

# KAMES SUSTAINABILITY REPORT 2023





## 2023 STATEMENT

2023 saw us define the Future50 strategy that we launched for our 50<sup>th</sup> anniversary in 2022 into a progressive structure: investing in business, environment and community with long-term vision and positive impact. Like all producers in our industry and locale, we have seen increased environmental challenges. But we have unique strength in being small and able to react quickly; in being fully vertically integrated and owning our own brood stock programme, allowing us to adapt and naturally select fish that will thrive in our specific environment.

The greatest challenge may be to join the dots – sustainability unfortunately comes at a cost and all parts of the chain: supplier, distributor, farmer, retailer and consumer, need to work together to share the burden of a greener economy.

This year has been particularly hard for us internally with the sudden unexpected death of our Managing Director, Neil Manchester. I have been proud to step into his seat and continue the vision that he and my father Stuart Cannon have so strongly held at Kames for decades – of quality, sustainability and community, whilst working hard to achieve consistent production of Scottish Steelhead Trout, unique to us and bringing important diversity into Scottish aquaculture. Our values remain intrinsic to the way we farm and will continue to farm at Kames, and the quality of our product will always remain at the top of our agenda.

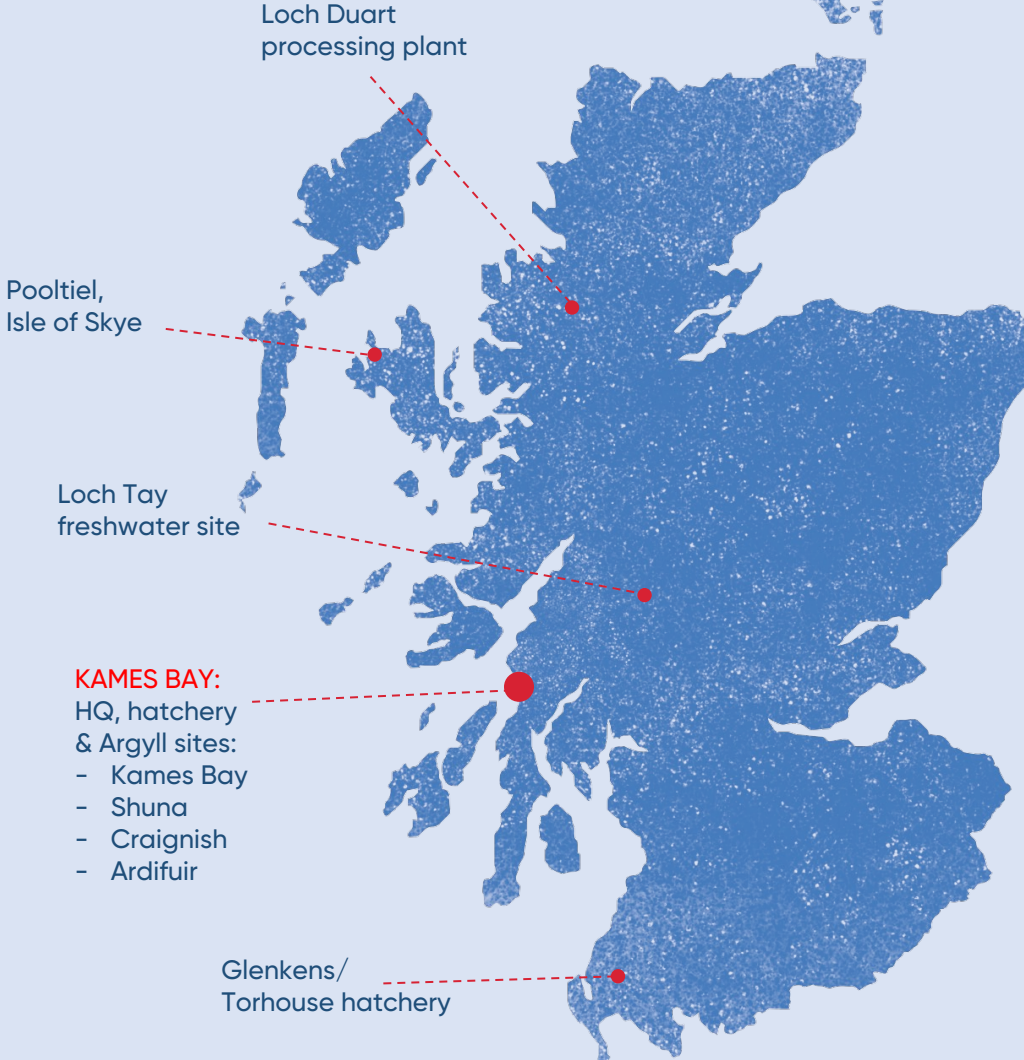
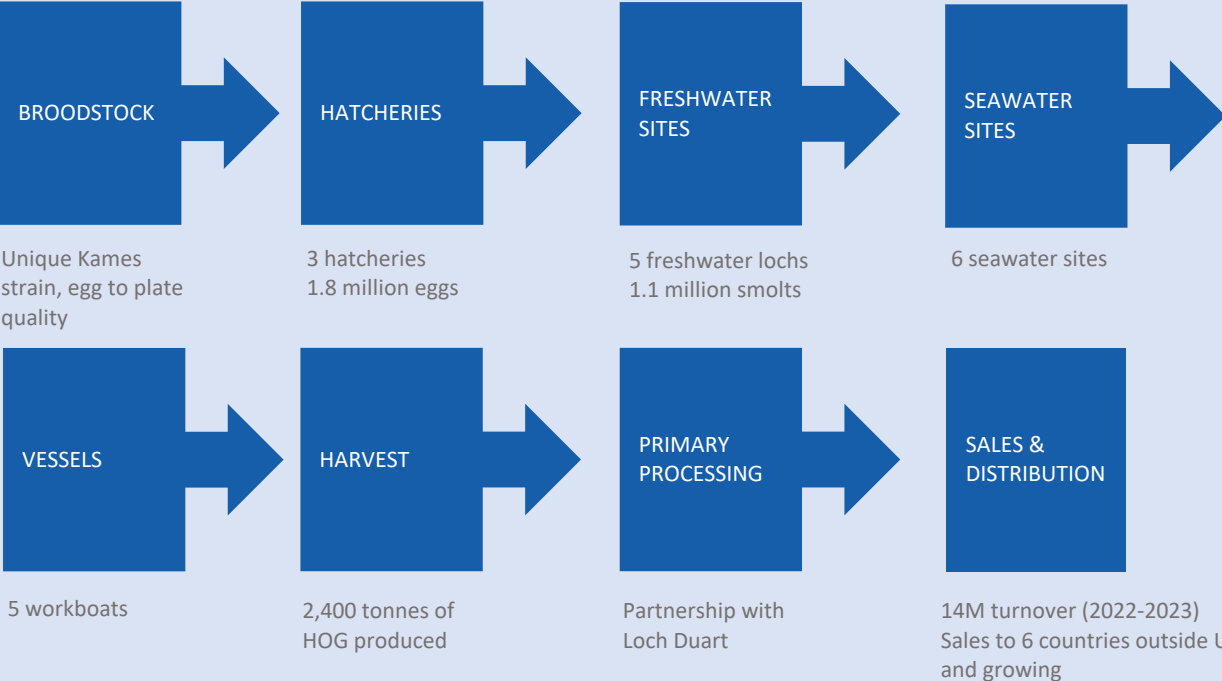
**Andrew Cannon,**  
Managing Director, December 2023





