



Revision of founding Discussion Document, which is now ten years old

Learning from the Past – Looking to the Future, Leading Discussion and Thinking



Society  
for  
Underwater  
Technology

Salvage & Decommissioning Committee

## Discussion Document:

Developing a Consistent, Cross-Sector Approach for Assessing the Impact of Man-Made Materials, Objects, Structures and Substances

(MMOSS)

on the Marine Ecosystem

# Foresight Future of the Sea

A Report from the Government  
Chief Scientific Adviser

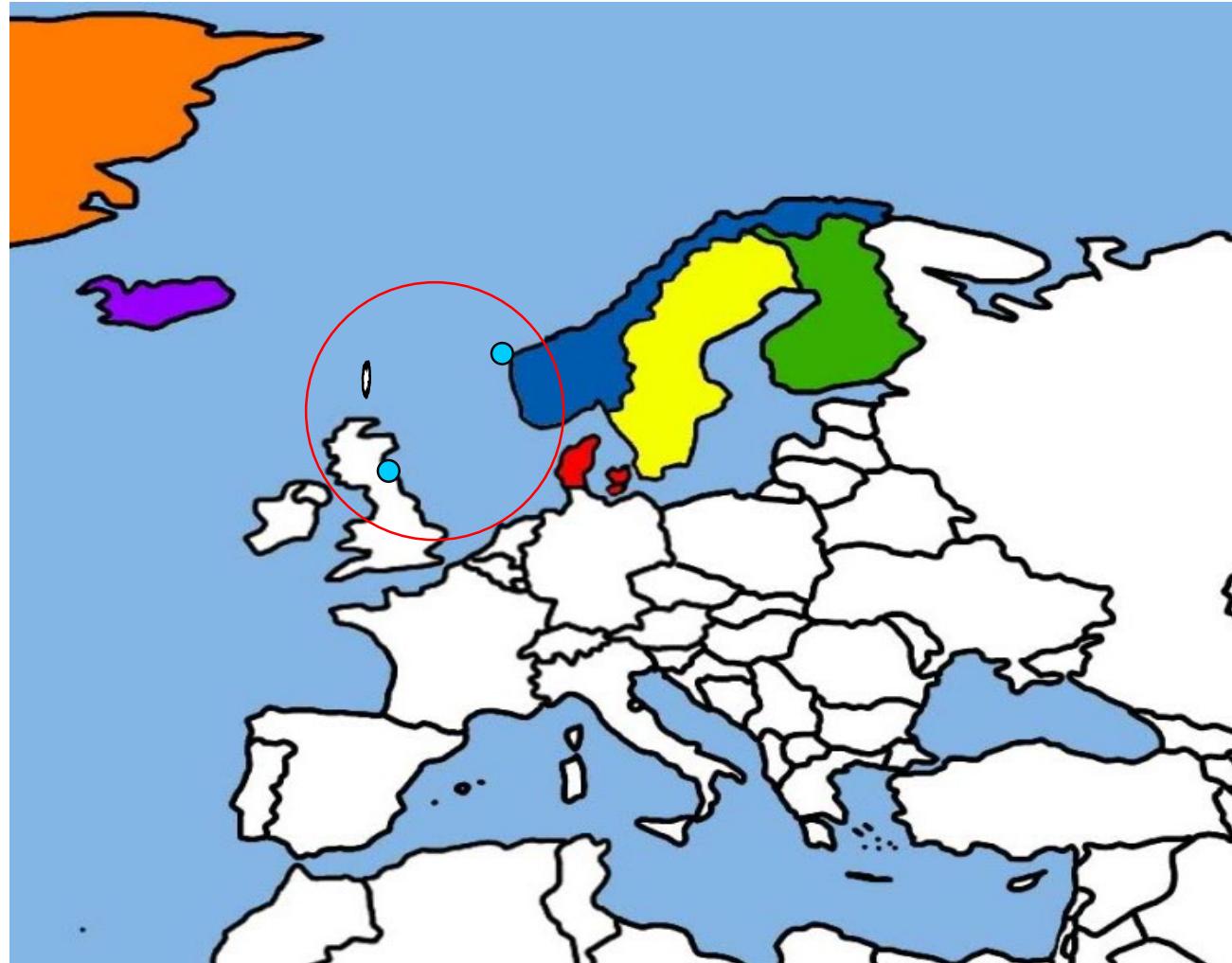


## Taking Recommendations and Conclusions of Foresight: Future of the Sea Report as Core Messages

*The sea is critical to planet Earth, and its future will fundamentally affect ours. Science and innovation have an important part to play in shaping that future. Science holds the key to understanding the impact of a changing marine environment, informing our response to it, while emerging technology brings opportunities to develop and stimulate economic growth, as well as improve our marine science capability. (Foresight Future of the Sea, A report from the Government Chief Scientific Advisor, 2018).*

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/706956/foresight-future-of-the-sea-report.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/706956/foresight-future-of-the-sea-report.pdf)

# Deep Tek Companies



Deep Tek AS is located in Fosnavåg, Norway. Its focus is on supplying Drum Winch Cassette Systems and Deck Winches to the offshore and maritime sectors.

Deep Tek Ltd is located near St Andrews, in Fife. Its focus is on implementing new subsea capability, with particular focus on salvage and decommissioning.

Both work together on Technology Development.



# Tripling the World Depth Record (1993)



**Last lifting that we did using steel wire rope as the flexible tension member!**

Copper Cathodes being landed on deck from the François Vieljeux, a wreck lying in 1250 metres of water, 45 miles south-west of Cape Finisterre (rough environmental exposure) using Deep Tek designed handling equipment with one single hoist umbilical (power, signals and lifting).



