FHI 059, Version 13		Issued by: FHI	Date of issue: 12/05/2020
Case No: 2023-0058			Date of visit: 22/02/2023
Time spent on site:	6 hours	Main Inspec	tor:
Site No: FS0413 Business No: FB0119	Site Name: Business Name:	Camas Glas Mowi Scotland Ltd	
Case Types: 1 ECI	2 CNI 3 SLI	4 VMD 5 DIA	6
Water Temp (°C): 8.5	Thermometer No:	T147	FHI 045 completed N/A
Observations:	Region: HI	Water type: S	CoGP MA M-34
Dead/weak/abnormally behaving Clinical signs of disease observe Gross pathology observed? Diagnostic samples taken?		Y If yes, see additional info	ormation/clinical score sheet. ormation/clinical score sheet. ormation/clinical score sheet.
UNI/REG only - if unable to carr	y out intended visit deta	il reason below:	

#### Additional Case Information:

Site currently holding approx. 300,000 fish for another site. These fish will be moved off in March/April and the remaining 6 pens will be split down to stock all 12 cages.

Yersinia ruckeri - antibiotics treatments just finished. Manager thinks this was brought about by stress of freshwater treatment 29th-31st December. Health surveillance Pharmaq report on 08/02/2023.

Antibiotic treatment was on the 9th February - Flofenicol In feed for 10 days. 500 degree day withdrawal period. Pens 1, 3, 5, 7, 9, 11. Morts have decreased but still remains an issue. Cage 7 was the worst due to freshwater issues when treating. Pen 2 and 6 haven't been treated. Product name - veterin 80.

ERM, RTFS, pasturella, furunculosis, IPN, - all fish on site vaccinated for.

SLICE 20th December - 27th December. Whole site treated. Recorded as 500 degree day withdrawal.

Peroxide bath treatment scheduled for next week for gill issues.

Ensiling system is new for this cycle - no movement off yet but will use Billy Bowie.

All lumpfish from Ocean matters. 22-27g Came in 13/10/22 and 12/01/2023.

Brand new seal pro nets this year with seal blinds.

Sealice treatment last cycle were Salmosan, SLICE, thermolicer, hydrolicer.

Paperwork inspected by the supervised by the . VMD sampled by the . Diagnostic F1,4 and 5 by the F2 and 3 by

On inspection of pens approximately 10-20 moribund fish with popeye were observed in all pens except 2 and 6. Pen 7 had approximately 30 moribund fish observed.

Lumpfish mortality: Wk 4 - 1.51% (1421), Wk 5 - 2.71% (2506), Wk 6 - 3.07% (2630) and Wk 7 - 2.24% (1859)

