

Summary: Intervention & Options

Department /Agency: Maritime & Coastguard Agency	Title: Impact Assessment of The Merchant Shipping (Ship-to-Ship Operations) Regulations 2010	
Stage: Consultation	Version: Draft	Date: 1 February 2010
Related Publications:		

Available to view or download at:

<http://www.mcga.gov.uk/c4mca/mcga07-home/shipsandcargoes/consultations/mcga-currentconsultations/cp-con-sts2010.htm>

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What is the problem under consideration? Why is government intervention necessary?

The problem under consideration is how to prevent pollution from ships engaged in ship-to-ship transfers. Government intervention is required because cargo transfers, consisting wholly or partially of oil, and bunkering operations between ships at sea are currently unregulated in the UK. There is no statutory requirement for parties engaged in such transfers at sea to notify the UK authorities or have the necessary resources in place should a pollution incident occur. At present, there are no powers in place to prevent such operations taking place. The introduction of the proposed regulations would seek to bring these transfers within statutory harbour areas, where there already exists a statutory responsibility to have oil pollution contingency plans in place, thus reducing the risk and impacts of any potential spills.

What are the policy objectives and the intended effects?

The Policy Objectives are:

- To regulate cargo transfers, consisting wholly or partially of oil, and bunkering operations between ships within the UK 12 nautical mile territorial sea;
- To ensure that the impact of cargo transfers upon any European Sites under the Habitats Directive is considered and minimised, and ensure that oil transfers are recorded and monitored through a system of environmental consents to be issued by an appropriate authority; and
- To enable the UK to take action against unauthorised ship to ship transfers.

The intended effect is to ensure that the UK would have the ability to prevent ship to ship transfers within the 12 nautical mile limit if they are considered a risk to the environment, economy or local communities. The UK would also have the ability to prosecute those that carry out unauthorised transfers or do not carry out transfers within the terms permitted the licence.

What policy options have been considered? Please justify any preferred option.

Option 1: Do Nothing – Do not regulate transfer operations within UK territorial seas.

Option 2: Ban transfer operations in UK territorial seas (excluding statutory harbour areas).

Option 3: Ban transfer operations in UK territorial seas (excluding statutory harbour areas, and introduce the requirement for an Oil Transfer Licence within a harbour area where an oil transfer will not significantly impact upon European sites and has the environmental consent of the appropriate authority.

Option 3 is the preferred option as it would enable the UK to effectively meet the outlined policy objectives. Option 3 therefore reflects the proposed Regulations that are subject to consultation.

When will the policy be reviewed to establish the actual costs and benefits and the achievement of the desired effects? Within three years to ensure they meet the needs of the environment and industry.

Ministerial Sign-off For consultation stage Impact Assessments:

I have read the Impact Assessment and I am satisfied that, given the available evidence, it represents a reasonable view of the likely costs, benefits and impact of the leading options.

Signed by the responsible Minister:

.....Date:

Summary: Analysis & Evidence

Policy Option: 2

Description: Ban transfer operations in UK territorial seas (excluding statutory harbour areas).

COSTS	ANNUAL COSTS		Description and scale of key monetised costs by 'main affected groups' SHIP OPERATORS : It is assumed that all cargo transfer operations within UK territorial waters would take place within harbour areas as a result of Option 2. Ship operators would consequently incur additional port charges. The cost has been estimated at up to £9.6 million per year. PORTS/HARBOURS : A new port wishing to allow cargo transfers would have to update its oil spill contingency plan. The one-off cost has been estimated at around £0.03 million, assuming that 3 new ports would do this.
	One-off (Transition)	Yrs	
	£ 0.03 million	1	
	Average Annual Cost (excluding one-off)		
	£ 9.6 million	10	Total Cost (PV) £82.2 million
Other key non-monetised costs by 'main affected groups' ENVIRONMENT : It is considered that there could potentially be local environmental costs (e.g. air quality) and related health impacts as a result of additional transfers occurring in harbour areas. It has not been possible to monetise this cost.			