# 3000 metres water depth 2002

LIFT, POWER &  
CONSTANT  
SIGNALS  
SUPPLIED TO  
3000M, USING A  
DP1, VOO. ONLY  
POSSIBLE DUE TO  
PRINCIPLES-BASED  
INNOVATION AND  
THE WINDER SYSTEMS'  
MINIMAL WEIGHT &  
FOOTPRINT.



## ss Persia

We had to make the change to synthetic filament rope and vessel of opportunity, if we wished to continue our specialist discipline of cargo recovery. All work was carried out on 'No Cure/ No Pay'!



# The ‘Elephant in the Room’? – the Implementation of Innovation

IF YOU BREAK THE LAW OF GRAVITY THE PENALTY IS HANGING



The Laws of Physics are the only laws we CANNOT break!

All other laws are codes of conduct that we make up for ourselves and can transgress and/or question, as long as we are prepared to pay the consequences.

*Great Lies to Tell Small  
Kids*, by Andy Riley

As far as profiting from the benefits of new technology is concerned - innovating to a standard is a mutually exclusive proposition - but how do we implement change in the ultra conservative oil & gas sector?



# History & Law of Salvage

**HISTORY:** the basis of salvage is that a person helping another at sea is putting himself and his vessel at risk and should be appropriately rewarded. The law of salvage has been recognised for centuries in such documents as the *Edicts of Rhodes*, the laws of the Romans, the *Justinian Digest*, the Medieval Laws of Oleron (the first formal statement of “maritime” or “admiralty” laws in Northwestern Europe), and the Code of the Hanseatic League.

**THE LAW OF SALVAGE:** Salvage, in maritime law, is the rescue of a ship or its cargo on navigable waters from a peril that, except for the rescuer's assistance, would have led to the loss or destruction of the property. Under some jurisdictions, aircraft may also be salved. Except for salvage performed under contract, the rescuer, known as the salvor, must act voluntarily without being under any legal duty to do so, apart from the general duty to give assistance to those in peril at sea, or to stand by after a collision. It is **sui generis**, meaning it stands on its own, because **it is based on fairness**.



