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The Scottish Government
Riaghaltas na h-Alba

# Marine Licence Application for Scientific Instrument Deployments

Version 1.0

## Marine (Scotland) Act 2010

## Marine and Coastal Access Act 2009

Marine Scotland, 375 Victoria Road, Aberdeen, AB11 9DB
http://www.gov.scot/Topics/marine/Licensing/marine

## Acronyms

Please note the following acronyms referred to in this application form:

| | |
|---|---|
| **ADCP** | Acoustic Doppler Current Profiler |
| **MHWS** | Mean High Water Springs |
| **MPA** | Marine Protected Area |
| **MS-LOT** | Marine Scotland – Licensing Operations Team |
| **ROV** | Remotely Operated Vehicle |
| **SAC** | Special Area of Conservation |
| **SNH** | Scottish Natural Heritage |
| **SPA** | Special Protection Area |
| **SSSI** | Site of Special Scientific Interest |
| **WGS84** | World Geodetic System 1984 |

## Explanatory Notes

The following numbered paragraphs correspond to the questions on the application form and are intended to assist in completing the form. These explanatory notes are specific to this application and so you are advised to read these in conjunction with the Marine Scotland Guidance for Marine Licence Applicants document.

### 1. Applicant Details

The person making the application who will be named as the licensee.

### 2. Agent Details

Any person acting under contract (or other agreement) on behalf of any party listed as the applicant and having responsibility for the control, management or physical deposit or removal of any substance(s) or object(s).

### 3. Payment

Indicate payment method. Cheques must be made payable to: The Scottish Government.

**Marine licence applications will not be accepted unless accompanied by a cheque for the correct application fee, or if an invoice is requested, until that invoice is settled. Target timelines for determining applications do not begin until the application fee is paid.**

### 4. Application Type

Indicate if the application is for a new scientific instrument deployment site or an existing scientific instrument deployment site. Provide the existing or previous consent/licence number or any other reference details and the expiry date if applicable.

### 5. Project Details

(a) Give a brief description of the project e.g. wave rider buoy deployment.

(b) Provide the proposed start date of the project. The start date will not be backdated, since to commence a project for which a licence has not been obtained will constitute an offence, which may result in appropriate legal action. A licence is normally valid for the duration of the project but not exceeding 6 years. If a project will not be completed before a marine licence lapses, it will be necessary for licence holders to re-apply for a further licence to continue any ongoing work at least 14 weeks prior to the expiry date of the licence. **Target duration for determination of a marine licence application is 14 weeks.**

(c) Provide the proposed completion date of the project.

(d) Provide the cost of the works seawards of the tidal limit of MHWS. This estimate should only cover work taking place below the tidal level of MHWS and must take into consideration the cost of materials, labour fees etc.

(e) Describe the location of the proposed works. Include a list of the latitude and longitude co-ordinates (WGS84) for each instrument location. WGS84 is the World Geodetic System 1984 and the reference co-ordinate system used for marine licence applications. Co-ordinates taken from GPS equipment should be set to WGS84. Coordinates taken from recent admiralty charts will be on a WGS84 compatible datum. Ordnance survey maps do not use WGS84.

**Example:** For positions read from charts the format should be as in the example: 55°55.555'N 002°22.222'W (WGS84). The decimal point specifies that decimals of minutes are used and the datum is stated explicitly. If seconds are used then the format should be as in the example: 55°55'44''N 2°22'11''W (WGS84).

**It is important that the correct positions, in the correct format, are included with this application, as any errors will result in the application being refused or delayed.**

To supplement your application, please provide a suitably scaled extract of an Ordnance Survey Map (1:2,500 scale but not more than 1:10,000) or Admiralty Chart which must be marked to indicate:

- the full extent of the works in relation to the surrounding area;
- latitude and longitude co-ordinates defining the location of the works;
- the level of MHWS;
- any adjacent SAC, SPA, SSSI, MPA, Ramsar or similar conservation area boundary.

Drawings and plans will be consulted upon. If they are subject to copyright, **it is the responsibility of the applicant to obtain necessary approvals to reproduce the documents and to submit suitably annotated copies with the application.**

(f) Indicate if the project is located within the jurisdiction of a statutory harbour authority and provide details of the statutory harbour authority where relevant.

(g) Provide a full method statement, including schedule of work, the period of time it will be in place, it's purpose and expected position (e.g. sea bed or water column).