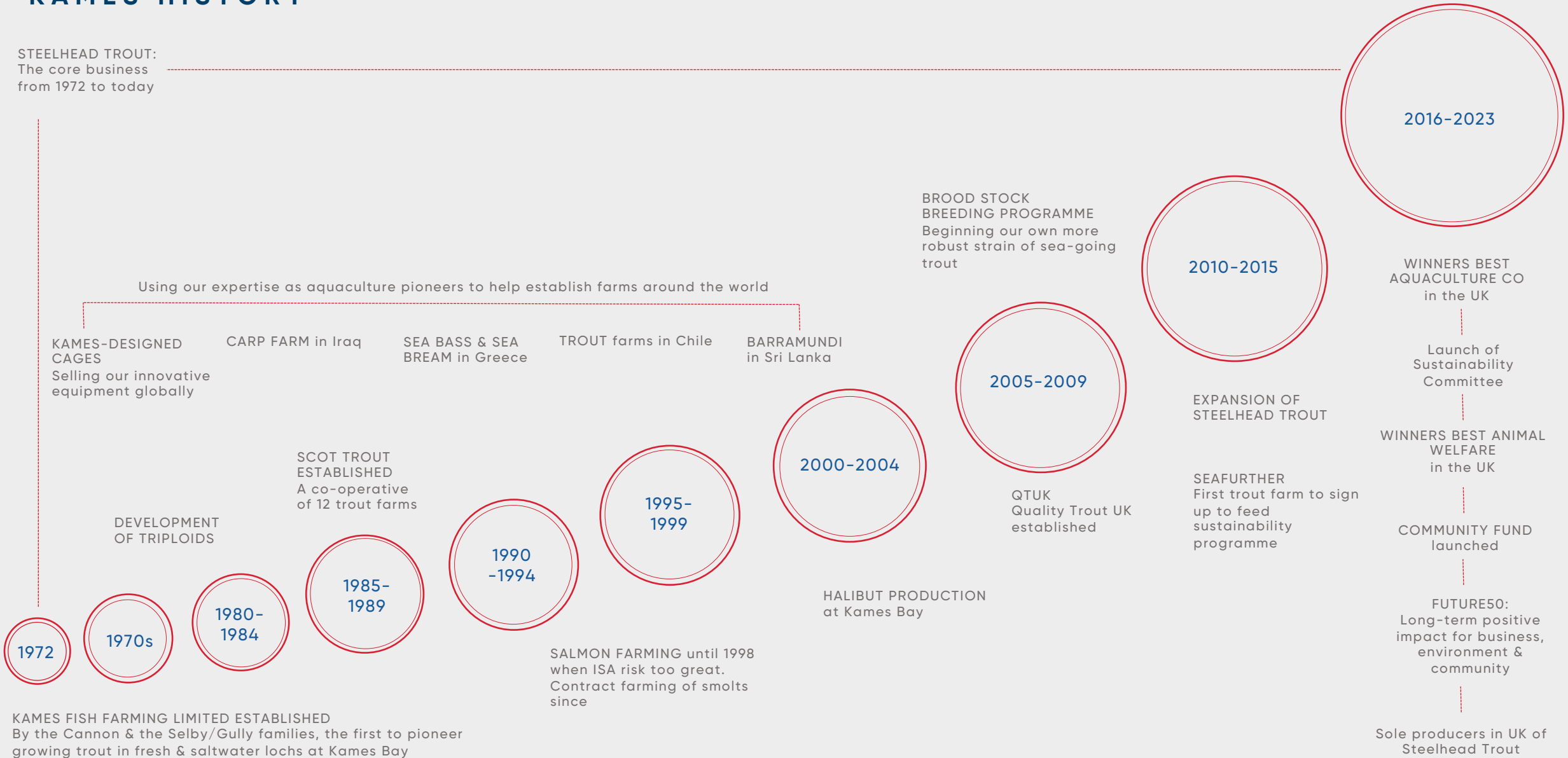
# COMPANY OVERVIEW

Established: 1972  
Location: Kames Bay HQ, Kilmelford, Argyll, Scotland  
Limited company, family owned  
Employees: 65  
Markets served: UK, Europe, North America



# KAMES HISTORY

STEELHEAD TROUT:  
The core business  
from 1972 to today





## UN TARGETS

The expected rise of the global population to nine billion people by 2050 puts extraordinary pressure on our food resources. It is urgent and essential that we prioritise sustainable food systems with minimal footprint that can provide food for future generations.

Aquaculture has been identified as a sustainable solution to meet the increasing demand for nutritious protein, with the lowest carbon footprint of all animal proteins. Farmed trout has a high content of omega-3 fatty acids, vitamin D, A, B and selenium and is a recommended part of our weekly diet.

We use the following UN goals as a benchmark for responsible farming and how we can contribute to a sustainable food future.

**2 ZERO HUNGER**

**End hunger, achieve food security and improved nutrition and promote sustainable agriculture**

**SDG2: Zero Hunger:** We are directly contributing to food security by providing a source of protein and nutrition.

**12 RESPONSIBLE CONSUMPTION AND PRODUCTION**

**Ensure sustainable consumption and production patterns**

**SDG12: Responsible Consumption and Production:** We are contributing to responsible consumption and production patterns by our reduction in waste and efforts in increasing efficiency with the goal of substantially reduced waste by 2030.

