TOWERS OF LIFE A LEGAL STUDY ON RIGS-TO-REEF IN THE NORTH SEA©

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INTRODUCTION

The retirement of the baby boom generation has always been something of an impending economic threat. Governments do not just have to worry about the retirement of their citizens[1] they also have to consider how to manage the upcoming retirement, and subsequent decommissioning, of numerous offshore oil installations.[2] Retirees do not contribute to the economy in the same way that workers do and they tend to cost the state money, rather than make it money. This is not dissimilar to an oil installation that has reached the end of its operational life, which can result in some overwhelming consequences that the concerned stakeholders must mitigate.[3] It will be demonstrated that disposal at sea in the form of what is known as rigs-to-reef (RTR)[4] can achieve a more effective method of disposal than the normal practice of fully removing obsolete installations and taking them to land.

The central aim of this paper is not to simply discuss what the law is, but to assist policymakers in creating workable ideas that have the ability to transcend into practical guidelines. Chapter I will outline the history of the Brent Spar protest by showing how it has impacted policy; the legal argument used by Shell will be recreated and various recommendations will be made to improve practice; this will conclude with suggestions on how to implement clearer grounds of jurisdiction. Chapter II will provide an account of the environmental benefits of RTR and illustrate why now is a good time to adopt an encompassing RTR regime.

[1] An estimated 600,000 people turning 65 each year until 2018. See <http://www.telegraph.co.uk/finance/personalfinance/pensions/9563647/Recordnumbersreacetirement-age-as-baby-boomers-turn-65.html> accessed 16.11.14

[2] Total decommissioning expenditure across the UK's continental shelve is now expected to exceed £27bn by 2050. See <http://www.oilandgasuk.co.uk/cmsfiles/modules/publications/pdfs/OP049.pdf> accessed 16.10.14

[3] For an overview of all of the stakeholders involved in the process of decommissioning, see Dan Rothbach, *"Rigs-To-Reefs: Refocusing The Debate in California"* (2006-2007) 17 Duke Environmental Law & Policy F. 283

[4] RTR is a method of disposal that can support marine life

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Chapter III will consider the US environmental watchdogs that operate separately from government and will discuss the Gulf disaster and the importance of having a proactive approach to decommissioning; this will lead to a case being made for the development of a domestic UK framework that can comprehensively govern RTR in the North Sea Region (NSR) and, appropriately, the main legal hurdles posed to this will be considered. This will be followed in chapter IV, with an analysis of the liability issues surrounding RTR combined with recommendations on how the law should address this.

Finally, concluding remarks will be provided along with some overall recommendations on what the industry can learn from the Brent Spar protest and how to best implement an encompassing, and legally viable, regime that governs RTR in the NSR.

BRENT SPAR & THE SURROUNDING INTERNATIONAL LEGAL FRAMEWORK

A. CONFLICTING VIEWS: A BRIEF OVERVIEW

On April 30th, 1995, a group of Greenpeace activists boarded the Brent Spar buoy to protest against Shell's plans to dispose of the facility in a deep-water trench.[5] The Prime Minister at the time John Major expressed his support for Shell.[6] Such support was understandable as the licence granted to dump the Brent Spar was sustained by three main reports[7] and arguably the UK government did not want to upset one of the biggest employers in the world.[8] The oil industry had also been lobbying government for years to allow

[5] The UK government -February 16th 1995- approved the disposal method
[6] Christopher Barclay, *"The Disposal of Disused Oil Platforms, Research Paper"* (1995) Science and Environment Section 95/77
[7] A Safety and Environmental Assessment of the Options by Aberdeen University (AURIS report); an impact hypothesis; a report on the best practicable environmental option (BPEO)
[8] Shell currently employs 92,000 people in more than 70 countries. See < http://www.shell.com/global/aboutshell/who-we-are/our-people.html> accessed 17.11.14

offshore disposal.[9] Greenpeace, however, took the opposite view, claiming that it is unethical to dump at sea and oil companies cannot live in an ethical vacuum by going against the "collective consciousness" of the public.[10]

Greenpeace sternly opposed dumping at sea. Their website shows that the occupation of Brent Spar is a victory on the basis that the ocean is not a dumping ground [11] and, by occupying the Brent Spar, they successfully achieved a 'moratorium' on disposal at sea.[12] This is a reasonable argument simply because many, if not most, would agree that the ocean should never be used as a dumpsite[13] that international oil companies can exploit for their own benefit. Although, it is worth mentioning, this argument will probably be obsolete in the future since it has been argued that in accordance with rising populations the ocean will have to be used to dispose of waste.[14] Nonetheless, Greenpeace felt that they successfully intervened on behalf of the public interest by "sinking" a selfish dumping policy; a policy designed to benefit the operators by minimising their costs and one that Greenpeace was not willing to allow.[15] This argument was the basis for a protest that caught the oil industry by storm and heightened the international standards on abandonment at sea.[16]

[9] Kasoulides, G.C. "*Removal of offshore platforms and the development of international standards".* (1989) Marine Policy 249-263

[10] Greenpeace case was a restatement of the conservationist approach: recover, recycle, reuse. See BBC News story at <http://news.bbc.co.uk/1/hi/sci/tech/218527.stm > accessed 31.10.14

[11] Shell reverses decision to dump Brent Spar. See Greenpeace Website at < http://www.greenpeace.org/international/en/about/history/the-brent-spar/ > accessed on 29.10.14

[12] Mark Baine, *"The North Sea rigs-to-reef debate"* (2002) 59 ICES Journal of Marine Science S277

[13] With growing populations, one cannot exclude the deep sea being used for general waste disposal. See <http://isites.harvard.edu/fs/docs/icb.topic1291423.files/Previous%20years%20papers/2010%20Papers/November%20papers%204/Angel_Waste.pdf >accessed 19.11.14

[14] *Ibid*

[15] A. Rice, "*Does Science Have a Role in Risk Analysis? The Case of Brent Spar and Other Cautionary Tales,* " Paper presented at the Society for Risk Analysis-Europe Conference, June (1996). Available at <http://www.riskworld.com/abstract/1996/sraeurop/ab6ad138.htm >

[16] Dolly Jørgensen, *"OSPAR's exclusion of rigs-to-reefs in the NSR "* (2012) 58 Ocean & Coastal Management 57, 61

B. THE JUSTIFICATION FOR THE DISPOSAL METHOD OF THE BRENT SPAR

Shell, despite such arguments, claimed that UK policy and regulations surrounding disposal of redundant offshore oil installations comply with the highest international standards and their disposal plan entailed a scrupulous evaluation of a diverse range of environmental, safety and economic factors.[17] They also surveyed and selected the disposal site to be 150 miles out in the Atlantic in a water depth of around 7,800ft.[18] The laws governing this are designed to implement the best international standards on disposal.[19] It would seem, therefore, that such standards were intended to guarantee the best method of disposal. Greenpeace took the conflicting view, however, by arguing the international treaties set out a 'minimum' standard that can be manipulated to suit the agenda of massive oil companies.[20]

Shell was obviously operating on the understanding that they had complied with their legal obligations[21] and this assertion was correct, but there is tension between the different international laws that govern disposal at sea.[22] The "removal" of offshore installations, for instance, has never been a universal regulatory requirement: in the US, for example, the careful placing of installations in the ocean is a suitable method of disposal so long as it is environmentally beneficial and economically viable.[23] However, as mentioned, the groundwork of Shell's argument was disputable on the basis that international standards on disposal at sea were insufficient in protecting the marine environment from being exploited by oil companies.[24]

[17] Christopher Barclay, *"The Disposal of Disused Oil Platforms, Research Paper"* (1995) Science and Environment Section 95/77 p.8
[18] *Ibid*
[19] Woodcliff, J, *"Decommissioning of Offshore Oil & Gas Installations in European Waters: The end of a Decade of Indecision?"*(1999) The International Journal of Marine & Coastal Law p101-122
[20] *Supra*, Barclay, n6
[21] For a detailed account of the Brent Spar protest, and timeline, see the Brent Spar Dossier. Available at <http://s02.static-shell.com/content/dam/shell-new/local/country/gbr/downloads/e-and-p/brent-spar-dossier.pdf> accessed 19.11.14
[22] *Supra*, Woodcliff, n19
[23] National Fishing Enhancement Act 1984 was introduced to promote commerce whilst enhancing fishery opportunities.
[24] *Supra*, Greenpeace Website, n11

It is critical, therefore, to appreciate the justification behind the disposal method chosen by Shell and attempt to understand the international law from a historical point; in other words, attempt to recreate the argument that Shell may have used when justifying their method of disposal. Hence, a discussion will take place on the international laws surrounding 'removal' followed by an analysis of the law on 'dumping'.

