FHI 059, Version 14	Issu	ed by: FHI	Date of issue: 04/04/2025
Case No: 2025-0347			Date of visit: 18/09/2025
Additional inspector(s):		Main Inspect	or:
Site No: FS0265 Business No: FB0061	Site Name: Business Name:	Inverkerry Smolt Unit Landcatch Natural Selection L	td
Case Types: 1 DIA 2	REP 3 VMD	4 5	6
Water Temp (°C): 12	Thermometer No:	Т306	FHI 045 completed N/A
Observations:	Region: HI	Water type: F	CoGP MA:
Dead/weak/abnormally behaving to Clinical signs of disease observed Post mortem signs observed? Diagnostic samples taken?	•	Y If yes, see additional infor	rmation/clinical score sheet. rmation/clinical score sheet. rmation/clinical score sheet.
UNI/REG only - if unable to carry	out intended visit detail rea	son below:	

#### Additional Case Information:

Reported mort events; 1/8/25-7/8/25 8g 11.72% 343184 fish unexplained

8/9/25-14/9/25 10g 11.97% environmental challenge/ bacterial gill disease 303075 fish. Pyceze and Chloramine-T treatments. A change from Pyceze to Chloramine-T treatments has proven effective with mortality dropping significantly from Friday onwards. Appetite in the surviving stock has noticeably improved.

Fish (2026 s1) were moved on from Inverpolly Hatchery (FS0264) from the 1/8/2025 to the 15/8/2025, had furunculosis prior to visit from FHI on 27/8/25 and were treated with antibiotics. This issue resolved after treatment and is considered separate from the last two reported mortality events which are being attributed to gill disease and environmental challenges.

Mortalities since last inspection on 27/8/25(3 weeks). 692084 (29.57%) - all stocks. 682343 (51%) in small parr and 9741 in large parr. Small parr (B tanks) have been lethargic, not responding to human activity and moribund.

Larger parr will be moved to Loch Awe in November. Small parr were due to go to Loch Damph but because of mort issues this is now undecided.

Treatments 12/9, 15,9 and 10/9 Chloramine T treatment in small parr. 11/9, 9/9, and 7/9 Bronopol - Pyceze in small parr. Floricol treatment ended 22/8/25 in small parr (225DD). Larger parr were sampled for VMD and were treated with formalin 17/9/25

Health reports STIM (fish vet group); 15/9/25 Gill pathology suggestive of suboptimal environmental conditions, apoptosis. Suspicion of SGPV. Organic debris and small rod-shaped bacteria on gills- atypical bacterial gill disease.

Health reports STIM (fish vet group); 8/9/25; Moderate gill pathology suggestive of environmental insult, glochidia parasite, PCR SGPV 6/6, IPN 0/6 Aeromonas salmonicidia 0/6

Health reports STIM (fish vet group); 4/9/25 PCR; RTFS 0/7, IPN 0/7, IPN 0/7, Aeromonas salmonicidia 0/7, ERM 0/7

On inspection of the tanks the small parr (B tanks) had 15-30 moribund fish in the mort removal side tanks.

FHI 059, Versio	on 14			Issued by: F	HI		Date o	f issue: 04/04/2025
Case No:	2025-0347	1	Site No:	FS0265				
Date of Visit:		18/09/2025	1		Main Insp:			
Registration/A	Authorisation	Details						
1. Business/sit			l bv site repre	esentative?			N	7
2. Changes ma			, ,				N	1
Site Details (ii	nclude clean	er fish for all	sections)					
Total No faciliti		69	Facilities sto	cked	32	No facilities	inspected	69
	Atlantic	Atlantic						
Species	salmon	salmon						
Age group	Parr	Parr						
No Fish	1,015,725	634,000						
	37g	7g						
Mean Fish Wt								
Next Fallow Da	, ,	spring 2026		Next Input D	_ ` ′	unknown		
Recent (last 4		•		Y	Any escapes	s (since last vi	sit)?	N
If yes, detail:	Gill health is:	sues						
Massaura Da								
Movement Re								V
1. Movement r		species held	available for	inspection?			07/00/0005	Y
2. Date of last	•		10				27/08/2025	Y/
3. Are records	•	•						Y
4. Are moveme				aste?				Y
5. Are records	•	· ·						Y
6. Have all intro		l imports (sinc	e last inspect	tion) from out	with the GB h	nealth zone be	en recorded	Y
the movement	records?							
Transport Red	cords							
1. Are any mov	ements carrie	ed out not usi	ng a STB (by	(or on behalf	of) the busine	ess)?		
If yes, is there	a system in pl	lace for maint	enance of tra	nsportation re	ecords?			
Mortality Reco	orde							
1. Mortality rec		<b>nacias</b> hald a	vailable for in	spection?				Y
2. How are mo	-		valiable for its	speciion:	Ensiled - on	sita		·
If other detail:	rtainties dispos	300 01:			Elisiica - oli	310		
Mortality rec	ords complete	and correctly	v entered?					V
Recent mort	•			al information				·
5. Evidence of	• •	•		ai iiiiOiiiiatiOii				V
If yes, facility n		• •		acility/reason:				<u> </u>
all small parr ta				•				
6. Any other pe								N/A
If yes, detail:	Jako III III Ortai	ity during pen	ou onconeu!					1.07
7. Have increa	sed (unexplain	ned) mortalitie	es heen repor	ted to vet or	FHI?			Y
If yes, detail ac	•	samples take						
8. Have 'morta						vents sheet		Y
	,	,						

