The Water Environment (Controlled Activities) (Scotland) Regulations 2011

Licence Application
FORM C
Please fill in this form to discharge effluent from a fish farm

The Data Protection Act 1998
"The Scottish Environment Protection Agency is responsible for maintaining and improving the environment and regulating environmental emissions. It has a duty to discharge its functions to protect and enhance the environment and to promote conservation and recreation.
The information provided will be processed by the Scottish Environment Protection Agency to deal with your application, to monitor compliance with the licence/permit/registration conditions, to process renewals, and for maintaining the relevant public register(s).
We may also process and/or disclose it in connection with the following:

- offering/providing you with our literature/services relating to environmental affairs
- consulting with the public, public bodies and other organisations (e.g. Health and Safety Executive, Local Authorities, Emergency Services, Scottish Executive) on environmental issues
- carrying out statistical analysis, research and development on environmental issues
- providing public register information to enquirers
- investigating possible breaches of environmental law and taking any resulting action
- preventing breaches of environmental law
- assessing customer service satisfaction and improving our service.

We may pass it on to our agents/representatives to do these things on our behalf.

You should ensure that any persons named on this form are informed of the contents of this Data Protection Notice

ADDITIONAL INFORMATION

In addition to the application form some supporting information is required. You can discuss these requirements with the local SEPA office.

For land based fish farm or associated land based facilities:

- A drainage plan showing the drainage layout of the fish farm (e.g. discharge points, treatment facilities, inlets and outlets. Number, size and design of tanks/ponds)
- Design drawings/details of treatment facilities

For cage farms:

- A drawing showing the design, dimensions and layout of the cages
- A plan showing the area licensed by the Crown Estate or planning consent within which the cages will be confined (National Grid References (10 characters e.g. NT 1234 5678) should be identified on the map at four points around the perimeter of the area.
- Documentation on the chemicals to be used on site
- Environmental survey data provided to comply with any required specifications which define the requirements for pre-development hydrographic, water chemistry and benthic biological surveys. Further details of these requirements are set out in the Marine Cage Fish Farm Procedures Manual available on the SEPA Website.

For marine cage fish farm sites, the outputs from the modelling package AutoDEPOMOD suggesting site biomass limits and limits for sea lice medicines. Further details of these requirements are set out in the Marine Cage Fish Farm Procedures Manual available on the SEPA Website.

SECTION 1: GENERAL INFORMATION

1.1 If not already included on your 'Site Plan' (see Form A), please provide a "Drainage Plan" showing:

- The site drainage layout (if applicable)
- All discharge point(s) locations
- The layout of the cage fish farm (if applicable)
- Identify pollution risk areas/chemical and oil stores

Reference the Plan "Drainage Plan" and attach it to your application

1.2 About Site Development					
Will the effluent come from (tick box)					
an existing development or discharge?	☐	a new development or discharge?	☒	an alteration to an existing development or discharge?	☐
Planning Permission ref no. (if applicable)		Planning Application: 21/495/MAR			
Building Warrant reference no. (if applicable) Crown Estate Lease no (if applicable)					

1.3 Receiving Environment						
Where will the discharge be made to: *(please tick)*	River?	☐	Freshwater loch?	☐	Land via a soakaway?	☐
	Direct to groundwater?	☐	Estuary (i.e. transitional waters) or coastal waters?	☒	Land?	☐
Is the discharge via a partial soakaway?	☐ YES ☒ NO					
What is the name of the receiving water (if known)?	**North Sound, Orkney**					

1.4 About the outlet(s) (not applicable to discharges from cage sites)						
1.4.1 Will the discharge be made through: *(please tick)*	*a new outlet?	☐	*an alteration to an existing outlet?	☐	an existing outlet?	☐
1.4.2 *If a new outlet or alteration to existing outlet: submit outlet design so that SEPA can agree your engineering proposals, prior to licensing						