(h) Provide assessment of the potential impacts the works may have, including interference with other uses of the sea. Please include details of areas of concern e.g designated conservation areas, such as a SAC, SPA, SSSI, MPA or Ramsar site and shellfish harvesting areas. Further guidance on designated conservation areas can be obtained from SNH at this website: http://gateway.snh.gov.uk/sitelink/index.jsp and guidance on shellfish harvesting areas can be obtained from http://www.foodstandards.gov.scot/ with regards to the Shellfish Waters Directive (2006/113/EC) which has parameters set to protect the water quality in which edible shellfish are grown.

Applicants should also be aware of the need to pay due regard to coastal and marine archaeological matters and attention is drawn to Historic Scotland's Operational Policy Paper HP6, "Conserving the Underwater Heritage".

Where there are potential impacts from the works, please provide details of proposed mitigation in response to potential impacts.

## 6. Deposits

(a) Indicate all instruments to be deployed, providing further information about the quantity and further details about the instrument to be deployed. Please include the details below depending on type of instrument:

Deployment of buoys (e.g scientific buoy, marker buoy, associated guard buoy)

- Description
- Type
- Size

Towed equipment (e.g profiling instruments):

- Description including number of cables
- Type
- Size including length, width and depth of towed equipment (metres)

Deposits on the sea bed:

- Description including how long proposed to be deposited
- Type
- Size including full dimensions (metres)

Where the project involves a number of elements, please complete all appropriate sections.

(b) Provide the vessel name, vessel type and name and address of all vessel operators to be used for scientific instrument deployment. If vessel details are not available at the time of application, please indicate this on the form as these details will be required prior to licence issue. Continue on a separate sheet if necessary.

(c) Provide details of the vessel role (e.g guard or fisheries liaison), indicate if the vessel(s) will be stationary during any survey work and provide details of the length of time that the vessel(s) will be stationary.

## 7. Noise Monitoring

Under the Marine Strategy Regulations (2010), there is now a requirement to monitor loud, low to mid frequency (10Hz to 10kHz) impulsive noise. Activities where this type of noise is produced include seismic airguns, other geophysical surveys (<10kHz), pile driving, explosives and certain acoustic deterrent devices. Where noisy activity is being undertaken, you must complete an initial registration form for the noise registry which allows you to provide details on the proposed work. Completion of a 'close-out' form, which allows licensees to provide details of the actual dates and locations where the activities occurred, is also required within 12 weeks of the completion of the 'noisy' activity or, in the case of prolonged activities such as piling for harbour construction or wind farms, at quarterly intervals or after each phase of foundation installation.

These forms can be downloaded from:
http://www.scotland.gov.uk/Topics/marine/science/MSInteractive/Themes/noise-reduction

**Marine licence applications will not be accepted until this form has been completed and submitted.**

## 8. Scotland's National Marine Plan

Scotland's National Marine Plan has been prepared in accordance with the EU Directive 2014/89/EU, which came into force in July 2014. The Directive introduces a framework for maritime spatial planning and aims to promote the sustainable development of marine areas and the sustainable use of marine resources. It also sets out a number of minimum requirements all of which have been addressed in this plan. In doing so, and in accordance with article 5(3) of the Directive, Marine Scotland have considered a wide range of sectoral uses and activities and have determined how these different objectives are reflected and weighted in the marine plan. Land-sea interactions have also been taken into account as part of the marine planning process. Any applicant for a marine licence should consider their proposals with reference to Scotland's National Marine Plan. A copy of Scotland's National Marine Plan can be found at: http://www.gov.scot/Publications/2015/03/6517/0

Indicate whether you have considered the project with reference to Scotland's National Marine Plan and provide details of considerations made including reference to the policies that have been considered. If you have not considered the project with reference to Scotland's National Marine Plan please provide an explanation.

## 9. Consultation

Provide details of all bodies consulted and give details of any consents issued including date of issue.

