Case No:	2025-0042			Date of visit:	24/07/2002
Additional inspector(s):	[redacted]			Main Inspector:	[redacted]
Site No:	FS0839	Site Name:	Geasgill		
Business No:	FB0169	Business Name:	Bakkafrost Scotland		

Case Types: 1 REP 2 DIA 3 4 5 6

Water Temp (°C):	15.53	Thermometer No:	T304	FHI 045 completed	N/A

Observations: Region: ST Water type: S CoGP MA: M-37

Dead/weak/abnormally behaving fish present?	Y	If yes, see additional information/clinical score sheet.
Clinical signs of disease observed?	Y	If yes, see additional information/clinical score sheet.
Post mortem signs observed?	Y	If yes, see additional information/clinical score sheet.
Diagnostic samples taken?	Y	

UNI/REG only - if unable to carry out intended visit detail reason below:

Additional Case Information:

Site inspected following reports of increased mortality week beginning 07/07. Mortalities on site had been attributed to PD. During the inspection 15-20 lethargic fish observed across sites with 6 moribund fish observed within pen 4. The moribund fish were near the centre of the pen beside the top net support and were unable to be caught.

9 fish removed and examined at the shorebase, the 5 fish displaying the most significant internal signs were sampled.

Salmon on site are from two different FW sources, with the majority of mortalities occurring in one stock. A FW/SFLS treatment was conducted between 01/07 and 04/07 to cover all pens.

During routine water samples, micro jellyfish were observed and the site automatically implemented procedures to reduce the impact on stock. Numbers of micro jellyfish have reported to have dropped, but the site is still operating to procedures to address this.

A peak in mortality occurred the W/B 07/07/25 where mortalities of 66,371 (11.19%) were reported, mortalities reduced week beginning 14/07/25 to 39,114 (7.43%). The worst affected pens were Pen 4, which lost 17,827 (56%) of it's stock W/B 07/07 and W/B 14/07/25 lost a further 6,200 (45%) of the stock.

During the same period Pen 11 lost 12,362 (33%) W/B 07/07/25 and a further 7,432 (30%) W/B 14/07. At time of inspection the report mortalities for site W/B 21/07/25 (between 21/07/25 and 23/07/25) were 4,230 (0.86%) .

The site had received QPCR results the day prior to the site inspection, these identified pasturella skyensis, although no observations reported in fish sampled of signs consistent with pasturella skyensis. The site also received positive CMS results from gill swabs, but no result reported from heart sample.

Case No: 2025-0042 Site No: FS0839

Date of Visit: 24/07/2002 Main Insp: [redacted]

Registration/Authorisation Details

1. Business/site details summary checked by site representative?	Y
2. Changes made to details?	Y

Site Details (include cleaner fish for all sections)

Total No facilities	14	Facilities stocked	14	No facilities inspected	14		
Species	Atlantic salmon						
Age group	2024 Q3						
No Fish	483,333						
Mean Fish Wt	2.248kg						
Next Fallow Date (Site)	2026 Q1	Next Input Date (Site)	2026 Q3				
Recent (last 4 wks) disease problems?	Y	Any escapes (since last visit)?	N				
If yes, detail:	PD, PGD						

Movement Records

1. Movement records for **all species** held available for inspection?	Y
2. Date of last inspection:	26/02/2025
3. Are records complete and correctly entered?	Y
4. Are movement records available for dead fish and waste?	Y
5. Are records complete and correctly entered?	Y
6. Have all introductions and imports (since last inspection) from outwith the GB health zone been recorded in the movement records?	Y

Transport Records

1. Are any movements carried out not using a STB (by (or on behalf of) the business)?	
If yes, is there a system in place for maintenance of transportation records?	