1.4.3 National Grid Reference for Outlet(s) (at least 10 characters, format xx-xxxx–xxxx)

- - - - - -	Outfall Internal diameter mm mm mm
What provision will be made for samples to be taken of the effluent discharged? *(e.g. sampling chamber, automatic sampler)*	

1.5 In the boxes provided please indicate which of the following discharges you will be applying for (give the number of each discharge, scale of discharge {i.e. complex licence or simple licence} and whether any environmental service claim is being made)

Discharge	**Description**	Number of discharges applied for *State Number*	Complex Licence (CL) *State Number*	Simple Licence (SL) *State Number*
Fish Farm Effluent	**Cage fish farm**	1	1	
	Tank/hatchery Fish Farm			

Note- if you claim Environmental Service then your reasoning must be set out on a separate sheet referenced "Environmental Service Claims". Information on Environmental Service is available in the Charging Scheme guidance, please see the Environmental Regulation (Scotland) Charging Scheme 2016 found on the SEPA website. SEPA Website: http://www.sepa.org.uk/regulations/authorisations-and-permits/charging-schemes/charging-schemes-and-summary-charging-booklets/

SECTION 2: FARM DETAILS

2.1 The fish farm is, or shall be (*please tick*)

in the sea	☒	in a sea loch or voe	☐
on land with a marine intake	☐	on land with a freshwater intake	☐
in a freshwater loch	☐	on land with a groundwater intake	☐
Other (*please specify*)			

2.2 What species of fish do you rear or plan to rear?	Atlantic salmon *(Salmo salar)*

PRODUCTION

2.3 What is the planned maximum production? (*in tonnes per year*)	5,526 tonnes/year

2.4 What is the planned maximum weight of fish to be held at any time? (*in tonnes*)	3,850 tonnes/year

2.5 Please supply a stocking plan for the on-growing cycle based upon monthly projections. (Use a separate, referenced sheet if required.)

	Production Plan attached

2.6 What is the planned maximum stocking density? (*in kilograms per cubic metre*)	14.99 kg/m^3

FISH FOOD

2.7 What quantity of fish food do you plan to use? (*in tonnes per year*)	3,442 tonnes/year

2.8 What method is proposed to be used to feed the fish?	Remote feeding via feed barge

2.9 What food conversion ratio do you expect to achieve? (*Kilograms of fish production (wet weight) against kilograms of food (wet weight)*)	1.27

Note: please provide supporting documentation.

2.10 What will the phosphorus and nitrogen content of the food be? *(% composition by weight*)	Phosphorous = 1.68% Nitrogen = 6.30%

USE OF CHEMICALS

2.11 Please list all chemicals/medicines that you intend to use on the farm, which may end up entering the receiving waters (e.g. therapeutants, whether in-feed or bath treatments, anaesthetics, disinfectants, anti-fouling net coatings)

The following details should be provided.

- the trade name of chemical and the manufacturer;
- the active ingredient
- a copy of the manufacturers data sheet for each chemical;
- a method statement, which explains in detail the procedure used to carry out the treatment including measures to minimise the release of chemicals to the environment.
- maximum treatment concentration (active ingredient) for each chemical (where applicable);
- the number of applications typically needed for each complete treatment;
- total quantity of neat chemical used for each application or the amount of active ingredient;
- an indication of the number of treatments which could be required over a year assuming (a) optimistic and (b) pessimistic conditions;
- details of storage arrangements for chemicals;
  For net anti-fouling coatings, information should be provided on the sites where coatings will be applied and nets washed

You should check product documentation (or if necessary, with the manufacturers) to establish if any of the chemicals listed in the annex to this form are present. If any of these chemicals are present, you must list them and estimate the quantities which will be used.

