

|   |  |  |   |                                 |                                 |                                 |
|---|--|--|---|---------------------------------|---------------------------------|---------------------------------|
| Case No:                                    | <input type="text" value="2022-0261"/> | Date of visit:   | <input type="text" value="29/08/2022"/>     |                                 |                                 |                                 |
| Time spent on site:                         | <input type="text" value="1 hour"/>    | Main Inspector:  | <input type="text" value=""/>               |                                 |                                 |                                 |
| Site No:                                    | <input type="text" value="SS0853"/>    | Site Name:   | <input type="text" value="Loch Kanaird"/>   |                                 |                                 |                                 |
| Business No:                                | <input type="text" value="SB0529"/>    | Business Name:   | <input type="text" value="Ockran Oysters"/> |                                 |                                 |                                 |
| Case Types:                                 | 1 <input type="text" value="ECI"/>     | 2 <input type="text" value=""/>                          | 3 <input type="text" value=""/>             | 4 <input type="text" value=""/> | 5 <input type="text" value=""/> | 6 <input type="text" value=""/> |
| Water Temp (°C):                            | <input type="text" value="14"/>        | Thermometer No:  | <input type="text" value="T173"/>           | FHI 045 completed               | <input type="text" value=""/>   |                                 |
| Observations:                               | Region:                                | HI   | Water type:                                 | S                               | CoGP MA:                        |                                 |
| Dead/weak/abnormally behaving fish present? | <input type="text" value="N"/>         | If yes, see additional information/clinical score sheet. |   |                                 |                                 |                                 |
| Clinical signs of disease observed?         | <input type="text" value="N"/>         | If yes, see additional information/clinical score sheet. |   |                                 |                                 |                                 |
| Gross pathology observed?                   | <input type="text" value="N"/>         | If yes, see additional information/clinical score sheet. |   |                                 |                                 |                                 |
| Diagnostic samples taken?                   | <input type="text" value="N"/>         |  |   |                                 |                                 |                                 |

UNI/REG only - if unable to carry out intended visit detail reason 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 [REDACTED], supervised by [REDACTED].

Case No: **2022-0261** Site No: **SS0853**  
 Date of Visit: **29/08/2022** Inspector(s): **[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                   | <b>230 trestles</b> | Facilities stocked | <b>140 trestles</b>    | No facilities inspected         |         |
| Species                               | CGI                 | CGI                | CGI                    | CGI                             |         |
| Age group                             | 2018                | 2019               | 2020                   | 2021                            | 2022    |
| No Fish                               | 5,000               | 3,000              | 110,000                | 180,000                         | 200,000 |
| Mean Fish Wt                          | 60-70g              | 55g                | 30g                    | 8g                              | 2g      |
| Next Fallow Date (Site)               | Continuous          |                    | Next Input Date (Site) | spring 2023                     |         |
| Recent (last 4 wks) disease problems? |                     |                    | N                      | Any escapes (since last visit)? |         |
| If yes, detail:                       |                     |                    |                        |                                 |         |

**Movement Records**

1. Movement records available for inspection?  
 2. Date of last inspection: **17/04/2018**  
 3. Are records complete and correctly entered?  
 4. Are movement records available for dead fish and waste?  
 5. Are records complete and correctly entered?  
 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?

**Mortality Records**

1. Mortality records available for inspection?  
 2. How are mortalities disposed of? **Other (detail)**  
 If other detail: **Landfill, potholes etc.**  
 3. Mortality records complete and correctly entered?  
 4. Recent mortality (last 4 wks): **Very low, single figures other than post input (see additional comr**  
 5. Evidence of recent increased/atypical mortalities?  
 If yes, facility nos/no mortality per facility/no stock per facility/reason:  
 6. Any other peaks in mortality during period checked?  
 If yes, detail:  
 7. Have increased (unexplained) mortalities been reported to vet or FHI?  
 If yes, detail action:  
 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)?

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?

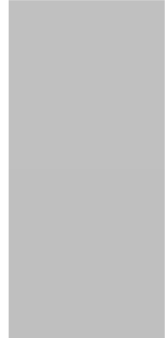
2. If yes, are results available for inspection?

3. Any significant results?

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

Records checked between:

17/04/2018 - 29/08/2022



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|---|---|------------|-----------------------------|----------------------------------|
| Case Number:  | 2022-0261   | Site No:   | SS0853                      |                                  |
| Date of Visit   | 29/08/2022  | Inspector: |                             |                                  |
| <b>Number of Susceptible species on site</b>            |   |            |                             |                                  |
| If no susceptible species present = <b>LOW</b> risk     |   |            |                             |                                  |
| If susceptible species present, score for each pathogen |   |            |                             |                                  |
|   |   | No         | Yes                         |                                  |
| Susceptible to Bonamia ostrea (OED)                     |   | 0          | 25                          |                                  |
| Susceptible to Marteilia refringens (OED, MED)          |   | 0          | 3                           |                                  |
| Susceptible to OshV (CGI)                               |   | 0          | 3                           |                                  |
| <b>Sites within a tidal excursion</b>                   |   | 1          | 2-5                         | >6                               |
| Site contacts   | Number of sites holding susceptible species within a tidal excursion                  | 0          | 2                           | 10                               |
| <b>Live shellfish movements</b>                         |   | 0          | 1-2                         | >3                               |
| Movements on  | Frequency of movements on from equivalent MS  | 0          | 5                           | 10                               |
|   | Frequency of movements on from equivalent zone or 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                                |
|   | Frequency of movements off <u>outwith</u> MSS Management Areas                        | 0          | 3                           | 6                                |
|   | Number of destinations  | 0          | 3                           | 6                                |
| <b>Management practices</b>                             |   | 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                                |
|   | Depuration of stock from other businesses sites within MSS management area            | 0          | 2                           | 6                                |
|   | Depuration of stock from sites outwith MSS management area                            | 0          | 4                           | 8                                |
| <b>Biosecurity</b>                                      |   | 1          | 2 or 3                      | ≥ 4                              |
| Contacts with other sites                               | Sites operating from single shorebase   | 0          | 1                           | 2                                |
|   | Sites sharing staff and equipment   | 0          | 1                           | 5                                |
|   |   |            | Yes                         | No                               |
|   | Disinfection of equipment between sites, use of footbaths etc                         | 0          | 0                           | 2                                |
| <b>Total Risk</b>                                       |   |            |                             | 13<br><b>LOW</b>                 |

Case No: 2022-0261

Date of visit: 29/08/2022

Site No: SS0853

Inspector: [Redacted]

| Results Summary | Freq. | Date of Notification |      |       |      |         |      |                      |
|-----------------|-------|----------------------|------|-------|------|---------|------|----------------------|
|                 |       | 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 |
| ECl            | 12/10/2022 |      |                      |
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# FISH HEALTH INSPECTORATE VISIT REPORT