Mortality Records

1. Mortality records for **all species** held available for inspection?	Y
2. How are mortalities disposed of?	Biogas - Barkip
If other detail:	
3. Mortality records complete and correctly entered?	Y
4. Recent mortality (last 4 wks):	W/B 14/07 - 39,114 (7.4%), W/B 07/07 - 66,371 (11.19%), W/B 30/06 - 11,224 (1.86%), W/B 23/06 - 8,582 (1.40%)
5. Evidence of recent increased/atypical mortalities?	Y

If yes, facility nos/no mortality per facility/no stock per facility/reason:

W/B 07/07 - Pen 4 17,827 (56%) and P11 (33%), w/b 14/07 - Pen 4 6,200 (45%), Pen 11 7,472 (30%), P10 9,136 (23%) - all attributed to PD.

6. Any other peaks in mortality during period checked?	N
If yes, detail:	
7. Have increased (unexplained) mortalities been reported to vet or FHI?	N/A
If yes, detail action:	
8. Have 'mortality events' been reported to FHI? If no, enter details on mortality events sheet.	Y

Treatments and Medicines Records

1. Recent treatments (see comment)?	Y
If yes, detail:	T.M.S.
If other, detail:	
2. Medicines records available for inspection?	Y
3. Are records complete and correctly entered?	Y
4. Are fish in a withdrawal period?	Y
5. If yes, what treatment(s)?	T.M.S.
If other, detail:	
6. Are medicines stored appropriately?	Y

Biosecurity Records

1. Biosecurity records available for inspection?	
2. Has the manner and frequency of mortality removal, recording and safe disposal been considered?	
3. Has the manner and period in which the APB will notify Scottish Ministers or veterinary professional of any *increased* (*unexplained)* mortality at the site been included?	
4. Has the action that will be taken in the event that the presence or suspicion of the presence of a listed disease is detected been included and *how* and *when* that will be notified to Scottish Ministers?	
5. Has the health status of aquaculture animals being stocked on the farm site been covered (equal or higher health status, certification if required)?	
6. Have the husbandry and biosecurity measures implemented between each epidemiological unit to minimise transmission of disease been covered (movement of staff, visitors, equipment, live or dead fish etc.)?	
7. Is documentation available regarding the measures in place to maintain the physical containment of aquaculture animals held on site?	
8. Have the biosecurity procedures been adequately implemented on site?	
If no, detail:	

Results of Surveillance

1. Has any animal health surveillance been carried out by, or on behalf of, the business?	Y
2. If yes, are results available for inspection?	Y
3. Any significant results?	Y
If yes, detail (if not detailed under recent disease problems).	PD, PGD and Jellyfish
Records checked between:	26/02/25 to 23/07/25

Case no:	2025-0042	Site No:	FS0839	Date of visit/ Sampling:	24/07/2002	24/(							
Priority samples:	VI	BA	PA	MG	HI								
Time sampling starts/ends:	13:00:00	14:10:00	Main Insp:		VMD No.	0							
Environmental conditions:	1 Indoors	2	3	4	5								
Summary samples	HIST Y	BA Y	MG Y	VI	PA	Total Samples							

Add Fish/Pools - click button

	Pool/Fish No	F1	F2	F3	F4	F5							
	Fish nos	1	2	3	4	5							
	Pool Group												
Stock Details	Species	SAL	SAL	SAL	SAL	SAL							
	Average weight	2.2000	2.2000	2.2000	2.2000	2.2000							
	Sex												
	Water Type	SW	SW	SW	SW	SW							
	Stock Origin	Applecross Smolt Unit (FS0500)	Applecross Smolt Unit (FS0500)	Loch Damph (FS0375)	Applecross Smolt Unit (FS0500)	Applecross Smolt Unit (FS0500)							
	Facility No	3	10	8	5	5							

07/2025 Additional Sample Information:

