd					
Case Type Reg	Date 14/09/2023	Insp	2 <sup>nd</sup> Insp					
Reg	14/09/2023							



#### SUMMARY FOR INFORMATION OF SITE OPERATOR

 Business No
 FB0568
 Date of Visit
 29/08/2023

 Site No
 FS1353
 Site Name
 AGRF (RAS B)

 Case No
 20230380
 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.

On this occasion, the site was found to be fallow. We plan to revisit the site in October when it may be stocked.

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 Scottish Government website at <u>Fish Health Inspectorate Service Charter - gov.scot</u> (www.gov.scot)

Date: 14/09/2023

FHI 059, Version 13	ls	ssued by: FHI	Date of issue: 12/05/2020
Case No: 2023-0381			Date of visit: 29/08/2023
Time spent on site:	mins	Main Inspect	or:
Site No: FS1314 Business No: FB0568	Site Name: Business Name:	Roslin Institute Hatchery The Roslin Institute	
Case Types: 1 ECI 2	CNI 3	4 5	6
Water Temp (°C): 8	Thermometer No:	Site	FHI 045 completed
Observations:	Region: CE	Water type: F	CoGP MA:
Dead/weak/abnormally behaving to Clinical signs of disease observed Gross pathology observed? Diagnostic samples taken?	•	N If yes, see additional info	rmation/clinical score sheet. rmation/clinical score sheet. rmation/clinical score sheet.
UNI/REG only - if unable to carry	out intended visit detail	reason below:	

Site inactivated following visit 9/11/22 when it was located in room 1.40 however it has been relocated to room G26 and is currently stocked and was also stocked in June 2023.

Room G26 Middle wing is stocked and thought of as Roslin Institute hatchery. It is being used as refurb work is undertaken at AGRF (RAS B and RAS A). Previous room (1.40 was not suitable as it was not secure and located within a larger laboratory. All equipment was moved to G26. Same procedures and equipment (recur with water holding tank that is treated with hypochlorite for 24hours prior to discharge in to drains) but smaller lockable room.

On site eyed ova - 1000 ova from Trout Lodge Washington input 24/8/23. These will be moved to RAS A in a week or so.

500 RTR ova also input 26/6/23 from RAS A. however these were culled due to poor quality.

Update 21/9/23 - Of the 1000 trout eyed-eggs that were imported on Aug 24th there were very few initial mortalities Mortality records:

Aug 24th to Sept 3rd (pre-hatch): morts = 10

Sept 3rd onwards (post-hatch): morts = 5 (failed to hatch)

Sept 4th cull 35 Sept 6th cull 37

Sept 14th cull 913 - no longer required for the study

Sept 14th: all animals removed and hatchery fallow

Site thermometer used so biosecurity reasons

FHI 059, Version 13	Issued by: F	HI		Date of issue: 12/05/2020
Case No: 2023-0381	Site No: FS13	14		
Date of Visit: 29/08/2023	3	Inspector(s):		
Registration/Authorisation Details				
<ol> <li>Business/site details summary checked</li> <li>Changes made to details?</li> </ol>	by site representative?			Y
2. Orlanges made to details.				
Site Details (include cleaner fish for all	-	1	No fosilitios i	nonceted 1
Total No facilities 1 Species RTR	Facilities stocked	+	No facilities i	nspected
Age group Ova				
No Fish 1,000				
Mean Fish Wt <1g				
Next Fallow Date (Site)	Next Input	Date (Site)	unknown	
Recent (last 4 wks) disease problems?		N Any escapes	(since last vis	sit)?
If yes, detail:				
<ol> <li>Movement records available for inspect</li> <li>Date of last inspection:</li> <li>Are records complete and correctly ente</li> <li>Are movement records available for dea</li> <li>Are records complete and correctly ente</li> <li>Are health certificates for introductions</li> <li>Are any movements carried out by (or of the second second</li></ol>	ered? ad fish and waste? ered? (outwith GB) available? on behalf) of the business (	_	s)?	Y 09/11/2022 Y Y Y Y
Mortality Records	-0			V
<ol> <li>Mortality records available for inspection</li> <li>How are mortalities disposed of?</li> </ol>	11	Other (detail)	1	T
If other detail: frozen, autoclaved and inc	inerated off site	Ourior (dotail)		
3. Mortality records complete and correctly				Y
4. Recent mortality (last 4 wks):	ova on on site for 5 days	<10 morts		
5. Evidence of recent increased/atypical m				N
If yes, facility nos/no mortality per facility/n	o stock per facility/reason:			
6. Any other peaks in mortality during peri	od checked?			Υ
If yes, detail: ova input June - delay in tr		pment after fert	ilisation - rem	aining stock culled
7. Have increased (unexplained) mortalities If yes, detail action:				N/A
8. Have 'mortality events' been reported to	FHI? If no, enter details o	n mortality even	ts sheet.	N/A

Treatments and Medicines Records	
1. Recent treatments (see comment)?	N
If yes, detail:	
If other, detail:	
2. Medicines records available for inspection?	N/A
3. Are records complete and correctly entered?	N/A
4. Are fish in a withdrawal period?	N
5. If yes, what treatment(s)?	
If other, detail:	
6. Are medicines stored appropriately?	N/A
Biosecurity Records	
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?	N
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: 9/11/22-29/8/23	