## 10. Associated Works

Indicate whether the application is associated with any other marine projects (e.g. land reclamation, marine/harbour construction works, dredging and sea disposal etc). If this is the case, provide reference/licence number for the related marine projects

# Marine Licence Application for Scientific Instrument Deployments

Version 1.0

## Marine (Scotland) Act 2010

## Marine and Coastal Access Act 2009

**It is the responsibility of the applicant to obtain any other consents or authorisations that may be required.**

**Under Section 54 of the Marine (Scotland) Act 2010 and Section 101 of the Marine and Coastal Access Act 2009, all information contained within and provided in support of this application will be placed on a Public Register. There are no national security grounds for application information not going on the Register under the 2010 Act. Under the 2009 Act, application information goes on the Register unless the Secretary of State determines that its disclosure in the Register would be contrary to the interests of national security.**

**Public Register**

Do you consider that any of the information contained within or provided in support of this application should not be disclosed:

(a) for reasons of national security; YES ☐ NO ■

(b) for reasons of confidentiality of commercial or industrial information where such confidentiality is provided by law to protect a legitimate commercial interest? YES ☐ NO ■

If **YES**, to either (a) or (b), please provide full justification as to why all or part of the information you have provided should be withheld.

## WARNING

**It is an offence under the Act under which this application is made to fail to disclose information or to provide false or misleading information.**

**Target duration for determination is 14 weeks. Please note that missing or erroneous information in your application and complications resulting from consultation may result in the application being refused or delayed.**

**Marine licence applications will not be accepted unless accompanied by a cheque for the correct application fee, or if an invoice is requested, until that invoice is settled. Target timelines for determining applications do not begin until the application fee is paid.**

**Declaration**

I declare to the best of my knowledge and belief that the information given in this form and related papers is true.

Signature [Redacted]

Date 15/11/19

Name in BLOCK LETTERS EUAN MACKENZIE

**Application Check List**

**Please check that you provide all relevant information in support of your application, including but not limited to the following:**

- Completed and signed application form ☑
- Maps/Charts ☑
- Co-ordinates of the boundary points of the area of harbour jurisdiction (if you are a statutory harbour authority) ☐
- Method Statement ☑
- Additional information e.g. photographs, consultation correspondence (if applicable) ☑
- Noise Registry – Initial Registration Form (if applicable) ☐
- Payment (if paying by cheque) ☐

**1. Applicant Details**

Title: Mr Initials: E Surname: Mackenzie

Trading Title (if appropriate):

Address: Dunstaffnage Marine Laboratory, Scottish Association for Marine Science, Dunbeg, Argyll, PA371QA

Name of contact (if different):

Telephone No. (inc. dialing code): 01631 559232

Email: euan.mackenzie@sams.ac.uk

Statutory Harbour Authority? YES ☐ NO ■

If **YES**, please provide a list of the latitude and longitude co-ordinates (WGS84) of the boundary points of the area of harbour jurisdiction using Appendix 01 Additional Co-ordinates form if necessary.

**2. Agent Details (if any)**

Title: Initials: Surname:

Trading Title (if appropriate):

Address:

Name of contact (if different):

Telephone No. (inc. dialing code):

Email:

**3. Payment**

Enclosed Cheque ☐ Invoice ■

Contact and address to send invoice to:

Applicant ■ Agent ☐ Other ☐

If **OTHER**, please provide contact details:

Title: Initials: Surname:

Address:

Email:

**4. Application Type**

Is this application for a new scientific instrument deployment site or an existing scientific instrument deployment site:

New Site ☒ Existing Site ☐

If an **EXISTING SITE**, please provide the consent/licence number or any other reference details and the expiry date if applicable and expiry date:

| Consent/Licence Number or Other Reference Details | Expiry Date |
|---|---|
| | |

**5. Project Details**

(a) Brief description of the project (e.g. wave rider buoy deployment):

Deployment of multiple short sections of HVDC cabling onto the seabed.
Two sites (each with two cable sections, each 2.5m in length) onto Limaria hians habitat, to examine the response of fauna to cable presence.

(b) Proposed start date **(Target duration for determination of a marine licence application is 14 weeks):**

Dec - March 2019/20

(c) Proposed completion date:

08/2021

(d) Cost of the works seawards of the tidal limit of MHWS:

£4800

(e) Location:

Loch Creran, Argyll and Bute.
Tidal narrows between North and South Shian

Latitude and Longitude co-ordinates (WGS84) defining the extent of the project (continue on Appendix 01 Additional Co-ordinates form if necessary):

| Latitude | | | | | | | | | | | Longitude | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | 6 | ° | 3 | 1 | . | 7 | 9 | 4 | ' N | | 0 | 0 | 5 | ° | 2 | 3 | . | 4 | 8 | 6 | ' W |
| 5 | 6 | ° | 3 | 1 | . | 4 | 5 | 7 | ' N | | 0 | 0 | 5 | ° | 2 | 3 | . | 3 | 6 | 4 | ' W |
| | | ° | | | . | | | | ' N | | | | | ° | | | . | | | | ' W |
| | | ° | | | . | | | | ' N | | | | | ° | | | . | | | | ' W |
| | | ° | | | . | | | | ' N | | | | | ° | | | . | | | | ' W |
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| | | ° | | | . | | | | ' N | | | | | ° | | | . | | | | ' W |

(f) Is the project located within the jurisdiction of a statutory harbour authority?