# German High Fleet, at anchor, Scapa Flow

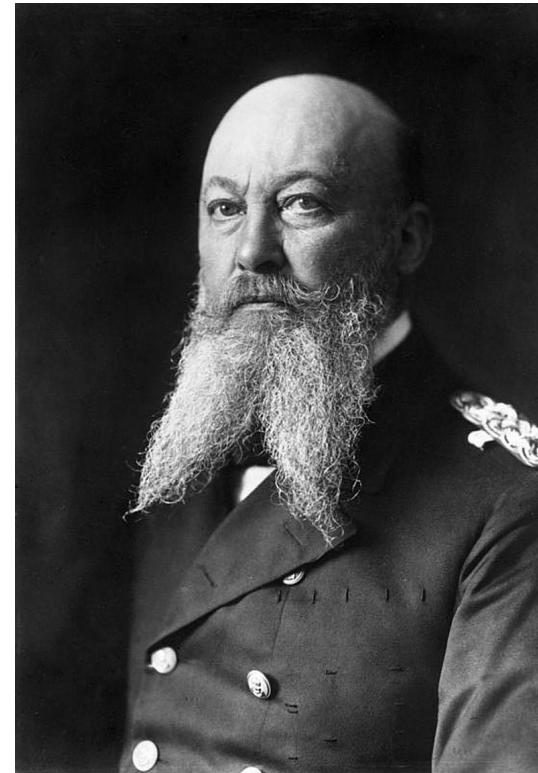
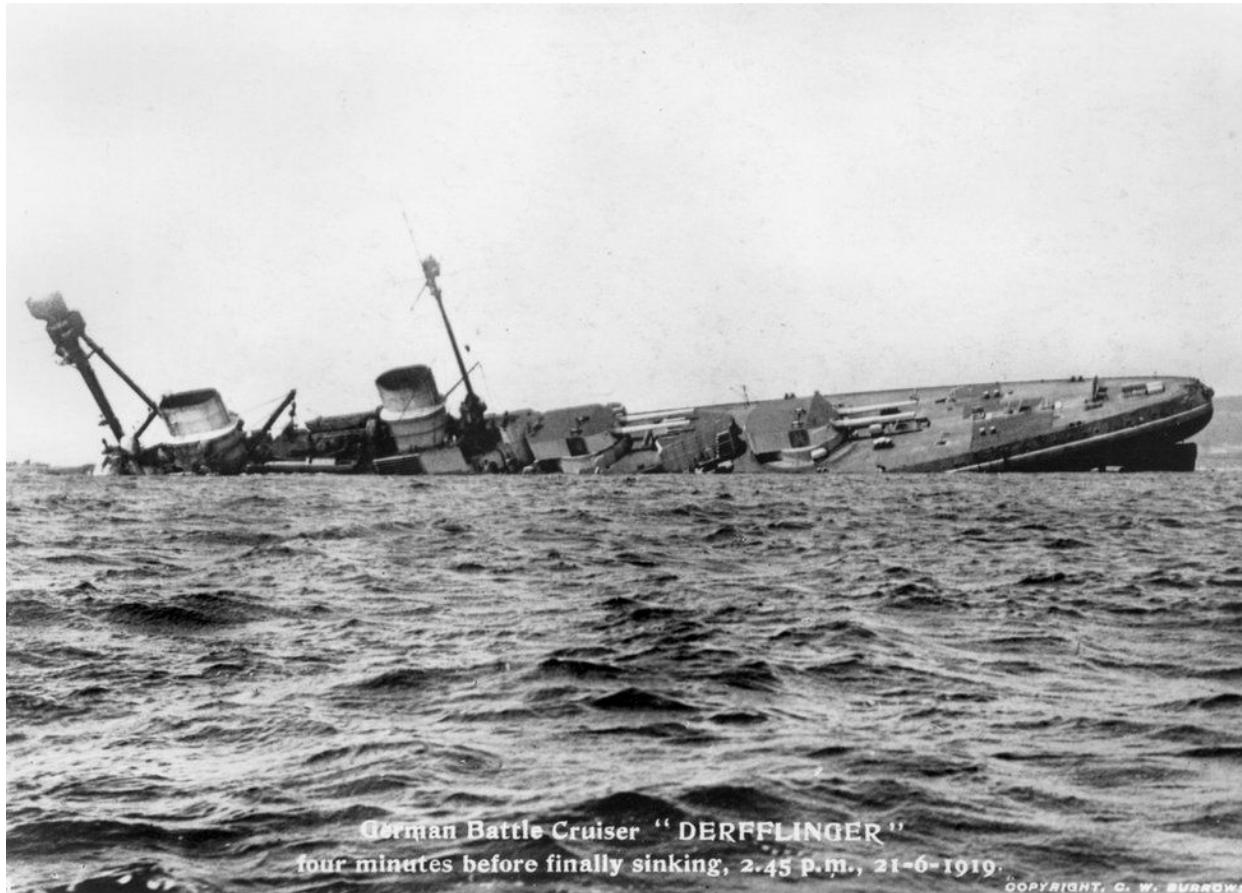