FHI 059, Version 13		Issued by: FHI			Date of	of issue	: 12/05/2020
Case Number:	2023-0381		Site No:	FS1314		Insp:	
Date of Visit	29/08/2023		No of me	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	
with GB) of susceptible species		novements on from equivalent zone or	0	0	40	20	0
Species	Number of sup	ncluding third country	0		18 10	26 14	5
Movements off	Frequency of n		0		6 6	10	3
Exposure via water	inumber of des	Site contacts			6-10	10	3
Water contacts with other	Farm is protect	ted (secure water supply through	T T	1-5	0-10		
farms (holding species	disinfection or I		0				0
susceptible to same		or in a coastal zone with category I	4	2	4		
diseases)		n or within 1 tidal excursion	1	2	4		$\vdash$
		or in a coastal zone with category III or within 1 tidal excursion	1	3	6		
		or in a coastal zone with category V					
	farms upstream	n or within 1 tidal excursion	1	4	8		
Management practices			None	Secure	Unsecure		
Water contacts with	Any processing	g plant discharging into adjacent waters					
processors			0	1	2		0
On farm processing within	No on farm pro	cessing	0				0
the rules of the directive	Processing own	n fish (re-cycling risk)	1				
	Processing fish	n from MS of equivalent status	2				
		n from zone or compartment of	_				
	equivalent stati	us	4				
	Processing fish	from Category III farm	8				
	Processing fish	n from Category V farm	10				
Disposal of fish and fish by-	Site's own was	te only processed.	0				0
products	Common proce	esses with other farms	3				
	Collection poin	t for waste from other farms	5				
Use of unpasteurised feeds	No feeding of u	Inpasteurised feed	0	i I			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		0
	Sites sharing s	taff and equipment	0	1	2		
Disinfection of equipment	Yes		0				
between sites, use of	No		0				0
footbaths etc			1				
CoGP/Regulator Practices in accordance	Yes			1			
with regulator or industry			0				0
code of practice	No		3				3
Platform access to cages	Yes		<u> </u>				0
d.ioiiii dooddo to dagos	No		2				0
	I						
					Total		23
					Rank		MEDIUM

Case No:	2023-0381	Site No: FS1314	
	(Seawater Sites Only)	) is in the previous 4 years?	
•	·	equivalent) fallowed synchronously on a single year class basis?	
3. Does the site have azamethiphos and em	access to a range of lie	cenced in-feed and bath sea lice medications (including deltamethrin, swell as access to suitable biological and/or mechanical control measures,	
4. Is there a signed do Management Area (or		gement agreement or statement relevant to the site and CoGP Farm	
5. Are sea lice count i	ecords available for ins	spection? (Legal SSI, CoGP Annex 6)	
6. Do records adequa	tely reflect the required	standard specified in the SSI and the CoGP? (Legal SSI, CoGP Annex 6)	
7. Are sea lice ( <i>L. salu</i> records are inspected		elow the suggested criteria for treatment in the CoGP during the period that	
		Imonis) numbers per fish been at a level of 3 or above (prior to w/b 10/6/19) period that records are inspected?	
If yes, have these bee	en reported to the Fish	Health Inspectorate? If no, FHI see comment.	
9. Is C. elongatus infe	estation at a level which	n is considered to cause significant welfare problems? (CoGP 4.3.81, 5.3.50)	
		histered 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)	
11. Has any other act	ion been taken (where	applicable)?	
·		ns taken had a significant impact upon the lice levels recorded?	
		d out in cooperation between participating farms?	
14. Is there a harvesti sea lice?	ng strategy for the site	, where fewer populations or part populations are held without treatment for	
		ement procedure with waypoints describing set actions to deal with of a sea lice infestation?	
16. Do the sea lice lev	vels observed on stock	s reflect sea lice count data? If no please detail reasons.	
Containment Inspec	tion		
•		age due to predators in the current or previous production cycles?	N
2. Are measures in pl	ace to mitigate against	the predation experienced on site? (Detail below)	Υ
in a secure laborato	ry		
If other, detail below	<b>/</b> :		
3. Have escape incid	ents or events been ex	perienced on or in the vicinity of the site since the last FHI inspection?	N
•	uestions 4 – 9. If No ski		
	eported to Scottish Mini		
		forthwith (where they exist)? (CoGP – 4.4.37, 5.4.17)	
6. Have these been re	eported to the SSPO ar	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	capees? If yes give detail	
8. If gill nets were dep Ministers? (Legal, Co		agreed with local wild fish interests and was permission given by Scottish	
9. What action was ta	ken to prevent and mir	nimise the risk of further escapes? (Not covered in code but could	
be considered under	er satisfactory measu		Υ
11.10 the one mopour	Las canciación y with	garage of the state of the stat	

Issued by: FHI

FHI 059, Version 13

Date of issue: 12/05/2020

					22/22/2			
Case No:	2023-0381	J		Date of vi	sit: 29/08/20	)23		
Site No:	FS1314	1		Inspect	or:			
Results Summary	Freq.	Detabase	- Inon		Date of Noti		Ilman	- nd -
		Database	e Insp	Phone	Insp	Writing	Insp	2 <sup>nd</sup> Insp
	_							
Report Summary				1				
Case Type	Date	Insp	2 <sup>nd</sup> Insp					
ECI,CNI	21/09/2023							
	+							



#### SUMMARY FOR INFORMATION OF SITE OPERATOR

**BUSINESS No** FB0568 **DATE OF VISIT** 29/08/2023

SITE NO FS1314 SITE NAME Roslin Institute Hatchery

CASE NO 20230381 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.