BENEFITS	ANNUAL BENEFITS		Description and scale of key monetised benefits by 'main affected groups'
	One-off	Yrs	
	£		
	Average Annual Benefit (excluding one-off)		
	£		Total Benefit (PV) £
Other key non-monetised benefits by 'main affected groups'. ENVIRONMENT : It is considered that bringing transfers within harbour areas could decrease the probability of a serious environmental incident occurring, and would ensure transfers take place within an area where response-facilities are available, reducing the costs to the UK of any incidents. It has not been possible to monetise this benefit.			

Key Assumptions/Sensitivities/Risks 1.) It is assumed that ship operators would respond to Option 2 by conducting all transfers within harbour areas, and that the number of cargo transfers undertaken in future years would be the same as in 2009. However, it is possible that ship operators could instead choose to conduct cargo transfers outside UK territorial waters. Therefore, it is possible that the above estimates could overestimate the cost of Option 2 to ship operators. 2.) The estimated monetised costs rely on a number of assumptions (e.g. that the number of cargo transfers undertaken in future years would be the same as in 2009) and are therefore uncertain. 3) It is possible that some of the estimated monetised costs could be incurred by non-UK firms. Therefore, it is possible the above estimates could overestimate the cost to the UK. 4.) The Net Benefit below only includes the estimated monetised costs, and does not reflect the non-monetised costs and benefits that have been identified.

Price Base Year 2010	Time Period Years 10	Net Benefit Range (NPV) £ -82.2 million	NET BENEFIT (NPV Best estimate) £ -82.2 million
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What is the geographic coverage of the policy/option?		United Kingdom	
On what date will the policy be implemented?		TBC	
Which organisation(s) will enforce the policy?		MCA	
What is the total annual cost of enforcement for these organisations?		£ 0	
Does enforcement comply with Hampton principles?		Yes	
Will implementation go beyond minimum EU requirements?		n/a	
What is the value of the proposed offsetting measure per year?		£ n/a	
What is the value of changes in greenhouse gas emissions?		£ Not quantifiable	
Will the proposal have a significant impact on competition?		No	
Annual cost (£-£) per organisation (excluding one-off)	Micro	Small	Medium Large
Are any of these organisations exempt?			

Impact on Admin Burdens Baseline (2005 Prices)		(Increase - Decrease)
Increase of £ 0	Decrease of £ 0	Net Impact £ 0

Summary: Analysis & Evidence

Policy Option: 3

Description: Ban transfer operations in UK territorial seas (excluding statutory harbour areas, and introduce the requirement for an Oil Transfer Licence within a harbour area where an oil transfer will not significantly impact upon European sites and has the environmental consent of the appropriate authority.

COSTS	ANNUAL COSTS		Description and scale of key monetised costs by 'main affected groups' SHIP OPERATORS: It is assumed that all cargo transfer operations within UK territorial waters would take place within harbour areas as a result of the proposed Regulations (Option 3). Ship operators would consequently incur additional port charges. The cost has been estimated at up to £9.6 million annually. PORTS/HARBOURS: 1.) A new port wishing to allow cargo transfers would have to update its oil spill contingency plan. The one-off cost has been estimated at around £0.03 million, assuming that 3 new ports would do this. 2.) In addition, all ports wishing to allow cargo transfers would have to conduct environmental impact assessments. The one-off cost has been estimated at around £0.6 million, assuming that a total of 6 ports would do this.	
	One-off (Transition)	Yrs		
	£ 0.63 million	1		
	Average Annual Cost (excluding one-off)			
	£ 9.6 million	10	Total Cost (PV)	£ 82.8 million
Other key non-monetised costs by 'main affected groups' ENVIRONMENT: It is considered that there could potentially be local environmental costs (e.g. air quality) and related health impacts as a result of additional transfers occurring in harbour areas. It has not been possible to monetise this cost.				