C. INTERNATIONAL LEGAL REQUIREMENTS: REMOVAL OR NOT?

The first declaration on the decommissioning of offshore installations was made in the *1958 Convention on the Continental Shelf* and in particular Article 5(5) which states, "*Any installations which are abandoned or disused must be entirely removed*". Although the UK was party to this convention, the accepted view is that this provision should be interpreted in a way that is consistent with the purpose of the convention, which is to exploit natural resources without unjustifiable interferences.[25] The main aim, therefore, is not to necessarily prohibit "abandonment" at sea, but to allow member states the autonomy to exploit oil around their continental shelf without unnecessary interference.[26] Moller observes, however, that one cannot be entirely certain whether the non-observance of Article 5(5) would give rise to a breach of international law.[27] It can be argued, however, that the "complete removal" clause does not need to be adhered by[28] and, instead, Article 60(3) of the *United Nations Convention on the Law of the Sea 1982 (UNCLOS)* is the position favoured by the UK government.[29]

UNCLOS introduced what appears to be a more relaxed approach to removal. Art 60(3) specifically states:

[25] Art. 2(1) of the 1958 Convention
[26] *Ibid*
[27] Moller in Marc Hammerson, "*Law, Policy and Comparative Practice*", Globe Business Publish Limited (2013)
[28] Brent Spar had different options for disposal but decided to abandon at sea. Also, as will be discussed, Article 311 paragraph 1 of the *Vienna Convention on the Law of Treaties 1969* states that UNCLOS shall take priority over the 1958 convention.
[29] *Ibid*

> Any installations or structures which are abandoned or disused shall be removed to ensure the safety of navigation, taking into account any generally accepted international standards established in this regard by the competent international organisation. Such removal shall also have due regard to fishing, the protection of the marine environment and the rights and duties of other States. Appropriate publicity shall be given to the depth, position and dimensions of any installations or structures not entirely removed.

There is an unmistakable tension between Article 5(5) of the *1958 Convention* and Article 60(3) of *UNCLOS*. The latter recognises that complete removal is not necessary whereas the former requires that offshore installations be removed completely. Although *UNCLOS* is more relaxed than the *1958 convention*, it could be inferred that it does still pose a threat to RTR since the US has still to ratify it,[30] thus suggesting they feel it poses a threat to their current abandonment methods.[31] However, going back to the Brent Spar, it is important that the tension between Article 5(5) and Article 60(3) did not lead to legal uncertainty.

(I) CONFLICTING LAW: A COMMON DENOMINATOR

When disentangling the tension between the two aforementioned treaties, one should look to the *Vienna Convention on the Law of Treaties 1969,*[32] which states, in Article 31, that any international treaty should be interpreted in accordance with its ordinary contextual meaning and in the light of its object and purpose.[33] Further, Article 311 at paragraph 1 states that *UNCLOS "shall prevail, as between States Parties, over the Geneva Conventions on the Law of the Sea of 29 April 1958".* Consequently, Article 311 paragraph 1 specifically allows

[30] UN Treaty Collections, the US is not present in the UNCLOS contracting parties, available at<http://treaties.un.org/Pages/ViewDetailsIII.aspx?&src=TREATY&mtdsg_no=XXI~6&chapter=21&Temp=mtdsg3&lang=en> accessed 19.10.14

[31] Gulf of Mexico, RTR is an accepted method of disposal

[32] UK is a signatory to the Vienna Treaty

[33] Article 31 provides for the general rule of interpretation of the Vienna Convention on the Law of Treaties. Available at <http://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf >accessed 19.10.14

precedence of *UNCLOS* over the *1958 convention*, but this must be interpreted in accordance with Article 31.[34]

This approach could have led to the justification that the Brent Spar does not need to be fully removed; instead, it can be toppled at sea or even turned into an artificial reef. Still, Article 60(3) requires member states to take into account the relevant international standards that have been developed by a competent international organisation.[35] However, in accordance with traditional legal interpretation, it appears that complete removal was not a legal necessity under *UNCLOS* at the time of the Brent Spar incident. Esmaeili, however, takes the opposite view by declaring, *"the complete removal regime is legally applicable to host states".*[36] It would appear that this position only applies to countries that have not ratified *UNCLOS* — making them members of the *1958 convention* — and thus bears little relevance to the present debate.

(II) INTERNATIONAL LEGAL REQUIREMENTS: DUMPING OR NOT?

Although the *1958 Convention* and *UNCLOS* provide some perspective on whether or not removal is necessary, they do not address the issue of "dumping" in enough detail. *UNCLOS* Article 1(5)(a) defines dumping as *"any deliberate disposal of vessels, aircraft, platforms or other man-made structures at sea".* It goes on, however, to claim in Article 1(5)(b)(ii) that *"the placement of matter for a purpose other than the mere disposal thereof, provided that such placement is not contrary to the aims of this Convention will not constitute dumping".* Meaning, if it can be established that the installation is not simply being "*dumped"* then disposal at sea is possible. An artificial reef, for instance, would constitute an exemption to this provision because the disposed installation would be serving 'another purpose' and is not merely being *"disposed thereof"* at sea. Full removal was the option taken by Shell, but this was with the mind-set that it would be abandoned at sea and, in order to reach this conclusion,

[34] *Ibid*
[35] International Maritime Organisation (IMO) is the competent international organisation.
[36] Hossein Esmaeili, "*The Legal Regime of Offshore Oil Rigs in International Law"* Ashgate, Aldershot, (2001) at p. 53

consultation with the *Convention on the Prevention of Marine Pollution by the Dumping of Waste and Other Matter 1972*[37] (London Convention) would most likely have occurred.

The *London Convention* was based on the older *OSLO Convention*[38] and was designed to address disposal at sea whilst preventing the dumping of hazardous materials.[39] The convention applies to all marine areas outside the internal waters of the coastal state,[40] which applied because Shell proposed that the Brent Spar be 'dumped' in the Atlantic[41] and dumping, according to the convention, includes any deliberate disposal at sea of platforms or man-made structures.[42] Hence, when Shell was considering the dumping of the Brent Spar, they would have consulted Annex III of the *London Convention,* which allows for a permit to abandon at sea subject to a number of criteria including, the actual characteristics of the waste, selection of dumping site, and the disposal technique to be employed.[43] There must also be an environmental impact assessment and an appropriate monitoring regime.[44]

Determining this would have been a lengthy procedure, which would have involved a scrupulous evaluation of the various different legal obligations. Despite this, Shell reversed their disposal method due to significant pressure from both the media and public.[45] This, it is suggested, led to a shift in perception that began almost immediately with the *London Convention* being supplemented by the *1996 Protocol*, which introduced significant changes to the concept of dumping[46] by saying, in essence, that dumping is prohibited[47]

[37] Available at <http://www.imo.org/OurWork/Environment/LCLP/Documents/LC1972.pdf>
[38] Kiss and Shelton (1991), *"International Environmental Law,* 183; Convention for the Prevention of Marine Pollution by Dumping from Ships and Aircraft (Oslo, 15 February 1972)
[39] *Supra* n37, Article I
[40] *Supra,* Kiss & Shelton, n38
[41] *Supra,* Barclay, n17
[42] *Supra*, n37, Article III, paragraph 1 (ii)
[43] *Ibid*
[44] *Ibid*
[45] Rice, T. & Owen, P *"Decommissioning the Brent Spar"* (1999) Spom Press. London
[46] The 1996 Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, for further information see<http://www.imo.org/OurWork/Environment/PollutionPrevention/Pages/1996-

with extremely limited exceptions.[48] The *1996 protocol* did, however, bring in some welcome changes such as the "polluter pays" principle.[49] Nonetheless, Shell had to reverse their disposal plan and, as shown, there was an almost immediate shift in the mind of policymakers.[50] It is important, therefore, to look at some of the reasons behind this.