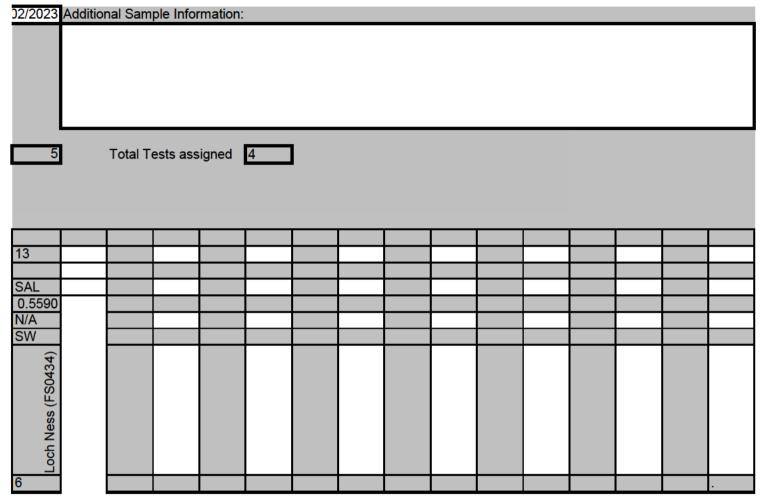
FHI 059, Version 13			Issu	ied by: FHI			Date of issu	ie: 12/05/2020
Case No:	2023-0058	]	Site No:	FS0413	3			
Date of Visit:		22/02/2023	3		Inspector(s):			
Registration/Autho			ito roprocont	ativo?			V	-
<ol> <li>Business/site deta</li> <li>Changes made to</li> </ol>		y checked by s	site representa	auver			Ϋ́	-
Site Details (includ	le cleaner fi			- dua d	10			10
Total No facilities Species	CAL	12	Facilities sto	оскеа	8	No facilitie	s inspected	12
Age group	SAL 22 Q4	LUM						
No Fish	1,100,061	2022 input 79,430				-		
Mean Fish Wt	559g	50g						
Next Fallow Date (S		June 2024		Next Input Da	ate (Site)	October 20	024	
Recent (last 4 wks)	· ·				Any escapes			N
If yes, detail:	Yersinia			•		1	,	
•								
Movement Record								
1. Movement record		or inspection?						Y
2. Date of last inspe			_				05/08/2021	
3. Are records comp		•						Ý
4. Are movement re				<i>(</i>				N/A
5. Are records comp		-						N/A N/A
6. Are health certific	ates for intro	auctions (outv	vith GB) availa	able?				IN/A
Transport Records	5							
1. Are any movement		ut by (or on be	half) of the bu	usiness (not us	ing a STB)?			Ν
If yes, is there a sys				•				
5,	•							
<b>Mortality Records</b>								
1. Mortality records	available for	inspection?						Y
2. How are mortalitie	es disposed	of?			Ensiled - on	site		
If other detail:								
3. Mortality records	complete an	d correctly ent						Y
4. Decent mortality				(8,205 fish), V	•		•	
<ol> <li>Recent mortality (</li> <li>Evidence of recent</li> </ol>	· · · · · · · · · · · · · · · · · · ·	atunical morta		o (3,212 fish). S	See additional	information	for cleanerfis	sn. N
If yes, facility nos/no				/reason:				
	montainty pe	a raciity/no ste		incason.				
6. Any other peaks i	in mortality d	uring period cl	necked?					Y
				nd Wk4 (1.43%	b) due to com	olex gill disea	ase and AGE	). Also Wk23
				and Wk26 (1.4				
If yes, detail:	and sea lice	э.						
7. Have increased (	unexplained)	mortalities be	en reported to	o vet or FHI?				N/A
If yes, detail action:								
8. Have 'mortality ev	vents' been r	eported to FHI	? If no, enter	details on mor	tality events s	heet.		Y

Treatments and Me	dicines Records		
1. Recent treatments	s (see comment)?		Y
	Florfenicol,		
If yes, detail:	T.M.S.,		
If other, detail:			
2. Medicines records	s available for inspection?		Y
3. Are records comp	elete and correctly entered?		Y
4. Are fish in a withd	rawal period?		Y
5. If yes, what treatment	nent(s)?	Florfenicol, T.M.S., Slice	
If other, detail:			
6. Are medicines sto	red appropriately?		Y
<b>Biosecurity Record</b>	ls		
1. Biosecurity record	Is available for inspection?		Y
2. Has the manner a	ind frequency of mortality remo	oval, recording and safe disposal been considered?	Y
3. Has the manner a	ind period in which the APB wi	ill notify Scottish Ministers or veterinary professional of any	
increased (unexplai	ned) mortality at the site been	included?	Y
4. Has the action that	at will be taken in the event that	at the presence or suspicion of the presence of a listed disease	
		t will be notified to Scottish Ministers?	Y
5. Has the health sta	atus of aquaculture animals be	ing stocked on the farm site been covered (equal or higher	Y
health status, certific			-
6. Have the husband	dry and biosecurity measures i	mplemented between each epidemiological unit to minimise	Y
		of staff, visitors, equipment, live or dead fish etc.)?	
		ures in place to maintain the physical containment of	Y
aquaculture animals			
•	rity procedures been adequate	ely implemented on site?	Y
If no, detail:			
<b>Results of Surveilla</b>	ance		
1. Has any animal he	ealth surveillance been carried	l out by, or on behalf of, the business?	Y
•	available for inspection?	• • •	Y
3. Any significant res	•		Y
	etailed under recent disease p	problems). Yersinia - see additional info	
ŀ	Records checked between:	5/08/2021 - 22/02/2023	

FHI 059, Version 13				Issued by: FHI		
Case no:	2023-0058	Site No:	-S0413	Date of visit Sampling:	t/ 22/02/2023	22/(
Priority samples:	VI	BA	PA	MG	н	
Time sampling starts/ends:	14:00:00	13:30:00	Inspector:		VMD No.	20
Environmental conditions:	1 Indoors	2	3	4	5	
Summary samples	HIST Y	BA Y	MGY	VI	PA Total Sample	es

