



## Aquaculture



# Aquaculture Services from Xodus AURORA

The aim of Xodus AURORA is to deliver a high quality independent service to achieve our aquaculture client's goals, to ensure compliance with environmental legislation, and to reduce environmental impact.

Xodus AURORA calls on experience gained from 15 years working in the aquaculture industry to provide a wide ranging consultancy service to the industry. The extensive knowledge within Xodus AURORA on environmental issues relating to offshore and coastal industries ensures that Xodus AURORA is ideally suited to support all areas of the aquaculture sector. The national and international nature of our business allows experience to be drawn from local industries as well as wider experiences outside the UK.

We offer a range of services, including:

- › Environmental Impact Assessments – including screening and scoping
- › Environmental survey planning (seabed, water column and hydrographic) and management
- › Environmental consent applications
- › Modelling studies (AutoDEPOMOD)
- › Site-selection and pre-screening
- › Environmental Management Systems (EMS), auditing and reporting
- › Environmental awareness and compliance training
- › Environmental performance review
- › Environmental management plans
- › Environmental research and development.



### Environmental Impact Assessment

Xodus AURORA is recognised as a provider of high quality, robust assessments to support planning applications. The cornerstone to this success is ensuring EIA is an integral process to design and operation, and that client teams are fully integrated in the environmental issue identification (ENVID) and EIA process. Consultation with stakeholders and the public is an important aspect of any EIA and Xodus AURORA has excellent working relationships with government departments, their statutory consultees, and a wide range of non statutory stakeholders. Xodus AURORA also assists with the site selection of aquaculture sites from assessments on the local receiving environment and can aid with the initial liaison with statutory consultees during pre-screening. Xodus AURORA has undertaken EIAs for a wide range of aquaculture developments throughout Scotland.

### Environmental Management Systems

Environmental Management Systems (EMS) are

essential to ensuring an organisation operates in an environmentally responsible manner. Xodus AURORA supports the development of such systems for a range of clients. Xodus AURORA can also provide accredited auditors to review any environmental management systems that you have in place. To support those who are involved in conducting or participating in environmental management system audits, we offer three day EMS Auditor training courses that can be tailored to your requirements.

### Environmental Survey

Xodus AURORA provides a range of survey services from baseline surveys as part of environmental impact studies, to the design and implementation of ongoing monitoring programmes. Capabilities include – survey design and planning, coastal and sub littoral habitat surveys, hydrographic and meteorological surveys, and the collection of seabed and water column samples for chemical and biological analysis.

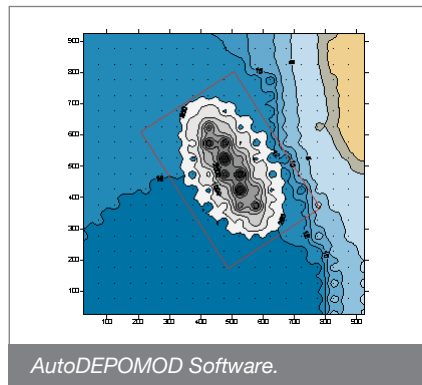
### Environmental Consent Applications

Specialist input into environmental permit and consent applications can be provided in support of operational licences. These include local planning applications and SEPA Controlled Activities Regulation (CAR) applications.

### Aquaculture Management Plans

Xodus AURORA assists in the development of aquaculture management plans to meet organic standards (e.g. Soil Association).

### Modelling Studies



AutoDEPOMOD, is a computer modelling system developed by SEPA to allow for the prediction of effects of fish farms on the environment and to determine where monitoring around sites should take place. It is also used for setting the limits on the biomass and quantities of sea lice chemicals allowable at the fish farm site which are assessed against Environmental Quality Standards (EQS). Xodus AURORA has extensive experience in using this software programme and are registered with SEPA to undertake modelling. Exploratory

### About Xodus

Xodus Group is a leading independent specialist consultancy with offices in the UK and Australia. We provide a uniquely integrated package of solutions for our clients as they seek to overcome the challenges they face throughout the life of their projects. From conceptual definition, through design and construction and into operation, Xodus provides the clever and innovative thinking needed to maximise the return on our customers' investment.

modelling can be run at sites and equipment characteristics altered in order to maximise the site's potential in terms of biomass and minimise environmental impact.

### Environmental Awareness and Compliance Training

Xodus AURORA has extensive experience of undertaking environmental awareness training, with a preferred joint approach of raising awareness of environmental sensitivities at operational sites, and through identifying practical measures that employees can understand and implement. Course content and delivery methods vary – options include presentation and workshop sessions, intranet or CD-based modules.

### Environmental Performance Review

Many organisations in the aquaculture industry have realised benefits by commissioning an independent statement of environmental performance. This statement can be used to assist in client audits as well as for PR and marketing material. In addition to reporting on performance indicators and trends over time, an independent statement from Xodus AURORA can be used as a means of reporting qualitative issues, for example, a focus on wildlife seen around the sites or reports on management and operational initiatives.

### Environmental Research and Development

Innovation is an important aspect to Xodus AURORA and we undertake research and development work as required.

### Case Study – Westray Salmon – EIA Background

Westray Salmon was the first salmon farm company in the UK to be certified for organic salmon production by the Soil Association in 1998. It is a family run business that initially operated two organic production sites in Westray, Orkney. Due to market success and the increased demand for Westray Salmon organic fish, the company proposed to expand its organic production with three additional sea cage sites.

### Consultation and Scoping

Due to the nature of the proposed development, an Environmental Impact Assessment (EIA) was required under the EIA Regulations 1999. The EIA process is as transparent as possible, focusing on 'perceived concerns' as well as scientifically demonstrable risks to the environment. An important aspect to the EIA process was the informal consultation with local stakeholders, initially through scoping letters and meetings, including discussions with the local Community Councils. Issues raised during consultation were incorporated into the overall EIA process.

### Baseline Surveys

Where Xodus AURORA identified environmental data gaps during scoping, we recommended that they were addressed as part of the EIA. A video survey confirmed presence/ absence of sensitive species to salmon farming operations (e.g. Zostera and maerl) in response to SNH concerns. Water sampling established baseline nutrient levels in the area at the recommendation of SEPA. The quantitative data obtained from the surveys fed into the Westray Salmon environmental impact process providing an accurate assessment of the potential impacts on the environment. The environmental surveys made a valuable contribution to the EIA process ensuring a robust Environmental Statement (ES) submission and minimising delays in the planning approval process. The process also established good working relationships between Westray Salmon and the regulators.



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