## SUMMARY FOR INFORMATION OF SITE OPERATOR

|                    |          |                      |              |
|--------------------|----------|----------------------|--------------|
| <b>BUSINESS No</b> | SB0529   | <b>DATE OF VISIT</b> | 29/08/2022   |
| <b>SITE No</b>     | SS0853   | <b>SITE NAME</b>     | Loch Kanaird |
| <b>CASE No</b>     | 20220261 | <b>INSPECTOR</b>     | [REDACTED]   |

### 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.

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 <https://www.gov.scot/publications/fish-health-inspectorate-service-charter/>

Case No:  Date of visit:

Time spent on site:  Main Inspector:

Site No:  Site Name:   
 Business No:  Business Name:

Case Types: 1  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 fish present?  If yes, see additional information/clinical score sheet.  
 Clinical signs of disease observed?  If yes, see additional information/clinical score sheet.  
 Gross pathology observed?  If yes, see additional information/clinical score sheet.  
 Diagnostic samples taken?

UNI/REG only - if unable to carry 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 [REDACTED]. 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.

Case No: 2022-0343

Site No: SS0252

Date of Visit: 18/08/2022

Inspector(s):

**Registration/Authorisation Details**

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

**Site Details (include cleaner fish for all sections)**

|                                       |        |                    |                        |                                 |     |
|---------------------------------------|--------|--------------------|------------------------|---------------------------------|-----|
| Total No facilities                   | 1      | Facilities stocked | 0                      | No facilities inspected         | 0   |
| Species                               |        |                    |                        |                                 |     |
| Age group                             |        |                    |                        |                                 |     |
| No Fish                               |        |                    |                        |                                 |     |
| Mean Fish Wt                          |        |                    |                        |                                 |     |
| Next Fallow Date (Site)               | fallow |                    | Next Input Date (Site) | no plans                        |     |
| Recent (last 4 wks) disease problems? |        |                    | N/A                    | Any escapes (since last visit)? | N/A |
| If yes, detail:                       |        |                    |                        |                                 |     |

**Movement Records**

- 1. Movement records available for inspection?  N
- 2. Date of last inspection: 16/04/2019
- 3. Are records complete and correctly entered?  N
- 4. Are movement records available for dead fish and waste?  N/A
- 5. Are records complete and correctly entered?  N/A
- 6. Are health certificates for introductions (outwith GB) available?  N/A

**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?

**Mortality Records**

- 1. Mortality records available for inspection?  N
- 2. How are mortalities disposed of? Other (detail)
- If other detail: empty shells fall to seabed
- 3. Mortality records complete and correctly entered?  N
- 4. Recent mortality (last 4 wks): mortality records not available but site has been fallow since 2019.
- 5. Evidence of recent increased/atypical mortalities?  N/A
- If yes, facility nos/no mortality per facility/no stock per facility/reason:
- 6. Any other peaks in mortality during period checked?  N/A
- 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.  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 <i>increased (unexplained)</i> 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 <i>how</i> and <i>when</i> 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: | 16/04/2019-18/08/2022 |
|--------------------------|-----------------------|

|   |   |            |                                  |
|---|---|------------|----------------------------------|
| Case Number:  | 2022-0343   | Site No:   | SS0252                           |
| Date of Visit   | 18/08/2022  | Inspector: |                                  |
| <b>Number of Susceptible species on site</b>            |   |            |                                  |
| If no susceptible species present = <b>LOW</b> risk     |   |            |                                  |
| If susceptible species present, score for each pathogen |   |            |                                  |
|   |   | No         | Yes                              |
| Susceptible to Bonamia ostrea (OED)                     |   | 0          | 25                               |
| Susceptible to Marteilia refringens (OED, MED)          |   | 0          | 3                                |
| Susceptible to OshV (CGI)                               |   | 0          | 3                                |
|   |   |            | 0                                |
|   |   |            | 0                                |
|   |   |            | 0                                |
| <b>Sites within a tidal excursion</b>                   |   |            |                                  |
|   |   | 1          | 2-5                              |
|   |   |            | >6                               |
| Site contacts   | Number of sites holding susceptible species within a tidal excursion                  | 0          | 2                                |
|   |   |            | 10                               |
|   |   |            | 2                                |
| <b>Live shellfish movements</b>                         |   |            |                                  |
|   |   | 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                                |
| <b>Management practices</b>                             |   |            |                                  |
|   |   | 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                                |
|   |   |            | 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                                |
| <b>Biosecurity</b>                                      |   |            |                                  |
|   | 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                                |
|   |   |            | 5                                |
|   |   |            | 1                                |
|   |   | Yes        | No                               |
|   |   |            |                                  |
|   | Disinfection of equipment between sites, use of footbaths etc                         | 0          | 2                                |
|   |   |            |                                  |
|   |   |            | 2                                |
|   |   |            | 2                                |
| <b>Total Risk</b>                                       |   |            |                                  |
| 7   |   |            |                                  |
| LOW   |   |            |                                  |

Case No: **2022-0343** Date of visit: **18/08/2022**  
 Site No: **SS0252** Inspector: **[Redacted]**

| Results Summary | Freq. | Date of Notification |      |       |      |         |      |                      |
|-----------------|-------|----------------------|------|-------|------|---------|------|----------------------|
|                 |       | Database             | Insp | Phone | Insp | Writing | Insp | 2 <sup>nd</sup> Insp |
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| Report Summary | Date       | Insp | 2 <sup>nd</sup> Insp |
|----------------|------------|------|----------------------|
| Case Type      |            |      |                      |
| REG            | 31/08/2022 |      |                      |
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# FISH HEALTH INSPECTORATE VISIT REPORT

## SUMMARY FOR INFORMATION OF SITE OPERATOR

|                    |          |                      |                    |
|--------------------|----------|----------------------|--------------------|
| <b>BUSINESS No</b> | SB0165   | <b>DATE OF VISIT</b> | 18/08/2022         |
| <b>SITE No</b>     | SS0252   | <b>SITE NAME</b>     | Barmore(North Bay) |
| <b>CASE No</b>     | 20220343 | <b>INSPECTOR</b>     | [REDACTED]         |

### 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 <https://www.gov.scot/publications/fish-health-inspectorate-service-charter/>

Case No: 2022-0344 Date of visit: 18/08/2022

Time spent on site: 20mins Main Inspector: [Redacted]

Site No: SS0253 Site Name: Barmore(South)
Business No: SB0165 Business Name: 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 fish present? If yes, see additional information/clinical score sheet.
Clinical signs of disease observed? If yes, see additional information/clinical score sheet.
Gross pathology observed? If yes, see additional information/clinical score sheet.
Diagnostic samples taken?