BENEFITS	ANNUAL BENEFITS		Description and scale of key monetised benefits by 'main affected groups'	
	One-off	Yrs		
	£			
	Average Annual Benefit (excluding one-off)			
	£		Total Benefit (PV)	£
Other key non-monetised benefits by 'main affected groups' ENVIRONMENT: It is considered that bringing transfers within harbour areas could decrease the probability of a serious environmental incident occurring, and would ensure transfers take place within an area where response-facilities are available, reducing the costs to the UK of any incidents. In comparison with Option 2, Option 3 also guarantee that environmental impact assessments would be undertaken, providing an additional safeguard. The MCA expect that this would increase this benefit. However, it has not been possible to monetise this benefit.				

Key Assumptions/Sensitivities/Risks The key assumptions / sensitivities / risks are the same as for Option 2.

Price Base Year 2010	Time Period Years 10	Net Benefit Range (NPV) £ -82.8 million	NET BENEFIT (NPV Best estimate) £ -82.8 million
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What is the geographic coverage of the policy/option?		United Kingdom	
On what date will the policy be implemented?		TBC	
Which organisation(s) will enforce the policy?		MCA	
What is the total annual cost of enforcement for these organisations?		£ 0	
Does enforcement comply with Hampton principles?		Yes	
Will implementation go beyond minimum EU requirements?		No	
What is the value of the proposed offsetting measure per year?		£ n/a	
What is the value of changes in greenhouse gas emissions?		£ Not quantifiable	
Will the proposal have a significant impact on competition?		No	
Annual cost (£-£) per organisation (excluding one-off)	Micro	Small	Medium Large
Are any of these organisations exempt?			

Impact on Admin Burdens Baseline (2005 Prices)		(Increase - Decrease)
Increase of £ 0	Decrease of £ 0	Net Impact £ 0

Evidence Base (for summary sheets)

1. Background

- 1.1 Cargo transfers between ships (referred to as Ship-to-Ship (STS) Transfers) involve the transfer of oil, carried as cargo, from one tanker to another. It is an internationally recognised practice, which takes place worldwide. There are voluntary industry guidelines issued under the aegis of the International Chamber of Shipping (ICS) and the Oil Companies International Marine Forum (OCIMF), which set out the procedures to be followed when carrying out cargo transfers. Domestically, these transfer operations have a very good record, both in respect of safety and in respect of the environment.
- 1.2 Bunkering operations between ships (normally referred to as bunkering) involves the replenishment of bunker fuel for use by a ship receiving the transfer for propulsion of the engines. This can be considered as a lesser form of ship to ship transfer with usually much smaller volumes being transferred.
- 1.3 Routine cargo and bunkering transfers between ships are currently unregulated and ships can conduct transfers anywhere in the UK waters.
- 1.4 Current situation for Cargo Transfers (STS Transfers)
 - 1.4.1 Historically, STS transfers have been carried out in the UK territorial seas in locations off Southwold (Suffolk) and in Lyme Bay (Devon/Dorset), as well as in the Harbour Authority areas of Scapa Flow, Nigg and Sullom Voe. In recent years, there has been an increase in STS transfers in UK waters, brought about by new trading patterns within Europe and Russia, namely the noted increase in trade through European waters of Russian export blend crude oil and heavy fuel oil.
 - 1.4.2 The specific reason for the requirement to carry out the transfers is that the oil emanating from Baltic and Russian ports initially has to be shipped using relatively small tankers due to the shallow waters of the Baltic Sea and some of the approaches to the Northern Maritime Corridor ports. However, once this stage of the journey has been negotiated it is then more economically viable to transfer the oil into larger tankers for the onward journey to its eventual destination in either the Americas or the Far East. MCA data indicates that transfer operations tend to involve transfer of oil from a number of smaller vessels (around 2-6) into one larger vessel.
 - 1.4.3 MCA records show that from 2006 – 2008, less than 60 applications to complete ship to ship transfers were received by the MCA. However, the MCA had in excess of 200 applications in 2009. The operations have involved a total of 594 ship movements (this includes all receiving and discharging vessels). This substantial increase is mainly due to the current economic downturn as it is more profitable for companies to hold the product on the vessels until such time as the oil price peaks before transferring it to the receiving vessel for onward transit to the intended market. Ships are being repeatedly used as storage receptacles with the subsequent change in trading patterns.
 - 1.4.4 Cargo transfer operations are undertaken by manoeuvring two vessels to berth together. Pipelines are then connected between the vessels and the cargo transferred from one vessel to the other. If more than one vessel is involved in discharging oil then the first vessel will uncouple and move way before the process is repeated with the next discharging vessel. The number of vessels involved can vary from 2 (one discharging and one receiving) to 6 (one or two receiving and up to 5 discharging). Each transfer operation is independent and the MCA cannot predict the number of vessels that may be involved overall. Under the proposed Regulations, the MCA expect that this operation would instead take place within the sheltered confines of the harbour waters using similar methodology. The alternative would be for these operations to take place outside UK territorial waters.

