

INSITE

Influence of
man-made
structures in
the ecosystem

The INSITE Programme: Phase 2 Update

SUT/MASTS Decom Workshop
October 2019

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INSITE Background and Milestones (2010-2019)

	Year	Milestone
	2010-2012	Decommissioning Baseline Study
	2011	Baseline Study Scientific Advisory Board recommends a 'Long-term Environmental Study'
Phase 1	2014	Eight companies sign the INSITE Phase 1 JIP Agreement
	2015	INSITE Phase 1: Call for Proposals (35 proposals received)
	2016-2017	INSITE Phase 1 Research
	2018	Eight companies sign the INSITE Phase 2 JIP Agreement, confirming partnership with NERC
Phase 2	2019	INSITE Phase 2: NERC Call for Proposals

On the **effect** of structures:

- Detailed understanding of the composition and function of species on and around man-made structures
- Increased our understanding of the effect of structures on:
 - The abundance and diversity of key species
 - The distribution and behaviour of sea mammals and birds
 - Planktonic communities from pre-North Sea oil and gas until now

On the **connectivity** or *reef-effect* of man-made substrate:

- Modelling ecosystems to predict the effect of man-made structures (oil and gas, renewables and wrecks) on a range of species across the North Sea
- Enabling the prediction of ecological consequences of altering the network of structures

Project summaries and peer reviewed publication listing available on <http://www.insitenorthsea.org>



INSITE Phase 1 - Scientific Observations

- Significant progress has been made in understanding the effects and connectivity of man-made structures in the North Sea Ecosystem
- A major step forward has been achieved in modelling the role of structures in the ecosystem
- However:
 - More data is needed for ground-truthing of models
 - Phase 1 research is geographically unbalanced.

INSITE Independent Scientific Advisory Board, October 2017

Partnership

- *Natural Environment Research Council¹*
- *CEFAS² (DEFRA³)*
- *Industry Partners: BP, Chevron, CNRI, ExxonMobil, Shell, Repsol-Sinopec, Total, TAQA Britani*



Objective

Increasing our understanding of the role of man-made structures in the North Sea ecosystem, i.e.:

- Determine the **effect** of man-made structures in the North Sea over time
- Evaluate the **connectivity** of man-made structures in the North Sea

Timeline

- 5-Year programme
 - Commenced: Q4 2018
 - Conclusion: End 2022
-

INSITE Phase 2 – Scope and Funding (2018-2022)

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2

Data Initiative

Access to new industry
acquired data



Scope

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Industry Partners Funding
£2.0M,
Plus In-Kind Support

Funding

2018-2022

1

Science Programme

Built on INSITE Phase 1;
5-year Research Programme



Joint Strategic Response
£5.0M



DEFRA funding
£600K

2019-2022

3

Technology Programme

Identification and
development of low-cost
ecological data acquisition
systems

INSITE

Industry Partners;
funding to be confirmed

2020-2022

-
- NERC will be investing £5m in its INSITE research programme.
 - The overarching research question of the NERC research programme will be: ‘How critical are man-made structures in the North Sea to ecosystem structure and function?’
 - The programme will aim to tackle the critical gaps in scientific understanding needed to address this question.
 - The programme will be delivered in collaboration with Cefas.



Data Initiative: *INSITE Interactive* – The Data Sharing portal

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The screenshot displays the INSITE Interactive web application interface. At the top, the navigation bar includes the INSITE logo, the text "INSITE Interactive", and the subtitle "WebMap built by Xodus Group on behalf of INSITE". Navigation links for "Contact Us", "User Guide", "Data Guide", "Discussion Forum", "Xodus Website", "INSITE Website", and "Legal" are also present.

The main interface is divided into several sections:

- SEARCH DATA / DATA SUMMARY:** A top navigation bar with a search input field containing "Search for infrastructure..." and a search icon.
- Tasks:** A sidebar on the left with a "Results" header and three search options: "Search Survey Data", "Search UK Benthos (2014) Data", and "Search Marine Data Exchange (MDE) Data".
- LEGEND:** A sidebar on the left showing "Survey Data (Points)" with a color-coded legend for the number of features: > 42 (dark green), 30 (medium green), 20 (light green), 10 (yellow-green), and 1 (yellow). Below it, "Survey Data (Lines)" is partially visible.
- Map:** The central map shows the North Sea region, including the Shetland Islands, Outer Hebrides, Rockall Rise, Celtic Sea, English Channel, and parts of the United Kingdom, Ireland, Norway, Denmark, and Germany. A yellow line traces a path through the North Sea, and several yellow squares of varying sizes indicate data points. A search bar is located in the top right of the map area.
- ABOUT:** A sidebar on the right with the INSITE logo and the text "[INTERACTIVE]". It contains a paragraph: "The INSITE Programme was initiated in 2012 to produce independent science with the objective of developing a greater understanding of the influence of man-made structures on the North Sea ecosystem." Below this, it states: "Having completed the first Phase in 2017, INSITE Phase 2 has been developed as a partnership between industry, NERC and DEFRA to build on the science produced in Phase 1 and most significantly, facilitate first-time access to ecological data collected by industry during the course of their operations." Further down, it says: "INSITE Interactive has been developed to provide visibility of the ecological survey data which is now being made available by industry partners to support research relating to the INSITE objective. The portal provides access to geo-referenced descriptions of data in the form of primary".
- DATA SOURCES:** A sidebar on the right with the heading "DATA SOURCES" and a paragraph: "UK Oil and Gas data layers, including UK Benthos data, are made available by Oil and Gas Authority through the National Data Repository (NDA) and contains public sector information licensed under the Open Government Licence v3.0. These include:". Below this, a list of data sources is shown: "Median Line", "UKCS Block", and "Licence Areas".

