

TechWorks Marine, Deployment of 4 x ADCPs in Lough Swilly

Supporting Information:

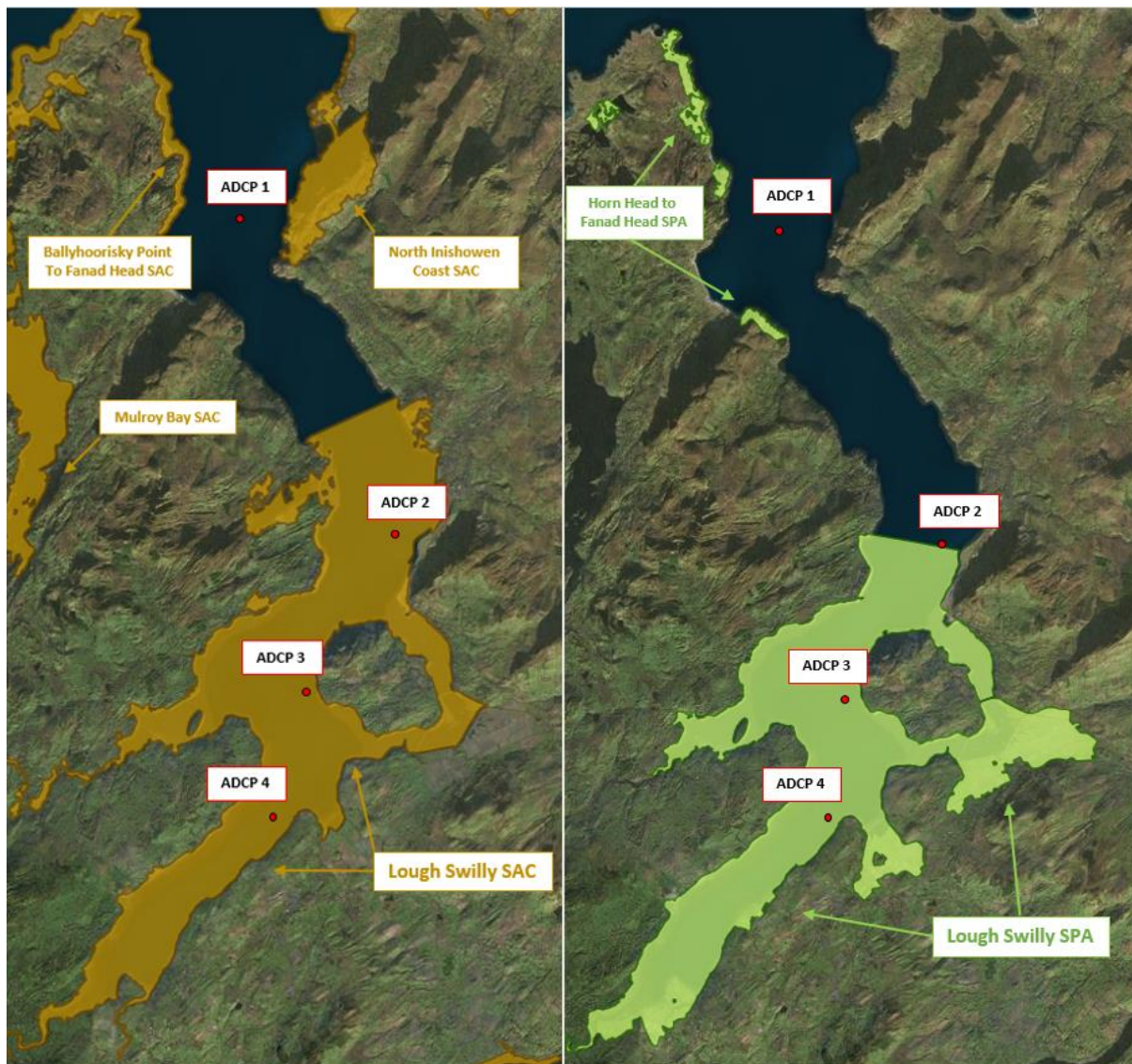
This document contains information responding to observations made by the Public Bodies Consultees relating to TechWorks Marine's Foreshore License application (Ref: FS006919).