1.5 Current Situation for Bunkering Transfers (Bunkering)

- 1.5.1 The majority of ports have the necessary facilities for bunkering transfers to be carried out within their statutory harbour areas resulting in the majority of all bunkering transfers being carried out within these harbour areas.
- 1.5.2 However, bunkering can take place outside of harbour areas. When this occurs, as with ship to ship transfers, there is no regulation currently in place to control the operation or impose sanctions should an incident occur.
- 1.5.3 No statistics exist as to the number of bunkering operations that currently take place within UK harbour areas as these are a daily operational occurrence. Of the 248 ship to ship transfer applications that were received during 2009, 23 were identified as bunkering operations.

1.6 Regulatory Background

- 1.6.1 One of the recommendations in the report 'Safer Ships, Cleaner Seas' overseen by Lord Donaldson of Lymington following the Braer incident, was that the Government should bring new Regulations into force as soon as practicable to control transshipments, such as cargo transfer and bunkering transfer operations.

1.7 The OPRC Regulations

- 1.7.1 All statutory harbour areas must comply with the International Convention on Oil Pollution Preparedness, Response and Co-operation Convention (OPRC) 1990 and the associated domestic legislation under the Merchant Shipping (OPRC) Regulations 1998.
- 1.7.2 The OPRC Regulations require ports and harbours to have a MCA approved oil spill contingency plan which includes a risk assessment and the provision of oil combating equipment commensurate to the identified risk. The plans are designed to ensure that trained personnel and the necessary equipment for responding to a spill are close at hand, and can be deployed in a timely manner. Were cargo transfers or bunkering transfers to be carried out in a statutory harbour area, the port / harbour would be required to give this due consideration as part of its oil spill contingency plan.
- 1.7.3 The OPRC Regulations do not apply to cargo or bunkering transfer operations which take place outside of statutory harbour areas. As a result, there are currently no statutory requirements placed on operators to have in place the necessary resources to respond to a pollution incident arising from their operations if they take place outside of statutory harbour areas. This means it would fall upon the government to initiate a response to an incident and use taxpayers money to undertake the clean up operation. It is also possible that those involved in the incident would not notify the authorities resulting in a delayed reaction and greater damage occurring to the marine and coastal environments as a result. If operations are carried within a port area there are more and better resources available to respond to an incident to mitigate and pollution.

1.8 The Habitats Directive

- 1.8.1 Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Flora (The Habitats Directive) has the aim of preserving, protecting and improving the quality of the environment, including the conservation of natural habitats and of wild fauna and flora.
- 1.8.2 The proposed Merchant Shipping (ship-to-ship operations) Regulations, which reflect Option 3 as described in Section 3 of this impact assessment, would implement the Habitats Directive in respect of the granting of oil transfer licences. . . . When applying for an oil transfer licence the Harbour Authority would be required to consider whether the transfer operation(s) proposed under the licence would constitute a significant threat or have a significant effect on any European designated conservation site. They would have to show that this has been taken into consideration prior to an Oil Transfer Licence being awarded.

