FHI 059, Version 13	lssi	ied by: FHI	Date of issue: 12/05/2020
Case No: 2022-0261			Date of visit: 29/08/2022
Time spent on site:	hour	Main Insp	ector:
Site No: SS0853 Business No: SB0529	Site Name: Business Name:	Loch Kanaird Ockran Oysters	
Case Types: 1 ECI	23	45	6
Water Temp (°C): 14	Thermometer No:	T173	FHI 045 completed
Observations:	Region: HI	Water type: S	CoGP MA:
Dead/weak/abnormally behaving Clinical signs of disease observe Gross pathology observed? Diagnostic samples taken?	i fish present? :d?	N If yes, see additional i N If yes, see additional i N If yes, see additional i N	nformation/clinical score sheet. nformation/clinical score sheet. nformation/clinical score sheet.
UNI/REG only - if unable to carry	/ out intended visit detail rea	ason below:	

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

Couple of gaping shells during the inspection. All shells were empty. Some trestles were quite heavily fouled with seaweed but site was in the process of turning bags.

Manager looking to take in larger spat next year due to the large losses he gets currently. Spat mortalities due to fragile shells and bad weather. Low level losses of oysters are seen after grading.

All movements off site are for human consumption. Some stock sold to Caledonian oysters and mull oysters where they are depurated prior to sale.

Site and paperwork inspected by supervised by supervised by



Treatments and Medicines Records
1. Recent treatments (see comment)?
If yes, detail:
If other, detail:
2. Medicines records available for inspection?
3. Are records complete and correctly entered?
4. Are fish in a withdrawal period?
5. If yes, what treatment(s)?
If other, detail:
6. Are medicines stored appropriately?
Biosecurity Records
1. Biosecurity records available for inspection?
2. Has the manner and frequency of mortality removal, recording and safe disposal been considered?
3. Has the manner and period in which the APB will notify Scottish Ministers or veterinary professional of any
increased (unexplained) mortality at the site been included?
4. Has the action that will be taken in the event that the presence or suspicion of the presence of a listed disease
is detected been included and how and when that will be notified to Scottish Ministers?
5. Has the health status of aquaculture animals being stocked on the farm site been covered (equal or higher
health status, certification if required)?
C. Use the bush and big south and some implemented between each enidemiclesical unit to minimize
6. Have the husbandry and biosecurity measures implemented between each epidemiological unit to minimise
transmission of disease been covered (movement of stail, visitors, equipment, live of dead lish 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?
Results of Surveillance
1 Has any animal health surveillance been carried out by or on behalf of the business?
2. If ves, are results available for inspection?
3 Any significant results?
If ves, detail (if not detailed under recent disease problems).
Records checked between: 17/04/2018 - 29/08/2022





FHI 059, Version 13	Issued by: FHI			Date	of issue: 12	2/05/2020
Case Number:	2022-0261 Site No:	SS085	3			
Date of ∀isit	29/08/2022 Inspector:			l		
Number of Susceptil	ble species on site					
If no susceptible spec	ies present = <u>LOW</u> risk					
If susceptible species	present, score for each pathogen		No	Yes		
	Susceptible to Bonamia ostrea (OED)		0	25	0	
	Susceptible to Marteilia refringens (OED, MED)		0	3	0	
	Susceptible to OsHV (CGI)		0	3	3	
Sites within a tidal e	xcursion	1	2-5	>6		
Site contacts	Number of sites holding susceptible species within a tidal					
	excursion	0	2	10	0	
Live shellfish moven	nents	0	1-2	>3		
Movements on	Frequency of movements on from equivalent MS	0	5	10	5	
	Frequency of movements on from equivalent zone or					
	compartment including third country	0	10	20	0	
	Number of suppliers	0	5	10	5	
Movements off	Frequency of movements off <u>within</u> MSS Management Areas	0	1	2	0	
	Frequency of movements off <u>outwith</u> MSS Management Areas	0	3	6	o	
	Number of destinations	0	3	6	0	
Management practices		None	Secure (effluent treatment)	Unsecure (no effluent treatment)		
Water contacts with depuration facilities	Depuration of stock from own sites within MSS management area	0	1	2	o	
	Depuration of stock from other businesses sites within MSS management area	0	2	6	0	
	Depuration of stock from sites outwith MSS management area	0	4	8	0	
Biosecurity	Number of sites	1	2 or 3	≥ 4		
Contacts with other	Sites operating from single shorebase	0	1	2	0	
sites	Sites sharing staff and equipment	0	1	5	0	
			Yes	No		
	Disinfection of equipment between sites, use of footbath	is etc	0	2	0	
			Total Risk		13 LOW	

Deculto Summer on (	Erea	Data of National
Site No:	SS0853	Inspector:
Case No:	2022-0261	Date of visit: 29/08/2022

Results Summary Freq.	Date of Notification							
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Case Type     Date     Insp     2 <sup>nd</sup> Insp       ECI     12/10/2022       Image: Straight of the straight of	Report Summary			
ECI 12/10/2022	Case Type	Date	Insp	2 <sup>nd</sup> Insp
	ECI	12/10/2022		
		_		
		_		
		+		





## SUMMARY FOR INFORMATION OF SITE OPERATOR

 BUSINESS
 No
 SB0529

 SITE NO
 SS0853

 CASE NO
 20220261

DATE OF VISIT29/08/2022SITE NAMELoch KanairdINSPECTORInspector

### 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 low. An inspection under the Aquatic Animal Health (Scotland) Regulations 2009 will be conducted every fourth 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 not available for inspection.

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

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

The following point was raised with the site representative during the inspection:

• Mortality records were not maintained, mortality records should be kept and made available for future inspections.

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



Date: 11/10/2022

Fish Health Inspector

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

FHI 059, Version 13	l	ssued by: FHI	Date of issue: 12/05/2020
Case No: 2022-0343			Date of visit: 18/08/2022
Time spent on site:	20mins	Main Inspe	ctor:
Site No: SS0252 Business No: SB0165	Site Name: Business Name:	Barmore(North Bay) Loch Fyne Seafarms Ltd.	
Case Types: 1 REG	23	4 5	6
Water Temp (°C):	Thermometer No:		FHI 045 completed
Observations:	Region: ST	Water type: S	CoGP MA
Dead/weak/abnormally behavin Clinical signs of disease observ Gross pathology observed? Diagnostic samples taken?	ig fish present? /ed?	If yes, see additional in If yes, see additional in If yes, see additional in	formation/clinical score sheet. formation/clinical score sheet. formation/clinical score sheet.
UNI/REG only - if unable to car	ry out intended visit detail	reason below:	

#### Additional Case Information:

Site fallow and only one empty line with buoys in the water. No boat to inspect site but viewed from the shore in WK42 2022 by . Company's focus has shifted away from scallops therefore inactivation forms have been sent. No current plans to stock the site.

Mortality and movement records have been misplaced. Issues have been raised as a result. Business contact reminded that the should site not be inactivated, any movements and mortality of stock onto the site should be recorded.

FHI 059, Version 13	Issued by: FHI Date of issue: 12/					e: 12/05/2020
Case No: 2022	-0343 Site No	: SS0252	2			
Date of Visit:	18/08/2022		Inspector(s):			
Registration/Authorisation 1. Business/site details su	on Details Immary checked by site repre	sentative?			Y	
2. Changes made to detail	Is?				N	
Site Details (include clea	aner fish for all sections)					
Total No facilities	1 Facilitie	s stocked	0	No facilitie	es inspected	0
Species						
Age group						
No Fish						
Mean Fish Wt	6-11-00-0	Next Input D	(0:1-)			
Next Fallow Date (Site)	fallow	Next Input Da	ate (Site)	no plans	:-::	NI/A
Recent (last 4 wks) diseas	e problems?		A Any escapes	(SINCE last	VISIT)?	IN/A
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?         5. Are records complete and correctly entered?         6. Are health certificates for introductions (outwith GB) available?         Transport Records         1. Are any movements carried out by (or on behalf) of the business (not using a STB)?         If yes, is there a system in place for maintenance of transportation records?						
1. Mortality records availab	ble for inspection?					N
2. How are mortalities disp	posed of?		Other (detail)	)		
If other detail: empt	y shells fall to seabed					
3. Mortality records complete	ete and correctly entered?					N
4. Recent mortality (last 4	wks): mortalit	y records not availa	able but site ha	as been fallo	ow since 2019	
5. Evidence of recent incre	eased/atypical mortalities?					N/A
If yes, facility nos/no morta	ality per facility/no stock per ta	acility/reason:				
						NI/A
6. Any other peaks in mon If yes, detail:	ality during period checked?					IN/A
7. Have increased (unexpl	lained) mortalities been repor	ted to vet or FHI?				N/A
If yes, detail action:						
8. Have 'mortality events'	been reported to FHI? If no, e	enter details on mor	rtality events sl	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 I. 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)?						
transmission of disease been covered (movement of staff, visitors, equi	pment, live or dead fish etc.)?					
7. Is documentation available regarding the measures in place to mainta	ain the physical containment of					
aquaculture animals held on site?	-2					
8. Have the biosecurity procedures been adequately implemented on si	e?					
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 ?						
it yes, detail (it not detailed under recent disease problems).						
Records checked between: 16/04/201	9-18/08/2022					
10/04/201						