5 Total Tests assigned 2

Case no: 2025-0042 Site No: FS0839 Method of killing: Anaesthetic

Date of visit: 24/07/2002 Main Insp: [redacted] Sheet Relevant: Y

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

Fish Number		F1	F2	F3	F4	F5					
Time sampled after death (if > 45 minutes)					15	30					
External Signs											
Behaviour	Moribund	W	W		W	W					
	Lethargic			W							
	Hanging vertical				W						
	Spiralling				W	W					
	Flashing										
	Loss of equilibrium										
Body	Dark										
	Distended abdomen										
	Anorexic										
	Scale Oedema										
Opercula	Shortened										
	Flared										
Haemorrhaging	Throat										
	Ventrum										
	Base of fins										
	Elsewhere										
Eyes	Exophthalmic		W								
	Enophthalmic (sunken)										
	Cataract										
	Haemorrhagic		W								
Gills	Pale	W	M	W	M	M					
	Zoned				W						
	Necrotic				W						
Lesions	Flank										
	Elsewhere										
Vent	Inflamed										
	Trailing faeces										
Lice Load	Estimate numbers										
Internal Signs											
Ascites	Clear										
	Bloody	M	W			M					
Oedema	In tissues										
Heart	Pale/anaemic										
	Granulomas										
	Deformed										
Liver	Petechial haem										
	Gross haem	W			W	W					
	Tissue breakdown										
	Enlarged										
	Colour number(s)	2	3	3	2	6					
	Granulomas										
	Lesions										
Pyloric caeca	Petechial haem										
	Tubules mauve										
	Lack of fat										
Spleen	Enlarged	W	W	W	S	W					
	Granulomas										
Gut	No food present										
	Yellow pseudo-faeces										
	External haem										
	Internal haem										
Body wall	Haemorrhaging					W					
Swim bladder	Haemorrhaging		W		W						
	Fluid filled					S					
Kidney	Swollen										
	Grey										
	Granular										
	Liquefied										
General	Parasites present										
	Anaemia										

Case no: 2025-0042

Date of visit: 24/07/2002

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

Fish Number											
Time sampled after death (if > 45 minutes)											
External Signs											
Behaviour	**Moribund**										
	Lethargic										
	Hanging vertical										
	Spiralling										
	Flashing										
	Loss of equilibrium										
Body	**Dark**										
	Distended abdomen										
	Anorexic										
	Scale Oedema										
Opercula	**Shortened**										
	Flared										
Haemorrhaging	**Throat**										
	Ventrum										
	Base of fins										
	Elsewhere										
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										

Additional comments:

Case No: 2025-0042 Date of visit: 24/07/2002

Site No: FS0839 Main Insp:

Results Summary	Freq.	Date of Notification						
		Database	Insp	Phone	Insp	Writing	Insp	2nd Insp
AGDQ	5/5	29/07/2025		29/07/2025		09/12/2025		
IHNP	0/5	29/07/2025		29/07/2025		09/12/2025		
IPNM	0/5	29/07/2025		29/07/2025		09/12/2025		
ISAQ	0/5	29/07/2025		29/07/2025		09/12/2025		
PNST	5/5	29/07/2025		29/07/2025		09/12/2025		
PMVP	3/5	29/07/2025		29/07/2025		09/12/2025		
SPVP	4/5	29/07/2025		29/07/2025		09/12/2025		
SALP	0/5	29/07/2025		29/07/2025		09/12/2025		
VHSP	0/5	29/07/2025		29/07/2025		09/12/2025		
VSPE	2/5	06/08/2025		12/08/2025		09/12/2025		
GPAT	4/5	06/08/2025		12/08/2025		09/12/2025		
HPAT	5/5	06/08/2025		12/08/2025		09/12/2025		
KPAT	4/5	06/08/2025		12/08/2025		09/12/2025		
SPAT	3/5	06/08/2025		12/08/2025		09/12/2025		
PPAT	1/5	06/08/2025		12/08/2025		09/12/2025		
SALH	1/5	06/08/2025		12/08/2025		09/12/2025		
CGDH	5/5	06/08/2025		12/08/2025		09/12/2025		

Report Summary			
Case Type	Date	Insp	2nd Insp
REP, DIA	09/12/2025		

Fish Health Inspectorate visit report

Summary for information of site operator

Business no:	FB0169	Date of visit:	24/07/2025
Site no:	FS0839	Site name:	Geasgill
Case no:	20250042	Inspector:	[redacted]

Section one: summary

The above site was inspected following reports of mortalities exceeding the reporting threshold. Five fish were selected for diagnostic sampling.