2. Why Intervention is Required.

- 2.1 The problem under consideration is how to prevent pollution from ships engaged in ship-to-ship transfers. New trading patterns in Europe and Russia, associated with growing markets for Russian export blend crude oil, have meant an increased number of cargo transfers occurring in UK waters in recent years, with further growth expected. MCA statistics show that since 2006 the number of ship-to-ship transfers taking place in UK waters has greatly increased (see paragraph 1.4.3). This has led to a proportional increase in the risk to the UK from a major oil pollution incident arising as a result of a cargo transfer. The MCA has recorded 6 incidents of collisions and 2 incidents of oil spills during ship-to-ship transfers during 2009. The UK has been fortunate that these incidents have been minor. The sudden recent increase in ship-to-ship operations is linked to the economic downturn as explained in paragraph 1.4.3. There are no current trends indicating a downturn in this activity.
- 2.2 Although the UK has successfully controlled ship-to-ship transfers in UK waters through voluntary measures and guidelines for a number of years, and industry has effectively self regulated, the increase in operations and incidents has led to the need for the UK to further protect its coastline and waters from oil pollution incidents. The introduction of the proposed Regulations would ensure that all transfers within the UK's 12 nautical mile territorial sea limit take place within harbour areas where additional resources are available to combat any pollution incidents that may occur.
- 2.3 The proposed Regulations would ensure that no unauthorised transfers take place and would be an effective tool to prevent the 'rogue' operators that can currently carry out transfers, and operate outside of the voluntary guidelines, within UK waters without fear of sanctions. Although the MCA know that operations have been undertaken without the MCA being notified, no records of such operations are kept. When such a situation occurs, communication is undertaken with the operator to ensure they are informed of the MCA process for ship to ship transfers.
- 2.4 The Government has maintained an interest in the transfer activities that take place off of the coast and is aware that the recent history and record of the transfers has been good. However, the number of transfers taking place has increased as has the potential for a hazardous incident to occur. This increase in marine traffic around the coastline and rise in number of ship-to-ship transfers taking place has led the government to believe that the time is now right to introduce legislation to further control ship-to-ship transfers and minimise the potential for and impact of a marine pollution incident taking place.
- 2.5 The recent interest of the national media and general public in this issue has further strengthened the view that now is the correct time to introduce regulation before a major incident occurs, and before the level of transfers taking place result in numerous small incidents that collectively have a larger effect than their individual impacts.
- 2.5 Much of the UK coastline and marine environment is of international importance and as such needs protection from the threat posed from increased transfer of oil around the coast. By introducing the proposed Regulation to reinforce the Habitats Directive and ensure that appropriate environmental considerations are made, the UK can maintain the highest level of protection for its unique flora and fauna.

3 Policy Options

- 3.1 The policy options under consideration are as follows:

Option 1) Do Nothing (Counterfactual)

Option 2) Ban transfer operations in UK territorial seas (excluding statutory harbour areas).

Option 3) Ban transfer operations in UK territorial seas (excluding statutory harbour areas, and introduce a requirement for an Oil Transfer Licence within a harbour area

where an oil transfer will not significantly impact upon European sites and has the environmental consent of the appropriate authority.

Option 1) Do Nothing.

3.2.1 This option would leave all transfer operations unregulated. Evidence shows that the UK has a generally responsible shipping industry which operates within international industry guidelines for the conduct of cargo transfer operations and voluntary UK measures for cargo and bunkering transfers. However, the absence of any regulatory control makes it impossible to guarantee that the excellent safety record that has been established would continue. The option also ignores the potential future hazards posed by operators who may wish to set up such activities without the necessary pollution control resources in place. In this impact assessment, the costs and benefits of Option 2 and Option 3 have been assessed relative to this 'Do Nothing' option as the counterfactual.

3.3 Option 2) Ban cargo transfer and bunkering transfer between ships in United Kingdom territorial seas (excluding statutory harbour areas).