FHI 059, Version 13	Issued by: FHI			Date	of issue: 12	2/05/2020
Case Number:	2022-0343 Site No:	SS025	52			
Date of ∀isit	18/08/2022 Inspector:					
Number of Susceptil	ble species on site					
If no susceptible spec	ies present = <u>LOW</u> risk					
If susceptible species	present, score for each pathogen		No	Yes		
	Susceptible to Bonamia ostrea (OED)		0	25	0	
	Susceptible to Marteilia refringens (OED, MED)		0	3	0	
	Susceptible to OsHV (CGI)		0	3	0	
Sites within a tidal e	xcursion	1	2-5	>6		
Site contacts	Number of sites holding susceptible species within a tidal					
	excursion	0	2	10	2	
Live shellfish moven	nents	0	1-2	>3		
Movements on	Frequency of movements on from equivalent MS		5	10	0	
Movements on	Frequency of movements on from equivalent zone or	-	-			
	compartment including third country	0	10	20	0	
	Number of suppliers	0	5	10	0	
Movements off	Frequency of movements off <u>within</u> MSS Management Areas	0	1	2	0	
	Frequency of movements off <u>outwith</u> MSS Management	0	3	6		
	Number of destinations	0	3	6	0	
Management practices		None	Secure (effluent treatment)	Unsecure (no effluent treatment)		
Water contacts with	Depuration of stock from own sites within MSS					
deputation facilities	management area	0	1	2	1	
	Depuration of stock from other businesses sites within	0	2	6	0	
	Depuration of stock from sites outwith MSS management		-	<u> </u>	ЬŢ	
	area	0	4	8	0	
Biosecurity	Number of sites	1	2 or 3	≥ 4		
Contacts with other	Sites operating from single shorebase	0	1	2	1	
sites	Sites sharing staff and equipment	0	1	5	1	
		•	Yes	No		
	Disinfection of equipment between sites, use of footbath	ns etc	0	2	2	
			Total		7	
			RISK			

Case No:	2022-0343	Date of visit: 18/08/2022
Site No:	SS0252	Inspector:
Poculto Summony	Erog	Date of Notification

Results Summary	Freq.	Date of Notification						
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Report Summary			
Case Type	Date	Insp	2 <sup>nd</sup> Insp
REG	31/08/2022		





## SUMMARY FOR INFORMATION OF SITE OPERATOR

BUSINESS No SB0165 SITE NO SS0252 CASE NO 20220343

**DATE OF VISIT** 18/08/2022 SITE NAME INSPECTOR

Barmore(North Bay)

## 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 stock inspection could not be conducted as there was no equipment available to reach the site. Paperwork was forwarded to inactivate site as there are no plans to stock in the near future.

### Records

The surveillance frequency category of the site was assessed as low. An inspection under the Aquatic Animal Health (Scotland) Regulations 2009 will be conducted every fourth 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:

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

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

- Aquaculture animal and aquaculture animal product movement records were not available for inspection.
- Mortality records were not available for inspection.

These must be addressed to ensure the conditions of authorisation for your Aquaculture Production Business (APB) are being met. Due to the site currently being fallow, this report is a reminder to maintain records or documentation demonstrating that these points, should stock be brought onto site.

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



Signed:

Date: 31/08/2022

Fish Health Inspector

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

FHI 059, Version 13	lse	sued by: FHI	Date of issue: 12/05/2020
Case No: 2022-0344			Date of visit: 18/08/2022
Time spent on site:	20mins	Main Ins	pector:
Site No:SS0253Business No:SB0165	Site Name: Business Name:	Barmore(South) Loch Fyne Seafarms Ltd.	
Case Types: 1 REG	2 3	4 5	6
Water Temp (°C):	Thermometer No:		FHI 045 completed
Observations:	Region: ST	Water type: S	CoGP MA:
Dead/weak/abnormally behaving Clinical signs of disease observed Gross pathology observed? Diagnostic samples taken? UNI/REG only - if unable to carr	g fish present? ed? ry out intended visit detail re	If yes, see additional If yes, see additional If yes, see additional If yes, see additional	information/clinical score sheet. information/clinical score sheet. information/clinical score sheet.
	,		

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

Site fallow and no equipment on site. Company's focus has shifted away from scallops therefore inactivation forms have been sent. No current plans to stock the site.

Mortality and movement records have been misplaced. Issues have been raised as a result. Business contact reminded that the should site not be inactivated, any movements and mortality of stock onto the site should be recorded.

FHI 059, Version 13			Issu	ed by: FHI			Date of issue	e: 12/05/2020
Case No:	2022-0344		Site No:	SS0253				
Date of Visit:		18/08/2022	]		Inspector(s):			I
Registration/Author 1. Business/site deta	risation Deta	<b>ails</b> checked by s	ite representa	tive?			Y	1
2. Changes made to	details?						Ν	
Site Details (include	e cleaner fis	h for all sect	ions)					
Total No facilities		0	Facilities sto	cked	0	No facilitie	s inspected	0
Species								
Age group								
NO FISH Moon Fich W/t						-		
Next Fallow Date (Si	to)	fallow		Next Input Da	te (Site)	no plans a		pent
Recent (last 4 wks) c	lisease probl	ems?		N/A	Any escapes	(since last	visit)?	N/A
If ves. detail:					, any occupied		tion) i	10/71
1. Movement records available for inspection?       28/11/2018         2. Date of last inspection:       28/11/2018         3. Are records complete and correctly entered?       4. Are movement records available for dead fish and waste?         5. Are records complete and correctly entered?       5. Are records complete and correctly entered?         6. Are health certificates for introductions (outwith GB) available?       5. Are any movements carried out by (or on behalf) of the business (not using a STB)?         If yes, is there a system in place for maintenance of transportation records?       5. Are solution in the place for maintenance of transportation records?								N N/A N/A N/A
1. Mortality records a	available for in	nspection?						N
2. How are mortalitie	s disposed o	f?			Other (detail)			
If other detail:	empty shells	fall to seabe	d					
3. Mortality records c	complete and	correctly ente	ered?					N
4. Recent mortality (I	ast 4 wks): t increased/a	turniant martal	mortality reco	ords not availa	ble but site ha	as been fallo	w since 2019	Ν/Δ
5. Evidence of recen	mortality per	facility/no.sto	nnes?	roason.				IN/A
	montainty per	Tacility/110 Sto	ick per lacility/	Teason.				
6. Any other peaks in	n mortality du	rina period ch	necked?					N/A
If yes, detail:		512 22						
7. Have increased (u	inexplained) i	mortalities be	en reported to	vet or FHI?				N/A
If yes, detail action:								
8. Have 'mortality eve	ents' been re	ported to FHI	? If no, enter o	details on mort	ality 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	
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: 28/11/2018-31/08/2022	

FHI 059, Version 13	Issued by: FHI			Date	of issue: 12	2/05/2020
Case Number:	2022-0344 Site No:	SS025	3			
Date of Visit	18/08/2022 Inspector:					
Number of Susceptil	ble species on site					
If no susceptible spec	ies present = <u>LOW</u> risk					
If susceptible species	present, score for each pathogen		No	Yes		
	Susceptible to Bonamia ostrea (OED)		0	25	0	
	Susceptible to Marteilia refringens (OED, MED)		0	3	0	
	Susceptible to OsHV (CGI)		0	3	0	
Sites within a tidal e	xcursion	1	2-5	>6		
Site contacts	Number of sites holding susceptible species within a tidal					
	excursion	0	2	10	2	
l ive shellfish moven	nents	0	1-2	>3		
Movements on	Frequency of movements on from equivalent MS		5		0	1
			0	10		
	Frequency of movements on from equivalent zone or		10	20		
	Number of europiero	0	5	20	0	
		0	5	10	0	l
Movements off	Frequency of movements off <u>within</u> MSS Management Areas	0	1	2	0	
	Frequency of movements off outwith MSS Management	0	3	6	0	
	Number of destinations	0	3	6	0	
Management practices		None	Secure (effluent treatment)	Unsecure (no effluent treatment)		
Water contacts with	Depuration of stock from own sites within MSS					
depuration facilities	management area	0	1	2	1	
	Depuration of stock from other businesses sites within					
	MSS management area	0	2	6	0	
	Depuration of stock from sites outwith MSS management					
	area	0	4	8	0	
Biosecurity	Number of sites	1	2 or 3	≥ 4		_
Contacts with other	Sites operating from single shorebase	0	1	2	1	
sites	Sites sharing staff and equipment	0	1	5	1	
			Yes	No		
	Disinfection of equipment between sites, use of footbath	is etc	0	2	2	
			Total		7	
			Risk		LOW	

Case No:	2022-0344	]		Date of visit	: 18/08/2022	2		
Site No:	SS0253	]		Inspector	:			
Results Summary	Freq.			Da	ate of Notifica	ation		
		Database	Insp	Phone	Insp	Writing	Insp	2 <sup>nd</sup> Insp
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Report Summary			
Case Type	Date	Insp	2 <sup>nd</sup> Insp
REG	31/08/202	2	
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	_		





## SUMMARY FOR INFORMATION OF SITE OPERATOR

BUSINESS No SB0165 SITE NO SS0253 CASE NO 20220344

**DATE OF VISIT** 18/08/2022 SITE NAME INSPECTOR

Barmore(South)

## 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 stock inspection could not be conducted as there was no equipment available to reach the site. Paperwork was forwarded to inactivate site as there are no plans to stock in the near future.