Antifoulants, anaesthetics, anti-microbials, anti-parasitics and disinfectants as per the SEPA permitted substances list. Also the following anti-parasitics:

Excis: Novartis Animal Vaccines Ltd
Active ingredient: 1% cypermethrin (cis 40: trans 60) in an ethanolic base

Salmosan vet: Novartis Animal Vaccines Ltd
Active ingredient: azamethiphos 50% w/w

Alpha Max: Pharmaq
Active ingredient: deltamethrin 10mg/ml

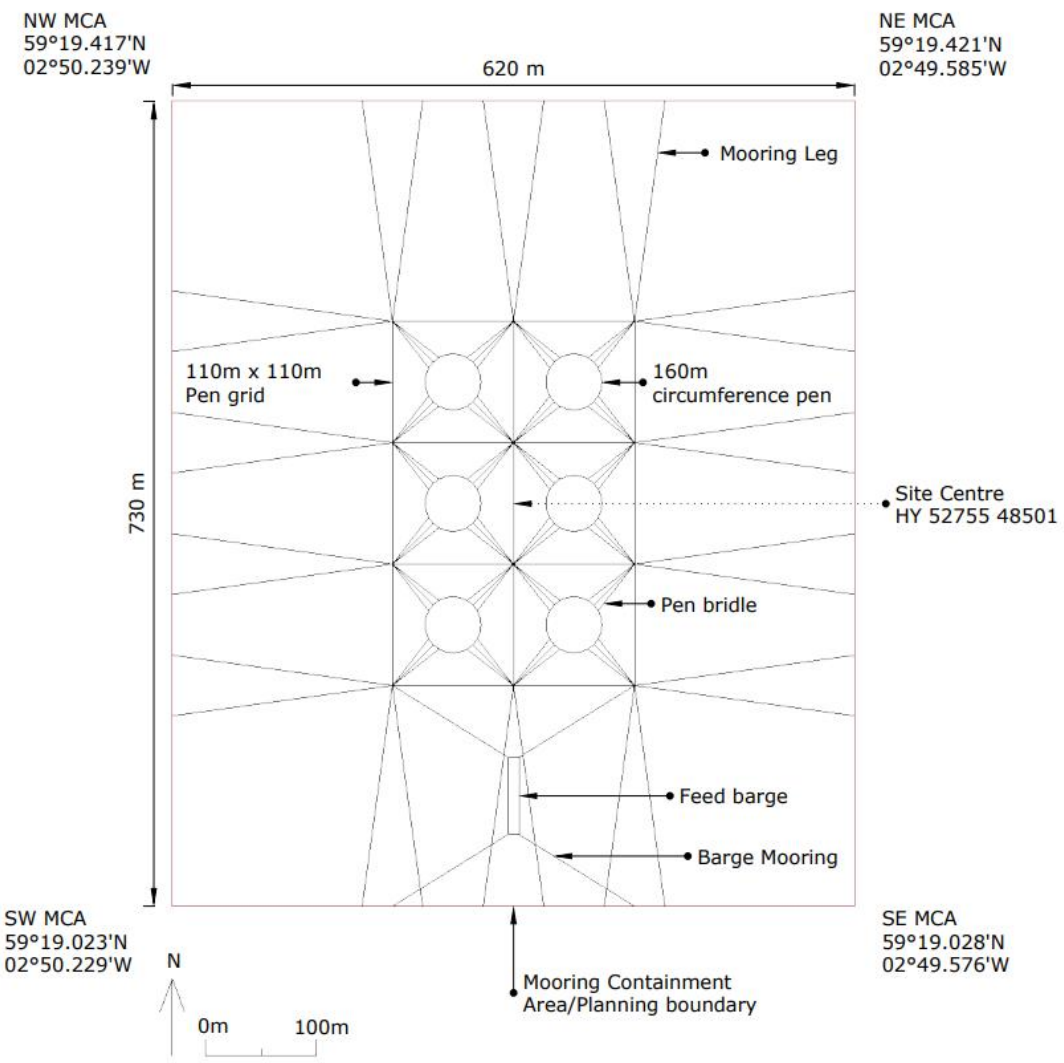
SLICE: MSD Animal health
Active ingredient: emamectin benzoate 0.2%

Please see attached Biomass and Chemotherapeutant modelling report and Bath modelling report.

