

Decommissioning offshore infrastructure - policy

Scope of this Policy

1. This policy covers the Scottish Wildlife Trust's views on the decommissioning of offshore oil and gas infrastructure in the context of OSPAR Decision 98/3 on the Disposal of Disused Offshore Installations¹. It supports both the Trust's vision for 'a network of healthy, resilient ecosystems supporting expanding communities of native species across large areas of Scotland's land, water and seas'² and the Wildlife Trusts' vision for Living Seas³.

Policy Headline

2. The Scottish Wildlife Trust believes that the current presumption of complete removal of offshore infrastructure should be reconsidered to allow for a rounded assessment of the options for each structure based on likely net positive or negative environmental impact, and whether removal is technically feasible.

Introduction

3. Oil and gas has been a major industry in the North Sea for over 40 years. Today there is extensive offshore infrastructure associated with the exploration and production of oil and gas, including seabed and platform-mounted production facilities and networks of pipelines.⁴ Many of these structures are now reaching the end of their productive life.
4. Operators are under legal obligation to decommission infrastructure once production has ceased and eventually over 470 installations, 10,000km of pipeline and 5,000 wells will have to be decommissioned. Additionally, drill cuttings will have to be dealt with and accumulated debris cleared. This will be a significant activity in the North Sea over the next 30 years and industry forecasts estimate that £30-40 billion is to be spent between 2013 and 2040 on the UK Continental Shelf.⁵ Regulation is in place to protect the UK taxpayer from future liability although the UK Government has set tax relief at between 20% and 75% of decommissioning costs and in 2012 agreed to provide assurances over the level of relief that would apply. The total projected cost of tax relief on decommissioning is estimated at around £20 billion.⁶
5. Under current regulations it is estimated that over 90% of offshore installations will be entirely removed for re-use, recycling or disposal on land. The remainder, comprising very large steel and concrete structures can be considered for partial removal.⁷ Five platforms have been decommissioned in-situ to date on the UK Continental Shelf and a further two have applications for partial removal pending.⁸

¹ OSPAR Decision 98/3 on the Disposal of Disused Offshore Infrastructure. Available at: <http://www.ospar.org/>

² [Scottish Wildlife Trust \(2009\) Natural Connections: a vision for re-building Scotland's wildlife](#)

³ [The Wildlife Trusts: Living Seas](#)

⁴ A detailed map and GIS shapefiles showing oil and gas infrastructure is available at <https://www.gov.uk/oil-and-gas-offshore-maps-and-gis-shapefiles>

⁵ Oil & Gas UK Economic Report 2013 Available at: <http://www.oilandgasuk.co.uk/2013-economic-report.cfm>

⁶ HMRC Annual Report and Accounts 2011-12 Available at <http://www.hmrc.gov.uk/about/annual-report-accounts-1112.pdf>

⁷ Decom North Sea Market Info. Available at: <http://www.decomnorthsea.com/market.cfm>

⁸ DECC - Oil and gas: decommissioning of offshore installations and pipelines
<https://www.gov.uk/oil-and-gas-decommissioning-of-offshore-installations-and-pipelines>

Regulatory Context

6. International obligations on the disposal of offshore installations are set out in OSPAR⁹ Decision 98/3. The legally binding decision prohibits the dumping and leaving wholly or partly in place of disused offshore installations, and thus introduces a presumption of full removal for re-use, recycling or final disposal of the installation on land.¹⁰
7. The decision recognises the technical difficulty in removing the ‘footings’ of large steel jackets weighing more than 10,000 tonnes, concrete installations (including gravity-based structures and concrete anchors), and structures with significant damage or deterioration (otherwise preventing removal). Options for leaving these structures in place can be considered by way of applying for derogation from the general rule. The derogation does not apply to any steel installation placed after 9 February 1999, the date the decision came in to force. All ‘topsides’ (i.e. not part of the substructure) must be removed in any case.
8. The decision allows the consideration of amendments to the categories for derogation, taking into account the latest experience and research. Reviews to date, most recently in 2013, concluded that the operational experience to date was insufficient to justify any amendment to the derogation criteria. A further review will be undertaken in 2018.¹¹
9. The decommissioning of offshore oil and gas installations and pipelines in the UK is governed by the Petroleum Act 1998, as amended by the Energy Act 2008. The responsible UK department, and competent authority in relation to OSPAR, is the Department for Energy and Climate Change (DECC).¹² Operators must apply to DECC for approval of a decommissioning programme, including any case for derogation under OSPAR 98/3. Under DECC guidance the assessment of disposal options should include consideration of effects on the marine environment, including the impact on biota from exposure to contaminants and physical effects and any conflict with the conservation of species and habitats. An Environmental Impact Assessment (EIA) must support the decommissioning programme.¹³
10. The Marine Strategy Framework Directive¹⁴ is the first all-encompassing piece of EU legislation specifically aimed at the protection of the marine environment, with its primary objective to achieve Good Environmental Status (GES) of all EU waters by 2020 at the latest. The Directive sets out 11 high-level Descriptors of GES, which cover the key aspects of the marine ecosystem and the main human pressures on them (see appendix 1).

