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In this issue:

Restricted fishing areas

A guide to unexploded ordnance

Increased cable-activity: be aware

Uncrewed survey vessels

The unseen world of oil and gas





November 2021 saw the launch of something big for the commercial fishing community, a service that could finally give clarity over what fishing gear you can use - or not use - in the UK's hundreds of restricted fishing areas (including in Marine Protected Areas).

Until now, you had to check with up to 15 different authorities; now the answer's available in a one-stop-shop:

- · It will be easier to understand and comply with regulations and avoid breaches and penalties that can run into thousands of pounds.
- You'll get instant answers and clarity - and the fact you can now see clear boundary lines on the website or your fishing plotter could even open up additional areas of sea for fishing.
- It will help to promote sustainable fishing practices by all fishers in the UK Exclusive Economic Zone.

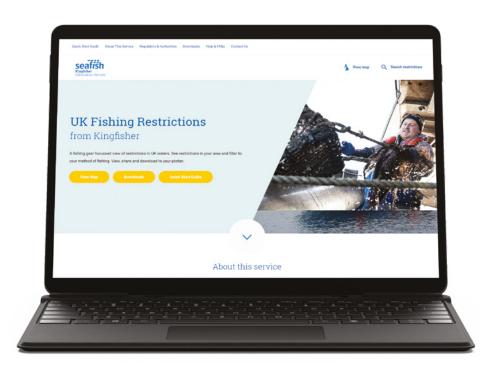
"If you are going out in your car, you need to know the rules of the road at any point during the journey, and it's the same with fishing. On the road, this is done with road signs but there is no equivalent for sea fishing, and this project helps to fill that gap," comments Dale Rodmell, Assistant CEO of the National Federation of Fishermen's Organisations (NFFO).

"It will make it much easier, especially when at sea to know what rules apply in a particular place. That helps to ensure no one inadvertently breaks them, which can only be good for the industry. It also ensures that the purposes of regulations are realised, and that in turn is a sign of sound fisheries governance."

An epic undertaking

Funded by the Marine Management Organisation (MMO) and European Maritime and Fisheries Fund (EMFF), the new Kingfisher service went live in November after a three-year development process.

Article continued overleaf >



The new service in brief

The new **UK Fishing** Restrictions service from Kingfisher shows all the different commercial fishing gear restrictions for the whole of the UK, with a focus on practicality and ease of use for commercial fishers:

- It covers both offshore and inshore areas, and all legally enforceable gear restrictions above the mean high water springs (MHWS) line.
- Precise positional data is given for each restricted area, sourced directly from and provided in cooperation with UK fisheries regulators.
- · A website and interactive map with quick-start filters allow you to view restrictions relevant to you; filters include location, type of gear, vessel size, or tonnage, and season.
- You can download your own personalised dataset for use at sea - as a preformatted fishing plotter file for on-board systems, a pdf or a standard spatial data file (eg. kmz, gpx).

The focus is on restrictions relating to fishing gear and commercial fishing, so the service does not include recreational restrictions, catch limitations or minimum size restrictions.

When we talk about a 'one-stop-shop' service, it sounds simple – and for users, it is. But the process of developing it was intense – as anyone who ever tried to check up on fishing restrictions themselves may well understand.

"When Kingfisher first applied for funding for the service, initial expectations were that there would be around 120 restricted areas. As it has turned out, there are around 900 management measures in place and over 1500 restricted areas around the UK," explains Eleanor Michie, GIS Analyst at Seafish.

Collating the details of these 1500+ areas involved gathering information from 15 different authorities, held in a variety of different formats – including photocopies of decades-old typewritten documents.

What next?

Now the UK has its first ever consolidated map of gear restrictions, what happens now?

For fishers, the priority is to start using it – by going to **www.kingfisherrestrictions.org**.

The Quickstart guide on the website will show you how it works and how to use it alongside other free services such as FishSAFE, KIS-ORCA and the Kingfisher Bulletin to get a complete picture of offshore hazards and restrictions.

Fishing plotter files can already be downloaded from the website. In addition, the UK fishing federations have issued USB cards containing the plotter files. If you haven't already received one, look out for them at your local fishing association.

"This project brings transparency to the regulations, to know where they apply, and make what is a rapidlygrowing and complex set of rules easier to follow."