D. GREENPEACE: MUDDYING THE WATERS

Even though the disposal method chosen by Shell was within the law, and scientifically justified,[51] it did not stop them losing the public battle. Upon a closer analysis of Greenpeace's annual report, it becomes apparent that there was considerable rhetoric used to justify their actions. There is reference, for instance, to the fact that if the Brent Spar were to have been dumped at sea then it would have been the equivalent of dumping 6,000 old cars at sea.[52] This justifies the argument that the same rules should apply to *"corporations and individuals"*[53] as to do otherwise is unjustified and unfair. This is a reasonable position to take, but such rhetoric tends to "muddy the waters" and makes having a transparent and open debate more difficult.[54]

Greenpeace also argued that by forcing Shell to reverse their abandonment plans; they created a 'safer' method of disposal through shore-based dismantling.[55] Around six years after the protest, however, a Health & Safety paper was published which carried out a study into eight offshore installations that were all to be returned to shore for dismantling.[56] The study indicated the

Protocol-to-the-Convention-on-the-Prevention-of-Marine-Pollution-by-Dumping-of-Wastes-and-Other-Matter,-1972.aspx >accessed 5.10.14

[47] *Ibid*, Article 4

[48] *Ibid*, Annex 1

[49] *Ibid*, Article 3

[50] *Supra*, 1996 Protocol, n46

[51] Art III, paragraph 1 (ii) of the *London Convention* requires an environmental assessment. This suggests that Shell had demonstrated that their method of disposal was scientifically justified.

[52] Greenpeace Annual Report 1995, available at <http://www.greenpeace.org/international/Global/international/planet-2/report/2006/11/greenpeace-international-annua.pdf > accessed 13.11.14.

[53] *Ibid*, p. 11

[54] For an overview of the public relations battle see<http://www.ethicalcorp.com/communications-reporting/brent-spar-battle-launched-modern-activism >accessed 30.10.14

[55] *Supra*, Greenpeace Annual Report, n52, p.11

[56] Decommissioning topic strategy OFFSHORE TECHNOLOGY REPORT (2001/032) at p70 at para 8.2.1. Available at <http://www.hse.gov.uk/research/otopdf/2001/oto01032.pdf> accessed 18.11.14

opposite of Greenpeace's findings by presenting evidence that the risks, associated with dismantling onshore, were considerably higher than abandoning an installation at sea.[57] The report suggested that there is a much greater risk of exposure to offshore hazards when completely removing an installation[58] thus highlighting that partial removal options, or toppling an installation at sea, are not only environmentally sound[59] but are also safer to those carrying out the task. It is suggested that such claims *inter alia* led to impartial bodies questioning the scientific rationality that underpins disposal at sea.

One such body was a scientific journal, Nature, who declared that Shell's decision not to dump the Brent Spar was an "unnecessary" dereliction from scientific rationality.[60] This, however, is not entirely reasonable since Shell is a business and the protest was causing their brand damage[61] so it is slightly naïve to suggest that it was an "unnecessary" dereliction from scientific rationality. The journal went on, however, to say that the Brent Spar protest *"exposed the shallowness of Greenpeace's arguments on scientific issues"*,[62] which reinforces Shell's argument that the international law upholds the highest standards when it comes to the environmental aspects of decommissioning.[63] The Marine Pollution Bulletin made similar observations by taking the view that there was little doubt that disposing the Brent Spar at sea was the best option environmentally.[64] It is suggested, therefore, that the "trial by media" is what led to the reversal of Shell's chosen disposal method.

[57] *Ibid*
[58] *Ibid*
[59] *Supra*, environmental impact assessment, n42
[60] Nature 1995. *"Brent Spar, Broken Spur"* Nature 375: 708. Available at <http://www.nature.com/nature/journal/v375/n6534/pdf/375708a0.pdf> accessed 20.11.14.
[61] *Supra*, Brent Spar Dossier, n21
[62] *Ibid*
[63] *Supra*, Barclay, n17
[64] McIntyre, A.D. "*The Brent spar incident- a milestone event".* (1995) Marine Pollution Bulletin 30: 578

E. A TRIAL BY MEDIA

Greenpeace attempted to raise legal action in order to challenge the decommissioning of the Brent Spar, but the English courts declined jurisdiction and it was expected that the Scottish courts would also decline.[65] The reasoning behind this is related to public law, in particular judicial review, and the issue of 'standing'.[66] Such legal formalities meant that Greenpeace, rather than going through the appropriate legal channels, resorted to a public relations battle. If this dispute had gone through the courts, it might, theoretically, have resulted in a different outcome.

Shell may have been able to justify that they acted within the law and the court would most likely have found in their favour, which would then resonate with the public that abandonment is a viable method of disposal. This did not happen and, instead, the public relations battle soared out of control and led to Shell petrol stations being boycotted and even physically attacked during a standoff.[67] Therefore, it is suggested, that clearer legal channels be created to avoid such public disputes. In this regard, the recent recommendation, made by Lord Gill, to develop more specialised environmental courts, is most welcome.[68] One just has to look to Denmark, for instance, where independent appeal boards provide efficient means of resolving environmental disputes.[69]

This, however, is a small part of the overall picture. It is suggested that pressure groups, like Greenpeace, have clearer grounds to obtain 'standing' for judicial review. Perhaps, as suggested by Redgwell, there should be further integration between human rights and environmental law.[70] In other words, as outlined by Ebesson, access to justice should provide a clear means to enforce

[65] *R v Secretary of State for Scotland and Another, ex parte Greenpeace Limited* (Popplewell J), May 24 1995 (unreported) in "*Sparring at Oil Rigs: Greenpeace, Brent Spar and challenges to the legality of dumping at sea"*, Poustie, 1995 JR 542
[66] Blair and Martin, "*Judicial Review 20 Years On- Where Are We Now*" Blair and Martin, (2005) SLT (news) 31 and 173
[67] *Supra*, Rice & Owen, n45
[68] The Lord Gill Review has suggested more specialised courts. See para. 4.28 available at <http://www.scotcourts.gov.uk/docs/default-source/civil-courts-reform/scccompleter-(2)7CDD54ABAE89.pdf?sfvrsn=2 >accessed 4.2.15
[69] Milieu 2007, Country report for Denmark on access to Justice in Environmental Matters
[70] C. Redgwell, "*Access to Environmental Justice"* in F. Francioni (ed.) *Access to Justice as a Human Right* (2007) 153 at 155;

environmental laws.[71] The courts seem to take the opposite view, even at the EU level, by not granting groups like Greenpeace 'standing'.[72] This position is now different in England where it has been stated that groups like Greenpeace are permitted to make public law challenges.[73] This, however, was not the case at the time of the Brent Spar,[74] which led to a 'trial by media' that forced Shell to "abandon" their chosen method of disposal.

This was too much for Shell to manage and on June 20th, 1995, they chose not to dispose the Brent Spar at sea and brought it to shore for dismantling.[75] By dismantling onshore, Shell paid an estimated £45m rather than the initial estimation of £12m. [76] This undermined the UK government who had supported Shell throughout the process.[77] It was also largely accepted that this changed the political climate against deep-water disposal, which resulted in a turning point in NSR decommissioning policy.[78] It is, therefore, necessary to look more fully at the reasons why a comprehensive system for RTR should now occur in the NSR.