**15 LIFE ON LAND**

**Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification and halt and reverse land degradation and halt biodiversity loss**

**SDG15: Life on Land:** Aquaculture accounts for less than 1% of the world's total marine and coastal areas as opposed to 37% of the earth's land surface being used for agriculture. We need to use the seas as a food source without destruction, and if aquaculture follows best practice, it is a great long-term solution to all of the above UN goals.

**14 LIFE BELOW WATER**

**Conserve and sustainably use the oceans, seas and marine resources for sustainable development**

**SDG14: Life Below Water:** With sustainable farming methods we can help protect marine and freshwater ecosystems by reducing the pressure on wild fish stocks and the negative environmental impacts of overfishing and trawling.

**8 DECENT WORK AND ECONOMIC GROWTH**

**Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all**

**SDG8: Decent Work and Economic Growth:** Our industry provides huge employment opportunities and local community development.



# FUTURE50

Our long-term investment for a future with better security.

- Development fund supporting local community projects with long-term impact
- Education within sector and externally



- Investment in technology
- Investment in infrastructure
- Development of people

- High welfare brood stock – survival, adaptability
- Feed from regenerative sources with lower carbon footprint
- Partnership with local restoration projects

## KAMES VALUES



### QUALITY

Our promise is to provide our customers with the best quality Scottish Steelhead Trout at all times. Our egg-to-plate quality control means our welfare is second to none.

### SUSTAINABILITY

Investment in our business and strategy to keep us healthy as a company is imperative to sustaining our future.

We recognise that we are merely custodians of the environment in which we operate for future generations and will operate in compliance with all regulations to produce fish in a responsible and environmentally safe manner.

### COMMUNITY

We acknowledge our role in helping to sustain the rural economies in which we operate, and our aim is to put back the equivalent or higher value than we take out.



## WHAT WE PRODUCE

Steelhead Trout is the rainbow trout that migrates to the sea. All our fish are from our own brood stock & selected to thrive in our Scottish sea lochs, meaning we fully control quality from egg-to-plate.

Steelhead Trout is an oily fish, high in Omega 3 & recommended weekly as part of a healthy diet, for cell & immune system functionality & brain development.



Grown: Loch Melfort, Argyll  
Loch Craignish, Argyll  
Loch Tay, Perthshire  
Isle of Skye

Species: *Oncorhynchus mykiss*

Fat: 11.3g/100g

Omega 3: 1.26g/100g

GMOs: None

Availability: All year round

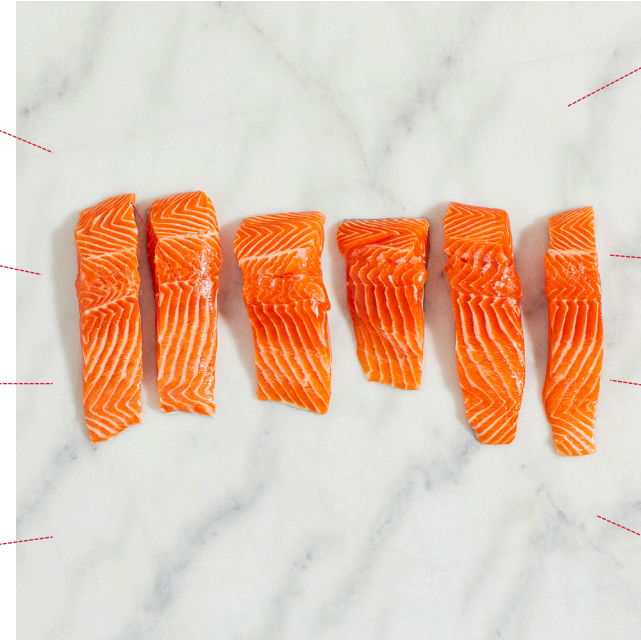
Size: 3-5kg, HOG

**13.8% oil**  
The NHS recommends we eat 2 portions of oily fish a week

**Vitamin A**  
Boosts barrier immune system against long-term disease & for healthy vision

**Vitamin D**  
For healthy bones & the immune system

**Selenium**  
Protects against cell damage & infections



**1.26g of Omega 3/100g (EPA/DHA)**  
Brain development, cell function, strong immune system, healthy blood vessels for protection against high blood pressure, strokes, heart disease etc. Anti-inflammatory





**Protein**  
Muscle growth & strength

**Vitamin B12**  
To prevent anaemia & neurological problem.

**Iodine**  
Thyroid function & brain development

### Q: How much impact does farmed fish have compared to other protein sources?

Farmed fish remains the most efficient form of protein in terms of FCR, water consumption & carbon footprint.