#### Records

The surveillance frequency category of the site was assessed as low. An inspection under the Aquatic Animal Health (Scotland) Regulations 2009 will be conducted every fourth 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:

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

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

- Aquaculture animal and aquaculture animal product movement records were not available for inspection.
- Mortality records were not available for inspection.

These must be addressed to ensure the conditions of authorisation for your Aquaculture Production Business (APB) are being met. Due to the site currently being fallow, this report is a reminder to maintain records or documentation demonstrating that these points, should stock be brought onto site.

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



Signed:

Date: 31/08/2022

Fish Health Inspector

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

FHI 059, Version 13	Issued	by: FHI	Date of issue: 12/05/2020
Case No: 2022-0366			Date of visit: 30/08/2022
Time spent on site: 1 hour	r	Main Inspector	:
Site No: SS0944 Sit Business No: SB0563 Bu	te Name: Isiness Name:	Loch Broom Mikietyn Ltd	
Case Types: 1 ECI 2	3	45	6
Water Temp (°C): 14.3 Th	ermometer No:	T310	FHI 045 completed
Observations: Re	egion: HI	Water type: S	CoGP MA:
Dead/weak/abnormally behaving fish Clinical signs of disease observed? Gross pathology observed? Diagnostic samples taken? UNI/REG only - if unable to carry out i	present?	If yes, see additional inform If yes, see additional inform If yes, see additional inform If yes, see additional inform	nation/clinical score sheet. nation/clinical score sheet. nation/clinical score sheet.

Natural spat collection.

No movements currently in records as no sales done so far due to classification testing still ongoing.

Once site has classification, manager plans to sell locally or abroad.

Manager has seen very little mortality this year.

Site and paperwork inspected by supervised by

FHI 059, Version 13			Issu	ed by: FHI			Date of issue: 12/05/2020
Case No:	2022-0366	]	Site No:	SS0944	]		
Date of Visit:		30/08/2022	]		Inspector(s):		
Registration/Autho	orisation Det	ails					
1. Business/site det 2. Changes made to	ails summary o details?	checked by si	ite representa	itive?			Y Y
Site Details (includ	le cleaner fis	sh for all secti	ions)				
Total No facilities		1	Facilities sto	cked	1	No facilitie	s inspected
Species	MED	MED					
Age group	2021	2022					
	660	340					
	droppers	droppers					
	with	with					
	unknown	unknown					
No Fish	tonnage	tonnage					
Mean Fish Wt	45mm (8g)	spat					
Next Fallow Date (S	site)	Continuous		Next Input Da	ate (Site)	2023	
Recent (last 4 wks)	disease prob	lems?		IN	Any escapes	s (since last	visit)?
If yes, detail:							
Movement Record 1. Movement record 2. Date of last inspective 3. Are records comp 4. Are movement records comp 5. Are records comp	s ds available for ection: blete and corr ecords availab blete and corr	or inspection? rectly entered? ble for dead fis rectly entered?	h and waste?				No previous 03/02/2021
Transport Records 1. Are any moveme If yes, is there a sys	ates for intro nts carried ou tem in place	ut by (or on bel for maintenand	nalf) of the buce of transpor	siness (not usi tation records?	ng a STB)? ?		
Mortality Records 1. Mortality records 2. How are mortalitie If other detail: 3. Mortality records 4. Recent mortality ( 5. Evidence of recer If yes, facility nos/no	available for es disposed o Empty shell complete and (last 4 wks): nt increased/a o mortality pe	inspection? of? drop to seabe correctly ente atypical mortali r facility/no sto	d ered? None record ities? ck per facility/	ed /reason:	Other (detail	)	
<ul> <li>6. Any other peaks if</li> <li>If yes, detail:</li> <li>7. Have increased (</li> <li>If yes, detail action:</li> <li>8. Have 'mortality ex</li> </ul>	in mortality du unexplained) vents' been re	uring period ch mortalities bee ported to FHI	ecked? en reported to ? If no, enter o	o vet or FHI? details on mort	ality events sł	neet.	

Treatments and Medicines Records
1. Recent treatments (see comment)?
If yes, detail:
If other, detail:
2. Medicines records available for inspection?
3. Are records complete and correctly entered?
4. Are fish in a withdrawal period?
5. If yes, what treatment(s)?
If other, detail:
6. Are medicines stored appropriately?
Biosecurity Records
1. Biosecurity records available for inspection?
2. Has the manner and frequency of mortality removal, recording and safe disposal been considered?
3. Has the manner and period in which the APB will notify Scottish Ministers or veterinary professional of any
increased (unexplained) mortality at the site been included?
4. Has the action that will be taken in the event that the presence or suspicion of the presence of a listed disease
is detected been included and how and when that will be notified to Scottish Ministers?
5. Has the health status of aquaculture animals being stocked on the farm site been covered (equal or higher
health status, certification if required)?
6. Have the husbandry and biosecurity measures implemented between each epidemiological unit to minimise
transmission of disease been covered (movement of staff, visitors, equipment, live or dead fish etc.)?
7. Is documentation available regarding the measures in place to maintain the physical containment of
aquaculture animals held on site?
8. Have the biosecurity procedures been adequately implemented on site?
If no, detail:
Results of Surveillance
1. Has any animal health surveillance been carried out by, or on behalf of, the business?
2. If yes, are results available for inspection?
3. Any significant results?
If yes, detail (if not detailed under recent disease problems).
Dete registered 20/00/2022
Date registered - 50/06/2022





FHI 059, Version 13	Issued by: FHI			Date	of issue: 12	2/05/2020
Case Number:	2022-0366 Site No:	SS094	4			
Date of Visit	30/08/2022 Inspector:			1		
Number of Susceptil	ble species on site					
If no susceptible spec	ies present = <u>LOW</u> risk					
If susceptible species	present, score for each pathogen		No	Yes		
	Susceptible to Bonamia ostrea (OED)		0	25	0	
	Susceptible to Marteilia refringens (OED, MED)		0	3	3	
	Susceptible to OsHV (CGI)		0	3	0	
Sites within a tidal e	xcursion	1	2-5	>6		
Site contacts	Number of sites holding susceptible species within a tidal					
	excursion	0	2	10	2	
Live shellfish moven	nents	0	1-2	>3		
Movements on	Frequency of movements on from equivalent MS	0	5	10	0	
	Frequency of movements on from equivalent zone or					
	compartment including third country	0	10	20	0	
	Number of suppliers	0	5	10	0	
Movements off	Frequency of movements off <u>within</u> MSS Management Areas	0	1	2	0	
	Frequency of movements off <u>outwith</u> MSS Management Areas	0	3	6	0	
	Number of destinations	0	3	6	0	
Management practices		None	Secure (effluent treatment)	Unsecure (no effluent treatment)		
Water contacts with depuration facilities	Depuration of stock from own sites within MSS management area	0	1	2	0	
	Depuration of stock from other businesses sites within MSS management area	0	2	6	0	
	Depuration of stock from sites outwith MSS management area	0	4	8	0	
Biosecurity	Number of sites	1	2 or 3	≥ 4		
Contacts with other	Sites operating from single shorebase	0	1	2	0	
sites	Sites sharing staff and equipment	0	1	5	0	
			Yes	No		
	Disinfection of equipment between sites, use of footbath	ns etc	0	2	0	
			Total		5	
			Risk		LOW	

Case No:	2022-0366	Date of visit: 30/08/2022						
Site No:	SS0944	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					
ECI	11/10/2022							





## SUMMARY FOR INFORMATION OF SITE OPERATOR

BUSINESS No SB0563 SITE NO SS0944 CASE NO 20220366

DATE OF VISIT 30/08/2022 Loch Broom SITE NAME 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 low. An inspection under the Aquatic Animal Health (Scotland) Regulations 2009 will be conducted every fourth 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 Scotland.

No animal health surveillance had been carried out on behalf of the business and/or Marine Scotland since the last Marine Scotland 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:

Date: 02/09/2022

Fish Health Inspector

The Fish Health Inspectorate Service Charter detailing standards of service is available on the Marine Scotland website at <a href="https://www.gov.scot/publications/fish-health-inspectorate-service-charter/">https://www.gov.scot/publications/fish-health-inspectorate-service-charter/</a>
FHI 059, Version 13		Issued by: FHI	Date of issue: 12/05/2020
Case No: 2022-0367			Date of visit: 30/08/2022
Time spent on site:	5 minutes	Main Ins	spector:
Site No: SS0877	Site Name:	Leac Nan Sgarbh Little L	och Broom
Business No: SB0534	Business Name:	Charron Ltd	
Case Types: 1 ECI	23	4 5	6
Water Temp (°C): 14.1	Thermometer No:	T173	FHI 045 completed
Observations:	Region: HI	Water type: S	CoGP MA:
Dead/weak/abnormally behaving	fish present?	N If yes, see additiona	l information/clinical score sheet.
Clinical signs of disease observed	d?	N If yes, see additiona	l information/clinical score sheet.
Gross pathology observed?		N If yes, see additiona	Information/clinical score sheet.
Diagnostic samples taken:		IN	
UNI/REG only - if unable to carry	out intended visit detai	reason below:	

### Issued by: FHI

# Additional Case Information:

6 x BST longline systems (including baskets) - 8 lines of 50m in each system

Not growing mussels.