3.3.1 Within UK waters, this option would force operators to conduct STS operations and bunker transferring operations within statutory harbour areas and thus prevent them from conducting such operations elsewhere in UK territorial seas. Within these harbour areas, oil spill contingency planning for STS and bunker transferring operations would be brought under the auspices of the OPRC Regulations, providing an additional element of control. Any port or harbour allowing such operations to take place within its statutory harbour area would be legally bound to consider the operations as part of the OPRC contingency planning process. Furthermore, there are additional resources in harbour areas, such as tugs, that would be of particular use in an emergency situation.

3.3.2 However, the measures recommended in this option would only be effective up to the 12 nautical mile (NM) limit of the UK territorial seas. Therefore, it would still notionally be possible for large tankers to conduct cargo or bunkering transfer operations just outside of the territorial sea. The UK is currently involved in negotiations at the International Maritime Organization (IMO) to draft a new chapter of Annex I of MARPOL (The International Convention for the Prevention of Pollution by Ships) which would regulate ship-to-ship transfers outside UK territorial waters but within the Pollution Control Zone. As an interim measure, the MCA would seek to discourage operators from conducting operations just outside of UK territorial seas.

3.3.3 Option 2 would be a viable way to proceed due to the additional control that the OPRC contingency planning process would place over contingency planning and pollution response when STS operations are carried out in statutory harbour areas. This option would remove the risks associated with STS and bunkering transfer operations that are carried out in UK territorial seas outside of statutory harbour areas.

3.3.4 However, Option 2 would not ensure that all of the policy objectives are met as it would not ensure that impacts upon European Sites¹ as detailed within the Habitats Directive are appropriately considered within the decision making process, and would not ensure that cargo transfers within a harbour area have taken into consideration the environmental impact or have an appropriate environmental consent. This is the key difference between Option 2 and Option 3, and is the main reason why Option 2 has been discounted.

3.4 Option 3: Ban transfer operations in UK territorial seas (excluding statutory harbour areas), and introduce a requirement for an Oil Transfer Licence within a harbour area where an oil transfer will not significantly impact upon European sites and has the environmental consent of the appropriate authority.

3.4.1 The preferred option is Option 3, which would only allow transfers to take place in statutory harbour areas subject to an appropriate licence being held. Within UK waters, this would force

¹ Special Areas of Conservation (SACs), Special Protection Areas (SPAs) & Offshore Marine Sites (OMS)

operators to conduct STS operations and bunker transferring within specified areas. Within these harbour areas, oil spill contingency planning for STS and bunker transferring operations would be brought under the auspices of the OPRC Regulations. Any port or harbour allowing such operations to take place within its statutory harbour area would be legally bound to consider the operations as part of the OPRC contingency planning process thus ensuring appropriate resources are in place should a pollution incident occur.

3.4.2 In order for ship-to-ship transfers to be undertaken within a statutory harbour area, the harbour authority would have to apply for an oil transfer licence. Application for this licence would be processed by the MCA, but would involve consultation with appropriate bodies, such as Scottish Natural Heritage, Natural England and the Countryside Council for Wales, as is deemed necessary.

3.4.3 A harbour authority would only allow cargo transfer operations within its waters for which an oil transfer licence has been granted (note – an oil transfer licence is not required for bunkering operations). As a part of the licence application due consideration would have to be given to the potential impact on the environment, with particular reference to any European Sites within the Harbour Authority Area. If required, a full environmental impact assessment would have to be undertaken prior to a licence being granted.

3.4.4 A requirement to obtain an oil transfer licence from the appropriate authority would mean that, even where there was no designated European site within harbour authority waters, there would still be a requirement to assess the potential environmental impact of a cargo transfer.

3.4.5 As with Option 2, Option 3 would only be effective up to the 12 nautical mile (NM) limit of the UK territorial seas.

3.4.6 Option 3 is preferred over option 2 for the following reasons:

- Greater protection of the marine and coastal environment;
- Ensure the impact of transfers are appropriately reviewed;
- Ensure continued compliance with existing UK environmental legislation;
- Compliance with Habitats Directive
- Ensures that adequate resources are in place should a pollution incident occur; and
- All policy objectives for the proposed Regulation would be achieved.