Treatments and Medicines Records										
Recent treatmer	` _	•	<b>D</b>	le, c				Y		
If yes, detail:		Chloramine	Pyceze	Florfenicol						
If other, detail:		ı								
2. Medicines record	ds availahl	e for inspecti	on?					Y		
3. Are records com		•						·		
4. Are fish in a with	•	•	5100:					N		
5. If yes, what treat	•									
If other, detail:	(5):			•						
6. Are medicines s	tored appr	opriately?						Y		
0.7.10 111041011100 0	torou uppr	opriatory.								
Biosecurity Reco	rds									
1. Biosecurity reco		le for inspec	tion?							
2. Has the manner				recording and	d safe disposa	l been consid	lered?			
3. Has the manner	and perior	d in which the	APB will not	tify Scottish M	linisters or vet	erinary profes	ssional of any			
increased (unexplain	ained) mor	rtality at the s	ite been inclu	uded?						
4. Has the action the										
disease is detected	d been incl	uded and <i>ho</i>	w and when	that will be no	otified to Scotti	sh Ministers?				
5. Has the health s				stocked on the	e farm site bee	n covered (e	qual or			
higher health statu	s, certificat	tion if require	d)?				_			
6. Have the husbar	•	•	•		•					
minimise transmiss	sion of dise	ease been co	vered (move	ment of staff,	visitors, equip	ment, live or	dead fish			
etc.)?										
7. Is documentatio aquaculture anima			e measures i	in place to ma	intain the phy	sical containn	nent of			
8. Have the biosec	urity proce	dures been a	adequately im	plemented or	n site?					
If no, detail:										
Results of Survei										
1. Has any animal				by, or on beh	alf of, the busi	ness?		Y		
2. If yes, are result		for inspection	n?					Y		
3. Any significant results?										
If yes, detail (if not detailed under recent disease problems). see additional information										
Records checked between: 28/8/25-18/9/25										
Reco	oras check	ed between:		28/8/25-18/9	120					

	11 059, Version 14										issueu b	y. 1 1 11				
	Case no:	2025	-034	7	Site	No:		FSC	)265			Date of Samplin		18	3/09/2025	18/0
	Priority samples:		VI			ВА		]	РА		MG			"		
	Time sampling starts/ends:	13	3:00	:00	1	4:0	0:00	]		Main In	ısp:			VMD I	No.	4
	Environmental conditions:		1 1	ndoors		2		]	3		4		]	5		
	Summary samples	HIS	ST	Y		ВА	Y	1	MG	Y	VI	Y	P	A	Y Total S	amples
Ac	dd Fish/Pools - click button															
	Pool/Fish No	P1	F	2	P3		P4	P5		P6	P7	P8	P9	P10	P11	
	Fish nos	1	2	)	3		4	5		6	7	8	9	10	11-15	16-32
	Pool Group															
	Species	SAL	S	SAL	SAL		SAL	SAL	_	SAL	SAL	SAL	SAL	SAL	SAL	SAL
	Average weight	8g	8	ßg	8g		8g	8g		8g	8g	8g	8g	8g	8g	50g
	Sex															
	Water Type	FW	F	W	FW		FW	FW		FW	FW	FW	FW	FW	FW	FW
			4	4		4	4		4	4	4	4	4	, ,	4	ery
			Inverpolly FS0264	Inverpolly FS0264		FS0264	FS0264		Inverpolly FS0264	Inverpolly FS0264	FS0264	FS0264	A SOOSA VII ORAAA	Nacoral Vilodraval	nverpolly FS0264	Inverkerry Hatchery FS1061
			FS	FS		FS	FS		FS	FS	FS	FS	U.	) 0	FS S	H <sub>a</sub>
Details		:	<u></u>	Ě		⋛			<u></u>	≦	≦		≧	<u> </u>	à	, E
)eta			.po	<u>od</u>		od.	od.		od.	od.	Od.	<u> </u> &	2	2 2	8 8	ke   61
			Vel	Vel		nverpolly	Inverpolly		Ve	Ver	Inverpolly	Inverpolly			Ver	Inverker FS1061
Stock	Stock Origin				D0			DC					_			
S	Facility No	B2	E	32	B2		B2	B2		B1	B1	B1	B1	B1	B1	H5