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

No animal health surveillance had been carried out on behalf of the business and/or Marine Directorate since the last Marine Directorate inspection.

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

### Inspection under the Aquaculture and Fisheries (Scotland) Act 2007

The site was also inspected in accordance with the Aquaculture and Fisheries (Scotland) Act 2007 with respect to section 5 regarding containment and escapes.

On this occasion the site was found to be satisfactory.

R04 UKAS accredited testing laboratory No. 1964

> Marine Laboratory, 375 Victoria Road, Aberdeen, AB11 9DB Tel - 0131 244 3498 Email - ms.fishhealth@gov.scot

Website - https://www.gov.scot/policies/fish-health-inspectorate/

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 Scottish Government website at <u>Fish Health Inspectorate Service Charter - gov.scot (www.gov.scot)</u>

Date: 21/09/2023

FHI 059, Version 13		Issued by: FHI		Date of issue	: 12/05/2020
Case No: 2023-0388				Date of visit: 30/08	3/2023
Time spent on site:	hour	N	Main Inspector	:	
Site No: SS0957 Business No: SB0372	Site Name: Business Name:	Papa North Shetland Mussels	Ltd		
Case Types: 1 ECI	2 3	4	5	6	
Water Temp (°C): 13.1	Thermometer No:	T306	]	FHI 045 completed	N/A
Observations:	Region: SH	Water type:	S	CoGP MA:	
Dead/weak/abnormally behaving	fish present?	N If yes, see ac	dditional inform	nation/clinical score sl	heet.
Clinical signs of disease observe	d?			nation/clinical score sl	
Gross pathology observed?		N If yes, see ac	dditional inform	nation/clinical score sl	heet.
Diagnostic samples taken?		N			
UNI/REG only - if unable to carry	out intended visit deta	ail reason below:			

Site has not had as high growth as the opperator expected. Operator suspects that long travel times from Western isles has impacted survivability. Stock transferred to lines later had ice added to bags for transportation, which has helped increase growth.

Some fowling on lines, however overall site was clean with good growth.

FHI 059, Version	13		Issu	ied by: FHI			Date of issu	ue: 12/05/2020
Case No:	2023-038	8	Site No:	SS095	7			
Date of Visit:		30/08/202	3		Inspector(s	):		
Registration/Au	thorisation D	etails						
1. Business/site			site representa	ative?			Υ	7
2. Changes mad	e to details?						N	]
Site Details (inc	lude cleaner	fish for all sec	tions)					
Total No facilities		6	Facilities sto	ocked	6	No faciliti	es inspected	6
Species	MED							
Age group	2022							
No Fish	120							
Mean Fish Wt	20mm							
Next Fallow Date	` '	No plans		Next Input D		2024		
Recent (last 4 wh	ks) disease pr	oblems?		1	N Any escape	es (since las	t visit)?	N
If yes, detail:								
Movement Reco	ords							
1. Movement rec	ords available	for inspection?	•					Y
2. Date of last ins	spection:						19/07/2022	
3. Are records co	mplete and co	orrectly entered	?					Y
4. Are movemen	t records avail	lable for dead fi	sh and waste?	?				N/A
5. Are records co	emplete and co	orrectly entered	?					N/A
6. Are health cert	tificates for int	roductions (out	with GB) avails	able?				N/A
Transport Reco	rds							
1. Are any mover		out by (or on be	ehalf) of the bu	usiness (not us	sing a STB)?			
If yes, is there a		• `	•	,	•			
Mortality Record	rls							
Mortality recor		or inspection?						N/A
2. How are morta		•			Other (deta	il)		
If other detail:		lls fall to seabe	d		2 1 2 (2 2 1 2	,		
3. Mortality recor								N/A
4. Recent mortal	•	•	No observed	d mortality				•
5. Evidence of re				· · · · · · · · · · · · · · · · · · ·				N/A
If yes, facility nos	/no mortality p	per facility/no st	ock per facility	/reason:				
6. Any other peal	ke in mortality	during period c	hackad?					N/A
If yes, detail:	No in mortality	during period c	HOOKGU:					14//
7. Have increase	d (unexplaine	d) mortalities be	een reported to	o vet or FHI?				N/A
If yes, detail action								
8. Have 'mortality	/ events' been	reported to FH	I? If no, enter	details on mo	rtality events	sheet.		N/A

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?		Y
2. Has the manner and frequency of mortality removal, recording	g and safe disposal been considered?	Y
3. Has the manner and period in which the APB will notify Scottis	sh 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	e or suspicion of the presence of a listed disease	
is detected been included and how and when that will be notified		Y
5. Has the health status of aquaculture animals being stocked or	n the farm site been covered (equal or higher	Y
health status, certification if required)?	, , , , , , , , , , , , , , , , , , ,	
6. Have the husbandry and biosecurity measures implemented by	petween each epidemiological unit to minimise	Y
transmission of disease been covered (movement of staff, visito		
7. Is documentation available regarding the measures in place to	_ · · · ·	Y
aguaculture animals held on site?	' '	
8. Have the biosecurity procedures been adequately implemented	ed 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?	N/A
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: 19/	/07/2022 - 30/08/2023	