Dale Rodmell Assistant CEO, NFFO

For Kingfisher, the next stage is to work with all relevant authorities to keep the map up-to-date and add in any new gear restrictions, including those in new Marine Protected Areas (or Highly Protected Marine Areas, if they are introduced in future).

"This project has highlighted just how complex UK fishing regulations can be. We're confident this service improves things for fishers and by working with fishers and regulators, we're determined to see this service developed further and kept updated into the future," concludes Matthew Frow, Kingfisher Manager.

The service in practice

1. When viewing the map online, you first choose your filters

Let's get started

Simply select a fishing type below to quickly view relevant fishing restrictions.















Then choose your area, and get an instant summary of gear restrictions, with further details, if needed



3. A simple Quick Start Guide and FAQs help you use the service, including downloading plotter data.

Unexploded ordnance or UXO: your 5-minute guide

A shocking incident in 2020 highlighted the risks of old explosives on the seabed.

In December 2020, the fishing vessel Galwad-Y-Mor was thrown out of the water by a huge explosion, while recovering crab pots about 20 nautical miles north of Cromer, in Norfolk. All seven crew members were hurt, some of them with lifechanging injuries.

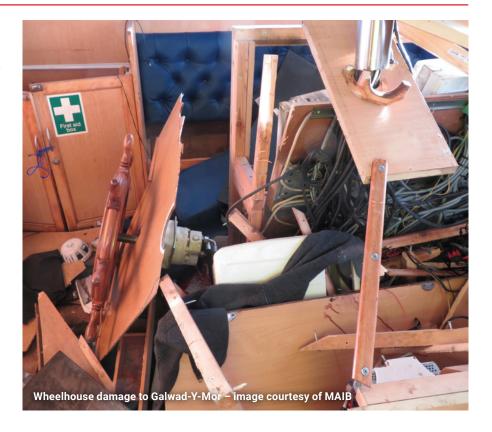
The preliminary investigation by the Marine Accident Investigation Branch (MAIB)* found that:

- it was possible that unexploded ordnance (UXO) on the seabed was disturbed as the vessel hauled its pots.
- there was "nothing that the crew could have done to prevent the accident".

The full MAIB report was due to be published in December 2021, after Talking Points went to press, but already the incident highlights an ever-present risk for fishers and also for energy companies and their contractors as they carry out engineering work offshore.

"The investigation into Galwad-Y-Mor has found that unexploded ordnance including mines, torpedoes and bombs dating from as far back as World War 1 can still be viable today."

MAIB



According to the MAIB, "Fisherman are advised to take extreme caution when encountering unexploded ordnance at sea and are advised to follow the guidance provided in Marine Guidance Note (MGN) 323 (M+F) Explosives Picked Up at Sea."

What are UXOs?

Unexploded ordnance is weapons or ammunition that were deployed but failed to explode, or that were dumped. It could be bombs, mines, torpedoes, shells, grenades, depth charges, small arms ammunition (stored in bulk on vessels that sunk), and other munitions.

Why are they there?

In UK waters, UXOs typically date from World War 2 and occasionally from World War 1. Decades underwater can cause serious erosion and degradation, making them increasingly unstable, especially if exposed to vibration or contact.

Where are they likely to be?

Anywhere. One report to Parliament estimated there are around 500,000 items (100,000 tonnes) of UXO in the water surrounding Great Britain.

^{*} The full MAIB report into the Galwad-Y-Mor explosion can be viewed at: www.gov.uk/government/organisations/marine-accident-investigation-branch



According to James Fisher
Renewables, which has undertaken
over 3,000 UXO investigations
around the globe, "They're most
frequently found on approaches
to prominent cities, towns and
harbours which were considered as
strategic and tactical targets during
World War 2. Typical examples
include the Thames Estuary, and
the North Sea, right up the east
coast past the outer Firth of Forth
and beyond to Scapa Flow.

"Artillery shells and projectiles of all sizes are also present anywhere that shoreline defences were positioned."

Do UXOs sink below the seabed?

In areas of sand, mud and sediment (especially in migratory sand bank areas), UXOs tend to become buried over time, and can be re-exposed (fully or partially) from time to time as the sandbanks migrate. Depth of burial can vary from a few centimetres to 1-2m depending on tidal stream strength and seabed composition.

In shallower areas, the depth of penetration of bombs and shells can vary from a few centimetres to 3m, depending on depth and seabed composition.

Are all UXOs still explosive?