### Add Fish/Pools - click

Pool/Fish No	F1	F2	F3	F4	F5							
Fish nos	1	2	3	4	5	6	7	8	9	10	11	12
Pool Group												
Species	SAL	SAL										
Average weight	0.5590	0.5590	0.5590	0.5590	0.5590	0.5590	0.5590	0.5590	0.5590	0.5590	0.5590	0.5590
Sex	N/A	N/A										
Water Type	SW	SW										
	Loch Lochy (FS0150)	Loch Ness (FS0434)										



FHI 059, Versio	on 13		Issued by: FHI				Date of issue: 12/05/202				5/2020	
Case no:	2023-0058		Site No	0:	FS041	3	Me	ethod of	killing:	Percus	sive	1
Date of visit:	22/02/20	23	Inspec	tor(s):				S	heet Re	elevant:	Y	
S for strong preser	nce: M for medium presence: W f	for weak pres	sence									
Fish Number	er death (if > 45 minutes) Moribund	1	2	3	4	5					<u> </u>	1
Time sampled aft	er death (if > 45 minutes)											1
External Signs												
Behaviour	Moribund	S	S	S	S	S						
	Lethargic	S	S	S	s	S						
	Hanging vertical											
	Spiralling											
	Flashing				_							
Dedu	Loss of equilibrium	s	s	s	s	S						
Body	Dark Distended abdomen	3	3	3	3	3						
	Anorexic											1
	Scale Oedema	-										1
Opercula	Shortened											
	Flared											1
Haemorrhaging	Throat											1
	Ventrum											]
	Base of fins											
	Elsewhere											1
Eyes	Exophthalmic	S	S	S	S	S						
	Enophthalmic (sunken)											
	Cataract				_							
0:11-	Haemorrhagic	М	_		_	м						
Gills	Pale Zoned	IVI	-			141						
	Necrotic	_										
Lesions	Flank	-	s	-	_							
Ecoloria	Elsewhere		-									
Vent	Inflamed											
	Trailing faeces											1
Lice Load	Estimate numbers	1	0	0	2	0						1
Internal Signs Ascites												
Ascites	Clear											
	Bloody											
Oedema Heart	In tissues				_							
Heart	Pale/anaemic	_			_							
	Granulomas Deformed				_							
Liver	Petechial haem	_			_							
LIVEI	Gross haem	-										
	Tissue breakdown											
	Enlarged											1
	Colour number(s)	2	2	4	4	5						1
	Granulomas											1
	Lesions											]
Pyloric caeca	Petechial haem	S										
	Tubules mauve											1
	Lack of fat	_	S									
Spleen	Enlarged	S				S						4
Cut	Granulomas		S	s	S							1
Gut	No food present Yellow pseudo-faeces	S	3	3	3							4
	External haem	3										1
	Internal haem											1
Body wall	Haemorrhaging	S										1
Body wall Swim bladder	Haemorrhaging											1
	Fluid filled											1
Kidney	Swollen											1
	Grey											1
	Granular											1
	Liquefied											]
General	Parasites present											
	Anaemia											

#### FHI 059, Version 13

Case no:	2023-0058

Date of visit:

22/02/2023

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

	ice: <b>M</b> for medium presence: <b>W</b> fo	_	-				_
Fish Number							
	er 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						
Mulley	Grey						
	Granular						
General	Liquefied Parasites present						
General	Anaemia						
	Anaemia						