FHI 059, Version 13 Issued by: FHI Date of issue: 12/05/2020 Case Number: 2023-0388 SS0957 Site No: Date of Visit 30/08/2023 Inspector: Number of Susceptible species on site If no susceptible species present = LOW risk Yes If susceptible species present, score for each pathogen No Susceptible to Bonamia ostrea (OED) 0 25 Susceptible to Marteilia refringens (OED, MED) 0 3 3 Susceptible to OsHV (CGI) 0 3 1 2-5 >6 Sites within a tidal excursion Site contacts Number of sites holding susceptible species within a tidal 10 excursion 0 2 10 0 1-2 >3 Live shellfish movements Frequency of movements on from equivalent MS 0 5 10 Movements on Frequency of movements on from equivalent zone or compartment including third country 0 10 20 Number of suppliers 0 5 10 Movements off Frequency of movements off within MSS Management 2 0 1 Frequency of movements off outwith MSS Management 0 6 6 Areas 3 0 Number of destinations 3 6 **Secure Unsecure** Management (effluent (no effluent practices None treatment) treatment) Water contacts with Depuration of stock from own sites within MSS depuration facilities management area 0 1 2 0 Depuration of stock from other businesses sites within 0 2 6 MSS management area Depuration of stock from sites outwith MSS management 0 4 8 area Number of sites 1 2 or 3 > 4 **Biosecurity** Contacts with other Sites operating from single shorebase 0 5 sites Sites sharing staff and equipment

Disinfection of equipment between sites, use of footbaths etc

Yes

0

Total Risk No

Case No:	2023-0388			Date of visit:	30/08/2023	В		
Site No:	SS0957	1		Inspector:				
		ı						
Results Summary	Freq.	Detahasa	Ilman		te of Notifica		Ilnen	- nd -
		Database	Insp	Phone	Insp	Writing	Insp	2 <sup>nd</sup> Insp
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							-	
							-	
							-	
		•						
Report Summary	Date	1	and .					
Case Type ECI	Date 16/10/2023	Insp	2 <sup>nd</sup> Insp					
201	10/10/2020							



### SUMMARY FOR INFORMATION OF SITE OPERATOR

Business No SB0372 Date of Visit 30/08/2023
Site No SS0957 Site Name Papa North
Case No 20230388 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.

No mortality had been observed on site since the last inspection by Marine Directorate .

No animal health surveillance had been carried out on behalf of the business and/or Marine Directorate since the last Marine Directorate inspection.

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

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: 02/10/2023

The Fish Health Inspectorate Service Charter detailing standards of service is available on the Scottish Government website at <u>Fish Health Inspectorate Service Charter - gov.scot (www.gov.scot)</u>

FHI 059, Version 13	Iss	sued by: FHI	Date of issue: 12/05/2020
Case No: 2023-0389			Date of visit: 30/08/2023
Time spent on site:	hour	Main Inspect	or:
Site No: SS0903 Business No: SB0372	Site Name: Business Name:	Crossroads Shetland Mussels Ltd	
Case Types: 1 ECI 2	3	4 5	6
Water Temp (°C): 13.1	Thermometer No:	T306	FHI 045 completed N/A
Observations:	Region: SH	Water type: S	CoGP MA:
Dead/weak/abnormally behaving Clinical signs of disease observed Gross pathology observed? Diagnostic samples taken?	•	N If yes, see additional info	rmation/clinical score sheet. rmation/clinical score sheet. rmation/clinical score sheet.
UNI/REG only - if unable to carry	out intended visit detail re	eason below:	

Site has not had as high growth as the opperator expected. Operator suspects that long travel times from Western Isles (Loch Erisort) has impacted survivability. Stock transferred to lines later had ice added to bags for transportation, which has helped increase growth.

Some fouling on lines, but overall lines were clean and site was well maintained.

FHI 059, Version	13		Issu	ied by: FHI			Date of issue	e: 12/05/2020
Case No:	2023-038	9	Site No:	SS0903	3			
Date of Visit:		30/08/202	3		Inspector(s	):		
Registration/Aut	thorisation D	etails						
1. Business/site of			site representa	ative?			Y	
2. Changes made	e to details?						N	
Site Details (incl	lude cleaner	fish for all sec	tions)					
Total No facilities		6	Facilities sto	ocked	4	No faciliti	es inspected	4
Species	MED							
Age group	2020							
No Fish	200 T							
Mean Fish Wt	60mm							
Next Fallow Date	(Site)	No plans		Next Input D	ate (Site)	Nov 2023		
Recent (last 4 wk	s) disease pr	oblems?		l l	N Any escape	es (since last	visit)?	N
If yes, detail:								
Movement Reco	arde							
1. Movement rec		for inspection?	•					Υ
2. Date of last ins							11/08/2022	
3. Are records co	•	orrectly entered	?				11/00/2022	Υ
4. Are movement	•	•						N/A
5. Are records co								N/A
6. Are health cert	•	•		able?				N/A
Transport Reco	rds							
1. Are any mover		out by (or on be	ehalf) of the bu	usiness (not us	sing a STB)?			
If yes, is there a s		• '	•	,	•			
Mortality Record	de .							
Mortality record		or inspection?						N/A
2. How are morta		•			Other (deta	il)		
If other detail:		lls fall to seabe	d		0.1.10.1 (0.01.0	,		
3. Mortality record								N/A
4. Recent mortali	•	•	No observed	d mortality				
5. Evidence of re				amortanty				N/A
If yes, facility nos		* *		/reason:				
								N1/A
<ol><li>6. Any other peak If yes, detail:</li></ol>	ks in mortality	during period c	necked?					N/A
7. Have increase	d (unexplaine	d) mortalities be	een reported to	o vet or FHI?				N/A
If yes, detail action	n:							
8. Have 'mortality	events' been	reported to FH	I? If no, enter	details on mor	rtality events	sheet.		N/A

