Case Study: Loch Linnhe

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(Regulator Compliance and Sustainable Development)

- Licencing Process – Current key issues
- Existing operations
- History of investment
- Wild fish numbers – it’s complicated!
- The bigger picture, management, and projects.
Licencing Process – Current key issues

- A strong regulatory system supports sustainable development.

- 2009 – room for some efficiencies and clarity, but the regulators were confident in making decisions & the industry knew what was expected of them.

- Today - Core issues – perception related to seabed impact and potential interactions with wild fish. General anti-lobby group – intelligent and enthusiastic at challenging the system.

- Industry working hard to find a way forward.

- Recent experience.
Existing farming operations & their importance

- Traditional farming location (sheltered, deep, etc.)
- Gorsten Farm 1985, £211,556
- Linnhe Farm 1980, £200,868
- Leven Farm 1975, £194,843
- Kingairloch Farm 1982, £137,261

29 direct employees, combined annual salaries before overtime etc. £744,528
A brief history of significant investment

- Traditional farming area
  30+ years of operation
- 2006 Consolidation
- 17-18 Approvals & investment (Gorsten pens and nets = £2 million)

<table>
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<th>Site</th>
<th>Pre 2006</th>
<th>2006</th>
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<td>750t</td>
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<tr>
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<td>1,300t</td>
<td>2,135t</td>
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<td><strong>Total</strong></td>
<td>68</td>
<td>72</td>
<td>4,625t</td>
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<table>
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<td>Linnhe</td>
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<td>10 x 36m²</td>
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<td><strong>Total</strong></td>
<td>56</td>
<td>38</td>
<td>6,124t</td>
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It’s complicated!

Uncontrolled farm derived lice represent a potential hazard, however where there is a potential pressure it is not quantified scientifically.

Based on the information currently available there is insignificant evidence to show aquaculture is the principle or only factor causing change to wild fish populations.

- The topic and data is complex, with periods of downward trends found on both the east and west coast of Scotland.

- Interpretation and the big debate.

- A reasonable understanding would require an independent specialist to look at a larger body of data (east and west coast trends), at a river level, over a period of time, and in context of other factors which could be contributing towards change.

- Appropriate of LPAs? - Reassuring observations
Aquaculture was established in Loch Linnhe.

Lower levels after aquaculture can also be similar to lower levels prior to fish farming.
Numbers can increase alongside fish farm neighbours and to levels higher that prior to aquaculture.
Numbers can increase and be maintained in relatively large numbers.
Leading the Blue Revolution

The Bigger Picture
Other Potential Considerations

Climate change, forestry, agriculture, over-fishing, predation, hydro schemes … etc. etc. …

Ways forward
• Investment in new technology – Cleaner Fish, Freshwater, Hydrolicers etc.
• Revised management
• Data transparency
• Monitoring
• Environmental Management Plans
• ASC
• Restocking
• Working with wild fish interest groups

Leading The Blue Revolution
Summary

- **2009** - Confident and predictable decision making. **Today** – Period of attrition resulting in regulators lacking confidence on key issues. Increasing inclination to use precautionary approach. **Solutions** - Training? Guidance from central government? Resource? Restructure Other?. A reasonable, transparent, clear, and strong system of regulation is required to support sustainable development and this needs to be flexible to respond to change.

- Aquaculture provides significant benefits to the local economy and areas such as Loch Linnhe play an important contribution to both employment and the company’s business.

- **Wild Salmon** – Data is complicated with room for interpretation. Uncontrolled farm derived lice represent a potential hazard, however where there is a potential pressure it is not quantified scientifically. Based on the information currently available there is insignificant evidence to show aquaculture is the principle or only factor causing change to wild fish populations. However, the company continues to work with wild fish interests to reduce the hazard at the farm and improve understanding.