At the bottom of the map, the text "Esri, GEBCO, DeLorme, NaturalVue | Esri, GEBCO, IHO-IOC GEBCO..." and the Esri logo are visible.

Data Initiative: *INSITE Interactive* – The Data Sharing portal

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INSITE | **INSITE Interactive**
WebMap built by Xodus Group on behalf of INSITE

Contact Us | User Guide | Data Guide | Discussion Forum | Xodus Website | INSITE Website | Legal

SEARCH DATA | DATA SUMMARY

Tasks | Results

- Search Survey Data
- Search UK Benthos (2014) Data
- Search Marine Data Exchange (MDE) Data

LEGEND

Survey Data (Points)

Number of features

> 42
30
20
10
1

Survey Data (Lines)

Search for infrastructure...

Orkney Islands

Moray Firth

Firth of Forth

Glasgow

Edinburgh

North Sea

Norwegian Sea

155

243

199

705

85

POWERED BY esri

OceanWise, Esri, GEBCO, DeLorme, NaturalVue | Esri, GEBCO, IHO...

ABOUT

INSITE

[INTERACTIVE]

The INSITE Programme was initiated in 2012 to produce independent science with the objective of *developing a greater understanding of the influence of man-made structures on the North Sea ecosystem.*

Having completed the first Phase in 2017, INSITE Phase 2 has been developed as a partnership between industry, NERC and DEFRA to build on the science produced in Phase 1 and most significantly, facilitate first-time access to ecological data collected by industry during the course of their operations.

INSITE Interactive has been developed to provide visibility of the ecological survey data which is now being made available by industry partners to support research relating to the INSITE objective. The portal provides access to geo-referenced descriptions of data in the form of primary

DATA SOURCES

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- Median Line
- UKCS Block
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- SEARCH DATA / DATA SUMMARY:** A sidebar on the left with 'Tasks' and 'Results' sections. The 'Tasks' section lists search options: 'Search Survey Data', 'Search UK Benthos (2014) Data', and 'Search Marine Data Exchange (MDE) Data'.
- LEGEND:** A sidebar on the left showing 'Survey Data (Points)' and 'Survey Data (Lines)'. The 'Points' legend uses color-coded squares to represent the number of features: > 42 (dark green), 30 (medium green), 20 (light green), 10 (yellow-green), and 1 (yellow).
- Map:** The central map area shows the North Sea region, including the Orkney Islands, Moray Firth, and Firth of Forth. It displays a network of infrastructure (blue lines) and survey data points (colored squares and circles). A search bar at the top right of the map area says 'Search for infrastructure...'. A pop-up window titled '(1 of 2) Environmental Baseline Survey' provides details for a specific survey.
- ABOUT:** A sidebar on the right containing the 'INSITE [INTERACTIVE]' logo, a description of the programme's objectives, and information about the first phase completed in 2017.
- DATA SOURCES:** A sidebar on the right listing data sources: 'UK Oil and Gas data layers, including UK Benthos data, are made available by Oil and Gas Authority through the National Data Repository (NDA) and contains public sector information licensed under the Open Government Licence v3.0. These include: Median Line, UKCS Block, Licence Areas'.

Environmental Baseline Survey Details:

OBJECTID	253
Name of Survey	Report No. 9237.2V3.1
Type of Survey	Environmental Baseline Survey
Purpose of the Survey	Available in Report Abstract
Survey Code	Available on Request
Asset	Proposed Location Dee Drilling Rig (Revised)
Start Date of Survey	13/01/2007
End Date of Survey	04/02/2007
Survey Frequency	Not Provided

Map footer: OceanWise, Esri, GEBCO, DeLorme, NaturalVue | Esri, GEBCO, IHO... **POWERED BY esri**

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- Science Programme
 - NERC Call – Grant awards Q1 2020
 - Data Initiative:
 - Post-NERC: Opening the portal to other researchers working within the scope of INSITE Phase 2
 - New sponsor category – ‘Associate Sponsor’
 - Data sharing role
 - Increase volume of data available to scientists
 - Technology Programme
 - Technology Scope Framework Q4 2019

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