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		
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 liste	ed 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 m	ninimise	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 / A
1. Has any animal health surveillance been carried out by, or on behalf of, the business?		N/A
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: 11/08/2022 - 30/08/2023		

FHI 059, Version 13 Issued by: FHI Date of issue: 12/05/2020 Case Number: 2023-0389 SS0903 Site No: Date of Visit 30/08/2023 Inspector: Number of Susceptible species on site If no susceptible species present = LOW risk Yes If susceptible species present, score for each pathogen No Susceptible to Bonamia ostrea (OED) 0 25 Susceptible to Marteilia refringens (OED, MED) 0 3 3 Susceptible to OsHV (CGI) 0 3 1 2-5 >6 Sites within a tidal excursion Site contacts Number of sites holding susceptible species within a tidal 10 excursion 0 2 10 0 1-2 >3 Live shellfish movements 0 5 10 Movements on Frequency of movements on from equivalent MS Frequency of movements on from equivalent zone or compartment including third country 0 10 20 Number of suppliers 0 5 10 Movements off Frequency of movements off within MSS Management 2 0 1 2 Frequency of movements off outwith MSS Management 0 6 6 Areas 3 0 Number of destinations 3 6 **Secure Unsecure** Management (effluent (no effluent practices None treatment) treatment) Water contacts with Depuration of stock from own sites within MSS depuration facilities management area 0 1 2 0 Depuration of stock from other businesses sites within 0 2 6 MSS management area Depuration of stock from sites outwith MSS management 0 4 8 area Number of sites 1 2 or 3 > 4 **Biosecurity** 

Contacts with other

sites

Sites operating from single shorebase

Disinfection of equipment between sites, use of footbaths etc

Sites sharing staff and equipment

0

Yes

0

Total Risk 5

No

Case No:	2022 0200			Data af	30/00/20	222			
Case No.	2023-0389	J		Date of vi	isit: 30/08/20	023			
Site No:	SS0903	]		Inspec	tor:				
Results Summary	Freq.	I	Date of Notification						
,	· ·	Database	e Insp	Phone	Insp	Writing	Insp	2 <sup>nd</sup> Ir	
	+								
Report Summary									
Case Type	Date	Insp	2 <sup>nd</sup> Insp						
ECI	16/10/2023	3							
-									



#### SUMMARY FOR INFORMATION OF SITE OPERATOR

 Business No
 SB0372
 Date of Visit
 30/08/2023

 Site No
 SS0903
 Site Name
 Crossroads

 Case No
 20230389
 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.

No mortality had been observed on site since the last inspection by Marine Directorate.

No animal health surveillance had been carried out on behalf of the business and/or Marine Directorate since the last Marine Directorate inspection.

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

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

Date: 16/10/2023

Signed:

Fish Health Inspector

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The Fish Health Inspectorate Service Charter detailing standards of service is available on the Scottish Government website at <u>Fish Health Inspectorate Service Charter - gov.scot</u> (www.gov.scot)

FHI 059, Version 13		Issued by: FHI	Date of issue: 12/05/2020			
Case No: 2023-0390			Date of visit: 30/08/2023			
Time spent on site:	hour	Main Inspec	tor:			
Site No: SS0870 Business No: SB0372	Site Name: Business Name:	Northra Voe Shetland Mussels Ltd				
Case Types: 1 ECI 2	3	4 5	6			
Water Temp (°C): 13.4	Thermometer No:	T306	FHI 045 completed N/A			
Observations:	Region: SH	Water type: S	CoGP MA:			
Dead/weak/abnormally behaving fish present?  Clinical signs of disease observed?  Gross pathology observed?  Diagnostic samples taken?  If yes, see additional information/clinical score sheet.  N  If yes, see additional information/clinical score sheet.  N  N						
UNI/REG only - if unable to carry	out intended visit deta	il reason below:				

#### **Additional Case Information:**

Growth rate not as high as expected, following transport from Cromarty Firth (Udale Bay SS0147). Ice was added to bags, which seems to have helped increased growth in lines with stock from later shipments.

There was some fouling on lines. Overall site was well maintained.