North Sea Ecosystem

11. Human activities on land and sea place significant pressure on the health of marine ecosystems globally. Overfishing and destructive fishing, eutrophication, pollution, litter, energy production, fossil fuel and aggregate extraction, and the impacts of climate change are all on-going concerns in the North Sea.¹⁵
12. Centuries of fishing activity mean that it is highly likely that there are no pristine habitats remaining in the North Sea and examples of bottom habitat that have been unaffected by fishing activity are rare.¹⁶
13. There are however hypotheses, as yet not fully explored, that the presence of oil and gas infrastructure has contributed to the North Sea ecosystem in two areas – the creation of i) spatial protection in the form of vessel exclusion zones, and ii) habitat in the form of *de facto* artificial reefs.

⁹ OSPAR is the mechanism by which fifteen Governments of the western coasts and catchments of Europe, together with the European Community, cooperate to protect the marine environment of the North-East Atlantic. See: <http://www.ospar.org/>

¹⁰ The decision does not apply to pipelines. These are covered by the UK Petroleum Act 1998.

¹¹ DECC presentation to 2013 MASTS workshop *To Remove or not to Remove? The Challenge posed by Man- Made Structures on the Marine Environment*. Available at: http://www.masts.ac.uk/media/71931/sarah_tracy_decc_the_regulators_view_mast_29-8-13_.pdf

¹² Oil and gas, including offshore installations and pipelines, are matters reserved to the UK Parliament.

¹³ DECC (2011) Guidance Notes . Decommissioning of Offshore Oil and Gas Installations and Pipelines under the Petroleum Act 1998.

¹⁴ Directive 2008/56/EC

¹⁵ OSPAR, 2010. Quality Status Report 2010. OSPAR Commission. London. 176 pp. Available at: <http://qsr2010.ospar.org/en/index.html>

¹⁶ Roberts, C. & Mason (2008) Return to Abundance: A Case for Marine Reserves in the North Sea. Report for WWF UK Available at: http://www.wwf.org.uk/filelibrary/pdf/marine_reserves_north_sea.pdf

Spatial Protection

14. There are a number of marine areas around our coastline where access and / or use are restricted for reasons other than conservation (e.g. safety, archaeological interest, military use). Where these place restrictions on potentially damaging activities, such as bottom trawl fishing, they can act as conservation-based Marine Protected Areas (MPAs).
15. For reasons of health and safety, vessel exclusion zones are set at a 500m radius from a central point at all offshore oil and gas structures on the UK Continental Shelf that project above the sea. Subsea structures such as wellheads may also have exclusion zones set by legal instrument.¹⁷ While the overall area excluded from fishing is likely to be small (estimated at c.1% of the North Sea¹⁸), it should be looked at in the context of the UK North Sea's only designated No Take Zone at Flamborough Head, Yorkshire¹⁹ (c. 1 sq.km or 0.0001% of the North Sea area). MPA coverage in the North Sea is currently 10.39% and includes sites designated under the Birds And Habitats Directives as well as national legislation.²⁰ However, such designations do not necessarily result in the exclusion of human activity.
16. In Scotland, area-based measures such as vessel exclusion zones can potentially be recognised as contributing to an overall network of MPAs but are unlikely to be designated as such.²¹ According to IUCN (International Union for the Conservation of Nature) guidelines, offshore installations that may have an indirect benefit to nature conservation by increasing biodiversity around underwater structures and by excluding fishing and other vessels should not automatically be classified as MPAs as they have no stated aim for nature conservation.²²