No. However, in some cases, even experienced disposal experts cannot tell if an item is live or inert. Therefore, fishers should always assume any item is live, unstable and dangerous.

What do offshore operators do when they find UXOs?

When UXOs are detected, EOD (explosive ordnance disposal) specialists will carry out risk assessments and decide between different options such as removal and disposal elsewhere, detonation or 'low order deflagration' (a less disruptive alternative to detonation).

Keeping yourselves safe

- 1. The Kingfisher Bulletin includes notices of new examples of UXOs in UK waters, and fishers are advised to avoid these areas. Identification of UXOs is becoming increasingly common due to offshore engineering activity, such as wind farm development.
- 2. If you think you have caught an UXO, contact VTS / UK Coastguard immediately on your local working channel or VHF Channel 16 to report it. It may be helpful if you have a photo or can describe the item.
- **3.** STOP any lifting / hauling equipment and, if possible and safe to do so, lower the fishing gear back to the seafloor. If you are able, disconnect the fishing gear and mark its location.
- **4.** Never try to investigate, tamper with or take any object back to shore.

This year will see an increase in subsea telecoms and interconnector power cables activity around the UK. All fishers need to know about these cables, where they are, and how they could affect you.

A big part of this story is digital and the requirement for greater bandwidth as we all live our lives online. There's lots of activity to replace existing cables, and also a number of new mega-projects underway as Google, Facebook and others ramp up their networks:

- 98% of internet traffic is ferried around the world by subsea cables.
- · Facebook and Google each own well over 95,000km of cables covering the world.
- · Google is close to completing its Grace Hopper transatlantic fibre-optic subsea cable from New York to Bude in Cornwall and Bilbao in Spain.
- Facebook is a partner in the huge 2Africa cable project, a 45,000km subsea cable system to connect the UK. Western Europe and most of coastal Africa.

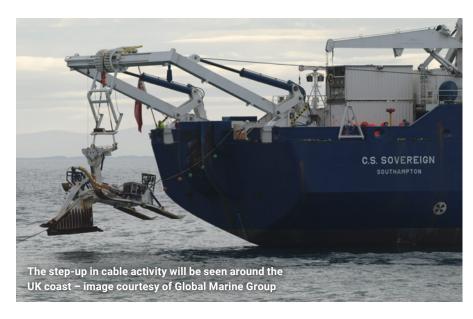
As the US tech magazine Wired says, "Big Tech is getting into big cables - and doing so in a big way."

Energy is also powering up

Energy companies are also doing big things on big cables.

Take the new North Sea Link, the world's longest undersea power cable, stretching over 720km between Norway and Blyth in Northumberland. And about to outdo that is the Viking Link, running 760km from Denmark to the UK (although 140km of it won't be subsea).

These new cables are all about the changing nature of global energy markets. Offshore wind energy needs to be transported to shore, and with all renewable energy generation, there's a lot of impetus to make sure that power can be moved around efficiently through interconnectors. As with telecoms cables, these new subsea cables are part of the critical infrastructure that makes modern living possible.



It's not just the mega-projects

In addition, there are numerous smaller-scale cable projects that aren't grabbing the attention of tech magazines.

The growing demand for bandwidth means there are domestic replacement and installation projects going on all around us, for instance, bringing broadband and power connections to the UK's islands.

Consequences for fishing

When we talk about the consequences of cable activity and how it affects where and when you fish, we should first note a key positive. All of us – fishers included – benefit from better connectivity, greater bandwidth and a more resilient power network; the Covid-19 lockdown would have been much harder to bear without broadband!

At the same time, the work to get all this happening does have implications for your fishing activity:

Pre-installation surveys and clearance operations and installation: This may displace fishing activity. Static gear may have

fishing activity. Static gear may have to be removed, and fishing vessels advised to stay clear from vessels.

Exposed cables: Burying subsea cables is always the preferred option, but surface-laying may be necessary where the seabed may be too hard or rocky for burial. Surface-laid cables can create snagging and damage risks for your gear.

Seabed disturbance: This can occasionally expose buried cables, again creating snagging risks for demersal / bottom trawling.

Crossings: The more cables are installed subsea, the more crossings we'll get. The rock or mattresses used to cover and protect them can also create snagging risks.

Cable damage: Around 70% of cable faults are caused by fishing gear, and cable companies may seek to recover the (very significant) costs of repair.