Marine Notice

TechWorks Marine will arrange the publication of a marine notice at least two weeks prior to works on site to ensure the local fishermen are aware of the locations and timeframe of the equipment being deployed. This notice will give a general description of operations and approximate dates of commencement and completion.

Natura 2000 site

The locations of the proposed placement of three of the ADCP frames (ADCP2, ADCP3, & ADCP4) lies within Lough Swilly SAC (002287) and Lough Swilly SPA (004075) (*Figure 1*).



*Figure 1: Lough Swilly SAC (left image) and Lough Swilly SPA (right image) sites with respect to the ADCPs locations.*

(Source: EPA map viewer <https://gis.epa.ie/EPAMaps/>).

Lough Swilly SAC is a long sea inlet situated on the north Donegal coast. The site includes all of the inner part of the lough, extending from below Letterkenny to just north of Buncrana, a distance of approx. 25 km along a south-west to north-east axis. The lough varies in width, from approximately 2 km to 5 km. The site is estuarine in character, with shallow water and intertidal sand and mud flats being the dominant habitats. The main rivers flowing into the site are the Swilly, the Leannan and the Crana. Salt marshes occur mainly on the more sheltered western side. Artificial embankments have created brackish lakes at Inch and Blanket Nook. Other habitats which have a minor presence include sand dune, wet grassland, heath, scrub and deciduous woodland.

The SPA comprises the inner part of Lough Swilly from just east of Letterkenny northwards to Killygarvan (approx. 2 km north of Rathmullan) on the west side and to c. 2 km south of Buncrana on the east side; it includes the adjacent Inch Lough. Also forming part of the site is a series of improved pasture and arable fields on the south side of Lough Swilly between Farsetmore and Inch Levels - these are of importance to geese and swans. It includes sections of the estuaries of the River Swilly, the River Leannan and the Isle Burn and the predominant habitat is a series of extensive sand and mud flats which are exposed at low tide.

The SAC site is important as a fine example of a large, natural sea inlet which is estuarine in character. Extensive intertidal sand and mud flats are exposed at low tide. Salt marshes of the Atlantic salt meadow type are well represented. The estuarine habitats are generally of good quality, though areas along the south-eastern shore have been embanked in the past to create polders. Although the lagoon habitat is artificial in origin, it is one of the largest and best examples of a shallow, low salinity lagoon in the country. It supports what is probably the largest population in the country of *Chara canescens*, a Red Data Book species. The fauna is rich and diverse and contains 8 lagoonal specialists, and is of significant conservation value for ecotonal Coleoptera. Prospects for maintenance of the conservation structure of the habitat are good. The site includes several areas of old oak woodland, mostly of good quality and with natural regeneration. One of these woods is a Statutory Nature Reserve. Lough Swilly SPA supports important populations of wintering and staging waterfowl. Of particular significance is that the site provides roosting and limited feeding areas for the internationally important populations of Whooper Swan, Greylag Goose and Greenland White-fronted Goose which feed mainly on the polders adjacent to the site. In addition, there are at least 16 species occurring in numbers of national importance, while European golden plover and Bar-tailed godwit, both listed on Annex I of the EU Birds Directive, also occur regularly. Has breeding Otter.<sup>1</sup>

It is envisaged that no species or habitats within Lough Swilly SAC or Lough Swilly SPA will be impacted as a result of the deployment, operation and recovery of the ADCP frames given the nature and scale of the ADCP frames and the fact that deployment and recovery of the frames will be carried out to the highest standards, incorporating best practice methods, such that no sedimentation or pollution to surface waters will occur. Therefore, no significant adverse effects will occur on the integrity of the Natura 2000 sites – Lough Swilly SAC (002287) and Lough Swilly SPA (004075) as a result of the temporary placement of the 4 x ADCP frames at Lough Swilly.