A CONTEMPORARY DISCUSSION OF RIGS-TO-REEF

A. ARTIFICIAL REEF PROGRAM: WHY NOW?

The UK Department of Energy and Climate Change (DECC) has claimed that over 220 oil installations will be decommissioned by 2025.[79] It comes as little surprise, therefore, that the "*oil and gas sector are voluntarily seeking to more*

[71] J. Ebesson, "*Access to Justice at the National Level*" in: M. Pallemaerts (ed.), *Aarhus Convention at Ten* (2011) 245 at 247.
[72] *Greenpeace Stichting Council v. Commission,* Case-231/95 ECJ 2 April 1998 Available at http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:61995CJ0321 accessed 14.11.14
[73] Feakins, R (On the Application Of) v Secretary of State for Environment, Food Rural Affairs [2003] EWCA Civ 1546, 2004 1 WLR 1761 See paragraph 20 where there is specific reference to Greenpeace. Available at<http://www.bailii.org/ew/cases/EWCA/Civ/2003/1546.html accessed 8.11.14
[74] *Supra*, Greenpeace case, n65
[75] *Supra*, Brent Spar Dossier, n21
[76] For an overview of cost, *inter alia,* see http://www.thelawyer.com/brent-spar-a-debate-that039s-all-at-sea/93924.article> accessed 26.10.14.
[77] M. Worcester, "*Assessing the Public Opinion on the Environment: The Predictable Shock of Brent Spar*" (National Society for Clean Air and Environmental Protection, Brighton, 1995).
[78] Gage J.D & Gordon, J.D.M "*Sound bites, science and the Brent Spar; environmental considerations relevant to the deep-sea disposal option*" (1995). Mar. Pollut. Bull. 30, 772- 779
[79] Department of Energy and Climate Change (2011) Forecast of expected removal dates Available at< https://www.og.decc.gov.uk/upstream/decommissioning/forecast_rem.htm> accessed 21.11.14

systematically and comprehensively manage the full cycle of their operations".[80] As well as this, there has recently been a considerable drop in oil prices,[81] which might force oil installations into closing. This would increase the overall decommissioning obligations and, as discussed by Oil and Gas UK's economic director Mike Tholen, decommissioning can cost a "fortune".[82] Meaning, operators are not only concerned with production but also the method that will be adopted when decommissioning their installation.

The US has acknowledged this and, since the late 1980s, has used RTR as an accepted method of disposal.[83] Suitably, around 420 platforms have been converted into artificial reefs in the Gulf of Mexico,[84] which demonstrates that the oil industry, and by proxy the legislature and public, supports this method of disposal. It is worth mentioning, however, that this only equates to approximately ten percent of the total number of installations that have been removed from the Gulf of Mexico.[85] Despite this seemingly low number, the state is willing to allow RTR, as an alternative method of disposal, so long as it is environmentally sustainable.[86] It is suggested, therefore, that the time is right for the NSR to develop a comprehensive RTR policy that surpasses the pre-existing legal framework. However, in an attempt to fully justify this, it is important to build upon the environmental aspects of RTR.

B. AN ENVIRONMENTAL STUDY

A study was carried out around seven oil platforms, located in the Santa Barbara Channel area, determining that there was an accumulation of fish around the foundations of the installations and to remove them would

[80] Peter Osmundsen and Ragnar Tveteras, *"Decommissioning of petroleum installations— major policy issues".* Energy Policy, 31 (2003) at p.1579
[81] Article in the Guardian concerning falling oil prices. Available at < http://www.theguardian.com/business/2014/oct/19/oil-price-us-opec-brinkmanship-shale-gas> accessed 19.1.15
[82] *Ibid*
[83] Kaiser, M.J and Pulsipher A.G *"Rigs-to-Reef programs in the Gulf of Mexico"* (2005) Ocean Dev Int. Law 36, 119-134
[84] BSEE, Decommissioning and Rigs to Reefs in the Gulf of Mexico FAQ, available at <http://www.bsee.gov/Exploration-and-Production/Decomissioning/FAQ.aspx> accessed 21.11.14
[85] Kaiser M.J and Kasprzak R. *"Louisiana adds new reef sites for storm-damages structures".* (2007) Oil Gas Journal
[86] *Ibid*

endanger the fish that had inhabited them.[87] By this logic, environmentalist groups and policymakers know more about the environmental implications of leaving an installation in *situ* than they do about removing it. Installations themselves have become "marine protected areas" due to the fact that they can offer shelter to fish and other organisms.[88] This demonstrates that removing an installation can do more harm than good. Such studies, importantly, have not been limited to this area.

It has been contended that the upcoming decommissioning surge in the NSR will provide an excellent opportunity to create an artificial reef policy that will benefit ocean life. [89] Additionally, studies have indicated that a RTR programme could act as a fish stock safe harbour.[90] This is most appropriate considering that the NSR varies greatly in terms of its geographical distribution and geological composition.[91] In other words, the NSR harbours dynamic macrofaunal communities, which can frequently be biodiversity hotspots.[92] The addition of a comprehensive RTR system, therefore, is likely to increase organic connectivity, which could have important biogeographic results. [93] However, it is not unanimously accepted that RTR is the best environmental practice.

C. AN OPPOSING VIEW

Quirolo and Charter outline some scientific concerns around RTR.[94] They provide a comprehensive account of RTR in the Gulf of Mexico and deliver a

[87] Milton S. Love, Jennifer E. Caselle, Linda Snook, *"Fish assemblages around seven oil platforms in the Santa Barbara Channel area"* 98 Fishery Bulletin.
[88] Schroeder DM and Love MS. "*Ecological and political issues surrounding decommissioning of offshore oil facilities in the Southern California Bight*." (2004) Ocean Coast Manage 47: 21 48
[89] Macreadie, P.I., Fowler, A.M., Booth, D.J. *"Rigs-to-Reef: will the deep sea benefit from artificial habitat?"* (2011) Front. Ecol.Environ. 9, 455-461
[90] Cripps, S.J., Aebel, J.P. *"Environmental and socio-economic impact assessment of Ekoreef, a multiple platform rigs-to-reefs development"*. (2002) ICES J. Mar.Sci.59, S300-S308.
[91] Baco AR and Smith CR. *"High species richness in deep-sea chemoautotrophic whale skeleton communities"*(2003) Mar Ecol-Prog Ser 260: 109 14.
[92] *Ibid*
[93] *Ibid*
[94] Quirolo, D & Charter, R. (2014) "*Bring Back the Gulf*". Available at < https://dl.dropboxusercontent.com/u/21908323 1/BringBackTheGulf/bringbackthegulf-layout-7-24-14-lores.pdf? Accessed 20.12.14

historical view of its development.[95] They also offer some useful legal analysis on what is necessary to qualify for a National Artificial Reef Plan.[96] They interrogate, however, the very rationality of RTR and, much like Greenpeace's argument, question whether or not RTR has been created to stop oil companies having to endure the costly procedure of returning the seabed to its original condition.[97] They highlight, for instance, that in 2009 the oil industry in the Gulf saved approximately $92m by applying RTR.[98]

Suggesting, however, that RTR is purely a means of saving the oil industry money is unreliable since RTR is not only an accepted practice in the Gulf of Mexico but is also an environmentally sustainable method of disposal in Brunei, Malaysia and Japan[99] thus suggesting they recognise the environmental benefits. Quirolo and Charter do justify their argument, however, by looking at some scientific studies that question the environmental benefits of RTR.[100] Nevertheless, most of these studies are very specific in the sense that they only concern certain characteristics of the Gulf of Mexico and, therefore, cannot be extrapolated and applied to fit the current debate. Additionally, they accept that RTR has become an established practice in the Gulf of Mexico[101] and provide some recommendations on how RTR practice can be improved.[102] One significant suggestion, which will be touched upon in concluding recommendations, is to include the public in federal decision-making.[103]

Although Quirolo and Charter make some worthy points, it is suggested that there are some overwhelming scientific benefits for RTR that should be taken into account. [104] A blanket approach should not apply. Instead, each case

[95] *Ibid*, p.9
[96] *Ibid*, p.29-31
[97] *Ibid*, p21
[98] *Ibid*, p.87-91
[99] DecomWorld Report Available at <http://analysis.decomworld.com/projects-and-technologies/rigs-reefs-viable-north-sea > accessed 16.10.14
[100] *Supra*, Quirolo & Charter, fn.94, pp.19-27
[101] *Ibid*, p.43
[102] *Ibid*, pp.97-103
[103] *Ibid*, pp.99-100
[104] *Supra,* Cripps & Aebel, n90

should be independently assessed. It is suggested, therefore, that a multi-criteria approach is taken,[105] which has not been the case in the UK, leading to a "closed door" approach to policymaking.