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

**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.

Case No:  Site No:

Date of Visit:  Inspector(s):

**Registration/Authorisation Details**

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

**Site Details (include cleaner fish for all sections)**

|                                       |                                     |                        |  |                               |                                |
|---------------------------------------|-------------------------------------|------------------------|--|-------------------------------|--------------------------------|
| Total No facilities                   | <input type="text" value="0"/>      | Facilities stocked     | <input type="text" value="0"/>                         | No facilities inspected       | <input type="text" value="0"/> |
| Species                               | <input type="text"/>                |                        |  |                               |                                |
| Age group                             | <input type="text"/>                |                        |  |                               |                                |
| No Fish                               | <input type="text"/>                |                        |  |                               |                                |
| Mean Fish Wt                          | <input type="text"/>                |                        |  |                               |                                |
| Next Fallow Date (Site)               | <input type="text" value="fallow"/> | Next Input Date (Site) | <input type="text" value="no plans and no equipment"/> |                               |                                |
| Recent (last 4 wks) disease problems? | <input type="text" value=""/>       | N/A                    | Any escapes (since last visit)?                        | <input type="text" value=""/> | N/A                            |
| If yes, detail:                       | <input type="text" value=""/>       |                        |  |                               |                                |

**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?

**Mortality Records**

- 1. Mortality records available for inspection?
- 2. How are mortalities disposed of?
- If other detail:
- 3. Mortality records complete and correctly entered?
- 4. Recent mortality (last 4 wks):
- 5. Evidence of recent increased/atypical mortalities?
- If yes, facility nos/no mortality per facility/no stock per facility/reason:
- 6. Any other peaks in mortality during period checked?
- If yes, detail:
- 7. Have increased (unexplained) mortalities been reported to vet or FHI?
- If yes, detail action:
- 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)?            |  |
| 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 <i>increased (unexplained)</i> 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 <i>how</i> and <i>when</i> 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 |
|--------------------------|-----------------------|

|               |            |            |        |
|---------------|------------|------------|--------|
| Case Number:  | 2022-0344  | Site No:   | SS0253 |
| Date of Visit | 18/08/2022 | Inspector: |        |

**Number of Susceptible species on site**  
 If no susceptible species present = **LOW** 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 excursion**

|               | 1  | 2-5 | >6 |   |
|---------------|--|-----|----|---|
| Site contacts | Number of sites holding susceptible species within a tidal excursion |     |    | 2 |
|               | 0  | 2   | 10 |   |

**Live shellfish movements**

|               | 0   | 1-2 | >3 |   |
|---------------|---|-----|----|---|
| Movements on  | Frequency of movements on from equivalent MS  |     |    | 0 |
|               | Frequency of movements on from equivalent zone or compartment including third country |     |    | 0 |
|               | Number of suppliers   |     |    | 0 |
| Movements off | Frequency of movements off <u>within</u> MSS Management Areas                         |     |    | 0 |
|               | Frequency of movements off <u>outwith</u> MSS Management Areas                        |     |    | 0 |
|               | Number of destinations  |     |    | 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              |                             |                                  | 1 |
|   | Depuration of stock from other businesses sites within MSS management area |                             |                                  | 0 |
|   | Depuration of stock from sites outwith MSS management area                 |                             |                                  | 0 |

**Biosecurity**

|                           | Number of sites   | 1   | 2 or 3 | ≥ 4 |   |
|---------------------------|---|-----|--------|-----|---|
| Contacts with other sites | Sites operating from single shorebase                         |     |        |     | 1 |
|                           | Sites sharing staff and equipment                             |     |        |     | 1 |
|                           |   | Yes |        | No  |   |
|                           | Disinfection of equipment between sites, use of footbaths etc |     |        | 2   | 2 |

**Total Risk**

|  |            |
|--|------------|
|  | 7          |
|  | <b>LOW</b> |

Case No: 2022-0344

Date of visit: 18/08/2022

Site No: SS0253

Inspector: [Redacted]

| Results Summary | Freq. | Date of Notification |      |       |      |         |      |                      |
|-----------------|-------|----------------------|------|-------|------|---------|------|----------------------|
|                 |       | Database             | Insp | Phone | Insp | Writing | Insp | 2 <sup>nd</sup> Insp |
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| Report Summary | Date       | Insp | 2 <sup>nd</sup> Insp |
|----------------|------------|------|----------------------|
| Case Type      | 31/08/2022 |      |                      |
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# FISH HEALTH INSPECTORATE VISIT REPORT

## SUMMARY FOR INFORMATION OF SITE OPERATOR

|                    |          |                      |                |
|--------------------|----------|----------------------|----------------|
| <b>BUSINESS No</b> | SB0165   | <b>DATE OF VISIT</b> | 18/08/2022     |
| <b>SITE No</b>     | SS0253   | <b>SITE NAME</b>     | Barmore(South) |
| <b>CASE No</b>     | 20220344 | <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.

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 <https://www.gov.scot/publications/fish-health-inspectorate-service-charter/>

Case No: 2022-0366 Date of visit: 30/08/2022

Time spent on site: 1 hour Main Inspector:

Site No: SS0944 Site Name: Loch Broom
Business No: SB0563 Business Name: Mikiety Ltd

Case Types: 1 ECI 2 3 4 5 6

Water Temp (°C): 14.3 Thermometer No: T310 FHI 045 completed

Observations: Region: HI Water type: S CoGP MA:

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

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

**Additional Case Information:**

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 [REDACTED], supervised by [REDACTED]

Case No: **2022-0366** Site No: **SS0944**  
 Date of Visit: **30/08/2022** Inspector(s): **[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                   | 1                             | Facilities stocked            | 1                               | No facilities inspected |
|---------------------------------------|-------------------------------|-------------------------------|---------------------------------|-------------------------|
| Species                               | MED                           | MED                           |                                 |                         |
| Age group                             | 2021                          | 2022                          |                                 |                         |
| No Fish                               | 660                           | 340                           |                                 |                         |
| Mean Fish Wt                          | droppers with unknown tonnage | droppers with unknown tonnage |                                 |                         |
| Next Fallow Date (Site)               | 45mm (8g)                     | spat                          |                                 |                         |
| Recent (last 4 wks) disease problems? | Continuous                    |                               | Next Input Date (Site)          | 2023                    |
| If yes, detail:                       |                               |                               | Any escapes (since last visit)? | N                       |

**Movement Records**

- 1. Movement records available for inspection? **[REDACTED]**
- 2. Date of last inspection: **No previous 03/02/2021**
- 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?

**Mortality Records**

- 1. Mortality records available for inspection?
- 2. How are mortalities disposed of? **Other (detail)**
- If other detail: **Empty shell drop to seabed**
- 3. Mortality records complete and correctly entered?
- 4. Recent mortality (last 4 wks): **None recorded**
- 5. Evidence of recent increased/atypical mortalities?
- If yes, facility nos/no mortality per facility/no stock per facility/reason:
- 6. Any other peaks in mortality during period checked?
- If yes, detail:
- 7. Have increased (unexplained) mortalities been reported to vet or FHI?
- If yes, detail action:
- 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)?