19/2025	9/2025 Additional Sample Information:												
	No spleen in histo sample F1.												
11	l	Total To	ests ass	igned	10								

FHI 059, Versio	ስ 14 	Issued by: FHI					Date of issue: 04/04				
Case no:	2025-0347		Site No	o:	FS026	5	M	ethod o	f killing:	Anaest	hetic
Date of visit:	18/09/2025		Main Ir	nsp:			Sheet Relevant: Y				Υ
S for strong presen	ce: <b>M</b> for medium presence: <b>W</b> for v	veak pres	sence								
Fish Number		1		3	4	5	6	7	8	9	10
	er death (if > 45 minutes)										
External Signs Behaviour	Moribund	S	S	S	S	S	S	S	S	S	S
Bellavioui	Lethargic	S	S	s	S	s	s	S	S	S	S
	Hanging vertical										
	Spiralling										
	Flashing										
Body	Loss of equilibrium  Dark										
Войу	Distended abdomen										
	Anorexic										
	Scale Oedema										
Opercula	Shortened										
Haemorrhaging	Flared Throat	-	<del>                                     </del>	-	<del>                                     </del>		<del>                                     </del>				
naemonnaying	Ventrum	<del> </del>	<del> </del>	1	<del> </del>	-	<del> </del>				<u> </u>
	Base of fins										
	Elsewhere										
Eyes	Exophthalmic										
	Enophthalmic (sunken) Cataract										
	Haemorrhagic										
Gills	Pale	S	S	S	S	S	S	S	S	S	S
	Zoned										
	Necrotic										
Lesions	Flank Elsewhere										
Vent	Inflamed										
Vonc	Trailing faeces										
Lice Load	Estimate numbers										
											ļ
Internal Signs Ascites	Clear										
Asciles	Bloody										
Oedema	In tissues										
Heart	Pale/anaemic										
	Granulomas										
Liver	Deformed Petechial haem										
Liver	Gross haem										
	Tissue breakdown										
	Enlarged										
	Colour number(s)	1	1	1	1	1	1	1	1	1	1
	Granulomas Lesions										
Pyloric caeca	Petechial haem										
	Tubules mauve										
	Lack of fat										
Spleen	Enlarged										
Gut	Granulomas No food present	S	S	S	S	S	S	S	S	S	S
Gut	Yellow pseudo-faeces		<del>                                     </del>	۳	<del>                                     </del>	۳	۳	3			۳
	External haem										
	Internal haem			S							
Body wall	Haemorrhaging										
Swim bladder	Haemorrhaging Fluid filled	<u> </u>	<u> </u>		<u> </u>	ļ	<u> </u>				<del>                                     </del>
Kidney	Swollen	<del>                                     </del>	<del>                                     </del>		<del>                                     </del>		<del>                                     </del>				<del>                                     </del>
. dancy	Grey										
	Granular										
	Liquefied										
General	Parasites present	ļ	ļ	-	ļ		<b></b>				<del> </del>
	Anaemia		l				<u> </u>				