Repairs: More cables could mean more faults and repairs needed. Conversely, through installation of new cables and technology advances, some older cables are being discontinued or removed, which could reduce faults. Fishers can stay up to date with repair activity on www.kis-orca.org

ESCA (European Subsea Cables Association) Chairman Steve Dawe says: "It is important for cable owners to publish positions of their subsea cables through initiatives such as KIS-ORCA to promote cable awareness. It is vital to ensure safety of fishermen and other sea users, and also protect vital telecommunications and energy infrastructure which we all rely upon."

Your Safety Five: How To Protect Against Cable Risks

- **1.** Be cable-aware: www.kis-orca.org has information, updates and interactive maps showing telecoms and power cables around the UK and Europe, provided by offshore operators. Information can be downloaded to your plotter system.
- **2. Be cautious** about fishing close to any cable, whether it's power or telecoms, and always follow safety advice.
- 3. Installation: Fishers should receive notices well in advance through www.kingfisherbulletin.org and perhaps directly from operators too. They're usually advised to remain 1nm clear of the cable ship, but there's a case-by-case element, especially in shallower waters and around the islands.
- **4.** Repairs and exposures: These too will be communicated through Kingfisher notices, with fishers told about locations, type of activity, timings etc. However, exposures can happen at any time and may not be identified immediately, which is one reason for being cautious about fishing near any subsea cable.
- **5.** Know what to do: KIS-ORCA also has advice on what to do if you think you have fouled a cable. Your immediate actions if this happens will be critical for safeguarding your crew, your vessel and the cable. This is available at www.kis-orca.org

Uncrewed vessels are transforming survey work

For some fishers, the sight of an uncrewed vessel may be un-nerving, but they can reduce survey disruption and improve safety – even being used as offshore rescue vehicles in future.

Wherever you fish, one sight that's going to become more familiar is the remotely-operated or autonomous vessel. They're being used in UK waters for a growing range of applications including:

- environmental and climate monitoring.
- seafloor mapping, eg. prior to installation of wind farms. pipelines or cables, or for postinstallation monitoring surveys.
- fisheries surveys.
- inspection of infrastructure, such as bridges.

The Maritime and Coastquard Agency (MCA) refers to these vessels as MASS (Marine Autonomous Surface Ships) and defines them as "every description of vessel or craft used in navigation that can for any part of its voyage, fully or in part navigate or operate autonomously or through remote operations".

In practice, most of these vessels currently in operation are remotely controlled, rather than autonomous. They use sensors to collect data, which is sent to shore via satellite, and are piloted by qualified mariners. Many operators refer to them as USVs, or uncrewed surface vessels.



The benefits

There are several attractions to using uncrewed vessels rather than standard crewed survey vessels, including:

- · by reducing the number of people who need to go offshore, they reduce risk of injury.
- their small size (about the size of a car) and power systems means a lower carbon footprint.

· the size means they can get closer to structures such as oil platforms.

However, they do not currently replace all survey activity carried out on crewed survey vessels, such as geotechnical surveys.



Your questions answered

Like any new type of survey vessel, uncrewed vessels raise questions for fishers, and other mariners, relating to practical details and safety. So, here are some of your common questions answered.

How big are they? Their size can vary according to the application. According to ocean data company XOCEAN, its XO-450 USV measures about 4m x 2m – about the size of a car. It weighs around 750kg, depending on the equipment payload, and typically travels at 2.5 to 3.5kts.

Do they have AIS and identification? Yes, they operate with Automatic Identification System (AIS) and have individual call signs and Maritime Mobile Service Identity (MMSI). They are also equipped with active radar reflectors, navigational lights and sound signals to alert seafarers of their presence.

How should fishers contact them in case of any issues?

There's no radio contact, but operators should issue Notices to Mariners to regulatory bodies and local fishing federations providing contact information for their Operations team.

Do they tow anything? It varies. Most have hull-mounted sensors only rather than towed systems. They may deploy other equipment, such as sound velocity profilers, in the water column, directly below the vessel, but these do not touch the seabed.

Who is responsible for safe navigation and collision avoidance?

COLREGs* apply as normal, with the remote control centre (RCC) navigation watchkeeper undertaking safe navigation and collision avoidance.

What should you do if you see one (visually and/or on radar)?