D. PRAGMATISM V POLITICS

RTR has not been 'explicitly' incorporated into UK decommissioning practice.[106] Jørgensen puts this down to a serious lack of communication between the scientific community and the policymakers who govern disposal at sea.[107] The scientific committee, which was advising the appropriate policymakers, had almost no say in the development of an offshore disposal policy in the NSR.[108] It is suggested, therefore, that policymakers be mindful of all the science not just the science that supports their political aim as to ignore it is denying pragmatism in an area where it has the utmost importance.

Shortly after the Brent Spar incident, for example, research was specifically conducted to investigate the possibility of developing a RTR model in the NSR, but the policymakers chose to ignore this[109] by going for the more politically safe method of disposal.[110] This is an example of a "closed door" approach to policy development, which allows for pragmatism to be defeated by political resolve. Such an approach can be traced back to the Brent Spar affair.[111] However, over twenty years have passed and now issues of a more legal nature can be addressed and this can be conducted in a more "encompassing" fashion. A discussion, therefore, will take place around environmental watchdogs that oversee US practice and a case will be made for a domestic framework that allows for a clearer, and more comprehensive, legal structure.

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[105] A.M, Fowler, et al, *"A multi-criteria decision approach to decommissioning of offshore oil and gas infrastructure"* Ocean & Coastal Management 87 (2014) 20-29
[106] *Supra*, Jørgensen, n16
[107] *Ibid*
[108] *Ibid*, p.9
[109] Jensen, A.C (Ed.) (1998) *"Report of the Results of EARRN Workshop 4: Reef Design and Materials"*. European Artificial Reef Research Network AIR3-CT94-2144.
[110] OSPAR Decision 98/3 Available at <http://www.ospar.org> accessed 11.10.14
[111] *Supra*, Jørgensen, n16

AMERICAN POSITION & CREATING AN ARGUMENT FOR A UK DOMESTIC FRAMEWORK

A. ENVIRONMENTAL WATCHDOGS

Environmental watchdog groups have attempted to ensure that US decommissioning practice remains in conjunction with the best environmental practice, which confirms that operators are adhering to the various guidelines and regulatory responsibilities.[112] The Coastal Conservation Association[113] (CCA) is responsible for convincing US Congress to grant decommissioning exemptions to operators who are willing to partially decommission their installations in order to create artificial reefs that will benefit marine life.[114]

This allows for RTR on the basis that the installation can become part of a state-sanctioned reef programme, which results in the operators being granted a permit by the US Army Corps of Engineers.[115] Additionally, groups such as the Center for Biological Diversity (CBD) supervise operators to validate that they are acting in compliance with the different environmental guidelines.[116] This is not too dissimilar to the function of the DECC that operates in the UK. However, the DECC is effectively a branch of government so it may not have the same objectiveness as the CBD. This is evidenced by the fact that the secretary of state who is the head of the DECC is a Member of Parliament.[117]

Having watchdog groups like the CCA and the CBD is helpful in supervising the decommissioning efforts in the Gulf of Mexico as they can cast an

[112] Peter Galvin, Center for Biological Diversity, Press Release, "*Order to Plug 3,500 Abandoned Wells is a Good First Step in Cleaning up Mess of Offshore Operations in Gulf,* September 15th 2010. Available at <http://www.biologicaldiversity.org/news/press_releases/2010/abandoned-wells-09-15-2010.html > accessed 20.11.14

[113] This organisation attempts to increase coastal biodiversity and assist in building sustainable environments for sea life

[114] This has been codified as 30 USA Code of Federal Regulations 250.1730. For more information about CCA see: Coastal Conservation Association. *"Rigs-to-Reefs"*. (2012). Available at <http://joincca.org?media%20room/RTR_home.htm> accessed 21.11.14.

[115] *Ibid*

[116] For an overview see< http://www.biologicaldiversity.org/programs/oceans/> accessed 20.11.14

[117] DECC is a ministerial department, supported by 8 agencies and public bodies. Information available at < https://www.gov.uk/government/organisations#department-of-energy-climate-change> accessed 21.11.14

"objective" eye that is free from the influence of politics and government.[118] The US position on this, however, was intensified by a disaster that juddered the oil industry into a state of alarm, which heightened the regulations by placing the oil industry under international scrutiny.

B. ENVIRONMENTAL DISASTERS: PROACTIVE OR REACTIVE?

Decommissioning guidelines and drilling practice, in the US, have been promulgated by the Horizon disaster, which led to a shift in the temperament of the public and oil industry.[119] Although the incident was not a 'direct' result of decommissioning, it promoted public support to reform the oil and gas sector and ensure that decommissioning is carried out in an environmentally sound way.[120]

This resulted in significant investments to ensure that more inspectors are available to assist in developing a more 'proactive' style of regulation.[121] However, this resulted in more spending instead of being prepared, which would have cost less and, of course, helped prevent a disaster.[122] A more practical regulatory framework is beginning to emerge,[123] but it should not take a disaster to make this happen. Instead, policymakers should 'proactively' seek the best practices. This logic can be extended to the NSR due to the upcoming decommissioning obligation.[124] Policymakers should, therefore, be safeguarding decommissioning practice by developing a domestic legal

[118] This might help prevent lobbying
[119] Jeff Donn, 3,200 Abandoned Wells Lack Cement Plugs, for a description of the events. Available at <http://abcnews.go.com/Business/wireStory?id=13421924> accessed 20.11.14
[120] PR Web, DecomWorld: Gulf of Mexico's Oil and Gas Community to Meet at Industry's Largest Offshore Decommissioning Summit, Yahoo News (February 21st 2012) available at< http://news.yahoo.com/decomworld-gulf-mexico-oil-gas-community-meet-industry-152236443.html> accessed 22.11.14
[121] $29m in emergency spending See <www.msnbc.msn.com/id/39195347/ns/us_news-environment/t/us-unused-gulf-wells-must-be-plugged/> accessed 20.11.14
[122] Timeline of events, available at< http://www.theguardian.com/environment/2010/jun/29/bp-oil-spill-timeline-deepwater-horizon > accessed 21.11.14
[123] Detailed account of the impact the deep-water horizon disaster will have on US decommissioning policy, see< http://social.decomworld.com/regulation-and-policy/deepwater-horizon-report-increases-decommissioning-scrutiny> accessed 24.11.14
[124] *Supra*, Health & Safety, n56

framework that encourages RTR to occur since, as demonstrated, it is a safer method of disposal.[125]

C. DEVELOPING A DOMESTIC FRAMEWORK

In 1984, the US Congress issued the National Fishing Enhancement Act (NFEA) with the aim of stimulating commerce whilst also promoting opportunities for fishermen.[126] The aim was to create an artificial reef system that mitigated the declining US fishery production, which was having a negative impact on US coastal economies and the biodiversity of the sea.[127] The government felt that this encouraged recreational and commercial activities whilst also stimulating economic growth.[128] This is not too dissimilar to the NSR where it has been noted that centuries of fishing activity has made it highly likely that there will be no pristine habitats remaining.[129]