Photograph circa November 1919

Scapa Flow has a shallow sandy bottom not deeper than 60 metres (200 ft) and most of it is about 30 m (100 ft) deep, and is one of the great natural harbours/anchorages of the world

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# Scuttling or Dumping?



'On 21 June 1919, believing the British intended to seize the fleet, Rear Admiral Ludwig von Reuter gave the order to **scuttle** every ship.'

**Note the language.**

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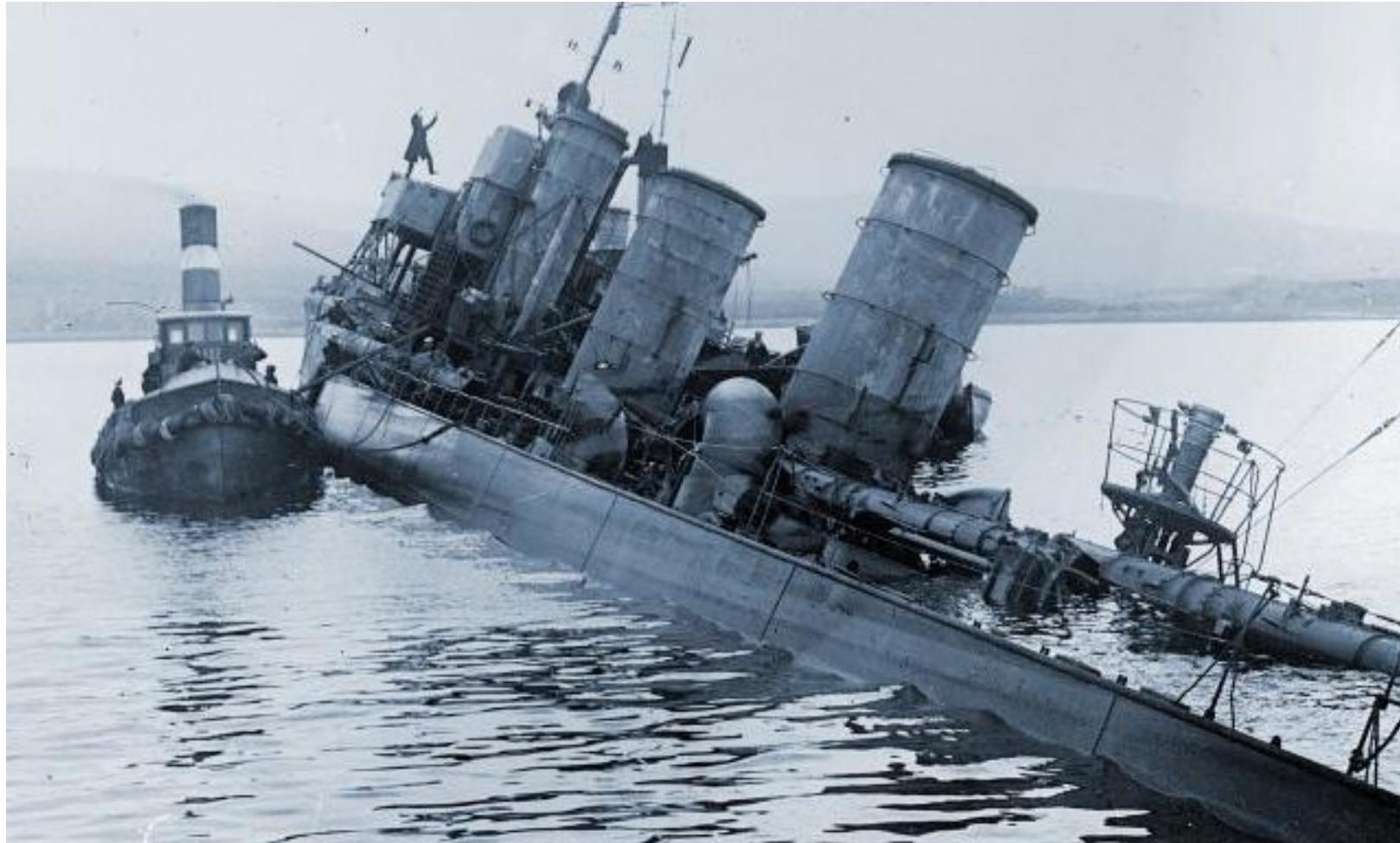
# SMS Bayern