RCC navigation watchkeepers will follow industry practices and adhere to COLREGs in relation to safe speed, light and sound signals, AIS and actions to give way, closest point of approach (CPA), and so on.

However, as with any other vessel at sea, fishers are advised to exercise caution in the vicinity of any uncrewed vessel and also to watch out for activity notices on www.kingfisherbulletin.org

Uncrewed rescue vehicles could improve safety at sea

An Edinburgh-based startup, Zelim, has partnered with naval architects Chartwell Marine to develop an uncrewed, remotely-operated rescue vessel for use at sea. Primarily designed for man overboard (MOB) incidents at offshore energy sites, it could also be used to provide 24-hour rescue services for fishers and other mariners who get into difficulties.

Installed at offshore sites and operated remotely, they could potentially reach workers more quickly than land-based emergency services or other vessels. They could also be kitted out with first aid equipment, a conveyor belt to help retrieve people from the water and a helicopter pick-up zone.

^{*} COLREGS refers to the Convention on the International Regulations for Preventing Collisions at Sea (1972), setting out the navigation rules, or 'rules of the road', for ships and other vessels to prevent collisions.

The unseen world of oil and gas: structures to know about

The world of oil and gas is awash with jargon – much of which has no relevance for fishers. But one category of jargon matters a lot, and that's around structures and safety zones.

From 'pipeline spans' to 'platform footings' to 'safety zones', these can all affect how fishers operate dayto-day, and it's easier to appreciate the risks if you can visualise what

they are. Below we've given bite size explanations of a small selection if there are other structures you'd like explained, let us know and we'll cover them in future issues.

All the items below are shown on FishSAFE plotter data and www.fishsafe.org, to help you steer clear of them

Pipeline Spans

A section of pipeline that is not touching the seabed - perhaps because the seabed has shifted leaving a gap underneath. There are over 200 pipeline spans currently on FishSAFE.

Size: Varies. Minimum size for inclusion on FishSAFE is 10m long and 0.8m high, but they can be up to 100m long and over 3m above the seabed. The size can vary over time because of shifting seabeds.

Location: Most common in areas of soft or shifting seabed or rocky, undulating areas.



Suspended Wellhead

Structures or equipment located above the seabed and relating to a well not currently in production (because it is awaiting work or no longer productive).

As far as fishing is concerned, the wellhead is a solid, immovable object, because it's physically connected to well casing. It may also have pipelines and umbilicals connected.

Size: Approx. 5m long x 5m wide x 4m high.



Post Decommissioning Platform Footings

When offshore platforms are decommissioned, an operator may be granted permission to leave the structure, of part of it, in place. This could include the platform footings, which are the structure closest to the seabed, which hold the platform in place.

Size: Each decommissioning project is different, but at North West Hutton platform in the North Sea, the remaining footings stand 50m above the seabed (140m water depth).

Safety Zone: Safety Zones are in force during decommissioning. But once decommissioned below sea level, platform footings do NOT automatically have statutory 500m Safety Zones.

500 Metre Safety Zone (Subsea)

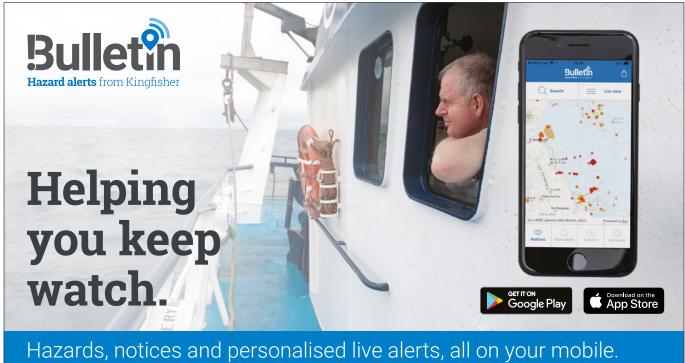
Area extending 500m in all directions from a given point of a subsea installation. Maybe marked by a buoy on the sea surface as close as possible to the centre, or there may be nothing visible on the sea surface.

Who they apply to: Vessels of all nations are required to respect these Zones (except, for example, to attempt to save a life or when in distress).

Purpose: To protect fishers and mariners from entanglement, and the subsea structure from damage.

NB: It's not uncommon for anchors and anchor lines to extend beyond the 500m surface safety zone.





Hazards, notices and personalised live alerts, all on your mobile. Sign up at **kingfisherbulletin.org** or **download the app** today.