

# OSEBERG WEST HYBRID SURVEY

## Case - nodes lost under extensive trawling

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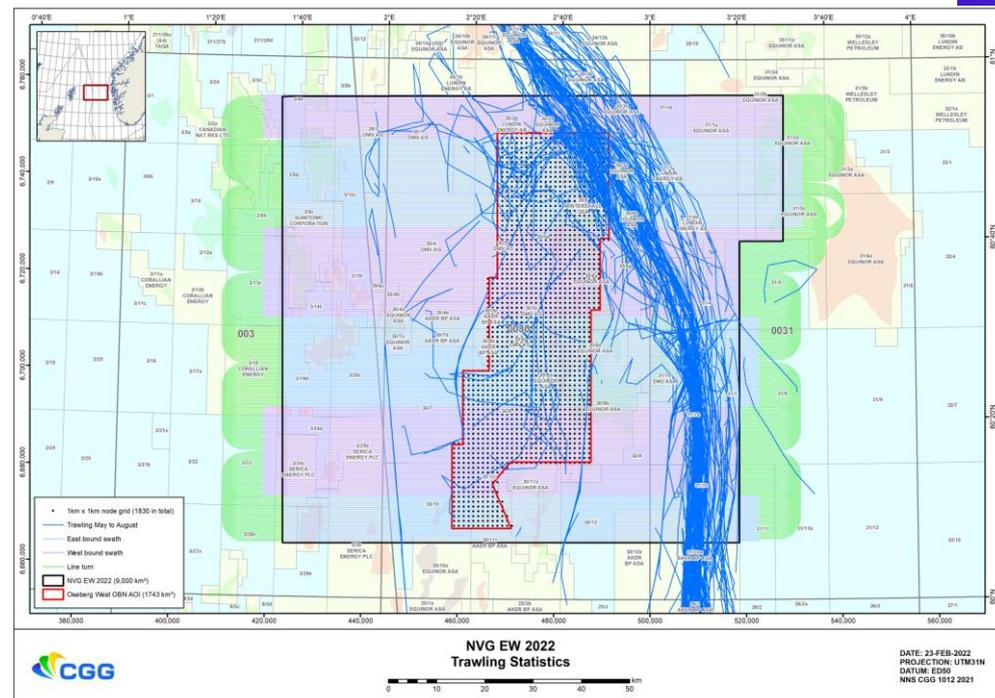
[cgg.com](http://cgg.com)





# Background

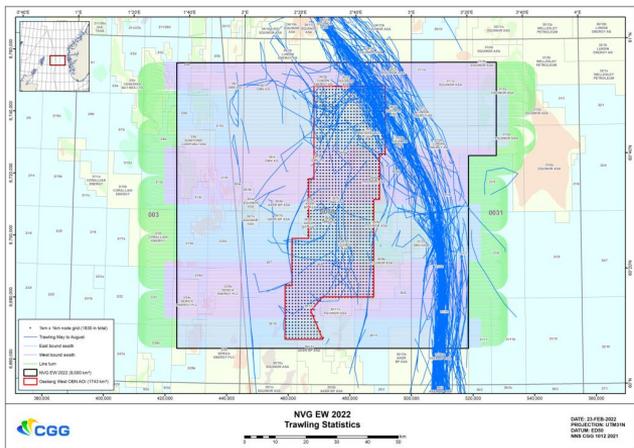
- Test of technology for smaller area in 2021
- Planning of survey 2022 with the following technology involving streamers and nodes;
  - 1 x 1 km node grid
  - Node drop technique
- Evaluating the statistical data for trawling we saw that a corner of the contractual survey area was covered with a lot of trawling.
- Consultation meetings were held with the Department of Fisheries while discussing the permit application. In agreement with them the nodes in the North-Eastern corner were moved.
- As part of the risk assessment, we accepted the risk of some nodes to be relocated during operation.



# Historic data

The statistical data from the Department of Fisheries is actively used in the survey planning. The data from pre- and post-brexit indicated that the majority of trawling took place in the Norwegian Trench, and that only arbitrary trawl lines were seen in the node drop areas – primarily trawling along pipelines.