FHI 059, Version 13	3		Issu	ed by: FHI			Date of issue	e: 12/05/2020
Case No:	2023-0390	]	Site No:	SS0870				
Date of Visit:		30/08/2023	3		Inspector(s):			ı
Registration/Auth	orisation Deta	ails						
1. Business/site de			ite representa	ative?			Y	
2. Changes made t	•	·	·				N	
Site Details (inclu	de cleaner fis	h for all sect	ions)					
Total No facilities		3	Facilities sto	cked	3	No facilitie	es inspected	3
Species	MED							
Age group	2021							
No Fish	50 T							
Mean Fish Wt	45mm							
Next Fallow Date (	Site)	No plans		Next Input Da	ate (Site)	Apr 2024		
Recent (last 4 wks)	disease probl	ems?		N	Any escapes	(since last	visit)?	N
If yes, detail:								
Movement Record	ds							
Movement recor		r inspection?						Y
2. Date of last insp		.,					19/07/2022	
3. Are records com		ectly entered?	?					Υ
4. Are movement re	•	•		•				N/A
5. Are records com	plete and corr	ectly entered?	?					N/A
6. Are health certifi	•	•		able?				N/A
Transport Record	<b>S</b>							
1. Are any movement		t by (or on be	half) of the bu	usiness (not usi	ing a STB)?			
If yes, is there a sy					-			
Mortality Records								
Mortality records		nspection?						N/A
2. How are mortalit		•			Other (detail)			•
If other detail:		fall to seabed			(0.000)			
3. Mortality records								N/A
4. Recent mortality	•	Í	No observed	d mortality				
5. Evidence of rece	•	typical mortal						N/A
If yes, facility nos/n		* *		/reason:				
6. Any other peaks	in mortality du	ring period ch	necked?					N/A
If yes, detail:	in mortality du	ing portor of						13/71
7. Have increased	•	mortalities be	en reported to	o vet or FHI?				N/A
If yes, detail action 8. Have 'mortality e		ported to FHI	2 If no enter	details on mort	ality events ek	neet		N/A
o. Have mortality e	TOTAL DOCTAL		. Il lio, cittor	actails on more	anty overite of	1001.		1 4/7 (

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	N/
1. Biosecurity records available for inspection?	Y
2. Has the manner and frequency of mortality removal, recording and safe disposal been considered?	T
3. Has the manner and period in which the APB will notify Scottish Ministers or veterinary professional of any	V
increased (unexplained) mortality at the site been included?	T
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 <i>how</i> and <i>when</i> 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?	N/A
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: 19/07/2022 - 30/08/2023	

FHI 059, Version 13 Issued by: FHI Date of issue: 12/05/2020 Case Number: 2023-0390 SS0870 Site No: Date of Visit 30/08/2023 Inspector: Number of Susceptible species on site If no susceptible species present = LOW risk Yes If susceptible species present, score for each pathogen No Susceptible to Bonamia ostrea (OED) 0 25 Susceptible to Marteilia refringens (OED, MED) 0 3 3 Susceptible to OsHV (CGI) 0 3 1 2-5 >6 Sites within a tidal excursion Site contacts Number of sites holding susceptible species within a tidal 10 excursion 0 2 10 0 1-2 >3 Live shellfish movements 0 5 10 Movements on Frequency of movements on from equivalent MS Frequency of movements on from equivalent zone or compartment including third country 0 10 20 Number of suppliers 0 5 10 Movements off Frequency of movements off within MSS Management 2 0 1 0 Frequency of movements off outwith MSS Management 0 6 Areas 3 0 Number of destinations 3 6 **Secure Unsecure** Management (effluent (no effluent practices None treatment) treatment) Water contacts with Depuration of stock from own sites within MSS depuration facilities management area 0 1 2 0 Depuration of stock from other businesses sites within 0 2 6 MSS management area Depuration of stock from sites outwith MSS management 0 4 8 area Number of sites 1 2 or 3 > 4 **Biosecurity** Contacts with other Sites operating from single shorebase 0 sites Sites sharing staff and equipment 5

Disinfection of equipment between sites, use of footbaths etc

Yes

0

Total Risk No

MEDIUM

Case No:	2023-0390			Date of visit:	30/08/2023	В					
Site No:	SS0870	Inspector:									
Results Summary	Freq.	Database	Insp	Phone Da	te of Notifica Insp	tion Writing	Insp	and I			
		Dalabase	шър	FIIONE	шър	vviitiig	шър	2 <sup>nd</sup> Insp			
			-				-				
							=				
							-				
							=				
							=				
				•							
Report Summary	Date	lnon	ond L								
Case Type ECI	15/10/2023	Insp	2 <sup>nd</sup> Insp								
	10,10,20										



## FISH HEALTH INSPECTORATE VISIT REPORT

#### SUMMARY FOR INFORMATION OF SITE OPERATOR

 Business No
 SB0372
 Date of Visit
 30/08/2023

 Site No
 SS0870
 Site Name
 Northra Voe

 Case No
 20230390
 Inspector

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.

No mortality had been observed on site since the last inspection by Marine Directorate.

No animal health surveillance had been carried out on behalf of the business and/or Marine Directorate since the last Marine Directorate inspection.

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

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: 16/10/2023

The Fish Health Inspectorate Service Charter detailing standards of service is available on the Scottish Government website at <u>Fish Health Inspectorate Service Charter - gov.scot</u> (www.gov.scot)

FHI 059, Version 13		Issued by: FHI	Date of issue: 12/05/2020
Case No: 2023-0391			Date of visit: 30/08/2023
Time spent on site:	hour	Main Ir	nspector:
Site No: SS0869 Business No: SB0372	Site Name: Business Name:	Gruna Shetland Mussels Ltd	
Case Types: 1 REG	2 3	4 5	6
Water Temp (°C):	Thermometer No:		FHI 045 completed
Observations:	Region: SH	Water type: S	CoGP MA:
Dead/weak/abnormally behaving Clinical signs of disease observed Gross pathology observed?	•	N/A If yes, see addition	al information/clinical score sheet. al information/clinical score sheet. al information/clinical score sheet.
Diagnostic samples taken?			
UNI/REG only - if unable to carry	out intended visit deta	il reason below:	
		Site fallow	

## **Additional Case Information:**

No immediate plans to stock in current location, although would like to keep the site active.