				
Feed Conversion Ratio <sup>1</sup>	1.2-1.5*	1.7-2	2.7-5	6-10
Water Consumption <sup>2</sup> (liter / kg edible meat)	2,000**	4,300	6,000	15,400
Carbon Footprint <sup>1</sup> (grams CO <sub>2</sub> -equivalent / typical serving of 40 g edible protein)	0.6*	0.9	1.3	5.9

<sup>1</sup> Global Salmon Initiative (GSI) Sustainability Report. Available at: <https://globalsalmoninitiative.org/en/sustainability-report/>. Last accessed October 2019.

<sup>2</sup> Mowll, Salmon Farming Industry Handbook 2019. Available at: <http://hugin.info/2019/R/2246047/887370.pdf>. Last accessed October 2019.

\* Figures reflect feed conversion ratio and carbon footprint of farmed Atlantic salmon.

\*\* Total water footprint for farmed salmon fillets in Scotland, in relation to weight and content of calories, protein and fat.



## SUSTAINABILITY IMPROVEMENT HIGHLIGHTS 2022-2023



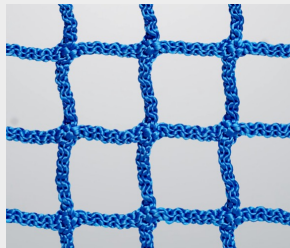
Our sustainability partnership with our feed suppliers has seen us tackle sourcing & regenerative agriculture practices