Note: You should be aware that the chemicals listed will be considered for inclusion within the licence which will authorise their subsequent use. The use of any other chemicals would be illegal and may make you liable to prosecution under the Water Environment (Controlled Activities) (Scotland) Regulations 2011.

SECTION 3: CAGE FISH FARMS

3.1 Please state the planned maximum number of cages on site and the proposed layout. *(include a plan of the cage grid and moorings)*	6 cages in a 2 x 3 grid.



3.2 What are the proposed measurements of each cage? (*including length, breadth and depth in metres or circumference, diameter and depth for circular cages*)	160 m circumference, 50.93 m diameter, 21 m depth

3.3 What is the average water depth below the cages? (from bottom of the nets to loch bed in metres)	33 m (mean depth = 54m)

3.4 SEPA will normally expect sites to be left fallow following each production cycle. Please explain how this will be achieved. If the cages are to be moved on a rotational basis, you should provide a map showing the location of sites which will be used as part of the rotation.	Site will be stocked 22 months out of 24

3.5 Please state the type of mooring, e.g. single point or corner anchors. If single point mooring, what will be the radius of swing? (*in metres*)	Fixed mooring grid

MINIMISING THE RELEASE OF POLLUTING MATTER

3.6 How do you intend to minimise the deposition of food/fish faeces underneath the cages.	Use of feed which has high inherent digestibility to minimise faecal production. Use of automated feed barges which facilitates greater control over feeding regimes which will reduce feed wastage and uneaten feed pellets being deposited on the seabed. Waste deposition will be kept to a minimum through strict adherence to site biomass limits as recommended via modelling and as specified by SEPA. Deposition of uneaten feed is to be minimised through the use of underwater cameras in each cage during feeding to effectively gauge fish appetite and prevent overfeeding.

3.7 SEPA will require you to provide <u>full</u> containment during the bath treatment of fish with therapeutants. Please explain how this will be achieved. (*e.g. <u>full</u> tarpaulins, well boats*)	Any bath treatments, should they be required, would be administered using either a full tarpaulin or via a licenced wellboat. The containment method will be chosen based on a number of factors. 1. Quantity of chemical available based on 3hr and 24hr limits. 2. Fish health 3. Wellboat availability.

3.8 SEPA will expect you to minimise the treatment volume within each cage during bath treatments. What will be the treatment volume relative to the normal working cage volume? (*either in cubic metres or % reduction*)	The treatment volume will be reduced by 70% depending on the medicine administered.

3.9 Associated land based facilities: please describe any land based facilities which will be associated with the cages. This could include a shore base, staff facilities, net washing facilities or processing plants.	The site will be serviced by the Cooke shore base located on Westray. Nets will be serviced at WJ Knox, Ayrshire. Harvested fish will be landed deal haul at Kirkwall for onward transport to the Cooke processing plant.

SECTION 4: LAND BASED FISH FARMS (INCLUDING HATCHERIES)

4.1 What is the planned average and maximum volume discharged in cubic metres per day?	Average Vol.	m^3/day
	Maximum Vol.	m^3/day

4.2 What is the planned maximum rate of flow of effluent in litres per second?	Maximum flow.	l/s

4.3 How is the effluent to be treated before it is discharged? This should describe facilities such as settlement ponds or filters. (*Should include dimensions of the pond or aperture size of the filter mesh*). **Provide expected quality of the discharge.** **Note: please submit design details of filter if available**	

4.4 How will the solid waste arising from the treatment facilities be handled? (*This should cover aspects such as the frequency of settlement pond desludging, the treatment of backwash from filters and the disposal of the waste*.)	

