

Case No:	2024-0419	Date of visit:	06/11/2024			
Time spent on site:	5 hours	Main Inspector:				
Site No:	FS0268	Site Name:	Tervine			
Business No:	FB0456	Business Name:	Dawnfresh Farming Ltd			
Case Types:	1 ECI	2 CNI	3 MIX	4 DIA	5	6
Water Temp (°C):	11	Thermometer No:	T172	FHI 045 completed	N/A	
Observations:	Region:	ST	Water type:	F	CoGP MA	
Dead/weak/abnormally behaving fish present?	<input checked="" type="checkbox"/>	If yes, see additional information/clinical score sheet.				
Clinical signs of disease observed?	<input checked="" type="checkbox"/>	If yes, see additional information/clinical score sheet.				
Gross pathology observed?	<input checked="" type="checkbox"/>	If yes, see additional information/clinical score sheet.				
Diagnostic samples taken?	<input checked="" type="checkbox"/>					
UNI/REG only - if unable to carry out intended visit detail reason below:						

**Additional Case Information:**

Site changing from RTR to SAL after current production cycle.

PKD last summer.

Dyneema nets on site(150kg) - no known escapes.

Harvest movements held on Mercatus system - all required information recorded.

Morts removed as whole fish by Billy Bowie for Biogas at Barkip.

Morts April 2023 - June 2024 - Maximum 0.57% in one week - week 36 2023 - PKD. Most weeks below 0.3%.

Morts July 2024 - November 2024. Maximum 0.38% week 31 (29 July). Most weeks below 0.25%.

Morts removed twice a week, moribunds daily. Morts today 100 for whole site. Last few weeks have been very low.

Two moribund and two dead fish seen across site. One moribund fish sampled for diagnostic investigation following observation of kidney pathology during sample demonstration for audit.

Surveillance frequency currently scores as low, but visited annually due to BKD movement restriction on site.

No treatments carried out so no treatment records. Showed previous example which held all required information.

Inspection, paperwork and sampling carried out by [REDACTED] observed by [REDACTED]. [REDACTED] audited [REDACTED].

Inspector(s):

- |   |  |
|---|--|
| Y |  |
| Y |  |

Total No facilities	28	Facilities stocked	11	No facilities inspected	28
Species	RTR				
Age group	2022				
No Fish	79,363				
Mean Fish Wt	3.5kg				
Next Fallow Date (Site)	End of 2024	Next Input Date (Site)	May 2025		
Recent (last 4 wks) disease problems?		No	Any escapes (since last visit)?		No
If yes, detail:					

- |            |  |     |
|------------|--|-----|
|            |  | Y   |
| 20/04/2023 |  | Y   |
|            |  | Y   |
|            |  | Y   |
|            |  | N/A |

- |  |
|--|
|  |
|  |

8. Have 'mortality events' been reported to FHI? If no, enter details on mortality events sheet.

**Treatments and Medicines Records**

1. Recent treatments (see comment)?

N

If yes, detail:

If other, detail:

2. Medicines records available for inspection?

N/A

3. Are records complete and correctly entered?

4. Are fish in a withdrawal period?

N

5. If yes, what treatment(s)?

If other, detail:

6. Are medicines stored appropriately?

Y

**Biosecurity Records**

1. Biosecurity records available for inspection?

Y

2. Has the manner and frequency of mortality removal, recording and safe disposal been considered?

Y

3. Has the manner and period in which the APB will notify Scottish Ministers or veterinary professional of any *increased (unexplained)* mortality at the site been included?

Y

4. Has the action that will be taken in the event that the presence or suspicion of the presence of a listed disease is detected been included and *how* and *when* that will be notified to Scottish Ministers?

Y

5. Has the health status of aquaculture animals being stocked on the farm site been covered (equal or higher health status, certification if required)?

Y

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.)?

Y

7. Is documentation available regarding the measures in place to maintain the physical containment of aquaculture animals held on site?