3.4.7 The proposed Regulations that are subject to consultation therefore reflect Option 3. However, the costs and benefits of both the proposed Regulations (Option 3) and Option 2 are presented in this impact assessment.

4 Simplification

4.1 Introducing legislation to ensure that ship to ship transfers are completed within statutory harbour areas when undertaken in UK waters means that the regulations relating to OPRC and the Habitats Directive can be used to further control STS transfers, thus reducing the complexity of legislation required to reduce the risk of pollution incidents within UK waters.

5. Implementation and Delivery Plan

5.1 The proposed Regulations would simply place restrictions on the locations in which STS operations can take place within UK waters, and as such, the MCA do not anticipate that they would be overly burdensome to the vessel or vessel operator. The vessel would, however, have to apply to the appropriate harbour authority for consent to carry out the ship-to-ship transfer within the harbour area. The MCA do not expect that the shipping industry would have any trouble complying with the proposed Regulations.

5.2 There could be some burden on harbour authorities who envisage a programme of transfers within their waters. They would need to ensure that such operations are adequately covered by oil spill contingency planning under the OPRC Regulations. They would also have to consider impacts on

any European Sites, and obtain environmental consent from the appropriate authority. Harbours would also have to process the applications received from vessels who wish to compete STS transfers within their waters. The proposed Regulations have been drafted to ensure that transfers can continue to take place until harbour authorities have the appropriate systems in place to fully implement the proposed Regulations.

- 5.3 The shipping industry generally has an excellent record with co-operation on matters regarding cargo transfer and bunkering transfer operations (previously operators have complied with various voluntary measures on locations where cargo transfers between ships may be carried out). It is not foreseen that there will be any significant level of opposition to the introduction of the proposed Regulations.
- 5.4 Where it can be established that transfers are already taking place within a harbour, the harbour authority may be granted up to 2 years from the date the Regulations come into force to obtain an oil transfer licence. Details and conditions of this process are detailed within the proposed Regulations.
- 5.5 A Marine Guidance Note (MGN) [and Merchant Shipping Notice (MSN)] would be included as part of the regulatory package to provide further guidance and clarification on certain issues for industry. These documents are being consulted upon alongside the proposed Regulations.

6. Post-implementation Review

- 6.1 The MCA is committed to reviewing the effectiveness of the proposed Regulations within three years of implementation, to ensure that they meet the needs of the environment and industry.
- 6.2 The implementation of the proposed Regulations would be reviewed domestically through the MCA's normal contact with industry and NGO groups at regular stakeholder meetings. In addition, the UK is active in ongoing work within the international community to tackle pollution from shipping both within the IMO's Marine Environment Protection Committee structure and through other UN and EU initiatives. For all of these bodies, the input of the industry and NGOs is sought when developing a UK position both through standing meetings before IMO Committee meetings and ad hoc consultation

7. Costs of Option 2

7.1 Costs for the Ports and Shipping sectors

7.1.1 Option 2 would prohibit STS transfers and bunkering operations taking place within the UK's territorial seas. In this impact assessment, it has been assumed that instead of these transfers taking place within the UK's Territorial Seas, Option 2 would result in all such transfers taking place within harbour areas in the UK. However, it would also be possible for ship operators to conduct transfers outside of the UK territorial seas in international waters. MGN / MSN issued by the MCA could be used to discourage operators from conducting transfers outside this area, although without the introduction of an IMO convention, this would not be enforceable. This has therefore been identified as one of the key assumptions in this Impact Assessment. It is possible therefore that the estimated monetised costs identified below could overestimate of the cost of Option 2 to ship operators. This risk is discussed further in paragraph 7.1.6.