Winners of 2023 Animal Welfare Award



Scottish government launched their Sustainable Vision for Aquaculture at Kames



Our switch to HDPE nets reduced our carbon emissions by 111 tonnes



Our brood stock programme saw increased survival & welfare

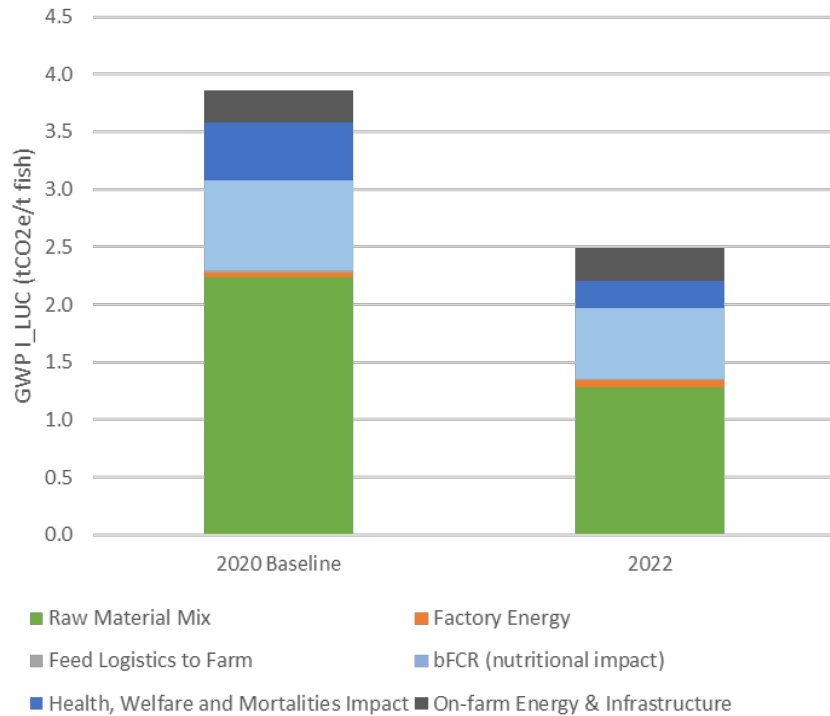


Community Fund launched at Kilmartin Museum



## 2023 / Feed

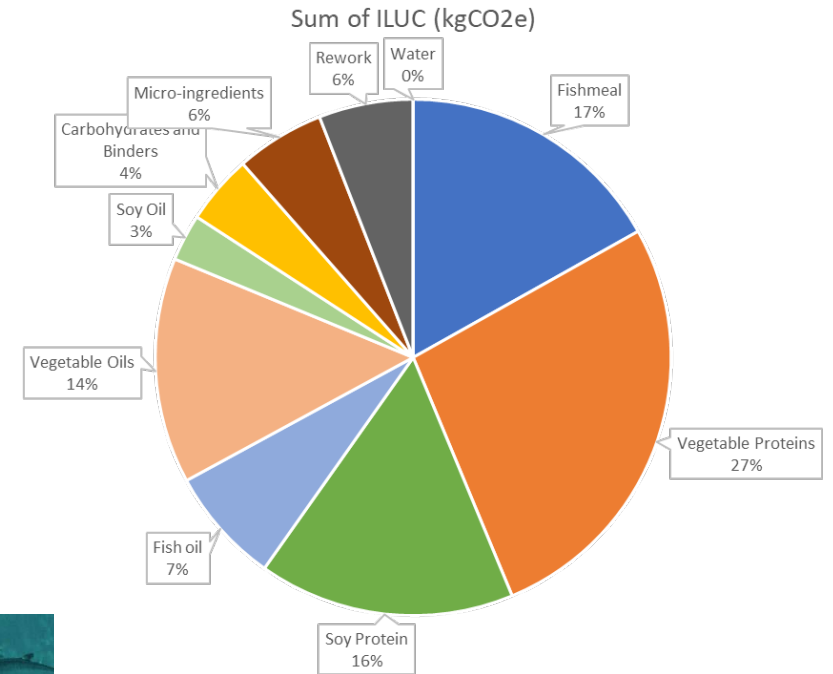
Feed remains our biggest source of carbon emissions but reduced significantly from 2020 to 2023, with better accountability down the supply chain.



	Total GWP_I_LUC	GWP_I_LUC Per t Fish at Harvest (tCO2e)
2020	7,117 tCO2e	3.58 tCO2e/t fish
2022	5,961 tCO2e	2.21 tCO2e/t fish

All marine raw ingredients are regulated by the Marine Trust.

All vegetable and soy-based ingredients are Terra Certified.



Our commitment to push our feed manufacturer on with their sustainability programme sees us continue in our strategy of continual reduction of carbon emissions.

**SOURCE**  
 - Better data on raw materials  
 - Regenerative agricultural practices

**OPTIMISE**  
 - Reduced factory emissions down supply change  
 - Lower footprint formulation  
 - Improvement of data analytics

**CARE**  
 - On farm fish health and welfare is key to reducing FCR  
 - Improved resilience through brood stock programme  
 - Feed management strategies to cope with warmer water



## 2023 / Health & Welfare

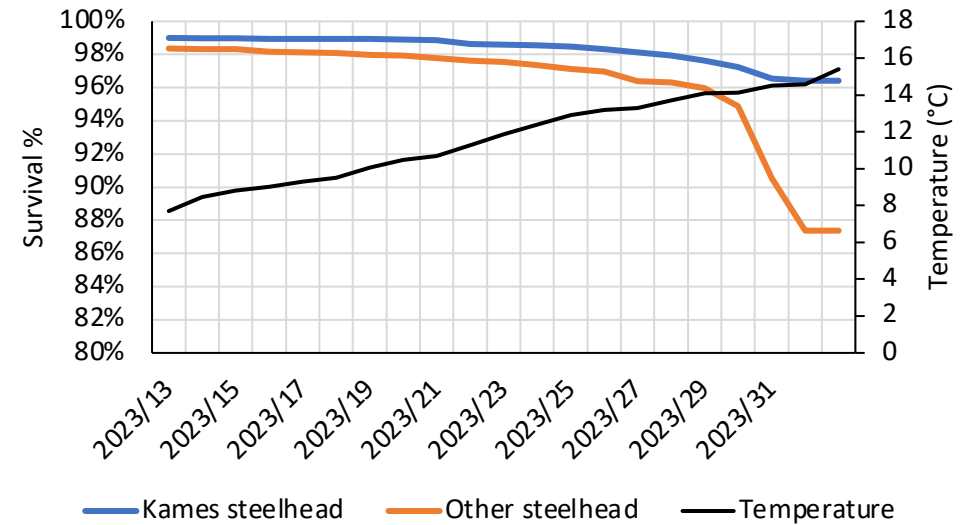
Strong survival and welfare hugely improves our environmental impact. Our Kames strain from our own breeding programme, now in full effect, shows a remarkable improvement in survival rates and we can fully control that quality from egg to plate.