Y

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

Y

If no, detail:

**Results of Surveillance**

1. Has any animal health surveillance been carried out by, or on behalf of, the business?

Y

2. If yes, are results available for inspection?

Y

3. Any significant results?

N

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

Records checked between:

20/04/2023 - 06/11/2024

Case no: 2024-0419

Site No: FS0268

Date of visit/ Sampling: 06/11/2024 06/11/2024

Priority samples: VI BA PA MG HI

Time sampling starts/ends: 14:50:00 15:20:00

Inspector: VMD No. 0

Environmental conditions: 1 Indoors 2 3 4 5

Summary samples HIST BA MG VI PA Total Samples

Add Fish/Pools - click

Stock Details	Pool/Fish No	F1											
	Fish nos	1											
	Pool Group												
	Species	RTR											
	Average weight	3.2000											
	Sex	N/A											
	Water Type	FW											
	Stock Origin												
	Facility No	206											

11/2024

**Additional Sample Information:**

PKD PCR if available. Updated 22/11/2024 - no PKD PCR as DNA PCR sample not collected.

1

Total Tests assigned

3

[illegible]

Case no:	2024-0419	Site No:	FS0268	Method of killing:	Percussive
Date of visit:	06/11/2024	Inspector(s):		Sheet Relevant:	Y

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

Fish Number	1								
Time sampled after death (if > 45 minutes)	1 hour								
External Signs									
Behaviour	Moribund	S							
	Lethargic	M							
	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	W							
	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)	2							
	Granulomas								
	Lesions								
Pyloric caeca	Petechial haem								
	Tubules mauve								
	Lack of fat								
Spleen	Enlarged								
	Granulomas								
Gut	No food present	S							
	Yellow pseudo-faeces								
	External haem	M							
	Internal haem								
Body wall	Haemorrhaging								
Swim bladder	Haemorrhaging								
	Fluid filled								
Kidney	Swollen	S							
	Grey	S							
	Granular	S							
	Liquefied	S							
General	Parasites present								
	Anaemia								

Case no:	2024-0419
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Date of visit: 06/11/2024

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	Grey									
	Granular									
	Liquefied									
General	Parasites present									
	Anaemia									



## Additional comments:

PC very soft and difficult to sample.

Kidney nodular.

Liver quite grey in colour - although does not appear this way in photo.

Case Number:	2024-0419	Site No:	FS0268	Insp:		
Date of Visit	06/11/2024	No of movements/supp./dest.			Score	
Live fish movements		0	1-5	6-10	>10	
Movements on (from out with GB) of susceptible species	Frequency of movements on from equivalent MS	0	5	10	14	0
	Frequency of movements on from equivalent zone or compartment including third country	0	9	18	26	
	Number of suppliers	0	5	10	14	
Movements off	Frequency of movements off	0	3	6	10	0
	Number of destinations	0	3	6	10	
Exposure via water	Site contacts	0	1-5	6-10		
Water contacts with other farms (holding species susceptible to same diseases)	Farm is protected (secure water supply through disinfection or borehole)	0				
	Farm is on-line or in a coastal zone with category I farms upstream or within 1 tidal excursion	1	2	4		2
	Farm is on-line or in a coastal zone with category III farms upstream or within 1 tidal excursion	1	3	6		
	Farm is on-line or in a coastal zone with category V farms upstream or within 1 tidal excursion	1	4	8		
Management practices	None	Secure	Unsecure			
Water contacts with processors	Any processing plant discharging into adjacent waters	0	1	2		0
On farm processing within the rules of the directive	No on farm processing	0				
	Processing own fish (re-cycling risk)	1				1
	Processing fish from MS of equivalent status	2				
	Processing fish from zone or compartment of equivalent status	4				
	Processing fish from Category III farm	8				
	Processing fish from Category V farm	10				
Disposal of fish and fish by-products	Site's own waste only processed.	0				0
	Common processes with other farms	3				
	Collection point for waste from other farms	5				
Use of unpasteurised feeds	No feeding of unpasteurised feed	0				0
	Feeding unpasteurised feed	5				
Biosecurity	Number of sites	1	2 or 3	≥ 4		
Contacts with other sites	Sites operating from single shorebase	0	1	2		1
	Sites sharing staff and equipment	0	1	2		0
Disinfection of equipment between sites, use of footbaths etc	Yes	0				0
	No	1				
CoGP/Regulator						
Practices in accordance with regulator or industry code of practice	Yes	0				0
	No	3				
Platform access to cages	Yes	0				
	No	2				2
Total Rank					6	LOW