Probably going to stop farming native oysters - all for restoration, not sold for eating.

Moved off site to depuration and then on to wholesaler. No farm to farm movements. Sales for Glenmorangie goes to Herriot Watt.

55% stock on site is native oysters.

Has health certificates from Guernsey - hasn't had stock from there since 2018.

No mortality observed since the last inspection.

Site inspection and paperwork carried out by state, supervised by

FHI 059, Version 13			Issue	ed by: FHI			Date of issue	12/05/2020	
Case No:	2022-0367	]	Site No:	SS0877	1				
Date of Visit:		30/08/2022	2		Inspector(s):				
Registration/Autho	risation Det	ails							
1. Business/site deta	ails summary	checked by s	ite representa	itive?			Y		
2. Changes made to	details?						Y		
Site Details (includ	le cleaner fis	sh for all sect	ions)						
Total No facilities		48 lines	Facilities sto	cked	44 lines	No facilitie	s inspected		
Species	OED	OED	OED	OED	CGI	CGI			
Age group	2019	2020	2021	2022	2019	2021			
No Fish	6 lines	6 lines	6 lines	6 lines	10 lines	10 lines			
	70mm	50mm	35mm	10mm (0.5-	90mm	40mm			
Mean Fish Wt	(50g+)	(35g+)	(15g+)	1g)	(75g+)	(20g+)			
Next Fallow Date (S	íte)	Continuous		Next Input Da	ate (Site)	Spring 202	23		
FHI 059, Version 13       Issued by: FHI       Date of issue: 1205/2         Case No:       2022-0367       Site No:       S50877         Date of Visit:       30/08/2022       Inspector(s):       Inspector(s):         Registration/Authorisation Details       1.       Business/site details summary checked by site representative?       Y         2. Changes made to details?       Y       Y       Y         Site Details (include cleaner fish for all sections)         Total No facilities       GED       OED       OED									
Recent (last 4 wks) disease problems?       N Any escapes (since last visit)?         f yes, detail:									
If yes, detail:									
1 Movement record	s available fo	or inspection?							
2. Date of last inspe	ction:						18/04/2018		
3. Are records comp	lete and corr	rectly entered?	,						
4. Are movement re	cords availab	ole for dead fis	h and waste?						
5. Are records comp	lete and corr	ectly entered?	,						
6. Are health certific	ates for intro	ductions (outw	/ith GB) availa	ble?					
							-		
Transport Records	;								
1. Are any movement	nts carried ou	ut by (or on bel	half) of the bu	siness (not usi	ng a STB)?				
If yes, is there a sys	tem in place	for maintenan	ce of transpor	tation records?	?				
Mortality Decords									
1 Mortality records	available for i	inspection?							
2 How are mortalitie	es disposed o	of?			Other (detail)				
If other detail:	Take them	and crush ther	m up Native o	net left in sea					
3. Mortality records	complete and	correctly enter	ered?						
4. Recent mortality (	last 4 wks):		None observ	/ed					
5. Evidence of recer	nt increased/a	atypical mortal	ities?						
If yes, facility nos/no	mortality pe	r facility/no sto	ck per facility/	/reason:					
6. Any other peaks i	n mortality du	uring period ch	ecked?						
7 Hove increased (		mortalitics	on ronorted to	wat an EUI2					
If yes, detail action:	unexplained)	mortaillies be	en reported to	veror FHI?					
8 Have 'mortality or	ents' been re	enorted to EHI	2 If no enter (	details on mort	ality events ch	eet			
o. Have mortality ev	ento beente	poned to i m	. in no, enter t		any events sh				

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





FHI 059, Version 13	Issued by: FHI			Date	of issue: 12	2/05/202
Case Number:	2022-0367 Site No:	SS087	7			
Date of ∀isit	30/08/2022 Inspector:			1		
Number of Suscepti	ble species on site					
If no susceptible spec	ies present = LOW risk					
If susceptible species	present, score for each pathogen		No	Yes		
	Susceptible to Bonamia ostrea (OED)		0	25	25	
	Susceptible to Marteilia refringens (OED, MED)		0	3	3	
	Susceptible to OsHV (CGI)		0	3	3	
Sites within a tidal e	xcursion	1	2-5	>6		
Site contacts	Number of sites holding suscentible species within a tidal					
	excursion	0	2	10	2	
Live shellfish mover	nente	0	1-2	>3		
Live shellish moven	Frequency of movements on from equivalent MS		5	10	0	
wovements on		Ŭ	<b>.</b>	10	<u> </u>	
	Frequency of movements on from equivalent zone or		10	20		
	Compartment including third country	0	10	20		
	Number of suppliers	0	5	10		
Movements off	Frequency of movements off <u>within</u> MSS Management Areas	0	1	2	0	
	Frequency of movements off <u>outwith</u> MSS Management	0	3	6	3	
	Number of destinations	0	3	6	3	
Management practices		None	Secure (effluent treatment)	Unsecure (no effluent treatment)		
Water contacts with	Deputation of stock from own sites within MSS					
depuration facilities	management area	0	1	2	0	
	Depuration of stock from other businesses sites within MSS management area	0	2	6	0	
	Depuration of stock from sites outwith MSS management area	0	4	8	0	
Riosecurity	Number of sites	1	2 or 3	> 4		
Contacts with other	Sites operating from single charabase		1	2	0	
sites	Sites sharing staff and equipment	0	1	5	- 0	
			Yes	No		
			_			
		IS etc	U	2		
			Total Risk		39 HIGH	
			NISK		- III SH	

Deputte Currenter	<b>F</b> ree <b>r</b>	Data of Natification
	L	
Site No:	SS0877	Inspector:
Case No:	2022-0367	Date of visit: 30/08/2022

Results Summary	Freq.							
		Database	Insp	Phone	Insp	Writing	Insp	2 <sup>nd</sup> Insp
			_				_	
			_				_	
			_					
	_	_	-		_		_	
			-				_	
	_	_	-				_	
	_		-		_		-	
							-	
	_		_		_		_	
	_		-		_		_	
	_	_	-				_	
			-				-	
		_						

Report Summary			
Case Type	Date	Insp	2 <sup>nd</sup> Insp
ECI	11/10/20	22	
		_	
	_	_	
	_	_	
	_	_	
	_	_	
		_	





# FISH HEALTH INSPECTORATE VISIT REPORT

## SUMMARY FOR INFORMATION OF SITE OPERATOR

BUSINESS No SB0534 SITE NO SS0877 CASE NO 20220367

DATE OF VISIT 30/08/2022 SITE NAME INSPECTOR

Leac Nan Sgarbh Little Loch Broom

## 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 Scotland.

No animal health surveillance had been carried out on behalf of the business and /or Marine Scotland since the last Marine Scotland 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: 11/10/2022

R14

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

FHI 059, Version 13	Issue	Date of issue: 12/05/2020						
Case No: 2022-0368			Date of visit: 31/08/2022					
Time spent on site: 3.	5 hours	Main Inspecto	ir:					
Site No: FS0065	Site Name:	Loch Laxford						
Business No: FB0398	Business Name:	Loch Duart Ltd						
Case Types: 1 DIA	2 REP 3	4 5						
			J ~LJ					
Water Temp (°C): 13.9	Thermometer No:	T173	FHI 045 completed					
Observations:	Region: HI	Water type: S	CoGP MA: M-3					
Dead/weak/abnormally behaving	fish present?	Y If yes, see additional infor	mation/clinical score sheet.					
Clinical signs of disease observed	d? '	Y If yes, see additional information/clinical score sheet.						
Gross pathology observed?		Y If yes, see additional infor	mation/clinical score sheet.					
Diagnostic samples taken?		Y						
UNI/REG only - if unable to carry	out intended visit detail read	son below:						
	out mondou von dotain road							

# Additional Case Information:

AGD was primarily the cause of mortality peaks at beginning of last cycle - Wks 40, 41, 43 and 44 in 2020, mortality of 1.59% (5,951 fish), 1.59% (5,845 fish), 1.24% (4,427 fish) and 1.82% (6,394 fish).

This year - April started to see changes in bloodwork to see PD. No noticeable changes to stock apart from when this water quality issue has arose recently - gills affected. Diet changed when diagnosed, functional feed - more digestible, less oil etc.

Report by the company due to increasing mortality on site (sample date 27/07/2022) stated that histology samples have shown harmful plankton insult was the primary cause of mortality.

Site has had 2 rounds of freshwater treatment between 14th-25th July. Increased mortality was not observed until after the first freshwater treatment. To try and reduce mortalities the site is routinely cleaning nets, feeding in the morning only, reduced feeding, low stock, swabbing every week for AGD (in case of needing further treatments). Aeration is also on site should it be required.

Salmosan and SLICE were given earlier in the year. SLICE 2nd -8th FEB 2022. Salmosan 18th-22nd April 2022.

Fish only in withdrawal for TMS (tricane) at the moment.