YES ☐ NO ■

If **YES**, please specify statutory harbour authority:

(g) Method statement including schedule of work (continue on separate sheet if necessary):

Deployment of a small-scale subsea cabling experiment within the Loch Creran MPA to investigate the potential impact on flame shell habitat at two study sites within the Shian bed.

Location: Loch Creran, Argyll. Flame shell bed located between North and South Shian, SE of Eriska.
Location of study sites:
Site 1 - 56°31.794'N , -5°23.486'W
Site 2 - 56°31.457N , -5°23. 364W

Both of these locations fall within previously identified continuous flame shell reef. There will be a total benthic footprint of 0.33m2 per cable = 0.66m2 at each study site excluding sampling (1.32m2 total cable impact).

Methods:
Four cables sections (2.5m x 132mm) will be installed, two within each study site. Cable sections will be floated into position using lift bags. Divers will deploy the cable sections and anchor them in place using u-shaped anchoring pins pushed into the seabed at either end (using multiple pins if required).

4 x 0.5m2 turf samples will be taken at each site. Turf samples will be taken by placing a quadrat and cutting along the inside of it with a diver's knife. Material will then be placed into a container for L. hians density and size data analysis. Each site will have a sampling footprint of 2m2 (4m2 total of sampling impact for the study). Turf sampling will occur after cable deployment, adjacent to cable sections. They will be randomly allocated with enough space between each sample so as not to impact the stability of the surrounding reef. Monitoring of turf sample areas for recovery will occur during each cable monitoring inspection as detailed below.

Turf sample areas will be investigated for the rate of recovery since initial clearing. This will be conducted by still imagery and the use of ImageJ software to gauge re-occupation by L. hians and the quantity of nest material reintegrated into the surrounding bed, similar to the work of Trigg and Moore (2009).

Monitoring will be completed by ROV when divers are not required for turf samples. ROV observation will consist of numerous transects across cable and turf sample sites. Divers will collect photo and video evidence in place of ROV when they are laying cables, collecting samples, conducting photogrammetry or removing cables. Monitoring images and video will inform on the extent of any scouring impact, security of cables anchoring, settlement of flora and fauna on cables sections and the response of nest material to cable presence. Monitoring evidence to be submitted to SNH after each monitoring event.

When the cables are in place, divers will thoroughly image cable sections to show their position within the nest material. Using these images, we will construct a 3D photogrammetry model of cable sections. Repeating this process on select sections, will allow us to observe any small of large changes on nest material growth in relation to the cable presence.

Timing:
Timing will be largely dependent on licensing decision and weather/tide windows. Ideally to be placed in the December - March window if conditions are suitable. The timetable below will be adapted to reflect the timings following deployment and maintain the winter storm monitoring periods.
Approximately two weeks (14 days after cable installation) following deployment, to encompass a full tidal cycle, cables will be inspected to observe any unintended cable scouring or movement and to take initial response data. Cables will be monitored again at 3 months (Approximately 93 days) following installation and then onto 6 monthly intervals with added storm monitoring periods. This will approximate as a monitoring schedule of;
• Cable install - End 2019
• Installation + 14 days
• Installation + 3 months (~January 2020)
• Installation + ~6 months (Winter Storm Period)

(h) Potential impacts the works may have (including details of areas of concern e.g designated conservation and shellfish harvesting areas) and proposed mitigation in response to potential impacts (continue on separate sheet if necessary):

There will be a direct impact of 5.32m2 total across two sites within the Shian flame shell bed (1.32m2 from cable laying, 4m2 from turf sampling). We will be undertaking regular monitoring of cable sections and turf sample sites to actively gauge the recovery of the habitat to this simulated disturbance. As found within the SNH MPA proforma, we have mitigation procedures in place including;
- 100mm scour boundary either side of cable will result in removal from seabed (area of devoid of flame shells)
- additional storm period monitoring to ensure stability of cables on the seabed
- Cutting of kelp and byssal thread attachments to cables upon removal to prevent lifting of larger areas of nest habitat.
- Monitoring evidence will be submitted to SNH at stated intervals to ensure flame shell bed is not being significantly impacted
Cable installation will not go ahead if Modiolus reef or Serpulid aggregations are found within the study area.