# Additional comments:

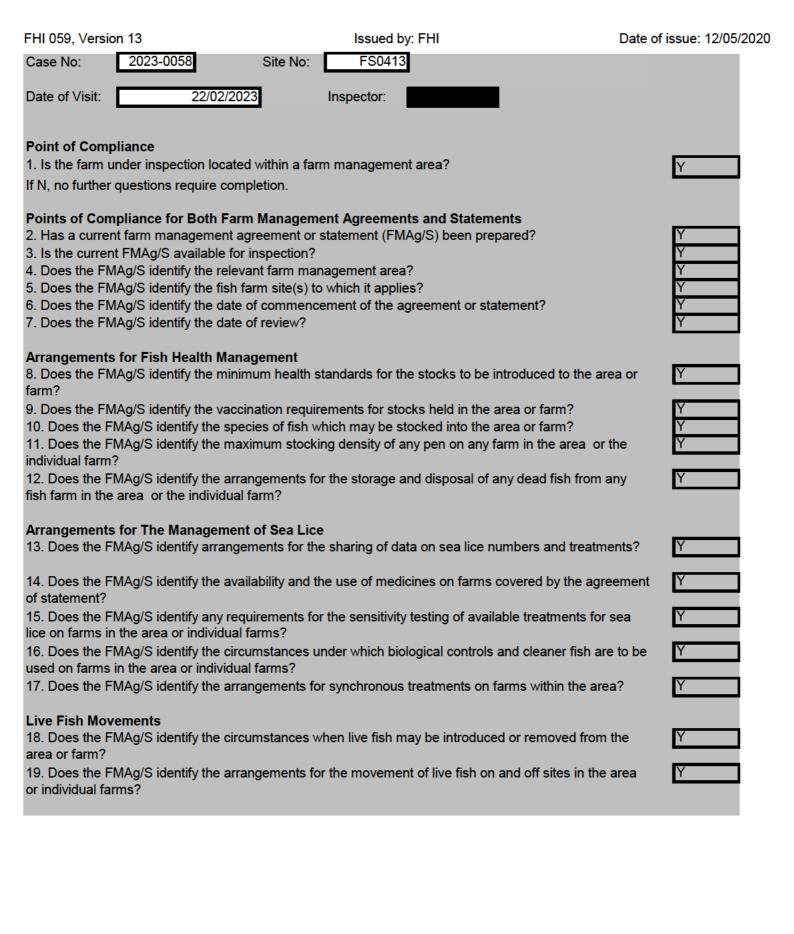
F4: Adhesions in body cavity and very pale internally. F5: Pale pyloric caeca.

FHI 059, Version 13

Issued by: FHI

FHI 059, Version 13		Issued by: FHI			Date d	or issue	: 12/05/2020
Case Number:	2023-0058		Site No:	FS0413		Insp:	
Date of Visit	22/02/2023		No of mo	ovements/s	supp./dest.		Score
Live fish movements			0	1-5	6-10	>10	
Movements on (from out	Frequency of n	novements on from equivalent MS	0	5	10	14	0
with GB) of susceptible species		novements on from equivalent zone or ncluding third country	0	9	18	26	0
	Number of sup		0	5	10	14	0
Movements off	Frequency of n	novements off	0	3	6	10	10
	Number of des		0		6	10	6
Exposure via water		Site contacts	0	1-5	6-10		
Water contacts with other farms (holding species	Farm is protect disinfection or	ed (secure water supply through borehole)	0				
susceptible to same diseases)	Farm is on-line	or in a coastal zone with category I n or within 1 tidal excursion	1	2	4		1
	farms upstrean	or in a coastal zone with category III n or within 1 tidal excursion	1	3	6		
		or in a coastal zone with category V n or within 1 tidal excursion	1	4	8		
Management practices			None	Secure	Unsecure		
Water contacts with processors	Any processing	plant discharging into adjacent waters	0	1	2		1
On farm processing within the rules of the directive	No on farm pro	cessing	0	1			0
	Processing own	n fish (re-cycling risk)	1				
	Processing fish	from MS of equivalent status	2				
	equivalent stat		4				
	•	n 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				0
	Feeding unpas	teurised feed	5				
Biosecurity		Number of sites	1	2 or 3	≥ 4		
Contacts with other sites		from single shorebase	0	1	2		0
	Sites sharing s	taff and equipment	0	1	2		0
Disinfection of equipment	Yes		0	1			
between sites, use of 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				0
	No		2				
					Total Rank		18 MEDIUM
					I COLIN		WEDIOW