Case No:

2024-0419

Site No:

FS0268

**Sea Lice Inspection (Seawater Sites Only)**

1. Has the site experienced sea lice problems in the previous 4 years? ☐
2. Is the CoGP Farm Management Area (or equivalent) fallowed synchronously on a single year class basis? ☐
3. Does the site have access to a range of licenced in-feed and bath sea lice medications (including deltamethrin, azamethiphos and emamectin benzoate) as well as access to suitable biological and/or mechanical control measures, and can these be deployed in a reasonable period of time? ☐
4. Is there a signed documented farm management agreement or statement relevant to the site and CoGP Farm Management Area (or equivalent)? ☐
5. Are sea lice count records available for inspection? (Legal SSI, CoGP Annex 6) ☐
6. Do records adequately reflect the required standard specified in the SSI and the CoGP? (Legal SSI, CoGP Annex 6) ☐
7. Are sea lice (*L. salmonis*) record levels below the suggested criteria for treatment in the CoGP during the period that records are inspected? (CoGP Annex 6) ☐
8. Have average adult female sea lice (*L. salmonis*) numbers per fish been at a level of 3 or above (prior to w/b 10/6/19) or 2 or above (from w/b 10/6/19) during the period that records are inspected? ☐
- If yes, have these been reported to the Fish Health Inspectorate? If no, FHI see comment. ☐
9. Is *C. elongatus* infestation at a level which is considered to cause significant welfare problems? (CoGP 4.3.81, 5.3.50) ☐
10. Have therapeutic treatments been administered or other actions taken when *L. salmonis* levels have exceeded the suggested criteria for treatment or where *C. elongatus* is considered to have welfare implications? (CoGP 4.3.82, 5.3.51) ☐
11. Has any other action been taken (where applicable)? ☐
12. Have therapeutic treatments or the actions taken had a significant impact upon the lice levels recorded? ☐
13. Are treatments, where conducted, carried out in cooperation between participating farms? ☐
14. Is there a harvesting strategy for the site, where fewer populations or part populations are held without treatment for sea lice? ☐
15. Is there a site specific written lice management procedure with waypoints describing set actions to deal with recognised scenarios during the escalation of a sea lice infestation? ☐
16. Do the sea lice levels observed on stocks reflect sea lice count data? If no please detail reasons. ☐

**Containment Inspection**

1. Has the site experienced equipment damage due to predators in the current or previous production cycles?
2. Are measures in place to mitigate against the predation experienced on site? (Detail below)

**Top nets, tensioned nets**

If other, detail below:

3. Have escape incidents or events been experienced on or in the vicinity of the site since the last FHI inspection?
- If Yes proceed with questions 4 – 9. If No skip to question 10
4. Have these been reported to Scottish Ministers? ☐
5. Have these been reported to local DSFB forthwith (where they exist)? (CoGP – 4.4.37, 5.4.17) ☐
6. Have these been reported to the SSPO and local fisheries trusts forthwith (where they exist)? (CoGP – 4.4.37, 5.4.17) ☐
7. Were methods (if any) used to recover escapees? If yes give detail ☐
8. If gill nets were deployed was this action agreed with local wild fish interests and was permission given by Scottish Ministers? (Legal, CoGP – 4.4.38, 5.4.18) ☐
9. What action was taken to prevent and minimise the risk of further escapes? (Not covered in code but could be considered under satisfactory measures of the Act)
10. Is the site inspected as satisfactory with regards to containment? If no, please detail reason(s)

Case No: 2024-0419

Date of visit: 06/11/2024

Site No: FS0268

Inspector: [REDACTED]

[illegible][illegible]