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?

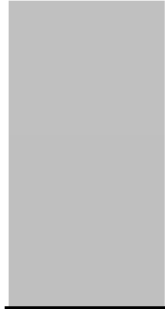
2. If yes, are results available for inspection?

3. Any significant results?

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

Records checked between:

Date registered - 30/08/2022



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|---|---|------------|-----------------------------|----------------------------------|----------|
| Case Number:  | 2022-0366   | Site No:   | SS0944                      |                                  |          |
| Date of Visit   | 30/08/2022  | Inspector: |                             |                                  |          |
| <b>Number of Susceptible species on site</b>            |   |            |                             |                                  |          |
| If no susceptible species present = <b>LOW</b> 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        |
| <b>Sites within a tidal excursion</b>                   |   |            |                             |                                  |          |
|   |   | 1          | 2-5                         | >6                               |          |
| Site contacts   | Number of sites holding susceptible species within a tidal excursion                  | 0          | 2                           | 10                               | 2        |
| <b>Live shellfish movements</b>                         |   |            |                             |                                  |          |
|   |   | 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        |
| <b>Management practices</b>                             |   |            |                             |                                  |          |
|   |   | 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        |
| <b>Biosecurity</b>                                      |   |            |                             |                                  |          |
|   | Number of sites   | 1          | 2 or 3                      | ≥ 4                              |          |
| Contacts with other sites                               | Sites operating from single shorebase   | 0          | 1                           | 2                                | 0        |
|   | Sites sharing staff and equipment   | 0          | 1                           | 5                                | 0        |
|   |   |            | Yes                         | No                               |          |
|   | Disinfection of equipment between sites, use of footbaths etc                         | 0          | 0                           | 2                                | 0        |
|   |   |            |                             | <b>Total Risk</b>                | 5<br>LOW |

Case No: 2022-0366

Date of visit: 30/08/2022

Site No: SS0944

Inspector: [Redacted]

| Results Summary | Freq. | Date of Notification |      |       |      |         |      |                      |
|-----------------|-------|----------------------|------|-------|------|---------|------|----------------------|
|                 |       | 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 |
| ECL            | 11/10/2022 |      |                      |
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# FISH HEALTH INSPECTORATE VISIT REPORT

## SUMMARY FOR INFORMATION OF SITE OPERATOR

|                    |          |                      |            |
|--------------------|----------|----------------------|------------|
| <b>BUSINESS No</b> | SB0563   | <b>DATE OF VISIT</b> | 30/08/2022 |
| <b>SITE No</b>     | SS0944   | <b>SITE NAME</b>     | Loch Broom |
| <b>CASE No</b>     | 20220366 | <b>INSPECTOR</b>     | [REDACTED] |

### 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: [REDACTED]

Fish Health Inspector

Date: 02/09/2022

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

|   |                            |  |                                   |                   |          |   |
|---|----------------------------|--|-----------------------------------|-------------------|----------|---|
| Case No:                                    | 2022-0367                  | Date of visit:   | 30/08/2022                        |                   |          |   |
| Time spent on site:                         | 15 minutes                 | Main Inspector:  |                                   |                   |          |   |
| Site No:                                    | SS0877                     | Site Name:   | Leac Nan Sgarbh Little Loch Broom |                   |          |   |
| Business No:                                | SB0534                     | Business Name:   | Charron Ltd                       |                   |          |   |
| Case Types:                                 | 1 ECI                      | 2  | 3                                 | 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? | <input type="checkbox"/> N | If yes, see additional information/clinical score sheet. |                                   |                   |          |   |
| Clinical signs of disease observed?         | <input type="checkbox"/> N | If yes, see additional information/clinical score sheet. |                                   |                   |          |   |
| Gross pathology observed?                   | <input type="checkbox"/> N | If yes, see additional information/clinical score sheet. |                                   |                   |          |   |
| Diagnostic samples taken?                   | <input type="checkbox"/> N |  |                                   |                   |          |   |

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

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**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 [REDACTED], supervised by [REDACTED]

Case No:  Site No:

Date of Visit:  Inspector(s):

**Registration/Authorisation Details**

1. Business/site details summary checked by site representative?

2. Changes made to details?

**Site Details (include cleaner fish for all sections)**

|                                       |  |  |  |  |  |
|---------------------------------------|--|--|--|--|--|
| Total No facilities                   | <input type="text" value="48 lines"/>    | Facilities stocked                       | <input type="text" value="44 lines"/>    | No facilities inspected                    |  |
| Species                               | <input type="text" value="OED"/>         | <input type="text" value="OED"/>         | <input type="text" value="OED"/>         | <input type="text" value="CGI"/>           | <input type="text" value="CGI"/>         |
| Age group                             | <input type="text" value="2019"/>        | <input type="text" value="2020"/>        | <input type="text" value="2021"/>        | <input type="text" value="2019"/>          | <input type="text" value="2021"/>        |
| No Fish                               | <input type="text" value="6 lines"/>     | <input type="text" value="6 lines"/>     | <input type="text" value="6 lines"/>     | <input type="text" value="10 lines"/>      | <input type="text" value="10 lines"/>    |
| Mean Fish Wt                          | <input type="text" value="70mm (50g+)"/> | <input type="text" value="50mm (35g+)"/> | <input type="text" value="35mm (15g+)"/> | <input type="text" value="10mm (0.5-1g)"/> | <input type="text" value="90mm (75g+)"/> |
| Next Fallow Date (Site)               | <input type="text" value="Continuous"/>  |  | Next Input Date (Site)                   | <input type="text" value="Spring 2023"/>   |  |
| Recent (last 4 wks) disease problems? |  |  | <input type="text" value="N"/>           | Any escapes (since last visit)?            |  |
| If yes, detail:                       | <input type="text" value=""/>            |  |  |  |  |

**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?

**Mortality Records**

1. Mortality records available for inspection?

2. How are mortalities disposed of?

If other detail:

3. Mortality records complete and correctly entered?

4. Recent mortality (last 4 wks):

5. Evidence of recent increased/atypical mortalities?

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

6. Any other peaks in mortality during period checked?

If yes, detail:

7. Have increased (unexplained) mortalities been reported to vet or FHI?

If yes, detail action:

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)?

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?

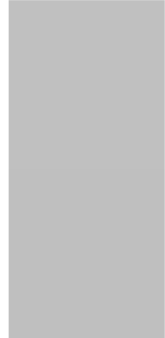
3. Any significant results?