FHI 059, Version 13	Issued by: FHI	Date of issue: 12/05/2020
Case No: 2023-0058	Site No:	FS0413
Sea Lice Inspection (Seawater Sites Only)		
1. Has the site experienced sea lice problems	in the previous 4 years?	Ν
2. Is the CoGP Farm Management Area (or e	quivalent) fallowed synchronously on a single y	year class basis? Y
	enced in-feed and bath sea lice medications (in well as access to suitable biological and/or med l of time?	
4. Is there a signed documented farm manage Management Area (or equivalent)?	ement agreement or statement relevant to the s	site and CoGP Farm
5. Are sea lice count records available for insp	pection? (Legal SSI, CoGP Annex 6)	Y
6. Do records adequately reflect the required	standard specified in the SSI and the CoGP? (I	Legal SSI, CoGP Annex 6) Y
7. Are sea lice ( <i>L. salmonis</i> ) record levels bel records are inspected? (CoGP Annex 6)	ow the suggested criteria for treatment in the C	CoGP during the period that
8. Have average adult female sea lice ( <i>L. salr</i> 2 or above (from w/b 10/6/19) during the period	<i>monis</i> ) numbers per fish been at a level of 3 or od that records are inspected?	above (prior to w/b 10/6/19) or Y
If yes, have these been reported to the Fish H	lealth Inspectorate? If no, FHI see comment.	Y
9. Is <i>C. elongatus</i> infestation at a level which	is considered to cause significant welfare problem	lems? (CoGP 4.3.81, 5.3.50) N
	stered or other actions taken when <i>L. salmonis</i> <i>longatus</i> is considered to have welfare implication	
11. Has any other action been taken (where a	pplicable)?	Y
12. Have therapeutic treatments or the action	s taken had a significant impact upon the lice le	evels recorded? Y
	out in cooperation between participating farms	
14. Is there a harvesting strategy for the site, sea lice?	where fewer populations or part populations are	e held without treatment for Y
15. Is there a site specific written lice manage scenarios during the escalation of a sea lice in	ment procedure with waypoints describing set a infestation?	actions to deal with recognised Y
16. Do the sea lice levels observed on stocks	reflect sea lice count data? If no please detail i	reasons. Y
<b>.</b>		
Containment Inspection		
	ge due to predators in the current or previous p he predation experienced on site? (Detail belov	
	ne predation experienced on site? (Detail below	v)
If other, detail below:		
	e bottom. Weighted froyer ring keeping chains t	ight. 50kg slider weight in 10 positions.
	erienced on or in the vicinity of the site since th	ne last FHI inspection? N
If Yes proceed with questions 4 – 9. If No skip	to question 10	
4. Have these been reported to Scottish Minis	iters?	
5. Have these been reported to local DSFB for	rthwith (where they exist)? (CoGP - 4.4.37, 5.4	4.17)
6. Have these been reported to the SSPO and	d local fisheries trusts forthwith (where they exis	st)? (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 deployed was this action ag Ministers? (Legal, CoGP – 4.4.38, 5.4.18)	greed with local wild fish interests and was pern	nission given by Scottish
	mise the risk of further escapes? (Not covered	in code but could
be considered under satisfactory measur		
-	egards to containment? If no, please detail reas	son(s) Y



FHI 059, Version 13	Issued by: FHI	Date of issue: 12/05/2020
Harvesting 20. Does the FMAg/S identify acceptable	e harvest practices on farms in the area or individual farms?	? Y
Fallowing		
21. Does the FMAg/S identify the dates I date when a farm or area may be restor	by which the area or individual farm will be fallow and the ea ked?	arliest Y
22. Does the FMAg/S identify whether or agreement or statement?	ne or more year classes may be stocked onto sites covered	by the Y
23. Does the FMAg/S identify whether be covered by the agreement or statement?	roodstock or potential broodstock are to be kept on any site ?	e Y
Point of Compliance for Farm Manage 24. Does the farm management agreem parties to the agreement?	ement Agreements Only lent include arrangements for persons to become, or cease	to be, Y
Management and operation 25. Is the fish farm being managed and o 26. What is the version no/date of issue	operated in accordance with the agreement or statement? of the FMAg/S? Date of issue 30/09/2022	Y

Site No: FS0413

Case No: 2023-0058

Nature of non-compliance:

Action taken (FHI):

Non-compliance relevant to (delete): VirologyMolGen/Bacteriology/Histology/Parasitology