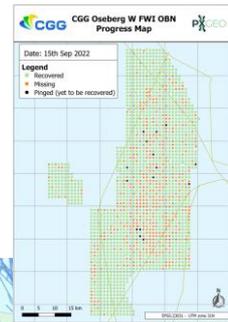
Nodes were therefore purposefully placed away from the pipelines



2017 (pre-Brexit)



2021 (post-Brexit)





# High operational risk

29/07/2022

Page 2

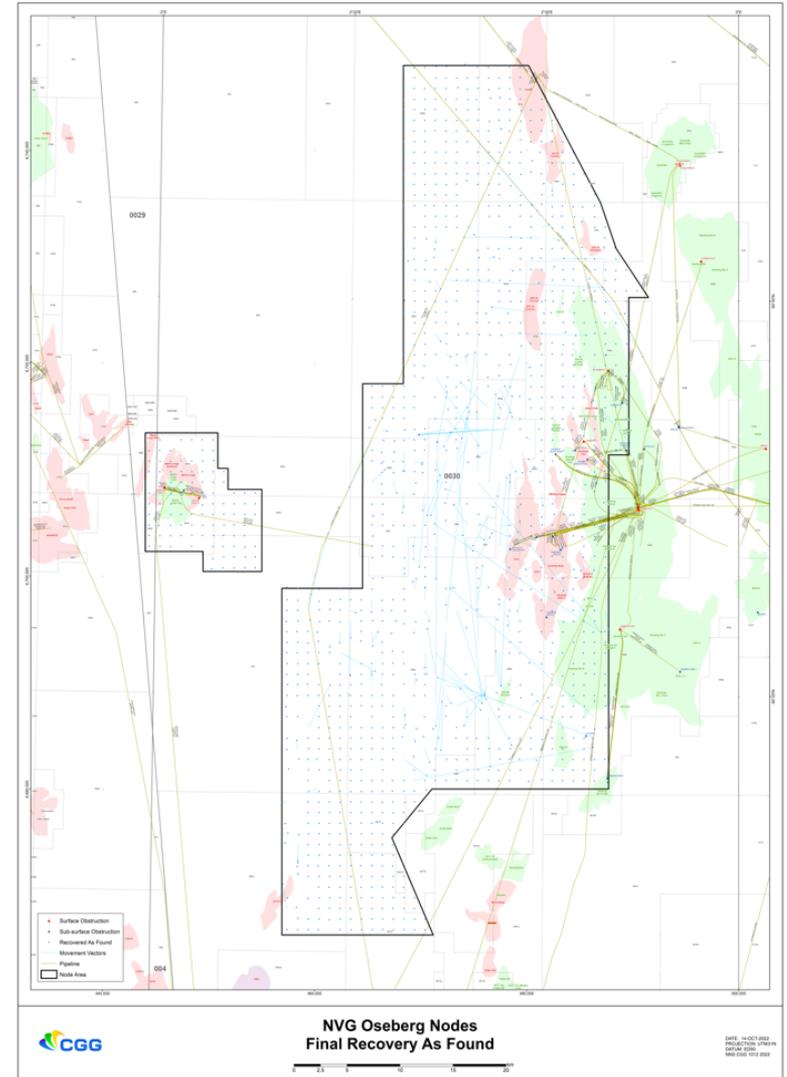
- Another two fishing vessels, Budding Rose and Sunrise, were encountered on the port side of AWA's path, again operating without AIS, but with sufficient CPA, but indeterminate plans. Agreement was reached for Rose & Sunrise to delay their move south to allow AWA continue uninhibited - they had no trawl ongoing. Their commitment was short-lived as within 30 minutes (without any trailing equipment deployed) they did the opposite of what was agreed and turn 180° and proceeded due south to cross AWA's path with 0.6NM CPA. AWA reduced speed to increase the CPA with both fishing boats crossing ahead of AWA - see pic below. FLO's have all necessary information to make a full report to the Norwegian Coast Guard.