On this point, OSPAR issued their Quality Status Report, which found that human activities have placed pressure on the health of marine ecosystems globally and things like overfishing, destructive fishing, aggregate extraction, and pollution are all on-going concerns.[130] Additionally, the European Common Fish Policy, which advocates that EU members have equal access to EU waters, may increase the level of damage being caused to the NSR.[131] Although this is a broader policy issue, it reveals the ostensible support for RTR in the sense that it would moderate, regardless of how much, the environmental concerns in the NSR. The reef-forming coral *Lophelia Pertusa*, for instance, is a species that is declining, due to mechanical damage by fishing

[125] *Ibid*
[126] National Fishing Enhancement Act Appendix B Title II s.202, "Findings"
[127] *Ibid* Appendix B Title II s.202, "Finding and Conclusions"
[128] *Ibid*
[129] Roberts, C. & Mason (2008) *"Return to Abundance: A Case for Marine Reserves in the NSR "*. Report for WWF UK Available at, <http://www.wwf.org.uk/filelibrary/pdf/marine_reserves_north_sea.pdf> accessed 18.10.14
[130] OSPAR, 2010 (Quality Status Report) See p176 Available at< http://qsr2010.ospar.org/en/index.htmk >accessed 18.11.14
[131] Regulation (EU) No 1380/2013 Available at < http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2013:354:0022:0061:EN:PDF> accessed 21.11.14

equipment, which is a testament to the point that policymakers should be doing all they can to mitigate any potential loss of sea life.[132]

It is possible, therefore, to create an argument that the UK should adopt domestic legislation that will assist in creating a feasible RTR policy. The NFEA could be used as a template, which would allow policymakers to comprehensively evaluate the US position and create a RTR system that could be properly designed, located, monitored, and managed.[133] Creating a clearer domestic framework could also be a timely measure that could assist the UK in fulfilling its legal obligations under the Marine Strategy Framework Directive, which is one of the first all-encompassing pieces of EU legislation that specifically aims to protect the marine environment.[134] Its primary aim is to achieve 'Good Environmental Status' of all EU waters by 2020.[135] The UK could assist in this aim by developing a comprehensive RTR model, which might encourage future investment from the EU. It is important, however, to briefly address some of the more pertinent 'legal barriers' that would need to be circumvented when implementing an encompassing RTR framework that could successfully govern the NSR.

D. OSPAR CONVENTION

It is suggested that implementing an encompassing domestic framework would prove impossible without consulting OSPAR since it is the principal UK authority[136] and, unlike the US, the UK has international obligations that it must fulfil.[137] The DECC, for instance, declare in their guidance notes that OSPAR is the most influential set of international laws affecting UK

[132] 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 > accessed 19.11.14

[133] This would be following the position found in The National Fishing Enhancement Act Appendix B Title II s.203, "Establishment of Standards".

[134] Directive 2008/58/EC

[135] *Ibid*

[136] Ridge M. & Style S. *'OSPAR 1998—A Naked Emperor'* 17 O.G.L.T.R (1999)

[137] DECC guidance notes. Available at <https://www.og.decc.gov.uk/regulation/guidance/decomm_guide_v6.pdf> see p.38 at 8.3. Accessed 12.1.15

practice.[138] The Sintra statement records this commitment and operates in conjunction with the OSPAR convention.[139]

For the purposes of determining the applicable law surrounding the possibility of RTR, it is most relevant to start with the OSPAR Convention which came into force in 1998 by replacing the OSLO and Paris Conventions[140] and in particular Article 5(1) Annex III that provides:

> No disused offshore installation or disused offshore pipeline shall be dumped and no disused offshore installation shall be left wholly or partly in place in the maritime area without a permit issued by the competent authority of the relevant Contracting Party on a case-by-case basis. The Contracting Parties shall ensure that their authorities, when granting such permits, shall implement the relevant applicable decisions, recommendations and all other agreements adopted under the Convention.

This provision excludes the dumping of a disused offshore installation and prohibits it being left "wholly" or "partly" in place without a permit that is issued by the competent authority. Most importantly, however, it specifies that Contracting Parties must ensure that, if granting such a permit, they implement the *"relevant applicable decisions, recommendations and all other agreements adopted under the Convention"*. One such "decision" was the OSPAR Decision 98/3. Consequently, this decision is binding when considering whether or not RTR is possible. However, prior to examining decision 98/3, it is relevant to assess some of the key provisions surrounding the OSPAR Convention. This will highlight the main aims of OSPAR and, therefore, cast light on their approach to protecting the marine environment.

Article 2(1) of the OSPAR Convention specifies that all contracting parties should take all possible steps to prevent pollution and take any necessary measures to protect the maritime area against the adverse effects of human

[138] *Ibid*
[139] Sintra Statement Available at <http://www2.unitar.org/cwm/publications/cbl/synergy/pdf/cat3/convention_ospar/convention_ospar.pdf> accessed 14.1.15
[140] Available at < http://www.ospar.org/html_documents/ospar/html/ospar_convention_e_updated_text_2007.pdf>

activities. This is building on the "precautionary principle" founded in Article 2(2) which directs that preventative measures should be taken when there are reasonable grounds for concern that damage may be caused to human health, living resources, marine ecosystems, or interfere with other legitimate uses of the sea and the "polluter pays" principle founded in Article 2(2)(b) which specifies that the costs of pollution prevention, control and reduction measures shall be borne by the polluter. Such principles appear to mirror the approach taken in the *1996 Protocol*,[141] which suggests a unified approach that can be traced back to shortly after the Brent Spar protest.

It appears that the 'polluter pays' principle and the 'precautionary principle' are what underpin the legal framework that surrounds OSPAR and the disposal of offshore installations. Both these principles seem well grounded in the idea that protecting the marine environment is fundamentally important, and according to Annex I, Article 1 it is encouraged that operators adopt the 'Best Environmental Practice'. It is suggested that such aims are in confliction with a prohibition on RTR due to the environmental benefits it can bring,[142] which perhaps corroborates the claim that the Brent Spar protest has cast a shadow over decommissioning practice. Accordingly, decision 98/3, and the reasoning behind the general prohibition on abandonment at sea, will be assessed.

E. OSPAR DECISION 98/3

OSPAR Decision 98/3 came into force in February 1999[143] with the key feature being a general prohibition on the 'dumping' of offshore installations.[144] The term 'dumping', however, is not particularly appropriate when considering RTR because it implies an installation is being abandoned at sea and is serving

[141] *Supra*, 1996 Protocol, n46
[142] *Supra*, Cripps & Aebel, n90
[143] OSPAR Decision 98/3 on the Disposal of Disused Offshore Installations Section 8. Available at< http://www.ospar.org/v_measures/browse.asp?preset=1&menu=005104160000000_000000_000000&v0_0=&v1_0=title,referencenumber,dateofadoption&v2_0=&v0_1=OSPAR+Decision+98/3&v1_1=referencenumber&v2_1=&v0_2=&v1_2=dateofadoption&v2_2=>
[144] *Ibid*, Section 2

no purpose, which is not the case.[145] Restricted 'derogations' do apply but are only granted in the case of large steel installations weighing more than ten thousand tonnes,[146] gravity-based concrete installations,[147] floating concrete installations,[148] and any concrete anchor-base which results, or is likely to result, in interference with other legitimate uses of the sea.[149] There is a general presumption, however, that all structures will be removed and, as noted by Garza and Rock,[150] exceptions will only be granted if the assessment and consultation procedure demonstrate that there are significant reasons why an alternative method of disposal is preferable to onshore disposal.[151]

Creating a legal argument around decision 98/3 is made difficult due to the fact that it offers very limited derogations and, although only a brief account has been provided, it is clear that 'complete removal' is the position favoured.[152] However, decision 98/3 does not necessarily apply to platforms that will be serving "another legitimate purpose" in the maritime area[153] since, as mentioned, an installation that is converted to a reef is not simply being "dumped". Accordingly, there is room for re-interpretation since there is no 'explicit' exclusion of RTR. Consideration, therefore, can be given to the guidelines that oversee artificial reefs in the NSR.