Case No:	2023-0058			Date of visit:	22/02/2023							
Site No:	FS0413	1		Inspector:								
Results Summary	Erog	Date of Notification										
Results Summary	Freq.	Database	Insp	ation Writing Insp 2 <sup>nd</sup> Insp								
MG IHN	0/2	06/03/2023	•	Phone 06/03/2023	Insp LVK	24/05/2023		2 11130				
MG IPN	0/2	06/03/2023		06/03/2023		24/05/2023						
MG ISA	0/2	06/03/2023		06/03/2023		24/05/2023						
MG PMCV	0/2	06/03/2023	AJW	06/03/2023	LVK	24/05/2023						
MG SAV	0/2	06/03/2023	AJW	06/03/2023	LVK	24/05/2023						
MG VHS	0/2	06/03/2023	AJW	06/03/2023		24/05/2023						
MG AGD	4/5	06/03/2023	AJW	06/03/2023	LVK	24/05/2023						
MG SAL POX	4/5	06/03/2023	AJW	06/03/2023	LVK	24/05/2023						
MG PARA THER	5/5	06/03/2023	AJW	06/03/2023	LVK	24/05/2023						
Yersinia ruckeri K	5/5	10/03/2023		10/03/2023		24/05/2023						
Yersinia ruckeri L	1/1	10/03/2023		10/03/2023		24/05/2023						
Vibrio sp. K	2/5	10/03/2023		10/03/2023		24/05/2023						
Vidrio sp L	1/1	10/03/2023		10/03/2023		24/05/2023						
EPIT	3/5	27/03/2023				24/05/2023						
GPAT	5/5	27/03/2023				24/05/2023						
SPAT	1/5	27/03/2023				24/05/2023						
SULK	1/5	27/03/2023				24/05/2023						
SKIN	1/5	27/03/2023				24/05/2023						
HPAT	5/5	27/03/2023				24/05/2023						

Report Summary			
Case Type	Date	Insp	2 <sup>nd</sup> Insp
ECI	02/03/20	23	
	_		
		_	
	_	_	
		_	
	_		
	_		
	+		





# FISH HEALTH INSPECTORATE VISIT REPORT

## SUMMARY FOR INFORMATION OF SITE OPERATOR

BUSINESS No FB0119 SITE NO FS0413 CASE NO 20230058

DATE OF VISIT 22/02/2023 SITE NAME INSPECTOR

Camas Glas

# Section 1: Summary

During the physical inspection of pens for the standard inspection at the above site many moribund fish were observed. Five fish were removed from pen 7 for diagnostic sampling.

Histopathology examination revealed mild, multifocal, hyperplasic branchitis. Fish also displayed ulcerative dermatitis with presence of Gram-negative rod-shaped bacteria which may impact on the osmotic balance. Also present was moderate to marked, multifocal myocarditis which could be related with common salmon cardiac disease or bacterial infection. Chronic, multifocal splenitis also observed (potentially associated with bacterial infection).

Yersinia ruckeri was identified on plates taken from kidney material of all five fish and the lesion of F2. Yersinia ruckeri is a primary pathogen and the level and purity observed would suggest that this is a primary source of morbidity observed on site.

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

During a routine inspection at Camas Glas site staff reported the presence of Yersinia and that the fish had been treated with the antibiotic florfenicol on the 9th February. During the physical inspection of the pens it was observed that all except pen 2 and 6 had between 10-20 moribund fish with a number of fish exhibiting exophthalmia. Pen 7 had the highest number of fish with exophthalmia and approximately 30 moribund fish. A small number of fish in various pens also had lesions along their flank. These lesions varied in size between approximately the size of a fifty pence piece to lesions several centimetres in diameter.

All five fish taken for diagnostic sampling were very lethargic, moribund fish with dark bodies. All had exophthalmia and F1 and F5 had pale gills. F2 had one larger lesion of approximately 5x4cm on the flank and a smaller lesion, approximately 1.5cm<sup>2</sup> at the base of the tail. Both lesions had no scales/skin, revealing the pink flesh underneath. The scales/skin surrounding the larger lesion by approximately 1cm were white. Sea lice load was very low with only one louse found on F1 and 2 lice on F4. Internally F1 and F5 had enlarged spleens. F1 had petechial haemorrhaging of the pyloric caeca, haemorrhaging of the body wall and yellow pseudo-faeces were present in the hind gut. F2 had a lack of fat on the pyloric caeca and F5 had very pale pyloric caeca. F4 was very pale

R09 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

internally and exhibited adhesions in the body cavity. No food was present in the hind gut of F2, F3 and F4.