No concerns with wrasse, no increased mortality.

Remote inspection carried out 25/08/2022 by and, supervised by and. Diagnostic inspection and sampling carried out 31/08/2022 by and, supervised by and.

FHI 059, Version 13			lssu	ed by: FHI			Date of issue	: 12/05/2020
Case No:	2022-0368		Site No:	FS0065	5			
Date of Visit:		31/08/2022	2		Inspector(s):			
Registration/Autho	orisation Def	tails						
1. Business/site deta	ails summary	/ checked by s	site representa	ative?			Y	
2. Changes made to	details?						Y	
Site Details (includ	le cleaner fi	sh for all sect	tions)					
Total No facilities		24	Facilities sto	ocked	15	No facilitie	es inspected	
Species	SAL	WRS						
Age group	S0 2021	Wild and						
No Fish	253,000	9,461						
Mean Fish Wt	1.1kg	60-70g						
Next Fallow Date (S	íte)	Spring 2023	5	Next Input Da	ate (Site)	Autumn 2	023	
Recent (last 4 wks)	disease prob	olems?		Y	Any escapes	s (since last	visit)?	
If yes, detail:	PD confirm	ed on site alor	ng with severe	e gill pathology	suggestive of	an acute er	nvironmental c	
Movement Records 1. Movement records 2. Date of last inspecies 3. Are records company 4. Are movement records company 6. Are health certifices <b>Transport Records</b> 1. Are any movement If yes, is there a system <b>Mortality Records</b> 1. Mortality records and a second se	s ls available for ction: olete and cor cords available olete and cor ates for intro nts carried of tem in place available for	or inspection? rectly entered? ole for dead fis rectly entered? iductions (outv ut by (or on be for maintenan	? sh and waste? vith GB) availa shalf) of the bu nce of transpo	able? usiness (not usi rtation records?	ing a STB)? ?		23/09/2020	
2. How are mortalitie	es disposed	of?			Other (detail	)		
FHI 059, Version 13       Issued by: FHI       Date of issue: 1205/2020         Case No:       2022-0383       Site No:       FS0063         Date of Visit:       31/08/2022       Inspector(s):       Inspector(s):         Registration/Authorisation Details       .       Issues: 1205/2020         1. Business/site details summary checked by site representative?       Y       Y         Site Details (include cleaner fish for all sections)       Total No facilities inspected       Species         Species       SAL       WRS       No facilities inspected         Species       SAL       WRS       Autumn 2023         Recent (last 4 wks) disease problems?       Many escapes (since last visit)?       If yee, detail:         Movement records available for inspection?       23/09/2020       3/09/2020         3. Are records complete and correctly entered?       Are movement records available for inspection?       23/09/2020         4. Are movement carried out by (or on behalf) of the business (not using a STB)?       If yee, is there a system in place for maintenance of transportation records? <t< td=""></t<>								
FHI 059, Version 13       Issued by: FHI       Date of issue: 1205/2020         Case No:       2022-0368       Site No:       FS0065         Date of Visit:       2022-0368       Site No:       FS0065         Date of Visit:       31/08/2022       Inspector(s):       Inspector(s):         Registration/Authonisation Details       .       .       .         1. Business/site details summary checked by site representative?       Y       Y         2. Changes made to details?       Y       Y         Site Details (include cleaner fish for all sections)         Total No facilities       24       racilities stocked       15       No facilities inspected         Species       SAL       WRS       All and       Inspector(s)       .         Age group       S0.2021       Wild and       Y       YAry escapes (since last visit)?       If hype codases (since last visit)?       .         Not Fish Wt       11/18g       60-70g       Yary escapes (since last visit)?       .       .         Next Fallow Date (Site)       Spring 2023       Next Input Date (Site)       Autumn 2023       .         Recent (last 4 wks)       Gas condities inspection?       .       .       .       .         1. Movement records available for inspe								
4. Recent mortality ( 5. Evidence of recer	(last 4 wks): ht increased/	atypical morta	SAL: Wk 30 (37,974), W lities?	/- 4.94% (17,4) <u>k33 - 4.6% (13</u> //reason:	73), WK31 - 4 ,108). WRS:	.03% (13,5) 756 in last 4	Date of issue: 12/05/2020	
Across whole site	ttributed to c	evere all noth		tive of an acut	environment	al challeng	PD also con	
site		evere gill pati	lology sugges		e environment	ar challenge		
6. Any other peaks i	n mortality d	uring period ch	hecked?					
If yes, detail:	See additio	nal info						
7. Have increased (	unexplained	mortalities be	en reported to	o vet or FHI?				
If ves, detail action	(intercention)	Reported to	company yet	and samples t	aken 27/07/22	- see addit	tional informati	
8. Have 'mortality ev	vents' been r	eported to FHI	? If no, enter	details on mort	ality events sh	neet.	aonarimonnati	

Treatments and Medicines Records
1. Recent treatments (see comment)?
If yes, detail: T.M.S.
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)? T.M.S
If other, detail:
6. Are medicines stored appropriately?
Biosecurity Records
1. Biosecurity records available for inspection?
2. Has the manner and frequency of mortality removal, recording and safe disposal been considered?
3. Has the manner and period in which the APB will notify Scottish Ministers or veterinary professional of any
increased (unexplained) mortality at the site been included?
4. Has the action that will be taken in the event that the presence or suspicion of the presence of a listed disease
is detected been included and how and when that will be notified to Scottish Ministers?
5. Has the health status of aquaculture animals being stocked on the farm site been covered (equal or higher
health status, certification if required)?
6. Have the husbandry and biosecurity measures implemented between each epidemiological unit to minimise
transmission of disease been covered (movement of staff, visitors, equipment, live or dead fish etc.)?
7. Is documentation available regarding the measures in place to maintain the physical containment of aquaculture animals held on site?
8. Have the biosecurity procedures been adequately implemented on site?
If no, detail:
Pesults of Surveillance
1. Has any animal health surveillance been carried out by or on behalf of the business?
2 If ves are results available for inspection?
3 Any significant results?
If yes, detail (if not detailed under recent disease problems)
Records checked between: 23/09/2020 - 31/08/2022





F۲	II 059, Version 13							Issue	d by: FHI				
	Case no:	2022-03	368	Site No:	:	FS0065	;	Da Sa	te of visit/ mpling:	/	31/(	08/2022	31/(
	Priority samples:	VI		BA		PA		MG		HI			
	Time sampling starts/ends:	11:1	5:00	12:4	0:00	1	Inspector:			,	VMD No	D.	0
	Environmental conditions:	1	Indoors	2	Sunny	3		4		5			
	Summary samples	HIST	Y	BA	Y	MG	Y	VI		PA		Total Sa	Imples
A	dd Fish/Pools - click												
	Pool/Fish No	F1	F2	F3	F4	F5	P1						
	Fish nos	1	2	3	4	5	1-5						
	Pool Group	P1	P1	P1	P1	P1							
	Species	SAL	SAL	SAL	SAL	SAL							
	A	4 4000	4 4000	4 4000	4 4000	4 4000							

	Pool/Fish No	F1	F2	F3	F4	F5	P1			
	Fish nos	1	2	3	4	5	1-5			
	Pool Group	P1	P1	P1	P1	P1				
	Species	SAL	SAL	SAL	SAL	SAL				
	Average weight	1.1000	1.1000	1.1000	1.1000	1.1000				
	Sex	N/A	N/A	N/A	N/A	N/A				
	Water Type	SW	SW	SW	SW	SW				
Stock Details	Stock Origin Facility No	Comsary (FS0575)	Drmsary (FS0575)	Comsary (FS0575)	2 Ormsary (FS0575)	Comsary (FS0575)				
S		21	21	21	21	21				

38/2022	2022 Additional Sample Information:													
	Time of Death: 10:30am.													
6	6 Total Tests assigned 11													

FHI 059, Version 13			Issued by: FHI					Date of issue: 12/05/20				)5/2020
Case no:	2022-0368	]	Site No	<b>D</b> :	FS006	5	М	ethod o	f killing:	Percuss	sive	
Date of visit:	31/08/2022	Inspector(s):						s	heet Re	elevant:	Y	
S for strong preser	nce: M for medium presence: W for	woak pros	enco									
Fish Number	ice. W for medium presence. W for	weak pres	2	3	4	5			1			
Time sampled aft	er death (if > 45 minutes)	45min	65min	85min	100m	115min						
External Signs												
Behaviour	Moribund											
	Lethargic	S	S	S	S	S						
	Hanging vertical											
	Spiralling											
	Flashing											
Pody	Loss of equilibrium											
Bouy	Distended abdomen											
	Anorexic			м	S	м						
	Scale Oedema				-							
Opercula	Shortened											
	Flared											
Haemorrhaging	Throat											
	Ventrum											
	Base of fins											
	Elsewhere											
Eyes	Exophthalmic											
	Enophthalmic (sunken)											
	Cataract											
Gille	Pale	W	W	w	W	w						
Gilla	Zoned											
	Necrotic	w	w	w	w	w						
Lesions	Flank	S										
	Elsewhere											
Vent	Inflamed											
	Trailing faeces											
Lice Load	Estimate numbers	0	0	0	0	0						
Internal Signs												
Ascites	Clear											
Oedema	In tissues											
Heart	Pale/anaemic											
	Granulomas											
	Deformed											
Liver	Petechial haem											
	Gross haem											
	Tissue breakdown											
	Enlarged											
	Colour number(s)	3	3	3	2	2						
	Granulomas											
Pularic acces	Lesions Potophial keeps											
r yione caeca												
	Lack of fat			м	s	м						
Spleen	Enlarged				-							
	Granulomas											1
Gut	No food present											
	Yellow pseudo-faeces	S	S	S	S	S						
	External haem											
	Internal haem											
Body wall	Haemorrhaging											
Swim bladder	Haemorrhaging											
	Fluid filled											
Kidney	Swollen											
	Grepular											
General	Parasites present											
	Anaemia											
						-						1