F. OSPAR GUIDELINES ON ARTIFICIAL REEFS

In June 1999, OSPAR issued guidelines on artificial reefs, which contain two provisions that directly impact the prospect of RTR in the NSR: Paragraph 13 states that *"No materials should be used for the construction of artificial reefs which constitute wastes or other matter whose disposal at sea is otherwise prohibited";*[154] and

[145] *Supra*, Cripps & Aebel, n90
[146] *Supra,* OSPAR, n140, Annex 1 Section (a)
[147] *Ibid*, Section (b)
[148] *Ibid*, Section (c)
[149] *Ibid*, Section (d)
[150] *Supra*, Hammerson, n27
[151] *Ibid*
[152] *Supra*, OSPAR, n143-148
[153] *Supra,* OSPAR, n140, Definitions 1(b)
[154] OSPAR Guidelines on Artificial Reefs in Relation to Living Marine Resources "Requirements for Construction and Placement, Materials" 1999

Paragraph 14 states that *"Modules for artificial reefs are generally built on land unless they consist solely of natural materials placed in an unmodified form."*[155] It is important to look, firstly, to the development of these provisions and, secondly, the wording of them and how they should be interpreted. This will then be followed by some practical suggestions on how to implement clearer guidelines.

The debates leading up to the issuing of the guidelines became rather impassioned with several contracting parties mainly Germany and Sweden complaining that they created a "loophole" that oil companies could exploit in order to dump their installation.[156] This mind-set perhaps demonstrates, again, the shadow that has been cast by the Brent Spar protest and thus explains the apparent reluctance to develop a comprehensive legal regime that governs RTR in the NSR. Such an approach allows for an insight into why the guidelines are specific in the sense that they only allow 'virgin' materials.

Both paragraphs limit reefing *de facto* to virgin materials[157] because, as suggested by Jørgensen, it makes it more difficult to properly implement RTR in the NSR[158] since it restricts them to material that has been unused rather than promoting, for example, toppling or leaving an installation in *situ*. The London Convention Protocol and the United Nations Environment Programme (LCP/UNEP), who issued their guidelines on artificial reefs in late 2009, take a slightly different view[159] by acknowledging the use of obsolete platforms being used as artificial reefs.[160]

Unlike the OSPAR guidelines, the LCP/UNEP guidelines allow for waste materials to be used as artificial reefs and, by not limiting them to virgin

[155] *Ibid*
[156] *Supra*, Jørgensen, n16
[157] F.Minutolo, *"Beyond the OSPAR exclusion: rigs-to-reefs in the North Sea"*(2014) I.E.L.R 13
[158] *Supra,* Jørgensen, n16
[159] Guidelines for the Placement of Artificial Reefs (LCP/UNEP, 2009)
[160] *Ibid*, Annex 3

materials,[161] are promoting RTR in a more expressive fashion. As a result of this, the UK delegation to OSPAR recently tried to get the language of OSPAR's artificial reef guidelines changed by proposing that they allow for "inert materials".[162] This has been forwarded to the Jurists/Linguists committee with the results still expected.[163] It is suggested that if the language is changed to allow "inert" materials then more artificial reefs will be utilised. This should allow decommissioning practice to shift to a position where RTR is an accepted norm, which will mirror practice in the Gulf of Mexico.

It is important to mention, however, that even if the guidelines are changed, they are only "guidelines" and are not technically enforceable law. However, as discussed by Jørgensen, the guidelines do set the international standard in the NSR[164] and a change in language would, therefore, be welcomed. That being said, the guidelines and all the aforementioned legal instruments do not address important issues such as 'residual' and 'perpetual' liability.

LIABILITY & THE NORTH SEA FUND: THE IMPORTANCE OF IMPARTIALITY

A. RESIDUAL LIABILITY

There is a "legislative gap" in the international law concerning the liability of offshore activities.[165] The EU attempted to fill this by issuing a directive on the safety of offshore oil and gas operations.[166] Ostensibly, RTR would fall under such a directive because the installation is being left at sea. However, the directive is intended to cover environmental 'damage' cases,[167] which RTR would not fall under since it is a 'voluntary' method of disposal that is made on

[161] *Ibid*
[162] *Supra*, Jørgensen, n16
[163] *Ibid*
[164] *Ibid*
[165] *Supra*, F.Minutolo, n157, p.11
[166] Directive 2004/35 21 April 2004 on environmental liability with regard to the prevention and remedying of environmental damage
[167] *Ibid*

the assumption that the concerned government has authorised it.[168] Therefore, liability after an installation has become a reef will fall outside the scope of this directive, which means alternative legal instruments have to be consulted.

There are a number of scenarios, when attempting to determine liability, which promote uncertainty: if the topside of an installation is removed, for instance, and the footings are left to form a reef, then there is an imperceptible danger to passing ships.[169] There is no contractual relationship between the operators, who are responsible for decommissioning, and the potentially injured pursuer. Hence, when determining liability, the key question is whether or not the operator owes a 'duty of care' to the pursuer. The UK approach adopts soft law,[170] which means one can look to the guidance notes of the appropriate legislation[171] when trying to determine the answer to the aforementioned question.

The guidance notes in the Petroleum Act 1998 indicate that the operator must provide at least six weeks' notice to the UK Hydrographic Office, which allows mariners sufficient time to make the appropriate amendments to their nautical charts.[172] Hammerson underlines the point that this is an act of publicity,[173] which would be in conformity with the international requirements under Article 60(3) UNCLOS.[174] This requires that 'appropriate' publicity be given to the depth, position, and dimensions of any installations that have not been entirely removed.[175] If the operator did not carry this out then liability would most likely reside with them. However, even if the installation owner carries out the requirements under the Petroleum Act and the act of publicity

[168] *Supra*, OSPAR, n140
[169] For a full list of risks see "*Artificial Reef Scotland, Benefits, costs and risks*" REPORT (2003) Available at< http://www.nautilus-consultants.co.uk/sites/default/files/Nautilus%20artificial%20reefs%20report_0.pdf> accessed 11.8.14
[170] *Supra*, Hammerson, n27
[171] Petroleum Act 1998
[172] *Ibid*, guidance notes, paragraph 15.1.
[173] *Supra*, Hammerson, n27
[174] See paragraph 1.3
[175] *Ibid*

under UNCLOS there is still a level of uncertainty in the sense that ownership has not passed.

This could potentially pose threats to the oil industry accepting RTR as a viable method of disposal since, as suggested by Cripps & Aabel, the benefits have to outweigh the costs[176] and, if there is any risk of liability, companies will be hesitant and would rather decommission onshore where liability ends upon completion.[177] However, if liability can be determined through clearer channels then installation owners might be more eager to adopt this method of disposal. Such issues are important when trying to justify RTR since, unlike the Brent Spar disposal, it will normally occur in shallower waters where the risk of damage is greater than deep-water disposal.[178] It is suggested, therefore, that there be a clear system in place that allows for the ownership of the installation to be transferred to a competent party.