Case no: 2025-0347

Date of visit: 18/09/2025

Anaemia

S for strong presence: M for medium presence: W for w 11 12 13 14 15 Fish Number Time sampled after death (if > 45 minutes) External Signs Behaviour Moribund S S S S Lethargic Hanging vertical Spiralling Flashing Loss of equilibrium Body Dark Distended abdomen Anorexic Scale Oedema Opercula Shortened Flared Haemorrhaging Throat Ventrum Base of fins Elsewhere Exophthalmic Eyes Enophthalmic (sunken) Cataract Haemorrhagic Gills S S Pale Zoned Necrotic Lesions Flank **Elsewhere** Vent Inflamed Trailing faeces Lice Load Estimate numbers Internal Signs Clear **Ascites** 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 Haemorrhaging Swim bladder Fluid filled Kidney Swollen Grey Granular Liquefied General Parasites present

Case No:	2025-0347			Date of visit	: 18/09/	2025		
Site No:	FS0265			Main Insp	):			
Results Summary	Freq.			Da	ate of No	otification		
		Database	Insp	Phone	Insp	Writing	Insp	2 <sup>nd</sup> Insp
HN PCR	0/5	24/09/2025		24/09/202	5	03/11/2025		
/HS PCR	0/5	24/09/2025		24/09/202		03/11/2025		
SAV PCR	0/5	24/09/2025		24/09/202	5	03/11/2025		
PN PCR	0/5	24/09/2025		24/09/202		03/11/2025		
SPVP	5/5	24/09/2025		24/09/202		03/11/2025		
GSAL	0/5	29/09/2025		21/10/202		03/11/2025		
AERH	4/5	30/09/2025		21/10/202		03/11/2025		
GPAT	5/5	30/09/2025		21/10/202		03/11/2025		
HPAT	3/5	30/09/2025		21/10/202		03/11/2025		
KPAT	4/5	30/09/2025		21/10/202		03/11/2025		
_PAT	5/5	30/09/2025		21/10/202		03/11/2025		
SPAT	4/5	30/09/2025		21/10/202		03/11/2025		
AERO PCR	3/3	21/10/2025		21/10/202		03/11/2025		
PSPE	2/5	21/10/2025		21/10/202		03/11/2025		
_API	1/5	21/10/2025		21/10/202		03/11/2025		
	.,,	2171072020		217107202		00/11/2020		
	+							
	_							
	_							
Report Summary			I	1				
Case Type	Date	Insp	2 <sup>nd</sup> Insp	4				
• • • • • • • • • • • • • • • • • • • •	05/11/202		2 insp					
Diag √MD	10/11/202							
VIVID	10/11/202	3						
		_						
	_							
	_							



# Fish Health Inspectorate visit report

## Summary for information of site operator

Business no: FB0061 Date of visit: 18/09/2025

Site no: FS0265 Site name: Inverkerry Smolt Unit

Case no: 20250347 Inspector:

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

The above site was visited in accordance with the Animals and Animal Products (Examination for Residues and Maximum Residue Limits) (England and Scotland) Regulations 2015.

Samples were taken to be analysed for veterinary residues.

In addition, samples were taken for diagnostic purposes. A separate report will be issued detailing the results of these tests.

### Records

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

Medicine records were inspected and found to be adequately maintained.

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

Mortality records were inspected and found to be adequately maintained.

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

Signed:

Date: 10/11/2025

Fish Health Inspector

R20

UKAS Accredited Inspection Body - Type C No. 0269
Marine Laboratory, 375 Victoria Road, Aberdeen, AB11 9DB
Telephone - 0131 244 3498
Email - ms.fishhealth@gov.scot
Fish Health Inspectorate Website



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



# Fish Health Inspectorate visit report

## Summary for information of site operator

Business no: FB0061 Date of visit: 18/09/2025

Site no: FS0265 Site name: Inverkerry Smolt Unit

Case no: 20250347 Inspector:

## Section one: summary

Inverkerry Smolt Unit was visited following reported increased mortalities. Fifteen fish were removed for diagnostic examination.

Histopathology examination revealed features consistent with a systemic bacterial infection resembling *Aeromonas* sp.. Minor gill pathology was also observed.

Following on from the histopathology results, testing for *Aeromonas salmonicida* was requested by QPCR from histology blocks. These tested positive. The fish also tested positive for salmonid gill poxvirus by PCR.