Case no:	2022-0368

Date of visit:

31/08/2022

S f	or	strong	presence:	М	for medium	presence:	w	for	V
-----	----	--------	-----------	---	------------	-----------	---	-----	---

Fish Number						
Time sampled afte	r 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					
	Flsewhere					
Eves	Exophthalmic					
Lycs	Enophthalmic (sunken)					
	Cataract					
	Haemorrhagic					
Gille	Pale					
omo	Zoned					
	Negrotie					
Lasiana	Flash					
Lesions				 		
Vant	Lisewnere	 				
vent	Inflamed					
1	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					
Kidnev	Swollen					
	Grev					
	Granular					
	Liquefied					
General	Parasites present					
	Anaemia					
	, mavina					

2022-0368

Case No:	2022-0368	Date of visit: 31/08/2022
Site No:	FS0065	Inspector:

Results Summary	Freq.		Date of Notification									
		Database	Insp	Phone	Insp	Writing	Insp	2 <sup>nd</sup> Insp				
Salmon Gillpox	5/5	06/09/2022		06/09/2022	2	11/10/2022	2					
Paranucleospora	5/5	06/09/2022		06/09/2022	2							
theridion						11/10/2022	2					
MG AGD	5/5	06/09/2022		13/09/2022	2	11/10/2022	2					
MG PRV	1/1	09/09/2022		13/09/2022	2	11/10/2022	2					
MG IHN	0/4	07/09/2022		13/09/2022	2	11/10/2022	2					
MG IPN	0/4	07/09/2022		13/09/2022	2	11/10/2022	2					
MG ISA	0/4	07/09/2022		13/09/2022	2	11/10/2022	2					
MG SAV	1/4	07/09/2022		13/09/2022	2	11/10/2022	2					
MG VHS	0/4	07/09/2022		13/09/2022	2	11/10/2022	2					
PRVH	1/5	16/09/2022		30/09/2022	2	11/10/2022	2					
GPAT	5/5	22/09/2022		30/09/2022	2	11/10/2022	2					
HPAT	4/5	22/09/2022		30/09/2022	2	11/10/2022	2					
SKIN	1/5	22/09/2022		30/09/2022	2	11/10/2022	2					
MPAT	1/5	22/09/2022		30/09/2022	2	11/10/2022	2					
MG_PMCV	0/4	07/09/2022		05/10/2022	2	11/10/2022	2					
Moritella Viscosa -	1/5	16/09/2022		30/09/2022	2							
VVIS						11/10/2022	2					

Date	Insp	2 <sup>nd</sup> Insp
26/10/2022		
	Date 26/10/2022	Date Insp 26/10/2022





# FISH HEALTH INSPECTORATE VISIT REPORT

# SUMMARY FOR INFORMATION OF SITE OPERATOR

 BUSINESS
 No
 FB0398

 SITE NO
 FS0065

 CASE NO
 20220368

DATE OF VISIT31/08/2022SITE NAMELoch LaxfordINSPECTORInspector

# Section 1: Summary

The above site was inspected following reports of increased mortality by the farm operator. During the physical inspection of all pens, five fish were removed for diagnostic sampling.

Histopathology examination revealed hyperplasic branchitis, vascular disturbance and haemorrhage. Bacterial dermatitis in F1. F2 displayed pathology features resembling heart and skeletal inflammation (HSMI), confirmed by a positive QPCR for piscine orthoreovirus.

*Moritella viscosa* was identified on plates taken from lesion material of F1. The level and purity of growth would suggest that although *Moritella viscosa* would be implicated as the primary source of the lesion it would not be implicated as the primary source of morbidity overall.

All five fish tested positive for Salmon gill poxvirus, *Paranucleospora theridion* and *Neoparamoeba perurans* (amoebic gill disease (AGD)). F4 tested positive for salmonid alphavirus (SAV).

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 three weeks of increased mortality notifications above the reporting threshold, a site inspection was conducted and diagnostic samples taken for analysis.

All fish sampled were lethargic. F4, F3 and F5 were anorexic in body condition. All fish showed a weak presence of necrotic and pale gills and F1 had a lesion on the flank. No lice were observed on any of the sampled fish.

During internal examination, F3-5 all had a lack of fat on the pyloric caeca and all fish had yellow pseudo-faeces.

## Samples

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

R09

Fish number	Facility number	Species	Stage	Origin		
1-5	21	Atlantic Salmon	1.1kg 2021 S0	Ormsary (FS0575)		

# <u>Results</u>

**Bacteriology:** Kidney and gill material from F1-5 and lesion material from F1 were inoculated onto appropriate media for the isolation of bacteria.

The following bacterium was isolated from fish one:

• Moritella viscosa from the lesion on F1

**Virology:** Tissue samples were tested for segments of nucleic acid indicative of the presence of the pathogens specified below using real-time PCR (qPCR). Due to failure of endogenous control, RNA QPCR tests for F5 were excluded from results. As mentioned in the summary, only F2 was tested for piscine reovirus following histopathology.

## Salmon gill poxvirus

Fish Number	Endogenous control Cp value		Reported result		
1	21.69	26.57	26.52	26.53	POSITIVE
2	21.84	25.46	25.2	25.37	POSITIVE
3	21.19	33.81	33.76	33.94	POSITIVE
4	21.23	31.76	31.74	31.52	POSITIVE
5	21.79	26.11	25.96	26.01	POSITIVE

## Salmonid alphavirus (SAV)

Fish Number	Endogenous control Cp value		Reported result		
1	-	-	-	-	NEGATIVE
2	-	-	-	-	NEGATIVE
3	-	-	-	-	NEGATIVE
4	16	31.12	31.78	30.76	POSITIVE
5	-	-	-	-	NO RESULT

## Piscine reovirus (PRVP)

Fish Number	Endogenous control CP value		Cp Values		Reported Result
2	19.66	24.18	24.12	24.11	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) and piscine myocarditis virus (PMCV).

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

пеорагатосьа	perurans (ROD)				
Fish Number	Endogenous control Cp value		Reported result		
1	21.67	29.43	29.3	29.49	POSITIVE
2	21.49	34.13	34.17	34.44	POSITIVE
3	20.96	29.34	29.28	29.66	POSITIVE
4	20.99	30.16	30.24	30.31	POSITIVE
5	21.63	32.62	32.79	32.77	POSITIVE

Neoparamoeba perurans (AGD)

# Paranucleospora theridion

Fish Number	Endogenous control Cp value		Reported result		
1	21.69	28.49	28.39	28.51	POSITIVE
2	21.84	28.57	28.77	28.81	POSITIVE
3	21.19	22.31	22.26	22.17	POSITIVE
4	21.23	22.17	22.02	22.21	POSITIVE
5	21.79	28.05	28.06	28.08	POSITIVE

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

Histopathological examination revealed the following:

Gill: Lamellar hyperplasia and fusion (F1-F5), mild to moderate, multifocal to diffuse. Occasional to several basophilic epithelial inclusions (likely epitheliocystis) observed in F1 and F2. Lamellar epithelial lifting and some exudate observed in all fish. Chloride cell hyperplasia and displacement and increase number of goblet cells observed in all fish. F2 displayed areas of marked filament and lamellar necrosis and haemorrhage. The filament of F2 at the centre exhibited moderate inflammatory cell infiltrate. Some aneurysmal dilation/telangiectasia and lamellar congestion and some vascular disturbances observed in all fish.

Skin & Muscle: Lesion F1: Partial absence of the epidermis, moderate inflammatory cell infiltrate and haemorrhage in the dermal layer reaching the outer layer of the hypodermis and mild oedema. Gram-negative filamentous bacteria observed on the dermis. F2 mild, multifocal, myofibre degeneration and inflammatory cell infiltrate observed in the skeletal red muscle.

Heart: Multifocal, mild, Myocarditis (F1, F2, F5). Epicarditis, mild (F2, F4). F2: No atrium in section.

Gut and pyloric caeca: Within normal range. F3: No pyloric caeca.

Pancreas: Within normal range.

Liver: Small area of hepatocellular necrosis (F4). Some foci hepatocellular vacuolation (macrovisicules) (F1, F4). Some cuffing (F2, F3). F5: Too few tissue and autolyse artefacts.

R09

Kidney: Hyaline droplets observed in few renal tubules of all fish. Some increase on the number of melanomacrophage aggregates (F3, F4).

Spleen: Within normal range.