Histopathological examination revealed lesions that may be associated with chronic pancreatic disease in one fish. Concurrent viral cardiac conditions may also be present. Samples tested by qPCR were positive for piscine myocarditis virus. Additionally, chronic inflammation was observed, potentially linked to bacterial infection; however, no overt bacteria were observed in the Gram stain.

A complex gill issue was noted, with evidence of plankton-like structures observed in one fish. Gill samples tested by qPCR were positive for *Paranucleospora theridion, Neoparamoeba perurans* and salmon gill pox virus.

Vibrio sp. was identified on plates taken from kidney material of F1 and F4. Although the level of growth is low, the purity would suggest this bacterium may be a risk to the health of these fish.

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 two: case detail

Observations

The site was inspected following reports of mortality above the reporting threshold. During the site inspection 15-20 lethargic fish were observed across the site, with six moribund fish were observed near the centre of pen 4 and were unable to be caught for sampling. Nine fish were removed across site and the five fish displaying the most significant internal signs were selected for diagnostic sampling.

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Fish Health Inspectorate Website

Mortality reports above the reporting threshold began on week 21 where the mortality level was 22,752 (3.38%) fish, peaking during week 28 when mortality levels reached 66,371 (11.19%). Mortalities were reported to be decreasing and for the week of inspection, week 30, reported mortalities were 6,114 (1.25%) for the site.

F1 and F2 were moribund, F3 was lethargic, F4 was moribund, hanging vertically and spiralling. F5 was moribund and spiralling. F2 displayed bilateral exophthalmia and haemorrhaging to both eyes. All fish displayed pale gills with the gills of F4 also zoned and necrotic.

Internally F1, F2 and F5 had bloody ascites. F1 to F4 had pale livers, whilst F1, F4 and F5 had gross haemorrhaging to the liver. All fish had enlarged spleens with F5 displayed haemorrhaging to the body wall and F2 and F4 had haemorrhaging to the swim bladder. The swim bladder of F5 was fluid filled.

Samples

Samples were collected from 5 fish according to the table below:

Fish number	Facility number	Species	Stage	Origin
F1	3	Atlantic salmon	2024; Q3 2.2 kg	Applecross Smolt Unit (FS0500)
F2	10	Atlantic salmon	2024; Q3 2.2 kg	Applecross Smolt Unit (FS0500)
F3	8	Atlantic salmon	2024; Q3 2.2 kg	Loch Damph (FS0375)
F4	5	Atlantic salmon	2024; Q3 2.2 kg	Applecross Smolt Unit (FS0500)
F5	5	Atlantic salmon	2024; Q3 2.2 kg	Applecross Smolt Unit (FS0500)

Results

Bacteriology:

Kidney and gill material from F1-F5 were inoculated onto appropriate media for the isolation of bacteria.

The following bacteria were isolated from fish one and four.

- *Vibrio* sp. (kidney F1 and F4)

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Two further *Vibrio* spp. were identified on plates taken from gill material of 5/5 fish. The level and purity of growth would not suggest they would be implicated in morbidity and they are likely to be of environmental origin.