Habitat Creation

17. An artificial reef is a submerged structure placed on the seabed deliberately, to mimic some characteristics of a natural reef.²³ Under this definition, offshore infrastructure cannot be considered as an artificial reef as this is not the primary objective of its placement, nor is this function built into its design. Nevertheless offshore structures can in some cases support species associated with natural reefs. For example, the cold water, reef-forming coral *Lophelia pertusa*, a species undergoing overall decline in the NE Atlantic due to mechanical damage by fishing gear, has been recorded on North Sea oil rigs.²⁴
18. In the US, the states of Louisiana, Texas, Mississippi, and California have all passed specific legislation to establish programs for building artificial reefs from oil and gas platforms. Termed *Rigs to Reef* programs, 420 platforms in the Gulf of Mexico have been converted into artificial reefs (10% of all platforms removed).²⁵ However, it is notable that the principal driver for these rigs to reef programs has been the creation of recreational angling and diving opportunities that are not transferrable to the North Sea setting.
19. OSPAR Decision 98/3 in combination with the OSPAR guidelines on artificial reefs²⁶ currently rules out any potential for rigs to reef type approaches in the North Sea.

¹⁷ HSE (2011) Safety zones around oil and gas installations in waters around the UK. Available at: <http://www.hse.gov.uk/pubns/indg189.pdf>

¹⁸ DTI (2002) Strategic Environmental Assessment - SEA2 Technical Report TR_003. Available at: http://www.cefas.defra.gov.uk/media/20461/tr_003.pdf

¹⁹ NE IFCA Flamborough Head No Take Zone Available at: <http://www.ne-ifca.gov.uk/EasySiteWeb/GatewayLink.aspx?allId=114515>

²⁰ OSPAR Commission (2012) 2012 Status Report on the OSPAR Network of Marine Protected Areas, OSPAR Commission.

²¹ Marine Protected Areas in Scotland's Seas: Guidelines on the selection of MPAs and development of the MPA network. Available at: <http://www.scotland.gov.uk/Resource/Doc/295194/0114024.pdf>

²² Day J., Dudley N., Hockings M., Holmes G., Laffoley D., Stolton S. & S. Wells, (2012) Guidelines for applying the IUCN Protected Area Management Categories to Marine Protected Areas. Gland, Switzerland: IUCN. 36pp. Available at: https://cmsdata.iucn.org/downloads/uicn_categoriesamp_eng.pdf

²³ OSPAR Guidelines on Artificial Reefs in relation to Living Marine Resources (Reference number: 2012-3) Available at: <http://www.ospar.org>

²⁴ Hall-Spencer, J. & Stehfest, K. (2008) Assessment of *Lophelia* reefs in the OSPAR area. Available at: http://www.ospar.org/html_documents/ospar/html/p00423_at%20bdc%20revised%20version%20uk_lophelia.pdf

²⁵ Decommissioning and Rigs to Reefs in the Gulf of Mexico. US Department of the Interior Bureau of Safety and Environmental Enforcement Available at: <http://www.bsee.gov/Exploration-and-Production/Decommissioning/FAQ.aspx>

²⁶ OSPAR Guidelines on Artificial Reefs in relation to Living Marine Resources (Reference number: 2012-3). Available at: <http://www.ospar.org>

Future Research and Initiatives

20. There are currently joint industry and multi-stakeholder research programmes in development to explore the potential ecological role of offshore infrastructure in the North Sea. Furthermore there are potential opportunities for novel funding mechanisms arising through offshore decommissioning that could help in delivering improvements in the sustainable management of the North Sea area, in turn aiding the protection and enhancement of biodiversity and the provision of ecosystem goods and services.
21. INSITE²⁷ is a joint industry science based project with the objective of provide stakeholders with the independent scientific evidence-base needed to better understand the influence of man-made structures in the North Sea. It is proposed that the following four hypotheses will be tested:
 - I. Each structure is a different habitat type depending upon its engineering design, absolute and relative location and the local environment, but structures can be classified into different functional groupings.
 - II. Marine communities vary systematically across structures depending on their characteristics as defined by hypothesis 1.
 - III. The spatial and temporal variability in the North Sea ecosystem is large compared to the potential effects of offshore structures.
 - IV. North Sea structures represent an ecologically important component of the North Sea ecology because they operate as a large interconnected reef system.
22. The Living North Seas Initiative (LiNSI) is a cross-sector collaboration of key stakeholders, NGOs and industries that aims to improve the status of the North Sea ecosystem and develop a funding mechanism for improvement plans. Although in early stages of development, LiNSI is exploring the potential opportunities provided by the decommissioning of offshore oil and gas infrastructure.²⁸