The project should not interfere with other users of the sea as there will be no moorings in place to impede sufrace navigation. As there is no mobile gear fishing or anchorage in this area due to MPA restrictions, there will be no interference with bottom contact anchors or gear.

## 6. Deposits

(a) Please indicate the instruments to be deployed:

| **Instruments** | **Instrument Details** (e.g description, type and size) | **Quantity** |
|---|---|---|
| Scientific Buoys (e.g waveriders or wave-powered) | | |
| Marker Buoys | | |
| Associated Guard Buoys | | |
| Profiling Instruments (e.g ADCP) | | |
| ROV | Deep trekker DTG2 - Small observation class ROV for monitoring cables. | 1 |
| Other (please specify) | HVDC cable sections (2.5m x 132mm)<br>NKT cable - (A)2X(F)K2YRAA_245kV | 4 |

(b) Details of any vessel(s) undertaking deposit or removal activities (please note that a marine licence cannot be issued until the vessel details have been confirmed. Continue on a separate sheet if necessary):

| Vessel | Vessel Name | Type of Vessel | Name and Address of Operator |
|---|---|---|---|
| 1 | R.V Seòl Mara | 10.4m MCA cat 3 research vessel | Scottish Association for Marine Science, Dunbeg, PA371QA |
| 2 | R.V Calanus | 20m MCA cat 2 research vessel | Scottish Association for Marine Science, Dunbeg, PA371QA |
| 3 | Uisge | RHIB | Scottish Association for Marine Science, Dunbeg, PA371QA |
| 4 | | | |
| 5 | | | |

(c) Further details of any vessel(s) undertaking deposit or removal activities (please note that a marine licence cannot be issued until the vessel details have been confirmed. Continue on a separate sheet if necessary):

| Vessel | Vessel Role (e.g guard or fisheries liaison) | Vessel to be Stationary (include length of time to be stationary) |
|---|---|---|
| 1 | Deployment/Retrieval | N/A |
| 2 | Deployment/Retrieval | N/A |
| 3 | Diver/ROV deployment | N/A |
| 4 | | |
| 5 | | |

**7. Noise Monitoring**

Will loud, low to mid frequency (10Hz to 10kHz) impulsive noise be produced by the project? YES ☐ NO ■

If **YES**, which please indicate the noise generating activities and sound frequencies:

| Noise Generating Activity | Sound Frequency (Hertz) |
|---|---|
| Use of Explosives | |
| Use of Acoustic Deterrent Devices | |

| Other (please describe below): | |
|---|---|
| | |
| | |

If you have ticked **YES**, please complete the Noise Registry – Initial Registration form located at:
http://www.scotland.gov.uk/Topics/marine/science/MSInteractive/Themes/noise-reduction

**A marine licence application will not be accepted until this form has been completed and submitted.**

## 8. Scotland's National Marine Plan

Have you considered the application with reference to Scotland's National Marine Plan? YES ■ NO ☐

If **YES**, provide details of considerations made including reference to the policies that have been considered:

Policies 4.39 - 4.58
We acknowledge that the development will occur on a PMF designated for conservation. The purpose of this study is to further our knowledge of the species and habitat while providing evidence for industry/policymakers on the installation of sub-sea cabling around Scotland. We have included Scottish Natural Heritage and local officers in the planning process regarding this study who have concluded the impact is likely to be non-significant and will monitor extensively to ensure this is the case. We have completed MPA and Natura site assessments in consideration of the National Marine Plan

If **NO**, please provide an explanation of why you haven't considered the National Marine Plan?

## 9. Consultation

List all bodies you have consulted and provide copies of correspondence:

Scottish Natural Heritage (SNH) - MPA proforma and HRA consideration consents (Granted 7/11/19)

## 10. Associated Works

Provide details of other related marine projects, including reference/licence numbers (if applicable):

| |
|---|
| N/A |