Signed: Fish Health Inspector

Date: 11/10/2022

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



FHI 059, Version 13	lssu	ed by: FHI	Date of issue: 12/05/2020					
Case No: 2022-0375			Date of visit: 30/08/2022					
Time spent on site: 4	.5 hours	Main Inspecto	r:					
Site No: FS0056	Site Name:	Ardmair						
Business No: FB0447	Business Name:	Wester Ross Fisheries Ltd						
Case Types: 1 DIA	2 REP 3	45	6					
Water Temp (°C): 14.2	Thermometer No:	T173	FHI 045 completed					
Observations:	Region: HI	Water type: S	CoGP MA: M-11					
Dead/weak/abnormally behaving	fish present?	Y If ves, see additional infor	mation/clinical score sheet.					
Clinical signs of disease observe	d?	Y If yes, see additional information/clinical score sheet.						
Gross pathology observed?		Y If yes, see additional infor	mation/clinical score sheet.					
Diagnostic samples taken?		Y						
UNI/REG only - if unable to carry	out intended visit detail rea	son below:						

## **Additional Case Information:**

Histopathology reports - 17/08/22 - waterborne or handling related damage. Signs of AGD but no amoeba detected. Gill inflammation.

Nothing found in site plankton trawls to indicate harmful plankton but health surveillance suggests otherwise.

Recent freshwater treatments - finished 28th August 2022. Had been going on for 2 weeks. No medicinal treatments.

Lice levels have been very low. A few caligus around but never had to treat.

Wrasse wild caught each day by the company - keeping numbers seasonally but suggested to keep note monthly in the movement book. Other site has a method to keep track weekly and this could be proposed for this site but company are waiting to see what Mowi want.

Paperwork and inspection completed by **1999**, supervised by **1999**. F1 sampled by **1999**, observed by **1999**. F2, 3 and 4 sampled by **1999**.

FHI 059, Version 13			Issue	ed by: FHI			Date of issue:	12/05/2020
Case No:	2022-0375		Site No:	FS0056	5			
Date of Visit:		30/08/2022	]		Inspector(s):			
Registration/Autho	risation Def	ails						
1. Business/site deta	ails summar	/ checked by s	ite representa	tive?			Y	
2. Changes made to	details?						Ν	
Site Details (includ	e cleaner fi	sh for all sect	ions)					
Total No facilities		44	Facilities sto	cked	23	No facilitie	es inspected	
Species	SAL	WRS						
Age group	2021 S0	Wild caught						
No Fish	268,941	2,000						
Mean Fish Wt	1.2kg	120g						
Next Fallow Date (S	ite)	June 2023		Next Input Da	ate (Site)	July/Augu	st 2023	
Recent (last 4 wks)	disease prob	lems?		Y	Any escapes	(since last	visit)?	
If yes, detail:	AGD, comp	olex gill disease	e, environmen	tal issues			,	
Movement Records 1. Movement record 2. Date of last inspecial 3. Are records comp 4. Are movement records comp 6. Are records comp 6. Are health certificant Transport Records 1. Are any movement If yes, is there a system Mortality Records	s s available for ction: blete and cor cords availal blete and cor ates for intro ates for intro tem in place	or inspection? rectly entered? ble for dead fish rectly entered? ductions (outwork) ut by (or on beh for maintenan	, , , , , , , , , , , , , , , , , , ,	ible? siness (not usi tation records?	ing a STB)? ?		14/09/2021	
1. Mortality records a	available for	inspection?						
2. How are mortalitie	es disposed	of?			Other (detail	)		
If other detail:	Incinerated	or biogas - Me	erkland tanker	s and Dunholn	n environment	al		
3. Mortality records	complete an	d correctly ente	ered?					
•			Wk31: 1.769	% (5657), Wk3	2: 3.67% (116	34). Wk33:	6.58% (2005)	
4. Recent mortality (	last 4 wks):		5.60% (15.9	50).				
5. Evidence of recer	nt increased/	atypical mortal	ities?	/-				
If yes, facility nos/no	mortality pe	r facility/no sto	ck per facility/	reason:				
Gill health related el	evated morta	alities across si	ite					
6. Any other peaks in	n mortality d	uring period ch	ecked?					
If yes, detail:	2022 Week	30: 1.55% (50	060 fish) due t	o environment	al conditions a	and gill heal	th	
7. Have increased (u	unexplained)	mortalities be	en reported to	vet or FHI?				
If yes, detail action:	. ,							
8. Have 'mortality ev	ents' been r	eported to FHI	? If no, enter of	details on mort	ality events sh	leet.		

Treatments and Medicines Records
1. Recent treatments (see comment)?
If yes, detail: T.M.S.
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)? T.M.S.
If other, detail:
6. Are medicines stored appropriately?
Biosecurity Records
1. Biosecurity records available for inspection?
2. Has the manner and frequency of mortality removal, recording and safe disposal been considered?
3. Has the manner and period in which the APB will notify Scottish Ministers or veterinary professional of any
increased (unexplained) mortality at the site been included?
4. Has the action that will be taken in the event that the presence or suspicion of the presence of a listed disease
is detected been included and how and when that will be notified to Scottish Ministers?
5. Has the health status of aquaculture animals being stocked on the farm site been covered (equal or higher
health status, certification if required)?
6. Have the husbandry and biosecurity measures implemented between each epidemiological unit to minimise
transmission of disease been covered (movement of staff, visitors, equipment, live or dead fish etc.)?
7. Is documentation available regarding the measures in place to maintain the physical containment of
aquaculture animals held on site?
8. Have the biosecurity procedures been adequately implemented on site?
If no, detail:
Results of Surveillance
1. Has any animal health surveillance been carried out by, or on behalf of, the business?
2. If yes, are results available for inspection?
3. Any significant results?
If yes, detail (if not detailed under recent disease problems). See additional comments/recent disea
Records checked between: 14/09/2021 - 30/08/2022





FHI 059, V	ersion 13							Issi	ued by: FH	11			
Case no	): )	2022-03	375	Site No:		FS0056			Date of vis Sampling:	it/	30/	08/2022	30/(
Priority	samples:	VI		BA		PA		MG		н			
Time sa starts/ei	mpling nds:	12:5	6:00	14:1	5: <mark>0</mark> 0	1	Inspector	r:			VMD No	<b>b</b> .	0
Environ	mental conditions:	: 1	Indoors	2		3		4		5			
Summa	ry samples	HIST	Y	BA	Y	MG	Y	VI		PA		Total Sa	amples
Add Fish/	Pools - click												
Pool/Fis	h No	F1	F2	F3	F4	P1							
Fish nos	6	1	2	3	4	1-5							
Pool Gr	oup	P1	P1	P1	P1								
Species		SAL	SAL	SAL	SAL								
Average	e weight	1.2000	1.2000	1.2000	1.2000								

## Date of issue: 12/05/2020

	Pool/Fish No	F1	F2	F3	F4	P1				
	Fish nos	1	2	3	4	1-5				
	Pool Group	P1	P1	P1	P1					
	Species	SAL	SAL	SAL	SAL					
	Average weight	1.2000	1.2000	1.2000	1.2000					
	Sex	N/A	N/A	N/A	N/A					
	Water Type	SW	SW	SW	SW					
Stock Details	Stock Origin Facility No	д Loch Merkland (FS0612)	Loch Merkland (FS0612)	R Loch Merkland (FS0612)	Loch Merkland (FS0612)					
S		BI	BI	B4	BI					

2022 Additional Sample Information:											
Time of death: 12:10											
5 Total Tests assigned 2											

FHI 059, Version 13			lss	ued by:	FHI			Date of issue: 12/05/2020				
Case no:	2022-0375		Site No	<b>D</b> :	FS0056			Method of killing: Percussive				
Date of visit:	30/08/202	2	Inspector(s):			Sheet Relevant: Y						
S for strong preser	nce: M for medium presence: W fo	r weak pres	sence									
Fish Number	ice. In for modiant prosonee. Whe	1	2	3	4		<u> </u>					1
Time sampled aft	er death (if > 45 minutes)	46min	62min	79min	99min							
External Signs												
Behaviour	Moribund											
	Lethargic	M	M	M	M							
	Hanging vertical											
	Spiraling	_										
	l oss of equilibrium	-										
Body	Dark											
-	Distended abdomen											1
	Anorexic	S	S		S							
	Scale Oedema											
Opercula	Shortened	W										
	Flared	_										
Haemorrhaging	Ventrum											4
	Base of fine											
	Elsewhere											1
Eyes	Exophthalmic											1
	Enophthalmic (sunken)											1
	Cataract											
	Haemorrhagic											
Gills	Pale	W	М	W	W							
	Zoned											
Lesiene	Necrotic											
Lesions	Flank	_										
Vent	Inflamed										_	
Vent	Trailing faeces											
Lice Load	Estimate numbers	0	0	0	0							1
Internal Signs												
Ascites	Clear											
	Bloody											
Oedema	In tissues	M	M	M	M							
Heart	Cronuloman	141		IVI								
	Deformed	-										
Liver	Petechial haem											
	Gross haem											1
	Tissue breakdown											1
	Enlarged											
	Colour number(s)	2	2	4	1							1
	Granulomas											
Pyloric cases	Petechial basem											1
i yione caeca	Tubules mauve			W								1
	Lack of fat	S			М							1
Spleen	Enlarged	-										
	Granulomas											1
Gut	No food present											
	Yellow pseudo-faeces	S	S	S	s							
	External haem											1
Deducel	Internal haem											1
Swim bladder	Haemorrhaging											4
												1
Kidnev	Swollen											1
,	Grey											1
	Granular											1
	Liquefied											
General	Parasites present											1
	Anaemia											
#### FHI 059, Version 13