Pseudomonas sp. and Pseudolactococcus piscium were both isolated on plates taken from the 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

Inverkerry Smolt Unit had been reporting mortality increased mortality levels since August 2025 that were attributed to furunculosis. The inspectorate visited the site on 27/8/25. At the time of this visit the fish had received an antibiotic treatment and mortality on the site had improved. However, from 1<sup>st</sup> September mortality levels began to increase again and the cause was attributed to an environmental challenge and bacterial gill disease. A total of 343,184 fish had died in the week beginning 1/9/25 and 303,075 the week beginning 8/9/25. This mortality was mainly observed in the smaller parr held on site in the B section. It was reported that the fish in these tanks had been lethargic and unresponsive to human activity.

During the site inspection about 15-30 moribund fish were observed in the mort removal side tanks in all of the B section. Fifteen of these moribund fish were removed for diagnostic examination.

R09

UKAS Accredited Inspection Body - Type C No. 0269
Marine Laboratory, 375 Victoria Road, Aberdeen, AB11 9DB
Telephone - 0131 244 3498
Email - ms.fishhealth@gov.scot
Fish Health Inspectorate Website



All of the fish removed had pale gills. Internally all the livers were pale and no food was observed in the guts.

## **Samples**

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

Fish number	Facility number	Species	Stage	Origin	
F1-F5	B2	Atlantic salmon	8g - parr	Inverpolly	
F6-F15	B1	Atlantic salmon	8g - parr	Inverpolly	

#### Results

## Bacteriology:

Kidney and spleen material from fish F6 to F10 were inoculated onto appropriate media for the isolation of bacteria.

The following bacteria were isolated;

- Pseudomonas spp.: F7 & F10 (kidney and spleen)
- Pseudolactococcus piscium: F10 (kidney and spleen)

Fish 7- *Pseudomonas* spp. was identified at a level and purity of growth that would suggest this bacterium would be implicated in morbidity of fish.

Fish 10- *Pseudolactococcus piscium* and *Pseudomonas* spp. could be implicated in the morbidity of this fish.

Following observations made from the histopathology, *Aeromonas salmonicida* QPCR was run from histology blocks from F3, F4 and F5 (liver, kidney and spleen). All three fish tested positive for *Aeromonas salmonicidida*.

#### Aeromonas salmonicida

or official carrierad										
Fish Number	Endogenous control Cp value	Cp Values	3	Reported Result (PCR)						
F3	20.14	22.12	22.21	22.18	POSITIVE					
F4	20.90	23.74	23.57	23.59	POSITIVE					
F5	20.79	20.85	21.10	21.07	POSITIVE					

R09



## 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)

oannon gii p		,			
Fish Number	Endogenous control Cp value		Cp Values	Reported Result (PCR)	
F6	21.74	36.72	36.91	36.81	POSITIVE
F7	21.35	30.41	30.96	31.07	POSITIVE
F8	20.94	37.44	>40	38.14	POSITIVE
F9	21.58	39.30	38.15	39.25	POSITIVE
F10	21.29	30.38	30.33	30.29	POSITIVE

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

## Parasitology:

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

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

### **Histology:**

Tissue samples of gill, skin and skeletal muscle, heart, pyloric caeca, pancreas, hind gut, liver, spleen, kidney and brain were taken from fish 1 to 5. The tissue samples were fixed in 10% neutral buffered formalin.

Histopathological examination revealed the following:

Gill: Several dense aggregates of Gram-negative rod-shape bacteria (F2-F5) and low level of inflammation observed in F2-F5. Small scatter foci of lamellar hyperplasia (F1-F5), some with bacteria (F2, F3, F5). Foci of necrosis also observed (F2).

Skin & Muscle: Red musculature exhibit foci of haemorrhage (F2, F3, F5).

R09



Heart: Few dense aggregates of Gram-negative rod-shape bacteria (F2-F4).

Gut and pyloric caeca: F4 exhibit one aggregate of rod-shape bacteria in the pyloric caeca fold.

Pancreas: No abnormalities detected.

Liver: Minor vasculitis (F1, F3). Few dense aggregates of Gram-negative rod-shape bacteria (F2-F5).

Kidney: Some foci of interstitial cell (haemopoietic) necrosis (F4, F5), F3 exhibited some foci of interstitial cell (haemopoietic) hyperaemia and few aggregates of rod-shaped Gram-negative bacteria (F2-F5).

Spleen: Several dense aggregates of Gram-negative rod-shape bacteria (F2-F5), focal area of necrosis (F2- F5).

Brain: No abnormalities detected.

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

Signed:

Date: 05/11/2025

Fish Health Inspector

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