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

Records checked between:

18/04/2018 - 30/08/2022





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|---|---|------------|-----------------------------|----------------------------------|
| Case Number:  | 2022-0367   | Site No:   | SS0877                      |                                  |
| Date of Visit   | 30/08/2022  | Inspector: |                             |                                  |
| <b>Number of Susceptible species on site</b>            |   |            |                             |                                  |
| If no susceptible species present = <b>LOW</b> risk     |   |            |                             |                                  |
| If susceptible species present, score for each pathogen |   |            |                             |                                  |
|   |   | No         | Yes                         |                                  |
| Susceptible to Bonamia ostrea (OED)                     |   | 0          | 25                          |                                  |
| Susceptible to Marteilia refringens (OED, MED)          |   | 0          | 3                           |                                  |
| Susceptible to OshV (CGI)                               |   | 0          | 3                           |                                  |
| <b>Sites within a tidal excursion</b>                   |   | 1          | 2-5                         | >6                               |
| Site contacts   | Number of sites holding susceptible species within a tidal excursion                  | 0          | 2                           | 10                               |
| <b>Live shellfish movements</b>                         |   | 0          | 1-2                         | >3                               |
| Movements on  | Frequency of movements on from equivalent MS  | 0          | 5                           | 10                               |
|   | Frequency of movements on from equivalent zone or 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                                |
|   | Frequency of movements off <u>outwith</u> MSS Management Areas                        | 0          | 3                           | 6                                |
|   | Number of destinations  | 0          | 3                           | 6                                |
| <b>Management practices</b>                             |   | 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                                |
|   | Depuration of stock from other businesses sites within MSS management area            | 0          | 2                           | 6                                |
|   | Depuration of stock from sites outwith MSS management area                            | 0          | 4                           | 8                                |
| <b>Biosecurity</b>                                      |   | 1          | 2 or 3                      | ≥ 4                              |
| Contacts with other sites                               | Sites operating from single shorebase   | 0          | 1                           | 2                                |
|   | Sites sharing staff and equipment   | 0          | 1                           | 5                                |
|   |   |            | Yes                         | No                               |
|   | Disinfection of equipment between sites, use of footbaths etc                         | 0          | 0                           | 2                                |
|   |   |            | <b>Total Risk</b>           | 39<br><b>HIGH</b>                |

Case No: 2022-0367

Date of visit: 30/08/2022

Site No: SS0877

Inspector: [Redacted]

| Results Summary | Freq. | Date of Notification |      |       |      |         |      |                      |
|-----------------|-------|----------------------|------|-------|------|---------|------|----------------------|
|                 |       | 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 |
| ECl            | 11/10/2022 |      |                      |
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# FISH HEALTH INSPECTORATE VISIT REPORT

## SUMMARY FOR INFORMATION OF SITE OPERATOR

|                    |          |                      |                                   |
|--------------------|----------|----------------------|-----------------------------------|
| <b>BUSINESS No</b> | SB0534   | <b>DATE OF VISIT</b> | 30/08/2022                        |
| <b>SITE No</b>     | SS0877   | <b>SITE NAME</b>     | Leac Nan Sgarbh Little Loch Broom |
| <b>CASE No</b>     | 20220367 | <b>INSPECTOR</b>     | [REDACTED]                        |

### 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

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

|   |  |  |   |                                 |                                 |                                 |
|---|--|--|---|---------------------------------|---------------------------------|---------------------------------|
| Case No:  | <input type="text" value="2022-0368"/> | Date of visit:   | <input type="text" value="31/08/2022"/>     |                                 |                                 |                                 |
| Time spent on site:   | <input type="text" value="3.5 hours"/> | Main Inspector:  | <input type="text" value=""/>               |                                 |                                 |                                 |
| Site No:  | <input type="text" value="FS0065"/>    | Site Name:   | <input type="text" value="Loch Laxford"/>   |                                 |                                 |                                 |
| Business No:  | <input type="text" value="FB0398"/>    | Business Name:   | <input type="text" value="Loch Duart Ltd"/> |                                 |                                 |                                 |
| Case Types:   | 1 <input type="text" value="DIA"/>     | 2 <input type="text" value="REP"/>                       | 3 <input type="text" value=""/>             | 4 <input type="text" value=""/> | 5 <input type="text" value=""/> | 6 <input type="text" value=""/> |
| Water Temp (°C):  | <input type="text" value="13.9"/>      | Thermometer No:  | <input type="text" value="T173"/>           | FHI 045 completed               | <input type="text" value=""/>   |                                 |
| Observations:   | Region:                                | HI   | Water type:                                 | S                               | CoGP MA:                        | M-3                             |
| Dead/weak/abnormally behaving fish present?                               | <input type="text" value="Y"/>         | If yes, see additional information/clinical score sheet. |   |                                 |                                 |                                 |
| Clinical signs of disease observed?                                       | <input type="text" value="Y"/>         | If yes, see additional information/clinical score sheet. |   |                                 |                                 |                                 |
| Gross pathology observed?   | <input type="text" value="Y"/>         | If yes, see additional information/clinical score sheet. |   |                                 |                                 |                                 |
| Diagnostic samples taken?   | <input type="text" value="Y"/>         |  |   |                                 |                                 |                                 |
| UNI/REG only - if unable to carry out intended visit detail reason below: |  |  |   |                                 |                                 |                                 |
| <input type="text" value=""/>   |  |  |   |                                 |                                 |                                 |

**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 [REDACTED], supervised by [REDACTED]. Diagnostic inspection and sampling carried out 31/08/2022 by [REDACTED], supervised by [REDACTED].



Case No: **2022-0368** Site No: **FS0065**  
 Date of Visit: **31/08/2022** Inspector(s): **[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                   | <b>24</b>   | Facilities stocked | <b>15</b>              | No facilities 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 (Site)               | Spring 2023   |                    | Next Input Date (Site) | Autumn 2023                     |  |
| Recent (last 4 wks) disease problems? |   |                    | <b>Y</b>               | Any escapes (since last visit)? |  |
| If yes, detail:                       | <b>PD confirmed on site along with severe gill pathology suggestive of an acute environmental c</b> |                    |                        |                                 |  |

**Movement Records**

1. Movement records available for inspection?  
 2. Date of last inspection: **23/09/2020**  
 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?

**Mortality Records**

1. Mortality records available for inspection?  
 2. How are mortalities disposed of? **Other (detail)**  
 If other detail: **Taken away to be incinerated or used for biogas**  
 3. Mortality records complete and correctly entered?  
 4. Recent mortality (last 4 wks): **SAL: Wk 30 - 4.94% (17,473), WK31 - 4.03% (13,574), Wk32 - 11 (37,974), Wk33 - 4.6% (13,108). WRS: 756 in last 4 weeks.**  
 5. Evidence of recent increased/atypical mortalities?  
 If yes, facility nos/no mortality per facility/no stock per facility/reason:  
**Across whole site. Attributed to severe gill pathology suggestive of an acute environmental challenge. PD also con site.**  
 6. Any other peaks in mortality during period checked?  
 If yes, detail: **See additional info**  
 7. Have increased (unexplained) mortalities been reported to vet or FHI?  
 If yes, detail action: **Reported to company vet and samples taken 27/07/22 - see additional informati**  
 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)?