Case no:	2022-0375

Date of visit:

30/08/2022

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

Fish Number						
Time sampled afte	r death (if > 45 minutes)					
External Signs						
Behaviour	Moribund					
	Lethargic					
	Hanging vertical					
	Spiralling					
	Flashing					
	Loss of equilibrium					
Body	Dark					
	Distended abdomen					
	Anorexic					
	Scale Oedema					
Opercula	Shortened					
	Flared					
Haemorrhaging	Throat					
	Ventrum					
	Base of fins					
	Elsewhere					
Eyes	Exophthalmic					
	Enophthalmic (sunken)					
	Cataract					
	Haemorrhagic					
Gills	Pale					
	Zoned					
	Necrotic					
Lesions	Flank					
	Elsewhere					
Vent	Inflamed					
	Trailing faeces					
Lice Load	Estimate numbers					
Internal Signs						
Ascites	Clear					
	Bloody					
Oedema	In tissues					
Heart	Pale/anaemic					
	Granulomas					
	Deformed					
Liver	Petechial haem					
	Gross haem					
	Tissue breakdown					
	Enlarged					
	Colour number(s)					
	Granulomas					
	Lesions					
Pyloric caeca	Petechial haem					
	Tubules mauve					
	Lack of fat					
Spleen	Enlarged					
	Granulomas					
Gut	No food present					
	Yellow pseudo-faeces					
	External haem					
	Internal haem					
Body wall	Haemorrhaging					
Swim bladder	Haemorrhaging					
	Fluid filled					
Kidney	Swollen					
	Grey					
	Granular					
• ·	Liquefied					
General	Parasites present					
	Anaemia					

2022-0375

FHI 059, Version 13

Case No:	2022-0375	Date of visit: 30/08/2022
Site No:	FS0056	Inspector:

Results Summary	Freq.	Date of Notification							
		Database	Insp	Phone	Insp	Writing	Insp	2 <sup>nd</sup> Insp	
AGD	4/4	06/09/2022		06/09/2022		11/10/2022			
Para Ther	4/4	06/09/2022		06/09/2022		11/10/2022			
Salmon Gillpox	4/4	06/09/2022		06/09/2022		11/10/2022			
MG IHN	0/2	12/09/2022		13/09/2022		11/10/2022			
MG IPN	0/2	12/09/2022		13/09/2022		11/10/2022			
MG ISA	0/2	12/09/2022		13/09/2022		11/10/2022			
MG PMCV	0/2	12/09/2022		13/09/2022		11/10/2022			
MG SAV	0/2	12/09/2022		13/09/2022		11/10/2022			
MG VHS	0/2	12/09/2022		13/09/2022		11/10/2022			
Vibrio Species VSPE	4/4 and 2/4	16/09/2022		30/09/2022		11/10/2022			
Ameobic gill disease	4/4	22/09/2022		30/09/2022		11/10/2022			
Complex gill issues	4/4	22/09/2022		30/09/2022		11/10/2022			
Epitheliocystis	4/4	22/09/2022		30/09/2022		11/10/2022			
LPAT	4/4	22/09/2022		30/09/2022		11/10/2022			
GPAT	4/4	22/09/2022		30/09/2022		11/10/2022			
Post mortem changes	4/4	22/09/2022		30/09/2022		11/10/2022			
Adhesions	4/4	22/09/2022		30/09/2022		11/10/2022			

Report Summary			
Case Type	Date	Insp	2 <sup>nd</sup> Insp
DIA	11/10/2022		
	_		





# FISH HEALTH INSPECTORATE VISIT REPORT

# SUMMARY FOR INFORMATION OF SITE OPERATOR

 BUSINESS
 No
 FB0447

 SITE NO
 FS0056

 CASE NO
 20220375

DATE OF VISIT 30/08/2022 SITE NAME Ardmair INSPECTOR

# Section 1: Summary

The above site was inspected following reports of increased mortality by the farm operator. During the physical inspection of all pens, four fish were removed for diagnostic sampling.

Histopathology examination revealed complex gill issues and some vascular disturbance. Amoebic gill disease and epitheliocystis (likely *Brachiomonas* sp.) also observed. Mild, multifocal hepatic necrosis and mild peritonitis (potentially associated with vaccine administration).

*Vibrio* sp. was identified on plates taken from kidney material of two fish, a second *Vibrio* sp. was identified as the predominant bacterium observed on plates taken from gill material of all four fish. The level and purity of growth of these isolates would not suggest they would be implicated in current morbidity.

All four fish tested positive for Salmon gill poxvirus, *Paranucleospora theridion* and *Neoparamoeba perurans* (amoebic gill disease (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**

Following five weeks of increased mortality notifications above the reporting threshold, a site inspection was carried out and samples taken for analysis.

All four fish sampled were lethargic, with F1, F2 and F4 having an anorexic body condition. F1 had a slightly shorted opercula and all four fish had pale gills. No lice were found on any of the fish sampled.

During internal examination, all four fish had pale/anaemic hearts. When examining the pyloric caeca, F3 had mauve tubules and F1 and F3 exhibited a lack of fat. All four fish had yellow pseudo faeces present.

#### Samples

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

R09

Marine Laboratory, 375 Victoria Road, Aberdeen, AB11 9DB Tel - 0131 244 3498 Fax - 0131 244 0944 Email - <u>ms.fishhealth@gov.scot</u> Website - <u>www.gov.scot/Topics/marine/science</u>

Fish number	Facility number	Species	Stage	Origin
F1, F2 and F4	B1	Atlantic Salmon	1.2kg 2021 S0	Loch Merkland (FS0612)
F3	B4	Atlantic Salmon	1.2kg 2021 S0	Loch Merkland (FS0612)

## <u>Results</u>

**Bacteriology:** Kidney and gill material from F1-4 were inoculated onto appropriate media for the isolation of bacteria.

The following bacteria were isolated:

- Vibrio sp. from kidney material in F2 and F4 (Isolate A).
- Vibrio sp. from gill material in F1, F2, F3 and F4 (Isolate B).

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

#### Salmon gill pox virus

Fish Number	Endogenous control Cp value		Reported result		
1	22.22	28.63	28.7	28.81	POSITIVE
2	19.19	25.08	25.58	25.67	POSITIVE
3	22.09	24.73	24.77	24.73	POSITIVE
4	22.35	27.77	27.73	27.93	POSITIVE

Samples taken from F1 and F2 tested negative for infectious haematopoietic necrosis virus (IHNV), infectious pancreatic necrosis virus (IPNV), infectious salmon anaemia virus (ISAV), Salmonid alphavirus (SAV), viral haemorrhagic septicemia virus (VHSV) and piscine myocarditis virus (PMCV). Due to failure of the endogenous control, samples from F3 and F4 could not be tested.

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

пеорагатоера	peruraris (AGD)				
Fish Number	Endogenous control Cp value		Reported result		
1	22.22	32.22	32.16	32.25	POSITIVE
2	19.19	32.05	32.52	32.57	POSITIVE
3	22.09	26.49	26.44	26.64	POSITIVE
4	22.35	33.00	33.52	33.14	POSITIVE

## Neoparamoeba perurans (AGD)

### Paranucleospora theridion

R09

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Fish Number	Endogenous control Cp value		Reported result		
1	22.22	21.20	21.02	21.32	POSITIVE
2	19.19	26.68	26.99	26.72	POSITIVE
3	22.09	29.18	29.56	29.11	POSITIVE
4	22.35	22.29	22.44	22.19	POSITIVE

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

Histopathological examination revealed the following:

Gill: Lamellar epithelial hyperplasia and hypertrophy with mild, multifocal lamellar fusion. Several small foci of cellular necrosis noted in F4. Several basophilic epithelial inclusions (likely epitheliocystis) observed in all fish and several amoeboid cells resembling *Neoparamoeba perurans* observed in F3. Lamellar telangiectasia with multifocal thrombosis and lamellar congestion. Free blood among gill filaments observed in F1.

Skin & Muscle: F2: Absence of the epidermis, some inflammatory cell infiltrated, haemorrhage and foci of necrosis in the dermal layer. Foci of unknown round-shaped structures (potentially yeast) noted. Some Gram-negative bacteria also observed.

Heart: Very minimal inflammatory cell infiltrate (F1, F4). F3: No atrium in section.

Gut and pyloric caeca: Mild peritonitis. Cell sloughing (potentially associated with post-mortem artefacts). F3: Almost pyloric caeca.

Pancreas: Within normal range. F1 reading hindered by autolysis artefacts (F1).

Liver: Hepatocellular necrosis, mild multifocal (F1-F4).

Kidney: Hyaline droplet observed in few renal tubules in F2. Some increase on the number of melanomacrophage aggregates (F1-F4).

Spleen: Within normal range.

Signed:

Date: 11/10/2022

Fish Health Inspector

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