Of the 74 German ships interned at Scapa Flow, 52 (or an equivalent of about 400,000 tons of material) were scuttled within five hours, representing the greatest loss of shipping in a single day in history.

This was also the day on which the final German casualties of the First World War were to be claimed: 9 sailors were shot and killed and 16 were injured by the British when they refused to help save the ships.

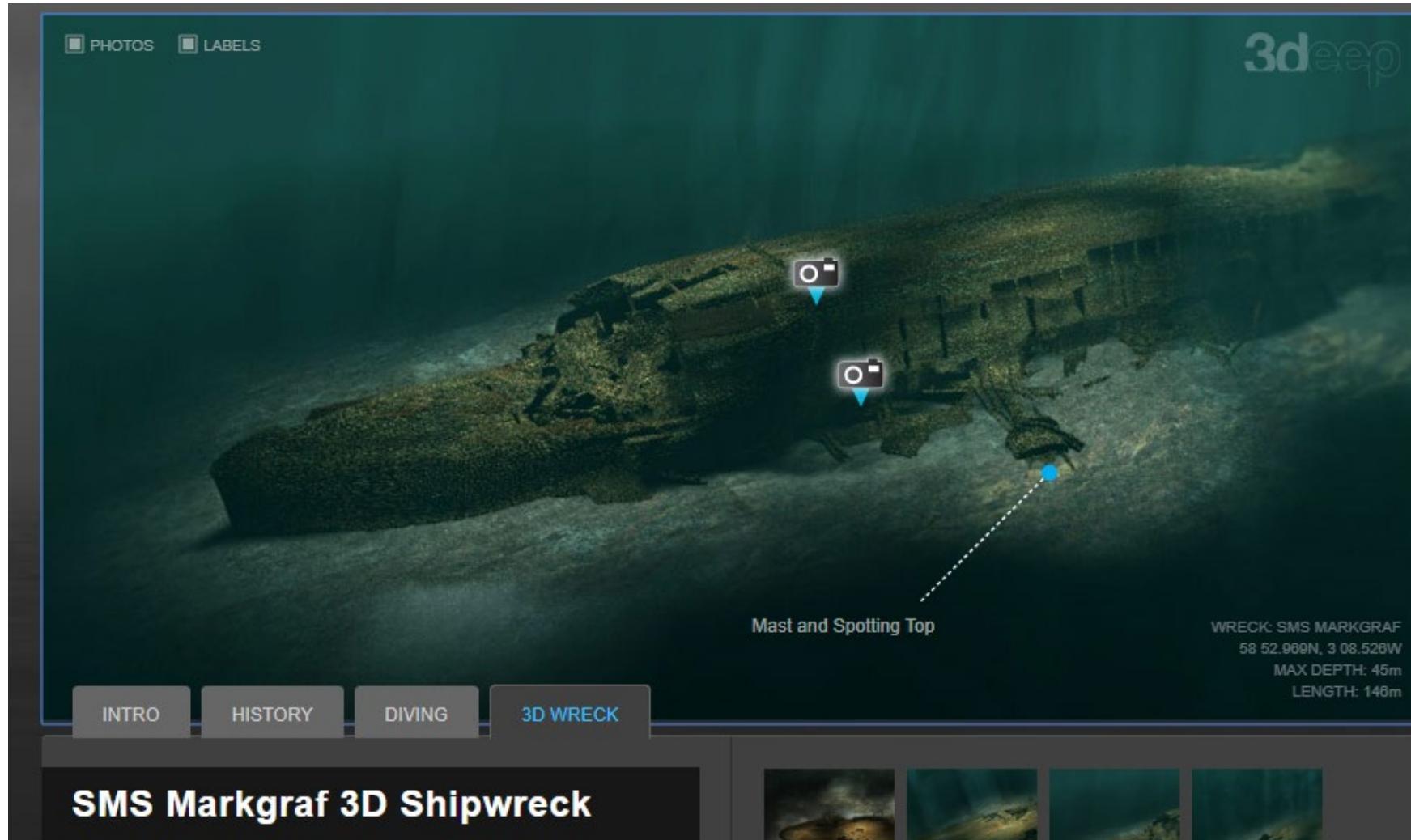
# Salvage



During the 1920s and 1930s the majority of the scuttled ships of the German High Seas Fleet were raised. It was one of the largest maritime salvage operations in history. Of the 52 ships that sank, only 7 remain beneath the waters of Scapa Flow.

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# SMS MArkgraf



PHOTOS    LABELS

3deep

Mast and Spotting Top

WRECK: SMS MARKGRAF  
58 52.968N, 3 08.526W  
MAX DEPTH: 45m  
LENGTH: 146m

INTRO HISTORY DIVING 3D WRECK

SMS Markgraf 3D Shipwreck

'Today the wrecks of three battleships, three light cruisers and a fast mine-layer – ships that all escaped complete removal during salvage operations – remain on the seabed of Scapa Flow.'

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United Nations  
Educational, Scientific and  
Cultural Organization



The Protection of  
the Underwater Cultural  
Heritage

# Underwater Cultural Heritage

## Article 1 – Definitions

For the purposes of this Convention:

1. (a) “Underwater cultural heritage” **means all traces of human existence having a cultural, historical or archaeological character which have been partially or totally under water, periodically or continuously, for at least 100 years such as:**