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?

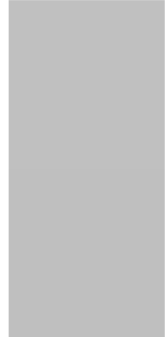
3. Any significant results?

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

PD

Records checked between:

23/09/2020 - 31/08/2022



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Case no:  Site No:  Date of visit/  
Sampling:

Priority samples: VI  BA  PA  MG  HI

Time sampling starts/ends:   Inspector:  VMD No.

Environmental conditions: 1  2  3  4  5

Summary samples HIST  BA  MG  VI  PA  Total Samples

**Add 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              |                  |  |  |  |  |  |  |
| 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  |              | Ormsary (FS0575) | Ormsary (FS0575) | Ormsary (FS0575) | Ormsary (FS0575) | Ormsary (FS0575) |  |  |  |  |  |  |
|                | Stock Origin |                  |                  |                  |                  |                  |  |  |  |  |  |  |
| Facility No    | 21           | 21               | 21               | 21               | 21               |                  |  |  |  |  |  |  |

08/2022

Additional Sample Information:

Time of Death: 10:30am.

6

Total Tests assigned

11

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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Case no: 2022-0368

Site No: FS0065

Method of killing: Percussive

Date of visit: 31/08/2022

Inspector(s):

Sheet Relevant: Y

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

| Fish Number                                |                       | 1     | 2     | 3     | 4    | 5      |  |  |  |  |
|--|-----------------------|-------|-------|-------|------|--------|--|--|--|--|
| Time sampled after death (if > 45 minutes) |                       | 45min | 65min | 85min | 100m | 115min |  |  |  |  |
| External Signs                             |                       |       |       |       |      |        |  |  |  |  |
| Behaviour                                  | Moribund              |       |       |       |      |        |  |  |  |  |
|  | Lethargic             | S     | S     | S     | S    | S      |  |  |  |  |
|  | Hanging vertical      |       |       |       |      |        |  |  |  |  |
|  | Spiralling            |       |       |       |      |        |  |  |  |  |
|  | Flashing              |       |       |       |      |        |  |  |  |  |
|  | Loss of equilibrium   |       |       |       |      |        |  |  |  |  |
| Body                                       | Dark                  |       |       |       |      |        |  |  |  |  |
|  | Distended abdomen     |       |       |       |      |        |  |  |  |  |
|  | Anorexic              |       |       | M     | S    | M      |  |  |  |  |
|  | Scale Oedema          |       |       |       |      |        |  |  |  |  |
| Opercula                                   | Shortened             |       |       |       |      |        |  |  |  |  |
|  | Flared                |       |       |       |      |        |  |  |  |  |
| Haemorrhaging                              | Throat                |       |       |       |      |        |  |  |  |  |
|  | Ventrum               |       |       |       |      |        |  |  |  |  |
|  | Base of fins          |       |       |       |      |        |  |  |  |  |
|  | Elsewhere             |       |       |       |      |        |  |  |  |  |
| Eyes                                       | Exophthalmic          |       |       |       |      |        |  |  |  |  |
|  | Enophthalmic (sunken) |       |       |       |      |        |  |  |  |  |
|  | Cataract              |       |       |       |      |        |  |  |  |  |
|  | Haemorrhagic          |       |       |       |      |        |  |  |  |  |
| Gills                                      | Pale                  | W     | W     | W     | W    | W      |  |  |  |  |
|  | 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                 |       |       |       |      |        |  |  |  |  |
|  | Bloody                |       |       |       |      |        |  |  |  |  |
| 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            |       |       |       |      |        |  |  |  |  |
|  | Lesions               |       |       |       |      |        |  |  |  |  |
| Pyloric caeca                              | Petechial haem        |       |       |       |      |        |  |  |  |  |
|  | Tubules mauve         |       |       |       |      |        |  |  |  |  |
|  | Lack of fat           |       |       | M     | S    | M      |  |  |  |  |
| Spleen                                     | Enlarged              |       |       |       |      |        |  |  |  |  |
|  | Granulomas            |       |       |       |      |        |  |  |  |  |
| 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               |       |       |       |      |        |  |  |  |  |
|  | Grey                  |       |       |       |      |        |  |  |  |  |
|  | Granular              |       |       |       |      |        |  |  |  |  |
|  | Liquefied             |       |       |       |      |        |  |  |  |  |
| General                                    | Parasites present     |       |       |       |      |        |  |  |  |  |
|  | Anaemia               |       |       |       |      |        |  |  |  |  |

Case no: 2022-0368

Date of visit: 31/08/2022

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

|  |                       |  |  |  |  |  |  |  |  |  |  |  |
|--|-----------------------|--|--|--|--|--|--|--|--|--|--|--|
| 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: 2022-0368

Date of visit: 31/08/2022

Site No: FS0065

Inspector: [REDACTED]

| 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 |      | 11/10/2022 |      |                      |
| Paranucleospora theridion | 5/5   | 06/09/2022           |      | 06/09/2022 |      | 11/10/2022 |      |                      |
| MG AGD                    | 5/5   | 06/09/2022           |      | 13/09/2022 |      | 11/10/2022 |      |                      |
| MG PRV                    | 1/1   | 09/09/2022           |      | 13/09/2022 |      | 11/10/2022 |      |                      |
| MG IHN                    | 0/4   | 07/09/2022           |      | 13/09/2022 |      | 11/10/2022 |      |                      |
| MG IPN                    | 0/4   | 07/09/2022           |      | 13/09/2022 |      | 11/10/2022 |      |                      |
| MG ISA                    | 0/4   | 07/09/2022           |      | 13/09/2022 |      | 11/10/2022 |      |                      |
| MG SAV                    | 1/4   | 07/09/2022           |      | 13/09/2022 |      | 11/10/2022 |      |                      |
| MG VHS                    | 0/4   | 07/09/2022           |      | 13/09/2022 |      | 11/10/2022 |      |                      |
| PRVH                      | 1/5   | 16/09/2022           |      | 30/09/2022 |      | 11/10/2022 |      |                      |
| GPAT                      | 5/5   | 22/09/2022           |      | 30/09/2022 |      | 11/10/2022 |      |                      |
| HPAT                      | 4/5   | 22/09/2022           |      | 30/09/2022 |      | 11/10/2022 |      |                      |
| SKIN                      | 1/5   | 22/09/2022           |      | 30/09/2022 |      | 11/10/2022 |      |                      |
| MPAT                      | 1/5   | 22/09/2022           |      | 30/09/2022 |      | 11/10/2022 |      |                      |
| MG_PMCV                   | 0/4   | 07/09/2022           |      | 05/10/2022 |      | 11/10/2022 |      |                      |
| Moritella Viscosa - VVIS  | 1/5   | 16/09/2022           |      | 30/09/2022 |      | 11/10/2022 |      |                      |
|                           |       |                      |      |            |      |            |      |                      |
|                           |       |                      |      |            |      |            |      |                      |
|                           |       |                      |      |            |      |            |      |                      |
|                           |       |                      |      |            |      |            |      |                      |
|                           |       |                      |      |            |      |            |      |                      |
|                           |       |                      |      |            |      |            |      |                      |
|                           |       |                      |      |            |      |            |      |                      |
|                           |       |                      |      |            |      |            |      |                      |