#### Samples

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

Fish number	Facility number	Species	Stage	Origin
1-5	7	Atlantic Salmon	559g 2022 Q4	Loch Lochy (FS0150)

#### Results

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

The following bacteria were isolated:

- Yersinia ruckeri: F1, F3, F4 and F5 (Kidney and Gill), F2 (Kidney, Gill and Lesion)
- Vibrio sp.:
  - o Isolate A found in F1, F3, F4 and F5 (Kidney); F2 (Kidney, Lesion)
  - Isolate B found in F2 (Kidney, Lesion); F4 (Kidney)

In relation to Yersinia ruckeri:

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

The level and purity of *Vibrio sp.* would not suggest it would be implicated in morbidity as primary pathogens.

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

Fish Number	Endogenous control Cp value	Cp Values			Reported Result (PCR)
F1	21.15	29.88	29.84	29.98	POSITIVE
F2	21.45	27.19	27.06	27.01	POSITIVE
F3	21.45	34.87	34.67	34.55	POSITIVE
F4	21.06	31.33	31.26	31.16	POSITIVE
F5	-	-	-	-	NEGATIVE

Salmon gill-pox virus (SGPV)

R09 UKAS accredited testing laboratory No. 1964 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> From the other samples tested by qPCR, F3 and F4 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). The other three fish were also tested but have been reported as "no result".

The three samples which presented no results by qPCR were run by cell culture for infectious haematopoietic necrosis virus (IHNV), infectious salmon anaemia virus (ISAV), viral haemorrhagic septicemia virus (VHSV), infectious pancreatic necrosis virus (IPNV) and salmonid alphavirus (SAV). These tests were negative.

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

Fish Number	Endogenous control Cp value	Cp Values			Reported Result (PCR)
F1	21.15	31.10	31.05	30.81	POSITIVE
F2	21.45	29.50	29.54	29.50	POSITIVE
F3	21.45	30.79	30.57	30.56	POSITIVE
F4	21.06	29.63	29.52	29.51	POSITIVE
F5	-	-	-	-	NEGATIVE

Neoparamoeba perurans (AGD)

#### Paranucleospora theridion

Fish Number	Endogenous control Cp value	Cp Values			Reported Result (PCR)
F1	21.15	34.06	34.35	34.21	POSITIVE
F2	21.45	32.36	32.27	31.97	POSITIVE
F3	21.45	31.28	30.90	31.32	POSITIVE
F4	21.06	34.21	34.08	34.20	POSITIVE
F5	21.64	37.86	37.17	37.04	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:

<u>Gill</u>: Lamellar hyperplasia and fusion, mild, multifocal (F1-F5). Several basophilic epithelial inclusions (likely epitheliocystis) observed in F1-F3. All fish displayed post-mortem artefacts.

<u>Skin & Muscle</u>: F2 lesion: Absence of the epidermis, oedema of dermis, minor inflammatory cellular infiltration noted in the dermis, Gram-negative bacteria present on the dermal layer. Mild myositis.

Heart: Myocarditis multifocal, moderate to marked. Epicarditis, mild.

R09 UKAS accredited testing laboratory No. 1964 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> Gut and pyloric caeca: Peritonitis.

Pancreas: Within the normal range.

Liver: Vasculitis (F1 & F2).

<u>Kidney</u>: Some hyaline droplets in the epithelium of renal tubule epithelium (F1). Reduction interstitial cell (haemopoietic), mild, multifocal (F2, F3, F4).

<u>Spleen</u>: Foci of granulomatous inflammation displaying centrally splendore-hoeppli reaction (homogeneous eosinophilic material), small foci of necrosis and occasional multinucleated giant cells also observed, some features also observed on F3. F3 also displayed some evide nce erythrophagocytosis.

Signed:

Date: 23/05/2023

**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>

marine scotland science



# FISH HEALTH INSPECTORATE VISIT REPORT

#### SUMMARY FOR INFORMATION OF SITE OPERATOR

 BUSINESS No
 FB0119

 SITE NO
 FS0413

 CASE NO
 20230058

DATE OF VISIT 22/02/2023 SITE NAME Camas Glas 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.

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

#### **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.

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 Scotland were available for inspection.

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

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

Medicine records were inspected and found to be adequately maintained.

Samples were taken to be analysed for veterinary residues.

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

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

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

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

Signed:

Fish Health Inspector

Date: 02/03/2023

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>