- This is just one of several accounts of operational risks the non-use of AIS have caused.
- Several vessels in the Danish and Scottish fleet does not use AIS, or have their AIS turned so low that they are invisible.



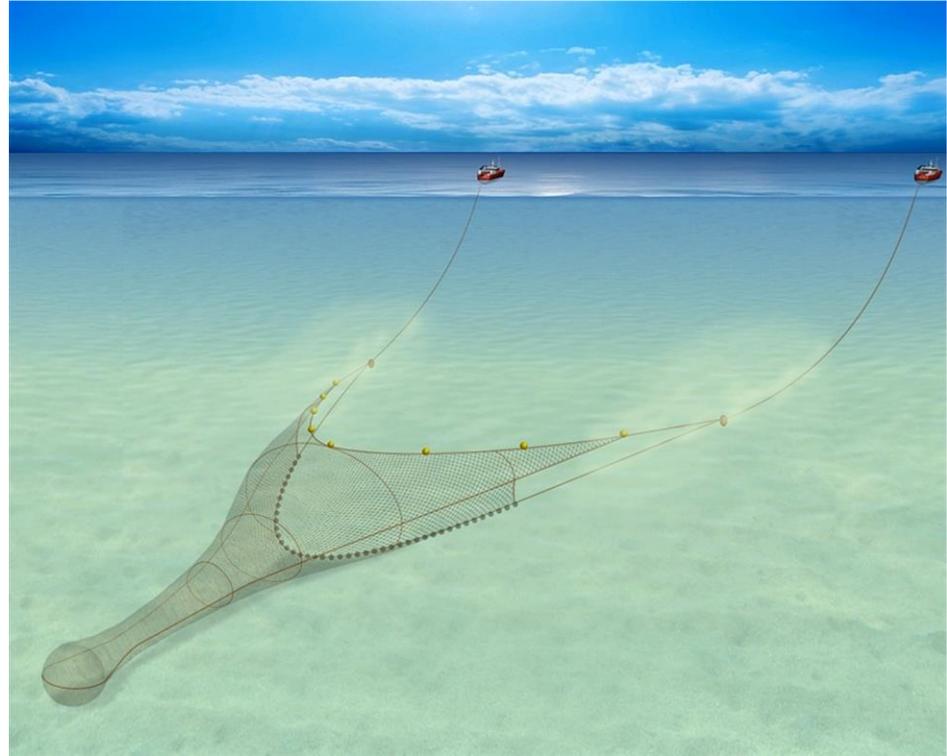
# HSE

- Both the navy and the coast guard was informed of potential nodes lying next to pipelines
- The Directorate of Fisheries and HI are both briefed on the loss of nodes.
- They have not reported to have damaged any fishing gear