- Winners of Best Animal Welfare in Aquaculture for our work in this area and our near elimination of Failed Trout Syndrome.
- Long-term, positive partnerships with R&Ds and academia globally for latest knowledge.
- Small flexible team structure ensures everyone is constantly learning and developing the best husbandry skills possible.
- Water sampling and increased and more detailed welfare assessments to predict and respond better to threats.
- Better monitoring equipment, more advanced underwater camera technology and centralised feeding personnel to further improve welfare.
- High level of welfare at harvest with effective new stunner system.

The government's launch of their Sustainable Vision for Aquaculture at Kames demonstrated how we are forging the way for Scottish sustainability in aquaculture.



**Kames strain vs "other" strain mortality [March - August 2023]**



**Q: What's our medicinal impact?**

Strategic lice treatments are needed for fish welfare in the height of the summer months, but we are moving away from medicinal treatments and towards more mechanical solutions. We have also significantly reduced the treatments – by 66% in the Loch Melfort cycle – and the Kames strain of Steelhead has shown a significant reduction in sea life infection compared to other strains. Continuing with producing an in-house strain of fish that's adapted to our saltwater environments continue to be key to improving fish health.



## 2023 / Waste

### KEY INVESTMENTS

A new centralised feed system that has resulted already in a 13% improvement in feed waste as well as better welfare monitoring

Switching nets at the end of their life to new HDPE technology: longer life, higher welfare, recyclable, and a carbon reduction of 111 tonnes in their production

### CONTINUED AREAS OF IMPROVEMENT

Recycling rope

Diesel consumption across sites

Fish by-products converted to biofuel



We continue to look for solutions across industry by sharing innovations and collaborating with partners



## 2023 / Environmental Monitoring



### Q: Do farmed fish threaten wild fish populations?

Our fish are sterile, and we minimise the risk of interactions by good containment measures and lice management.

Our Argyll sites, which we have farmed for over 50 years, are in one of the world's designated Hope Spots, remarkable for their pristine condition. Flapper Skate, a rare, protected species, have lived alongside our cages for many years and are known to breed in the surrounding waters. We work collaboratively with both Kilhoan Estate in Loch Melfort, supporting their rewilding initiatives with our infrastructure, and CROMACH – the Craignish Restoration of Marine and Coastal Habitats.

We strictly adhere to our Controlled Activities Regulation (CAR) licence regulated by the Scottish Environment Protection Agency (SEPA). This sets limits on our biomass and medicine use, informed by the marine environment's capacity to break down and disperse materials as well as any local sensitivities. In addition to this, we voluntarily undertake enhanced monitoring of the seabed. [A recent report by Scottish Sea Farms](#) outlines how quickly the seabed under pens and in the direct vicinity recover biodiversity, and we are proud of the water quality in our operating sites, where we have regulated our outputs and fallow periods for decades.

We have recently incorporated Environmental Management Plans and Environmental Incident Tracking Systems to monitor wildlife, conservation, biodiversity, energy efficiency and waste management at each site.

For many years Kames has supported the monitoring work carried out by biologists from the wild fisheries trusts in both Argyll and Skye where our marine sites are located. Kames has given both financial and practical help to assist with both sweep and fyke netting as well as electro-fishing in rivers.

Every year we undertake beach cleans in the areas we operate.



## 2023 / Community

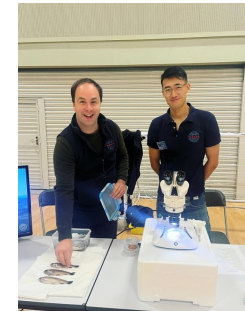
We have always contributed to local community projects, supporting music and sports ventures in particular as well as building and supporting the community village hall as a hub for many more activities.

2023 saw us form an official Community Fund for local projects with long-term impact, as part of our Future50 initiative to secure long-term sustainability in terms of local rural economy, environment and community.



Educating our local and wider community on how we grow our fish and what a sustainable food production future looks like is critical, and particularly in aquaculture which is can seem inaccessible and is often misunderstood by the general consumer.

In 2023, we supported three vet students and attended careers and school fairs, with practical demonstrations. We featured on the BBC talking about our breeding programme. We also regularly feature on Waitrose Farmers Instagram, to better connect our customers to the reality of life on the farm.





## ACCREDITATIONS





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