X ADDITIONAL INFORMATION SUBMITTED

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Please reference additional supporting documents submitted as part of this application	Document name: Document reference:	**Site Plan**
	Document name: Document reference:	**Chart 1-10000**
	Document name: Document reference:	**Modelling Data Collection Report**
	Document name: Document reference:	**ECE Modelling**
	Document name: Document reference:	**NewDepomod Modelling Report**
	Document name: Document reference:	**Bath Treatment Modelling Report**
	Document name: Document reference:	**Environmental Monitoring Plan**
	Document name: Document reference:	**Production Plans**
	Document name: Document reference:	**A Medicine Minimisation Plan**
	Document name: Document reference:	**Chemical Data Safety Sheets**
	Document name: Document reference:	**A Seabed and Water quality Monitoring Plan (SWMP)**

ANNEX: Substances

Table 1 below details substances which must be highlighted within your application if they are contained within your discharge.

Table 1 - Substances

Substance	
Alachlor	PS
Aldrin	LIST I
Aluminium	SP
Anthracene	PSR
Arsenic	SP, LIST II
Atrazine	PSR, LIST II
Azinphos-methyl	LIST II
Bentazone	LIST II
Benzene	PS, LIST II
Biphenyl	LIST II
Boron	LIST II
Brominated diphenylether (only	PHS
Cadmium	PHS, LIST I
Carbon tetrachloride	LIST I
Chlorfenvinphos	PS
Chlorine	SP
Chloroalkanes, (C10-13)	PHS
Chloroform	LIST I
Chloronitrotoluenes	LIST II
2-Chlorophenol	LIST II
4-Chloro-3-methylphenol	LIST II
Chlorpyrifos	PSR
Chromium	SP, LIST II
Copper	SP, LIST II
Cyanide	SP
Cyfluthrin	LIST II
2,4 –D (ester)	LIST II
2,4-D (non-ester)	LIST II
DDT	LIST I
Demeton	LIST II
Di(2-ethylhexyl)phthalate (DEHP)	PSR
Diazinon	SP
1, 2 Dichloroethane	PS, LIST I
Dichloromethane	PS
2,4-Dichlorophenol	LIST II
Dichlorvos	LIST II
Dieldrin	LIST I
Dimethoate	LIST II
Diuron	PSR
Endosulphan	PSR, LIST II
Endrin	LIST I
Fenitrothion	LIST II
Flucofuron	LIST II

Substance	
Fluoranthene	PS
Hexachlorobenzene	PHS, LIST I
Hexachlorobutadiene	PHS, LIST I
Hexachlorocyclohexane (Lindane)	PHS, LIST I
Iron	SP, LIST II
Isodrin	LIST I
Isoproturon	PSR
Lead and its compounds	PSR, LIST II
Linuron	LIST II
Malathion	LIST II
Manganese	SP
Mecoprop	LIST II
Mercury and its compounds	PHS, LIST I
Mevinphos	LIST II
Naphthalene	PSR, LIST II
Nickel and its compounds	PS, LIST II
Nonylphenols	PHS
Octylphenols	PSR
Omethoate	LIST II
PCSDS	LIST II
pentabromodiphenylether (PBDE))	PHS
Pentachlorobenzene	PHS
Pentachlorophenol	PSR, LIST I
Perchloroethylene	LIST I
Permethrin	SP, LIST II
Phenol	SP
Poly Aromatic Hydrocarbons	PHS
pp-DDT	LIST I
Simazine	PSR, LIST II
Sulcofuron	LIST II
Tetrachloroethane	SP
Toluene	SP, LIST II
Triazophos	LIST II
Tributyltin compounds	PHS, LIST II
Trichlorobenzene	PSR, LIST I
1,1,1-Trichloroethane	LIST II
1,1,2-Trichloroethane	LIST II
Trichloroethylene	LIST I
Trichloromethane	PS
Trifluralin	PSR, LIST II
Triphenyltins	LIST II
Vanadium	LIST II
Xylene	LIST II

KEY: PHS – Annex X priority hazardous substance
PS – Annex X priority substance
PSR – Priority Substance Review
SP - Annex VIII substance covered by points 1 to 9 - termed as Specific Pollutant
List I - Dangerous Substances Directive List I substance, also listed in annex IX of WFD
List II - Dangerous Substances Directive List II substance (as agreed by UK, statutory EQS applies)