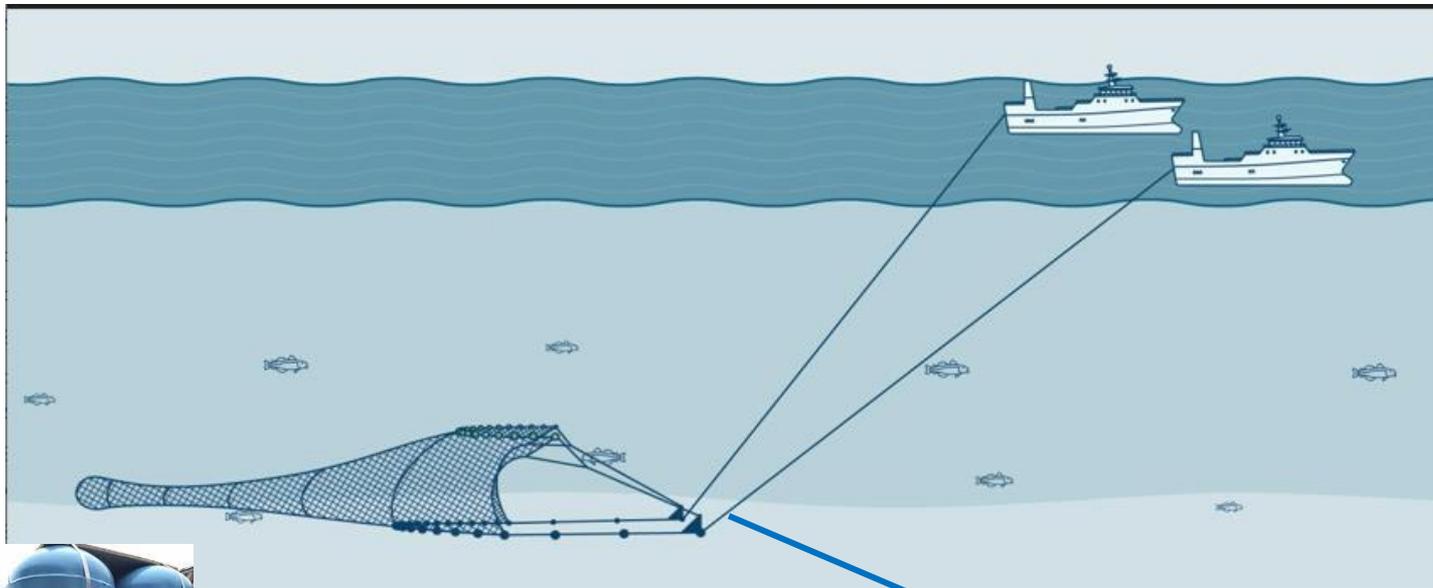


# Scottish trawlers – understanding the method of fishing





# Scottish trawlers – fish herding

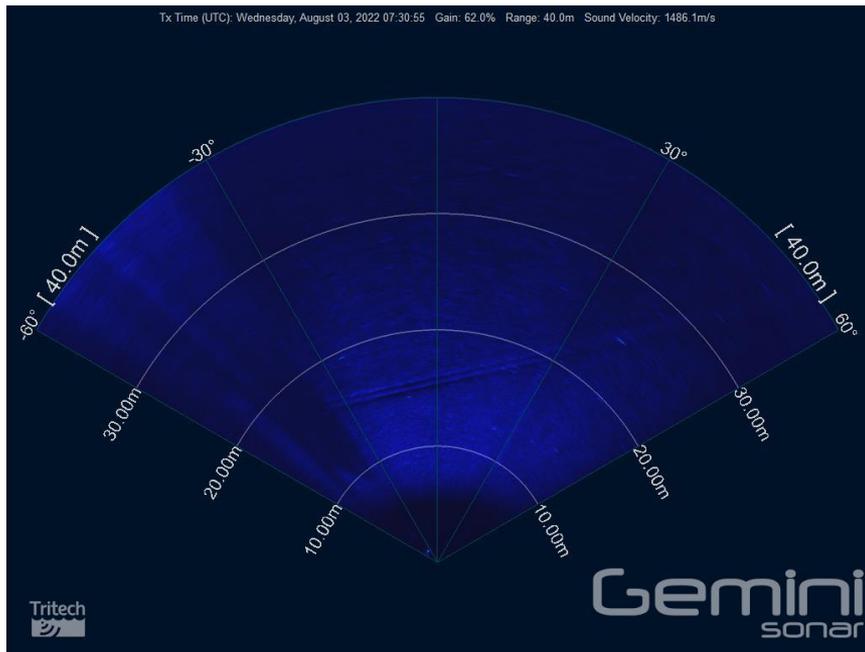


Steel bobbins





# Trawl tracks on the seabed



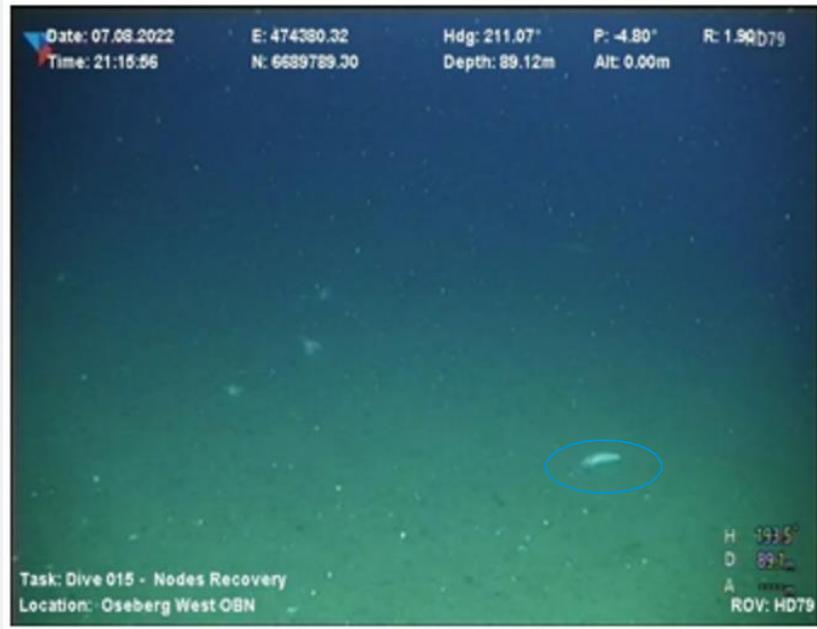
## 5 Trawler mark observed at RL3321 – RP2561