| Report Summary |            |      |                      |
|----------------|------------|------|----------------------|
| Case Type      | Date       | Insp | 2 <sup>nd</sup> Insp |
| DIA            | 26/10/2022 |      |                      |
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# FISH HEALTH INSPECTORATE VISIT REPORT

## SUMMARY FOR INFORMATION OF SITE OPERATOR

|                    |          |                      |              |
|--------------------|----------|----------------------|--------------|
| <b>BUSINESS No</b> | FB0398   | <b>DATE OF VISIT</b> | 31/08/2022   |
| <b>SITE No</b>     | FS0065   | <b>SITE NAME</b>     | Loch Laxford |
| <b>CASE No</b>     | 20220368 | <b>INSPECTOR</b>     | [REDACTED]   |

### 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 hyperplastic 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) |

## Results

**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 | Cp Values |       |       | 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 | Cp Values |       |       | 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).

R09

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

*Neoparamoeba perurans* (AGD)

| Fish Number | Endogenous control Cp value | Cp Values |       |       | 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        |

*Paranucleospora theridion*

| Fish Number | Endogenous control Cp value | Cp Values |       |       | 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 <https://www.gov.scot/publications/fish-health-inspectorate-service-charter/>



|   |                          |  |                           |                   |          |      |
|---|--------------------------|--|---------------------------|-------------------|----------|------|
| Case No:                                    | 2022-0375                | Date of visit:   | 30/08/2022                |                   |          |      |
| Time spent on site:                         | 4.5 hours                | Main Inspector:  |                           |                   |          |      |
| Site No:                                    | FS0056                   | Site Name:   | Ardmair                   |                   |          |      |
| Business No:                                | FB0447                   | Business Name:   | Wester Ross Fisheries Ltd |                   |          |      |
| Case Types:                                 | 1 DIA                    | 2 REP  | 3                         | 4                 | 5        | 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? | <input type="checkbox"/> | If yes, see additional information/clinical score sheet. |                           |                   |          |      |
| Clinical signs of disease observed?         | <input type="checkbox"/> | If yes, see additional information/clinical score sheet. |                           |                   |          |      |
| Gross pathology observed?                   | <input type="checkbox"/> | If yes, see additional information/clinical score sheet. |                           |                   |          |      |
| Diagnostic samples taken?                   | <input type="checkbox"/> |  |                           |                   |          |      |

UNI/REG only - if unable to carry out intended visit detail reason 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 [REDACTED], supervised by [REDACTED]. F1 sampled by [REDACTED], observed by [REDACTED]. F2, 3 and 4 sampled by [REDACTED], supervised by [REDACTED].

|                |            |               |        |
|----------------|------------|---------------|--------|
| Case No:       | 2022-0375  | Site No:      | FS0056 |
| Date of Visit: | 30/08/2022 | Inspector(s): |        |

**Registration/Authorisation Details**

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

**Site Details (include cleaner fish for all sections)**

|                                       |   |                        |                                 |                         |  |
|---------------------------------------|---|------------------------|---------------------------------|-------------------------|--|
| Total No facilities                   | 44  | Facilities stocked     | 23                              | No facilities 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 (Site)               | June 2023                                       | Next Input Date (Site) | July/August 2023                |                         |  |
| Recent (last 4 wks) disease problems? |   | Y                      | Any escapes (since last visit)? |                         |  |
| If yes, detail:                       | AGD, complex gill disease, environmental issues |                        |                                 |                         |  |

**Movement Records**

|  |            |
|--|------------|
| 1. Movement records available for inspection?                        |            |
| 2. Date of last inspection:  | 14/09/2021 |
| 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?         |  |

**Mortality Records**

|  |   |
|--|---|
| 1. Mortality records available for inspection?   |   |
| 2. How are mortalities disposed of?  | Other (detail)  |
| If other detail:   | Incinerated or biogas - Merkland tankers and Dunholm environmental                  |
| 3. Mortality records complete and correctly entered?   |   |
| 4. Recent mortality (last 4 wks):  | Wk31: 1.76% (5657), Wk32: 3.67% (11634), Wk33: 6.58% (20053), Wk34: 5.60% (15,950). |
| 5. Evidence of recent increased/atypical mortalities?  |   |
| If yes, facility nos/no mortality per facility/no stock per facility/reason:                     |   |
| <b>Gill health related elevated mortalities across site</b>                                      |   |
| 6. Any other peaks in mortality during period checked?   |   |
| If yes, detail:  | 2022 Week 30: 1.55% (5060 fish) due to environmental conditions and gill health     |
| 7. Have increased (unexplained) mortalities been reported to vet or FHI?                         |   |
| If yes, detail action:   |   |
| 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)?

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



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Case no:  Site No:  Date of visit/  
Sampling:

Priority samples: VI  BA  PA  MG  HI

Time sampling starts/ends:   Inspector:  VMD No.

Environmental conditions: 1  2  3  4  5

Summary samples HIST  BA  MG  VI  PA  Total Samples

**Add Fish/Pools - click**

|                |              |                           |                           |                           |                           |  |  |  |  |  |  |  |
|----------------|--------------|---------------------------|---------------------------|---------------------------|---------------------------|--|--|--|--|--|--|--|
| 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  |              | Loch Merkland<br>(FS0612) | Loch Merkland<br>(FS0612) | Loch Merkland<br>(FS0612) | Loch Merkland<br>(FS0612) |  |  |  |  |  |  |  |
|                | Stock Origin |                           |                           |                           |                           |  |  |  |  |  |  |  |
| Facility No    | B1           | B1                        | B4                        | B1                        |                           |  |  |  |  |  |  |  |

08/2022

Additional Sample Information:

Time of death: 12:10

5

Total Tests assigned

2

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Case no: 2022-0375

Site No: FS0056

Method of killing: Percussive

Date of visit: 30/08/2022

Inspector(s):