B. PERPETUAL LIABILITY

There is potential under the Petroleum Act for perpetual liability.[179] This is where all the involved parties are joint and severally liable for the decommissioned installation. For illustration, under regular practice, the Secretary of State issues a S29 notice to a list of all the involved parties[180] who are then required to submit a decommissioning programme.[181] The recipients of this notice are jointly liable since the Secretary of State has the power to enact a "liability net"[182] through S34 of the 1998 Act, which allows through S34(1)(b) for the power to enforce a duty on persons who did not previously have one.[183] This power has not been used since 1998[184] suggesting it is not

[176] *Supra*, Cripps & Aabel, n90
[177] Dymond, P. (2006) `Shadow Cast by Decommissioning Liability', International Energy Law and Taxation Review, August/September: 222-5
[178] Booth DJ, Fowler AM (2014) "*Making difficult decisions*" Oilfield Technology, 7(11): 77-80
[179] Judith Aldersey-Williams, *"The Decommissioning Cost Provision Deed: facilitating asset transfers on the UKCS"* (2008) I.E.L.R 169
[180] Petroleum Act 1998 section 29
[181] *Ibid*, section 30
[182] *Supra*, F.Minutolo, n157
[183] S34 (2)(a) specifies that such a person must be in accordance with S30 (1) 1998 Act.

likely to happen in the near future.[185] However, it also suggests liability in perpetuity for companies,[186] which may limit industry confidence. It is suggested, to mitigate such concerns, that government accepts liability for an installation that has been converted to a reef. The question that arises from this statement, however, is why would government want to accept liability when the status quo allows for the owner, and possibly all involved parties, to be liable? The US position assists in answering this question since it has a framework that aims to guarantee that liability will be severed so long as certain legal obligations are fulfilled.

The operators, in the US, "donate" the installation to the government.[187] After the operator has transported the structure, and properly disposed of it, the liability then passes to the state.[188] This usually takes the form of an agreement between the state and operator and consists of the state accepting liability subject to an agreed amount of funds.[189] By avoiding onshore disposal, the operator will have made considerable savings.[190]A percentage of these savings are donated to the state to allow for future management, and liability, to pass to them.[191] This will usually form part of the Artificial Reef Development Plan, which assists with the reefing procedure and the development of a sustainable reef programme.[192] This allows, after the installation reaches the end of its operational life, for a 'transfer of ownership' to occur.

Although this has only been a brief account of the actual process involved in the passing of ownership, it is suggested that the US have a worthy model that the UK could adopt. Transferring ownership should encourage more operators

[184] Department of Energy and Climate Change Guidance Notes for Industry: Decommissioning of Offshore Installations and Pipelines under the Petroleum Act 1998
[185] Issac Zauler, et al, "*Sector focus-The oil and gas sector*" (2013) 1157 Tax Journal
[186] *Supra*, F.Minutolo, n157
[187] Appendix VII of the Donation Agreement For Louisiana Artificial Reef Plan (1985), "Act of Donation" art.5.5, "Location and Placement"
[188] *Ibid,* Article 6.1, "Passing of Title"
[189] *Ibid.*
[190] *Supra*, overview of costs, n76
[191] *Supra*, n. 187, Article VIII, "Acceptance"
[192] *Ibid*

into "donating" their installation, which encourages the environmental aspects of decommissioning[193] whilst also stimulating economic commerce.[194] The problem that may arise, however, is how the funds are administered.

C. MISHANDLING OF FUNDS & ENSURING IMPARTIALITY

Avoiding liability, through a passing of ownership, is a key ingredient for stimulating industry investments. However, for this to operate effectively in the NSR, it is suggested that the UK creates a quasi-governmental body that ensures a certain level of objectiveness when determining the correct usage of the agreed funds. In the US, for instance, Governor Bobby Jindal used around $45m in RTR funds to cover up an overrunning in the state's budget,[195] which could lead to the public openly protesting and hence undermine the integrity of a RTR programme.

Such an event could also weaken the trust between the oil industry and government.[196] By having a quasi-governmental body governing the process, the risks of this happening should be diminished, which supports the notion of creating a North Sea Fund (NSF) that operates separately, but under the auspices of the UK government.

D. NORTH SEA FUND

One of the key aspects of the US position is the fact that around half of the savings received by the operator are filtered back through the government for future funding and management.[197] If the UK adopts a similar position then the NSF could be created to manage upkeep and liability costs. This could be micromanaged by the relevant stakeholders whilst having the infinite backing

[193] *Supra*, Cripps & Aebel, n90
[194] Detailed economic account of artificial reefs see < http://earthmind.net/marine/docs/world-bank-coral-reefs-valuation.pdf> accessed 14.10.14
[195] News story by DecomWorld see < http://social.decomworld.com/regulation-and-policy/lawsuit-threat-renewed-over-louisiana-rigs-reefs-fund> accessed 20.11.14
[196] Billy Broussard, vice chairman of the Louisiana Wildlife and Fisheries Commission noted that this was an act of dishonesty with the oil industry. See < http://news.yahoo.com/lawsuit-against-jindal-considered-over-183337628.html> accessed 18.11.14
[197] *Supra*, Louisiana Artificial Reef Plan, n187

of government. On this point, the North Sea Initiative is considering different methods on how to improve the status of the North Sea ecosystem whilst also developing effective funding mechanisms.[198] If the UK adopts the US method then a legally viable RTR policy can begin to emerge. The key difference, however, between the UK system and the US system is the NSF would be governed outside the political framework, thus promoting a separation of powers between industry and government, which might *inter alia* stop the oil industry lobbying government.[199]

It is also important that those who have practical experience in the industry can autonomously govern the NSF. This approach allows for sufficient financial stability and ensures the necessary objectiveness that will safeguard operators, and the UK government, against any potential backlash from the public and the various non-governmental agencies that seek to represent them. Having such a system in place should mitigate any possibilities that there will be an exploitation of funds and will assist in dealing with 'residual' and 'perpetual' liability since ownership will have passed over to the NSF. Although the main aim of the fund is to allow for a transfer of ownership to occur, it is also suggested that its remit be expanded to proactively ensure that any risk of an environmental disaster is minimal.[200] The NSF, therefore, can have a multidimensional role that expands into various different aspects of decommissioning.

OVERALL CONCLUSION & RECOMMENDATIONS

Shell initially denounced what they considered to be a protest of vacuity. An understandable position to take — as they believed they were acting in accordance with the highest international standards — but such complacency is what partially led to their demise and whilst many could argue that the

[198] Living NSR s Initiative project overview. Available at, http://www.forumforthefuture.org/project/living-north-sea-initiative/overview accessed 19.11.14
[199] For discussion of oil industry lobbying government: *Supra*, Kasoulides, n9
[200] Proactive approach: see section 3.2

outcome resulted in a good thing, as it stopped the ocean becoming a dumping pool,[201] the evidence indicates that the disposal method was environmentally the best practice.[202] Shell, however, should have had a more open dialogue between the various different stakeholders. It has been recommended that transparency is key with the public. It is suggested, therefore, that they be included in the disposal process through consultations, which can be achieved through "civic science".[203] This means that decisions are science-based, but also built on consultations with the public and experts.[204] Issues that concern 'standing' should also be clearly defined so that "trials by media" are avoided.

It is the author's view that, within a decade, there will be a change in the regulations that govern disposal in the NSR. The tide has settled post Brent Spar and now is the time to evaluate the evidence pragmatically and create an economically sustainable, environmentally justifiable, and legally viable framework. Issues concerning liability should, therefore, be clarified through a passing of ownership. The law governing this area does not comprehensively cover RTR and the Artificial Reef guidelines are too limited and should, therefore, be changed to mirror the LCP/UNEP guidelines. Additionally, issues concerning upkeep costs, liability, ownership, and environmental prerequisites should be codified into domestic legislation, which will assist in creating a more encompassing RTR framework in the NSR. There is, however, international law that poses obstacles to this, which needs further consideration.[205] It has been demonstrated, however, that RTR, if properly administered, can provide a win-win solution by being environmentally beneficial and cheaper to operators. It is hoped, therefore, that this paper has provided policymakers, the oil and gas industry, and the public with enough reasons as to why RTR should be fully adopted in the NSR.

[201] It may, in the future, be essential to use the ocean for "dumping". See n13
[202] *Supra*, McIntyre, n64
[203] Huxham, et al, *'Emotion, Science and Rationality: The Case of the Brent Spar'* Environmental Values, no.3 (1999): 349-368. See *p.363*
[204] *Ibid*
[205] Mainly OSPAR 98/3 and the OSPAR Artificial Reef Guidelines