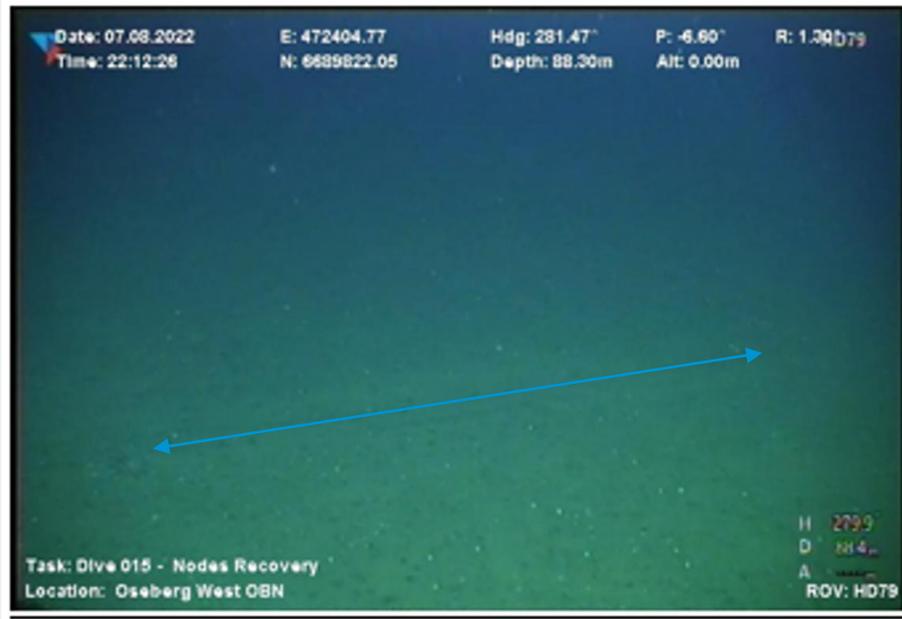


# Trawl tracks were seen at many of the node stations

## 11 Death fish observed at RL3321 – RP2201

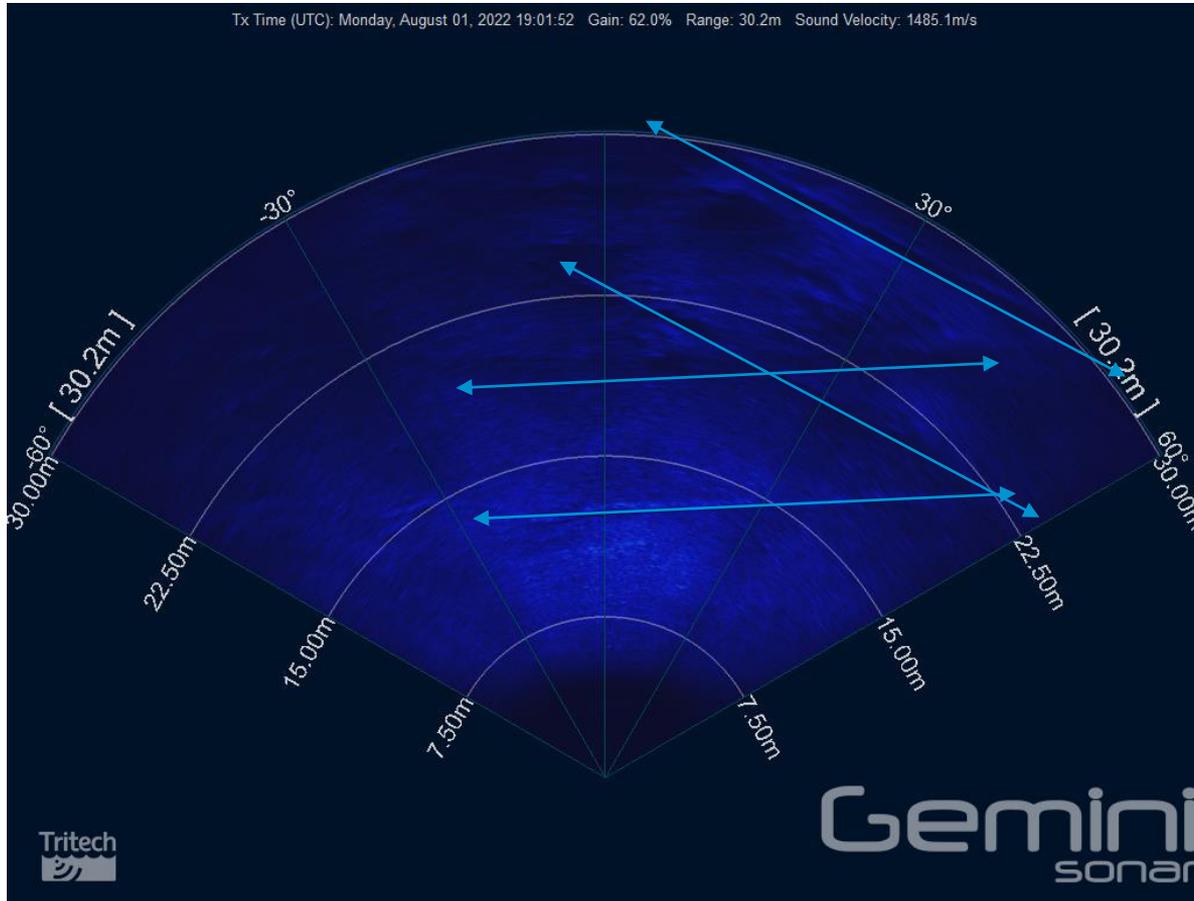


## 12 Trawler mark observed at RL3321 – RP2161



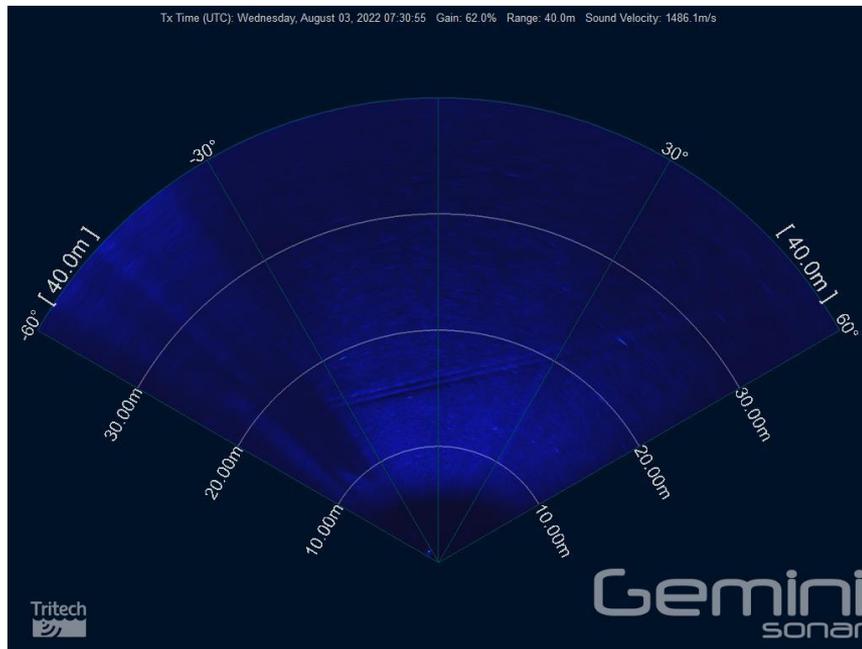


# Sonar images of trawl tracks

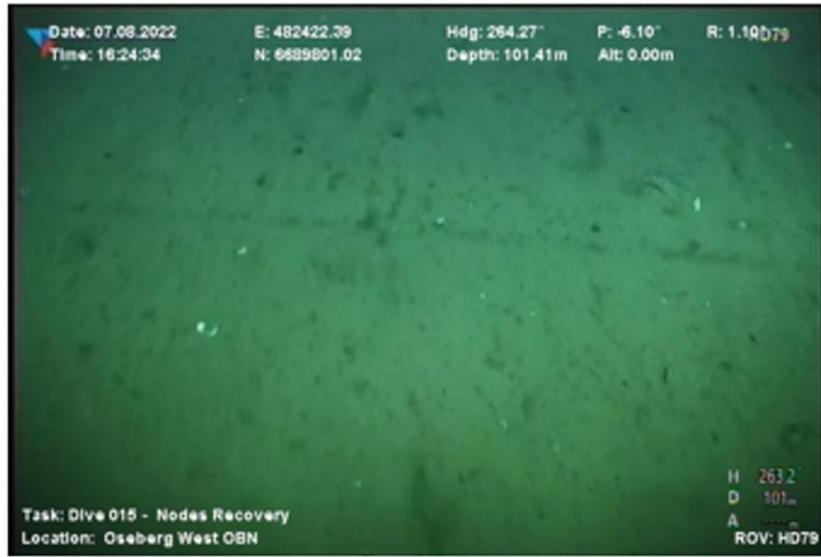




# Trawl tracks on the seabed



## 5 Trawler mark observed at RL3321 – RP2561





# The environmental aspect

- The bi-lateral agreement with the UK from December 2021r highlights that safeguards should be put in place so that the fishing do not have detrimental consequences for fish stocks and the wider environment
- From the use of ROV and Sonar we see that the trawling leaves large scour marks on the seabed
- The ROV has also observed dead fish lying on the seabed