Policy statements

23. The Scottish Wildlife Trust believes that until the scientific evidence-base is sufficiently developed to provide a full understanding of the role of offshore infrastructure in the marine ecosystem (positive and negative), the starting position should be the existing presumption for complete removal for re-use, recycling or disposal to land.
24. The Scottish Wildlife Trust is however prepared to support pragmatic solutions to decommissioning, based on likely net positive or negative environmental impact as determined through formal environmental assessment, and whether removal is technically feasible. The Trust accepts that in the future this could involve consideration of removal options for all structures on a case-by-case and / or a structure type basis rather than the current regulatory regime that defaults to full removal unless there are grounds for derogation.
25. The Scottish Wildlife Trust understands that options other than full removal represent potentially significant financial savings to operators. The Trust believes that these savings should be allocated to fund projects that aim to improve the long term the ecological health of the marine area, including helping relieve fishing pressure outside designated or *de facto* MPAs.
26. The Scottish Wildlife Trust believes that in the short to medium term operators, government and research institutions should take the opportunity to conduct pre-decommissioning monitoring of the exclusion zones around offshore infrastructure to establish baseline information on seabed habitats protected from physical disturbance by bottom trawl fishing.
27. The Scottish Wildlife Trust believes that while the habitat creation effect of offshore infrastructure may appear to benefit certain species there is as yet little evidence that platforms provide net ecological benefits to the marine ecosystem as a whole relative to areas left in or allowed to return to a natural

²⁷ Influence of man-made Structures in The Ecosystem <http://www.INSITEnorthsea.org>

²⁸ Living North Seas Initiative project overview. Available at: <http://www.forumforthefuture.org/project/living-north-sea-initiative/overview>

state. In particular, the Trust would urge caution on judging the value of a habitat (whether artificially created or not) on the basis of species richness alone, but also consider the value of naturally species poor habitats, particularly where these have a high degree of habitat integrity and functionality.

28. The Scottish Wildlife Trust will engage with and contribute as appropriate to research programmes and initiatives investigating the role of offshore infrastructure in the ecological health of the North Sea and exploring novel funding mechanisms for environmental outcomes. Future decommissioning strategies and international and national legislation should consider the recommendations from such initiatives.

Appendix 1

1. The Marine Strategy Framework Directive (MSFD) aims to achieve Good Environmental Status in Europe's seas by 2020. Good Environmental Status (GES) involves protecting the marine environment, preventing its deterioration and restoring it where practical, while using marine resources sustainably. It is transposed into UK law by the Marine Strategy Regulations 2010.
2. The Directive sets out 11 high-level Descriptors of Good Environmental Status (see below), which cover the key aspects of the marine ecosystem and the main human pressures on them.
3. Qualitative descriptors for determining good environmental status:
 - a) Biological diversity is maintained. The quality and occurrence of habitats and the distribution and abundance of species are in line with prevailing physiographic, geographic and climatic conditions.
 - b) Non-indigenous species introduced by human activities are at levels that do not adversely alter the ecosystems.
 - c) Populations of all commercially exploited fish and shellfish are within safe biological limits, exhibiting a population age and size distribution that is indicative of a healthy stock.
 - d) All elements of the marine food webs, to the extent that they are known, occur at normal abundance and diversity and levels capable of ensuring the long-term abundance of the species and the retention of their full reproductive capacity.
 - e) Human-induced eutrophication is minimised, especially adverse effects thereof, such as losses in biodiversity, ecosystem degradation, harmful algae blooms and oxygen deficiency in bottom waters.
 - f) Sea floor integrity is at a level that ensures that the structure and functions of the ecosystems are safeguarded and benthic ecosystems, in particular, are not adversely affected.
 - g) Permanent alteration of hydrographical conditions does not adversely affect marine ecosystems.
 - h) Concentrations of contaminants are at levels not giving rise to pollution effects.
 - i) Contaminants in fish and other seafood for human consumption do not exceed levels established by Community legislation or other relevant standards.
 - j) Properties and quantities of marine litter do not cause harm to the coastal and marine environment.
 - k) Introduction of energy, including underwater noise, is at levels that do not adversely affect the marine environment.