No movements since last inspection.

FHI 059, Version 13			Issu	ed by: FHI			Date of issue:	12/05/2020
Case No:	2023-0391		Site No:	SS0869				
Date of Visit:		30/08/2023	3		Inspector(s):			
Registration/Autho	risation Det	ails						
1. Business/site det			site representa	ative?			Υ	
2. Changes made to	•	·	·				N	
Site Details (includ	le cleaner fis	sh for all sect	ions)					
Total No facilities		Fallow	Facilities sto	cked		No facilitie	s inspected	
Species								
Age group								
No Fish								
Mean Fish Wt								
Next Fallow Date (S	ite)	No plans		Next Input Da	ate (Site)			
Recent (last 4 wks)					Any escapes	(since last	visit)?	N/A
If yes, detail:					, ,	,	,	
Marramont Dagard								
Movement Record							-	N/A
1. Movement record		or inspection?					10/07/2022	IN/A
2. Date of last inspe			,				19/07/2022	N/A
3. Are records comp		•					-	N/A
4. Are movement re							-	
5. Are records comp		•		- h-10			-	N/A
6. Are health certific	ates for intro	ductions (outv	vitn GB) avalla	able?			L	N/A
Transport Records								
1. Are any moveme		ut by (or on be	half) of the bu	siness (not us	ing a STB)?		Г	
If yes, is there a sys					_			
Mortality Records							_	
1. Mortality records	available for	inspection?					Г	N/A
2. How are mortaliti		•			Other (detail)			
If other detail:		fall to seabed	l		, ,			
3. Mortality records								N/A
4. Recent mortality	(last 4 wks):		No observed	l mortality				
5. Evidence of recei	nt increased/a	atypical morta						N/A
If yes, facility nos/no	mortality pe	r facility/no sto	ock per facility	/reason:				
C. Amu other medical		ام ام ماند ما ماند	l dO					NI/A
6. Any other peaks in the second of the seco	n mortality di	uning period cr	iecked?					N/A
7. Have increased (	unexplained)	mortalities be	en reported to	vet or FHI?				N/A
If yes, detail action:	onplained)	ortaintico bo	ooportod te					,
8. Have 'mortality ev	ents' been re	eported to FHI	? If no, enter	details on mort	tality events sh	neet.		N/A

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	
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).	
yes, see a see	
Records checked between: 19/07/2022 - 30/08/2023	

Case No:	2023-0391			Date of visit:	30/08/2023	3				
Site No:	SS0869	- 1								
		Inspector:								
Results Summary	Freq.	Date of Notification								
		Database	Insp	Phone	Insp	Writing	Insp	2 <sup>nd</sup> Insp		
							_			
							_			
			-							
			-				_			
Report Summary										
Case Type	Date	Insp	2 <sup>nd</sup> Insp							
REG	16/10/2023									



# FISH HEALTH INSPECTORATE VISIT REPORT

#### SUMMARY FOR INFORMATION OF SITE OPERATOR

 Business No
 SB0372
 Date of Visit
 30/08/2023

 Site No
 SS0869
 Site Name
 Gruna

 Case No
 20230391
 Inspector

#### Inspection under the Aquatic Animal Health (Scotland) Regulations 2009

The operator of the above site was contacted in accordance with the Aquatic Animal Health (Scotland) Regulations 2009, and to meet the requirements of European Community Council Directive 2006/88/EC.

On this occasion, the site was found to be fallow.

The information required for the public record of aquaculture production businesses regarding this site was verified and where necessary updated.

No movements had taken place since the last inspection.

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 Scottish Government website at Fish Health Inspectorate Service Charter - gov.scot (www.gov.scot)

Date: 16/10/2023

FHI 059, Version 13		Issued by: FHI	Date of issue: 12/05/2020			
Case No: 2023-0392			Date of visit: 30/08/2023			
Time spent on site:	Hour	Main Inspe	ector:			
Site No: SS0838 Business No: SB0372	Site Name: Business Name:	Brindister Inshore Shetland Mussels Ltd				
Case Types: 1 ECI 2	3	4 5	6			
Water Temp (°C): 13	Thermometer No:	T306	FHI 045 completed N/A			
Observations:	Region: SH	Water type: S	CoGP MA:			
Dead/weak/abnormally behaving fish present?  Clinical signs of disease observed?  Gross pathology observed?  Diagnostic samples taken?  If yes, see additional information/clinical score sheet.  N  If yes, see additional information/clinical score sheet.  N  N  N						
UNI/REG only - if unable to carry	out intended visit detail	I reason below:				

## **Additional Case Information:**

There was some fouling, as well as some brittle stars observed. No issues overall and the site was well maintained with good coverage.