- The method of herding fish is enabled by creating clouds of dust on either side of the trawl, whirling up the sediments on the seabed

## AGREED RECORD OF FISHERIES CONSULTATIONS BETWEEN THE UNITED KINGDOM AND NORWAY FOR 2022

21 DECEMBER 2021

### 7. ZONAL ACCESS

7.1 The Delegations agreed for 2022 to establish mutual zonal access of 30,000 tonnes for all demersal/whitefish stocks in ICES Subarea 4. This will be on the basis that if the relevant Party's vessels are entitled to catch demersal/whitefish stocks in their own Exclusive Economic Zone, then that same entitlement will apply in the Exclusive Economic Zone of the other Party up to the maximum overall limit of 30,000 tonnes.

7.2 The Delegations committed to putting in place appropriate safeguards to ensure that these access arrangements do not have detrimental consequences for fish stocks and the wider marine environment. The Delegations noted the importance of suitable and robust monitoring mechanisms to detect and react swiftly to significant changes from historic

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fishing patterns and catches as a result of these new arrangements. They further agreed that they will formally review catch data quarterly and, where appropriate, implement amended management measures, for example quota management measures, as soon as practicable. The Delegations also recognised that, given the novelty of these arrangements, joint guidance on their implementation would be beneficial, and agreed to discuss this in early 2022.

<https://www.regjeringen.no/contentassets/8e674a19756e44518c4641287b28e4db/uk-norge-avtale.pdf>

# Learnings

- Co-existence
- Planning tools and use of digital tracking
- Inclusion of all impacted parties as early as possible
- Communication – communication - communication