# FISH HEALTH INSPECTORATE VISIT REPORT

## SUMMARY FOR INFORMATION OF SITE OPERATOR

<b>BUSINESS NO</b>	FB0456	<b>DATE OF VISIT</b>	06/11/2024
<b>SITE NO</b>	FS0268	<b>SITE NAME</b>	Tervine
<b>CASE NO</b>	20240419	<b>INSPECTOR</b>	

### 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 low. However, an inspection under the Aquatic Animal Health (Scotland) Regulations 2009 will be conducted every year while the confirmed designation notice for bacterial kidney disease remains in place. The category of the site will be reassessed on a routine basis and updated as required.

The information required for the public record of aquaculture production businesses regarding this site was verified and where necessary updated. The following records were also inspected to ensure that the conditions of authorisation for your Aquaculture Production Business (APB) are being met:

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

Mortality records were inspected and found to be adequately maintained.

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

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

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

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

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

R04



On this occasion the site was found to be satisfactory.

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

Signed:



Date: 08/11/2024

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](https://www.gov.scot/policies/fish-health-inspectorate/)  
([www.gov.scot](https://www.gov.scot))



# FISH HEALTH INSPECTORATE VISIT REPORT

## SUMMARY FOR INFORMATION OF SITE OPERATOR

**BUSINESS No** FB0456  
**SITE No** FS0268  
**CASE No** 20240419

**DATE OF VISIT** 06/11/2024  
**SITE NAME** Tervine  
**INSPECTOR** [REDACTED]

### Section 1: Summary

During a routine inspection of the above site two moribund fish were observed, one of which was removed for diagnostic sampling.

Histopathology examination revealed marked chronic granulomatous inflammation resembling bacterial kidney disease (BKD), however no bacteria were observed in the Gram stain which may indicate a late stage of infection. Gills displayed several protist parasites, some of which resembled *Trichodina* spp.

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 of Tervine two moribund fish were observed. One fish was removed, initially for demonstration of sampling for an audit but diagnostic samples were collected when kidney pathology was observed. The overall population on site was in good condition and shoaling well. Mortality has been low on site with most weeks being below 0.25%. The site manager reported that the site had experienced some losses in the summer of 2023 due to proliferative kidney disease (PKD) but they had not had the same issues this year. Although, the site is under movement restrictions for BKD no associated increased mortality or morbidity was reported.

Externally the fish was moribund with slight exophthalmia. Internally, the liver was greyish in colour, the pyloric caeca was very soft and the gut was devoid of food and showed external haemorrhaging. The kidney was swollen, grey, granular and liquefied in places.

#### Samples

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

Fish number	Facility number	Species	Stage	Origin
F1	206	Rainbow trout	3.2 kg (2022)	Kinnaird Mill





## Results

**Microbiology:** Kidney and spleen material from fish one was inoculated onto appropriate media for the isolation of bacteria.

No significant bacteria were isolated. However, a colony matching the characteristics of *Saprolegnia* species was observed on the plate taken from spleen material.

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

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

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

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

Kidney imprints were taken to screen for *Tetracapsuloides bryosalmonae*, the causative agent of PKD. No parasites were observed in the samples examined.

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

Gill: Gill filaments displayed granulomatous response. Few ciliate protist parasites, some resembling *Trichodina* spp.. Occasional zooplankton-like structures among gill filaments.

Skin & Muscle: Small area of red musculature inflammation and few white skeletal fibres displayed degeneration.

Heart: Mild granulomatous inflammation observed in the compact layer. Pericarditis.

Gut and pyloric caeca: Marked peritonitis with haemorrhage in a focal area.

Pyloric caeca: Not in section.

Pancreas: Within the normal range.

Liver: Capsulitis. Hepatocellular vacuolation (macrovesicles), moderate, multifocal.

Kidney: Several renal tubes with hyaline droplets.

Spleen: Moderate, multifocal, granulomatous inflammation.

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

Signed:

Date: 18/12/2024

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 \(www.gov.scot\)](https://www.gov.scot/policies/fish-health-inspectorate/)





Tervine 20240419 F1