FHI 059, Version 13			Issu	ed by: FHI			Date of issu	ue: 12/05/2020
Case No:	2023-0392	2	Site No:	SS083	38			
Date of Visit:		30/08/202	23		Inspector(s	):		1
Registration/Author	orisation De	etails						
1. Business/site det	ails summa	ry checked by	site representa	ative?			Υ	1
2. Changes made to	details?						N	1
Site Details (includ	le cleaner f	ish for all se	ctions)					
Total No facilities		4	Facilities sto	cked	4	No facilitie	es inspected	4
Species	MED	MED					<u> </u>	
Age group	2021	2022						
No Fish	75 T	4 T						
Mean Fish Wt	45mm	<2mm						
Next Fallow Date (S		No plans	_	Next Input I	Date (Site)	Natural sp	patfall	
Recent (last 4 wks)	•			•	N Any escape			N
If yes, detail:				•			,	
<ol> <li>Are movement re</li> <li>Are records comp</li> <li>Are health certific</li> <li>Transport Records</li> <li>Are any moveme</li> <li>If yes, is there a sys</li> </ol>	olete and co cates for intr s nts carried o	orrectly entered oductions (out	d? twith GB) availa pehalf) of the bu	able? usiness (not u	-			N/A N/A N/A
Mortality Records								
1. Mortality records	available fo	r inspection?						N/A
2. How are mortalities	es disposed	l of?			Other (deta	ail)		
If other detail:	Dead shel	ls fall to seabe	ed					
3. Mortality records	complete a	nd correctly er	ntered?					N/A
4. Recent mortality	(last 4 wks):		No observed	d mortality				
5. Evidence of recei	nt increased	l/atypical mort	talities?					N/A
If yes, facility nos/no	mortality p	er facility/no s	tock per facility	/reason:				
6. Any other peaks i	n mortality	during period	checked?					N/A
If yes, detail:								\$1/A
7. Have increased (	unexplained	d) mortalities b	peen reported to	o vet or FHI?				N/A
If yes, detail action:								
8. Have 'mortality ev	ents' been	reported to FI	HI? If no, enter	details on mo	ortality events	sheet.		N/A

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		
Biosecurity records available for inspection?		Y
2. Has the manner and frequency of mortality removal, recording	g and safe disposal been considered?	Y
3. Has the manner and period in which the APB will notify Scottis		
increased (unexplained) mortality at the site been included?		Y
4. Has the action that will be taken in the event that the presence	e or suspicion of the presence of a listed disease	
is detected been included and how and when that will be notified	d to Scottish Ministers?	Y
5. Has the health status of aquaculture animals being stocked or	n the farm site been covered (equal or higher	Y
health status, certification if required)?	-	
6. Have the husbandry and biosecurity measures implemented by	petween each epidemiological unit to minimise	Y
transmission of disease been covered (movement of staff, visito	rs, equipment, live or dead fish etc.)?	
7. Is documentation available regarding the measures in place to	o maintain the physical containment of	Y
aquaculture animals held on site?		
8. Have the biosecurity procedures been adequately implemente	ed on site?	Y
If no, detail:		
Results of Surveillance		
Has any animal health surveillance been carried out by, or on	behalf of, the business?	N/A
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: 11/	/08/2022 - 30/08/2023	

FHI 059, Version 13 Issued by: FHI Date of issue: 12/05/2020 Case Number: 2023-0392 SS0838 Site No: Date of Visit 30/08/2023 Inspector: Number of Susceptible species on site If no susceptible species present = LOW risk Yes If susceptible species present, score for each pathogen No Susceptible to Bonamia ostrea (OED) 0 25 Susceptible to Marteilia refringens (OED, MED) 0 3 3 Susceptible to OsHV (CGI) 0 3 1 2-5 >6 Sites within a tidal excursion Site contacts Number of sites holding susceptible species within a tidal 10 excursion 0 2 10 0 1-2 >3 Live shellfish movements Frequency of movements on from equivalent MS 0 5 10 Movements on Frequency of movements on from equivalent zone or compartment including third country 0 10 20 Number of suppliers 0 5 10 Movements off Frequency of movements off within MSS Management 2 0 1 2 Frequency of movements off outwith MSS Management 0 3 6 Areas 3 0 Number of destinations 3 6 **Secure Unsecure** Management (effluent (no effluent practices None treatment) treatment) Water contacts with Depuration of stock from own sites within MSS depuration facilities management area 0 1 2 0 Depuration of stock from other businesses sites within 0 2 6 MSS management area Depuration of stock from sites outwith MSS management 0 4 8

**Biosecurity** 

Contacts with other

sites

area

Number of sites

Sites operating from single shorebase

Disinfection of equipment between sites, use of footbaths etc

Sites sharing staff and equipment

1

0

2 or 3

Yes

0

**Total** Risk

> 4

5

No

Case No:	2023-0392			Date of visit:	30/08/2023	3					
Site No:	SS0838	Inspector:									
Results Summary	Freq.	Databasa	Ilman		te of Notifica		Ilaan	- nd .			
		Database	Insp	Phone	Insp	Writing	Insp	2 <sup>nd</sup> Insp			
			-								
			-								
Report Summary				1							
Case Type	Date	Insp	2 <sup>nd</sup> Insp								
ECI	16/10/2023										



## FISH HEALTH INSPECTORATE VISIT REPORT

#### SUMMARY FOR INFORMATION OF SITE OPERATOR

Business No SB0372 Date of Visit 30/08/2023
Site No SS0838 Site Name Brindister Inshore
Case No 20230392 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.

No mortality had been observed on site since the last inspection by Marine Directorate.

No animal health surveillance had been carried out on behalf of the business and/or Marine Directorate since the last Marine Directorate inspection.

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

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

Date: 15/10/2023

Signed:

Fish Health Inspector

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The Fish Health Inspectorate Service Charter detailing standards of service is available on the Scottish Government website at <u>Fish Health Inspectorate Service Charter - gov.scot (www.gov.scot)</u>