---

<sup>1</sup> NPWS (2011) Conservation Objectives: Lough Swilly SAC 002287 and Lough Swilly SPA 004075. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht..

### Marine Traffic

The frames will occupy approx. 1 m<sup>2</sup> of the seabed and will remain on the seafloor for a period of up to 30 days after which the frame will be retrieved by either an acoustic release method or grapple recovery method as detailed below. The recovery methodology for each ADCP frame location will be finalised prior to deployment to ensure that the retrieval buoys do not pose as a hazard in terms of safe passage during recovery operation and a marine notice to advise marine traffic of their presence will be issued.

### Acoustic Release Recovery

After 30 days the frame will be retrieved by the retrieval team of a pop-up buoy (*Figure 2*) allowing for its recovery (*Figure 3*). There will be no surface marker during the extent of deployment so vessel traffic will not need to avoid the area.



*Figure 2: The recovery buoy after surfacing.*



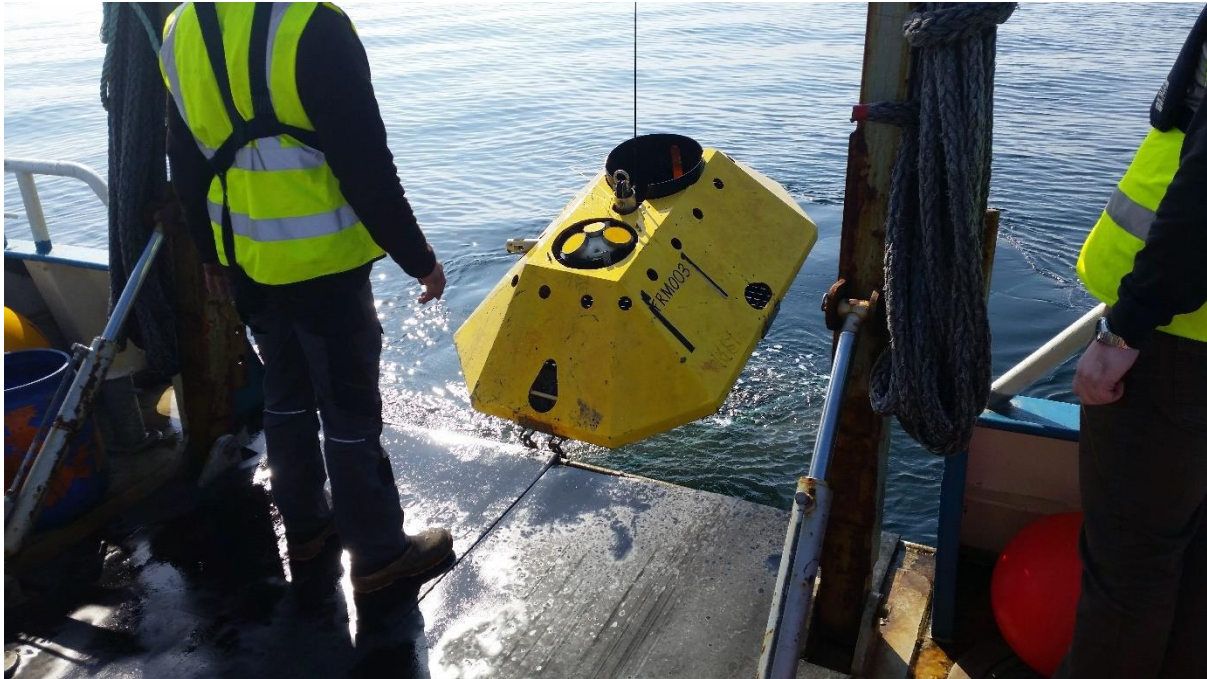


Figure 3: Recovered ADCP frame being moved into position on the deck.

#### Grapple Recovery

The grapple hook will be lifted over the bow of the vessel and lowered into the water. The vessel will then trawl the grapple hook between the ADCP frame and the deployed grapple anchor location (Figure 4).