Virology:

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

Salmon gill poxvirus (SGPV)

Fish Number	Endogenous control Cp value	Cp Values			Reported Result (PCR)
F1	19.79	26.55	26.60	26.56	**POSITIVE**
F2	20.21	25.94	25.84	25.95	**POSITIVE**
F3	21.18	29.49	29.46	29.34	**POSITIVE**
F4	19.96	29.07	29.06	29.00	**POSITIVE**
F5	-	-	-	-	Negative

Piscine myocarditis virus (PMCV)

Fish Number	Endogenous control Cp value	Cp Values			Reported Result (PCR)
F1	-	-	-	-	Negative
F2	15.71	35.75	35.87	36.11	**POSITIVE**
F3	15.84	21.13	21.26	21.39	**POSITIVE**
F4	15.57	36.01	35.81	38.51	**POSITIVE**
F5	-	-	-	-	Negative

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

Parasitology:

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

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Neoparamoeba perurans (AGD)

Fish Number	Endogenous control Cp value	Cp Values			Reported Result (PCR)
F1	19.79	29.99	30.13	30.09	**POSITIVE**
F2	20.21	33.73	34.41	33.94	**POSITIVE**
F3	21.18	29.54	29.50	29.51	**POSITIVE**
F4	19.96	29.56	29.62	29.62	**POSITIVE**
F5	21.10	33.26	32.77	32.95	**POSITIVE**

Paranucleospora theridion

Fish Number	Endogenous control Cp value	Cp Values			Reported Result (PCR)
F1	19.79	26.73	26.95	26.98	**POSITIVE**
F2	20.21	33.16	33.80	33.36	**POSITIVE**
F3	21.18	32.49	32.76	32.46	**POSITIVE**
F4	19.96	31.88	30.17	31.55	**POSITIVE**
F5	21.10	31.74	32.06	32.10	**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. An eye of F4 was sampled in Davidson's solution.

Histopathological examination revealed the following:

Gill: Filament hyperplasia, mild (F1, F2, F3), mainly at the gill tips (F1). Vascular damage in lamellae (F2, F3). Branchitis, necrotic, hyperplasic, mild, multifocal (F3, F4), with bacteria (F3), in F5 some lesions exhibit morphological features resembling amoebic gill disease (AGD). Some bacteria observed in the cell debris (F1). Epitheliocysts, low number (F2). Plankton-like structure observed among gill filaments (F4).

Skin & Muscle: Myositis and necrosis, mild, multifocal, observed in both musculatures (F1, F3, F5).

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Heart: Myocarditis, minimal, multifocal (F1, F2, F3, F5), with musculature necrosis, mild, and multinucleated giant cell in F2, endocarditis, minimal, multifocal (F3, F5). Degeneration of compact layer, mild, multifocal, (F5). Epicarditis, mild (F1, F2, F4).

Gut and pyloric caeca: Peritonitis, mild (F1, F2, F3, F5). Cell sloughing potentially associated with post-mortem artefact (F1).

Pancreas: Absence of acinar tissue (F3).

Liver: Some degree of vasculitis is present in the major blood vessels. (F1, F4). Hepatocellular vacuolation (macrovesicles), some, diffuse (F3, F4).

Kidney: Interstitial nephritis, necrotic (F1, F4). Interstitial nephritis, granulomatous, multifocal, moderate, with multifocal giant multinucleated cells, chronic (F2), some displayed centrally splendore-hoeppli reaction (homogeneous eosinophilic material) (F2), F3 is similar to F2, but to a lesser extent.

Spleen: Splenitis, granulomatous, multifocal, moderate, with multifocal giant multinucleated cells, chronic, some displayed centrally splendore-hoeppli reaction (homogeneous eosinophilic material (F2, F3). Capsulitis, mild (F1),

Eye: Inflammation observed, with rod-shaped Gram-negative bacteria present (F4).

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

Signed: [redacted] Date: 09/12/25

Fish Health Inspector

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

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F1 – top left, F2 – middle left, F3 – bottom left, F4 - top right, F5 – bottom right

F1 – Gill

F2 – Gill

F3 – Gill

F4 – Gill

F5 – Gill

F1 – Internal

F2 – Internal

F3 – Internal

F4 – Internal

F5 – Internal

F5 – Internal, Fluid filled swim bladder