- (i) sites, structures, buildings, artefacts and human remains, together with their archaeological and natural context;
- (ii) vessels, aircraft, other vehicles or any part thereof, their cargo or other contents, together with their archaeological and natural context; and
- (iii) objects of prehistoric character.

(b) **Pipelines and cables placed on the seabed shall not be considered as underwater cultural**

**(c) Installations other than pipelines and cables, placed on the seabed and still in use, shall not be considered as underwater cultural heritage.**



# Scapa Flow

Find out about Scapa Flow in Orkney and how we're protecting the wrecks of the German High Seas Fleet.

## How we protect the wrecks

Since 2001, the remains of [three battleships](#) and [four cruisers](#) of the German High Seas Fleet scuttled in Scapa Flow in 1919 have been protected as scheduled monuments.

*'Under current marine planning laws and policies, whether or not these wrecks are designated, a marine license would now be required and heritage implications would be considered as part of the licensing process.'*

1. Right to salvage denied (particularly tough when that property was sold via the Government)
2. Speculation that they now fall under the Buildings (Scotland) Act 2003 conferring obligations on Orkney Islands Council



ABOUT US

20 February 2019

# Consultation launched to protect Scapa Flow's wartime heritage

A consultation has been launched seeking views from the public on the designation of Scapa Flow as a Historic Marine Protected Area (HMPA).

**Where is the corresponding environmental impact assessment?**