Figure 4: Grapple recovery method

The grapple line will be brought to the surface by the grapple hook (Figure 5). The grapple anchor will be brought onto the deck of the vessel and the floating line removed. The ADCP frame is then brought to the surface and winched onto the deck of the vessel (Figure 5).



*Figure 5: Left -The grapple hook caught with the grapple line.  
Right - The floating grapple line is winched into retrieve the ADCP frame.*

#### Licensee at aquaculture site T12/037/B1

The proposed location for the deployment of ADCP3 is adjacent to / overlaps with a licence aquaculture site (T12 / 037 / B1).

TechWorks Marine contacted Lough Swilly ShellFish Growers Co Operative Society Limited on the 29<sup>th</sup> January 2019 to request permission to deploy ADCP3 at its proposed location. The representatives for Lough Swilly ShellFish Growers Co Operative Society Limited, Mr. Daniel Gallagher and Mr. Connor Blake granted TechWorks Marine permission for the deployment of ADCP3 at its proposed location. As per the recommendations of Mr. Blake a yellow surface buoy will be used at the proposed location of ADCP3 to advise local marine traffic of its presence (please refer to email correspondence attached below).

## Ciara Gilligan

---

**From:** Ciara Gilligan <ciara.gilligan@techworks.ie>  
**Sent:** Wednesday 30 January 2019 14:43  
**To:** 'connor blake'  
**Cc:** daniel.lazell@techworks.ie  
**Subject:** RE: TechWorks Marine - Lough Swilly Foreshore Licence

Great thanks Connor for that. A yellow buoy will be used and a marine notice will be published to ensure the local fishermen are aware of the locations and timeframe of the equipment being deployed.

Kind regards,  
Ciara

Ciara Gilligan  
TechWorks  
Marine Ltd.  
Pottery Enterprise  
Zone  
Pottery Road  
Dun Laoghaire  
Co Dublin  
Ireland



Tel: + 353 1  
2365990  
fax: + 353 1  
2365992

web:

[www.techworks.ie](http://www.techworks.ie)

<ciara.gilligan@techworks.ie>

**Cc:** daniel.lazell@techworks.ie

**Subject:** Re: TechWorks Marine - Lough Swilly Foreshore Licence

**From:** connor blake

<connorxblake@gmail.com>

**Sent:** Wednesday 30 January 2019 14:25

**To:** Ciara Gilligan

Received, thank you.

Don't see any problems with any of the 4 areas on the attached chart. If yellow marker is put on the structure and the fishermen were informed they would avoid. There are only half dozen boats 2be that would be in those areas.

Regards. Connor

On Wed 30 Jan 2019, 14:17 Ciara Gilligan <[ciara.gilligan@techworks.ie](mailto:ciara.gilligan@techworks.ie)> wrote:

Hi Connor,

Please find attached the Location Map for the proposed deployment locations of our Acoustic Doppler Current Profilers (ADCPs ) instruments in Lough Swilly and our foreshore licence application also attached for additional information. The proposed location for the deployment of ADCP3 overlaps with the licence aquaculture site (**T12 / O37 / B1**). As discussed a surface buoy will be used to advise marine traffic of its presence (we potentially will use a white in colour buoy). Let me know if you have any other recommendations.

The co-ordinates for the position of ADCP3 is as follows:

ID	Decimal Degrees	Degrees Minutes Seconds	Irish Transverse Mercator (ITM)
ADCP3	55.06456° -7.53648°	55° 03' 52.4" N 7° 32' 11.3"W	629609.47 E 924218.38 N

If you have any problems opening the attachments let me know.

Kind regards,

Ciara

Ciara Gilligan  
TechWorks  
Marine Ltd.  
Pottery Enterprise  
Zone  
Pottery Road  
Dun Laoghaire  
Co Dublin  
Ireland



Tel: + 353 1  
2365990  
fax: + 353 1  
2365992

web:  
[www.techworks.ie](http://www.techworks.ie)