Sheet Relevant: Y

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

| Fish Number                                |                       | 1     | 2     | 3     | 4     |  |  |  |  |
|--|-----------------------|-------|-------|-------|-------|--|--|--|--|
| Time sampled after death (if > 45 minutes) |                       | 46min | 62min | 79min | 99min |  |  |  |  |
| External Signs                             |                       |       |       |       |       |  |  |  |  |
| Behaviour                                  | Moribund              |       |       |       |       |  |  |  |  |
|  | Lethargic             | M     | M     | M     | M     |  |  |  |  |
|  | Hanging vertical      |       |       |       |       |  |  |  |  |
|  | Spiralling            |       |       |       |       |  |  |  |  |
|  | Flashing              |       |       |       |       |  |  |  |  |
|  | Loss of equilibrium   |       |       |       |       |  |  |  |  |
| Body                                       | Dark                  |       |       |       |       |  |  |  |  |
|  | Distended abdomen     |       |       |       |       |  |  |  |  |
|  | Anorexic              | S     | S     |       | S     |  |  |  |  |
|  | Scale Oedema          |       |       |       |       |  |  |  |  |
| Opercula                                   | Shortened             | W     |       |       |       |  |  |  |  |
|  | Flared                |       |       |       |       |  |  |  |  |
| Haemorrhaging                              | Throat                |       |       |       |       |  |  |  |  |
|  | Ventrum               |       |       |       |       |  |  |  |  |
|  | Base of fins          |       |       |       |       |  |  |  |  |
|  | Elsewhere             |       |       |       |       |  |  |  |  |
| Eyes                                       | Exophthalmic          |       |       |       |       |  |  |  |  |
|  | Enophthalmic (sunken) |       |       |       |       |  |  |  |  |
|  | Cataract              |       |       |       |       |  |  |  |  |
|  | Haemorrhagic          |       |       |       |       |  |  |  |  |
| Gills                                      | Pale                  | W     | M     | W     | W     |  |  |  |  |
|  | Zoned                 |       |       |       |       |  |  |  |  |
|  | Necrotic              |       |       |       |       |  |  |  |  |
| Lesions                                    | Flank                 |       |       |       |       |  |  |  |  |
|  | Elsewhere             |       |       |       |       |  |  |  |  |
| Vent                                       | Inflamed              |       |       |       |       |  |  |  |  |
|  | Trailing faeces       |       |       |       |       |  |  |  |  |
| Lice Load                                  | Estimate numbers      | 0     | 0     | 0     | 0     |  |  |  |  |
| Internal Signs                             |                       |       |       |       |       |  |  |  |  |
| Ascites                                    | Clear                 |       |       |       |       |  |  |  |  |
|  | Bloody                |       |       |       |       |  |  |  |  |
| Oedema                                     | In tissues            |       |       |       |       |  |  |  |  |
| Heart                                      | Pale/anaemic          | M     | M     | M     | M     |  |  |  |  |
|  | Granulomas            |       |       |       |       |  |  |  |  |
|  | Deformed              |       |       |       |       |  |  |  |  |
| Liver                                      | Petechial haem        |       |       |       |       |  |  |  |  |
|  | Gross haem            |       |       |       |       |  |  |  |  |
|  | Tissue breakdown      |       |       |       |       |  |  |  |  |
|  | Enlarged              |       |       |       |       |  |  |  |  |
|  | Colour number(s)      | 2     | 2     | 4     | 1     |  |  |  |  |
|  | Granulomas            |       |       |       |       |  |  |  |  |
|  | Lesions               |       |       |       |       |  |  |  |  |
| Pyloric caeca                              | Petechial haem        |       |       |       |       |  |  |  |  |
|  | Tubules mauve         |       |       | W     |       |  |  |  |  |
|  | Lack of fat           | S     |       |       | M     |  |  |  |  |
| Spleen                                     | Enlarged              |       |       |       |       |  |  |  |  |
|  | Granulomas            |       |       |       |       |  |  |  |  |
| Gut  | No food present       |       |       |       |       |  |  |  |  |
|  | Yellow pseudo-faeces  | S     | S     | S     | S     |  |  |  |  |
|  | External haem         |       |       |       |       |  |  |  |  |
|  | Internal haem         |       |       |       |       |  |  |  |  |
| Body wall                                  | Haemorrhaging         |       |       |       |       |  |  |  |  |
| Swim bladder                               | Haemorrhaging         |       |       |       |       |  |  |  |  |
|  | Fluid filled          |       |       |       |       |  |  |  |  |
| Kidney                                     | Swollen               |       |       |       |       |  |  |  |  |
|  | Grey                  |       |       |       |       |  |  |  |  |
|  | Granular              |       |       |       |       |  |  |  |  |
|  | Liquefied             |       |       |       |       |  |  |  |  |
| General                                    | Parasites present     |       |       |       |       |  |  |  |  |
|  | Anaemia               |       |       |       |       |  |  |  |  |



Case no: Date of visit: 

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

|  |                       |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|--|-----------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| 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: 2022-0375

Date of visit: 30/08/2022

Site No: FS0056

Inspector: [REDACTED]

| 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 |      |                      |
|                      |             |                      |      |            |      |            |      |                      |
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|                      |             |                      |      |            |      |            |      |                      |
|                      |             |                      |      |            |      |            |      |                      |

| Report Summary |            |      |                      |
|----------------|------------|------|----------------------|
| Case Type      | Date       | Insp | 2 <sup>nd</sup> Insp |
| DIA            | 11/10/2022 |      |                      |
|                |            |      |                      |
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# FISH HEALTH INSPECTORATE VISIT REPORT

## SUMMARY FOR INFORMATION OF SITE OPERATOR

|                    |          |                      |            |
|--------------------|----------|----------------------|------------|
| <b>BUSINESS No</b> | FB0447   | <b>DATE OF VISIT</b> | 30/08/2022 |
| <b>SITE No</b>     | FS0056   | <b>SITE NAME</b>     | Ardmair    |
| <b>CASE No</b>     | 20220375 | <b>INSPECTOR</b>     | [REDACTED] |

### 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

| 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) |

## Results

**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 | Cp Values |       |       | 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 septicaemia 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).

### *Neoparamoeba perurans* (AGD)

| Fish Number | Endogenous control Cp value | Cp Values |       |       | 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        |

### *Paranucleospora theridion*

R09

Marine Laboratory, 375 Victoria Road, Aberdeen, AB11 9DB

Tel - 0131 244 3498 Fax - 0131 244 0944 Email - [ms.fishhealth@gov.scot](mailto:ms.fishhealth@gov.scot)

Website - [www.gov.scot/Topics/marine/science](http://www.gov.scot/Topics/marine/science)

| Fish Number | Endogenous control Cp value | Cp Values |       |       | 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:



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 <https://www.gov.scot/publications/fish-health-inspectorate-service-charter/>