7.1.2 The MCA expect that the economic costs of Option 2 would largely be borne by the ports and harbours in the first instance, which in turn would be likely to pass the costs onto the shipping industry in the form of higher port fees. Ports are likely to face both fixed and variable costs under Option 2: fixed costs in terms of obtaining new OPRC Oil Spill Contingency Plans, and variable costs in terms of allowing ship operators into their port or harbour area to conduct an STS transfer. For the purposes of this impact assessment, it has been assumed that the ports are able to pass on these variable costs to their consumers (i.e. Ship Operators). This stems from the assumption that the ports industry is competitive and that it would therefore price its services at marginal cost. The fixed costs have thus been considered as a cost to the port or harbour, and the variable costs have thus been considered as a cost to ship operators. The extent to which the ports industry can

accurately be modelled by an assumption of perfect competition has not been investigated in this impact assessment.

- 7.1.3 A small fixed cost would be incurred by any port that wants to bring STS operations into its harbour area in order to prepare a new OPRC Oil Spill Contingency Plan. This is because a proposal to allow STS operations constitutes a major change, which affects or could affect the validity or effectiveness of a contingency plan to a material extent under the OPRC Regulations. The MCA assume that a port or harbour would incur a one-off cost of around £10,000 for preparation of a new plan on the basis of informal discussions with industry sources. On the assumption that three additional ports would begin to allow STS transfers as above and thus require an amended contingency plan, the MCA estimate that the total cost would be £30,000. However, it should be noted that the number of additional ports that would allow STS transfers and the cost of a new OPRC Oil Spill Contingency Plan are both uncertain.
- 7.1.4 As noted in paragraph 7.1.2, it is assumed that the variables costs faced by ports would be passed onto their customers (i.e. Ship Operators). Therefore, ship operators would incur additional costs as a result of Option 2 due to the prohibition of conducting the transfers at sea in the UK Territorial Sea. These would include port fees, the use of port facilities including pilotage, tug fees and light dues. By considering the charges that are levied by various ports that are suitable for cargo transfer operations to take place, the MCA consider that the average cost of port charges, such as those listed above, could be in the region of £0.45 per tonne of oil transferred².
- 7.1.5 Data collated by the MCA indicates that there were around 600 ship movements related to STS transfers in UK waters in 2009. For the purposes of this impact assessment, it has been assumed that the number of cargo transfers undertaken in future years would be the same as in 2009 and that the same number of ship movements would take place (i.e. 600 ship movements per year). As noted in paragraph 7.1.1, it is assumed that all of these transfers would take place within harbour areas as a result of Option 2. Based upon 2009 data, the MCA estimated that around 35,000 tonnes of oil were transferred per ship movement on average³. Using the port charges identified in paragraph 7.1.4, the MCA has estimated that ship operators undertaking transfers would face additional costs of around £16,000 per ship movement on average. Therefore, assuming 600 ship movements take place each year, the MCA has estimated the total cost to ship operators of the port charges that they would incur as a result of operations being banned in UK territorial seas at around £9.6 million per year⁴.
- 7.1.6 The above estimates assume that as a result of the introduction of Option 2, all STS transfers currently taking place within UK waters would move to a UK port or harbour rather than outside the UK 12 nautical mile territorial sea limit or to a foreign port or harbour. Given that the number of STS transfers that took place in UK waters in 2009 was historically high, this could lead to the above estimates overestimating the additional costs that would be incurred by ship operators in practice. For example, as a sensitivity test, data collated by the MCA indicates that on average 16 transfers, involving 51 ship movements, took place per year between 2006 and 2008. If it is assumed that only 50 ship movements related to STS transfers would take place in UK territorial waters on an annual basis in the future, the MCA has estimated that the total cost to ship operators would only be around £0.8 million per year⁵. This demonstrates the significant impact of the assumption about the number of STS transfers that would take place in harbour authority areas in the UK as a result of Option 2.
- 7.1.7 It should be noted that it is possible that the above estimates of the total cost to ship operators explained in paragraphs 7.1.5 and 7.1.6 could overestimate the costs of Option 2 to the UK. In particular, this is because it is possible that a proportion of the above costs could be incurred by non-UK firms. The MCA does not have any data which would allow the extent that the above costs

² This is based on the average price charged by two of the port operators that currently permit STS transfers & publish their schedule of port charges: http://www.orkneyharbours.com/Schedule_of_Charges_2009.pdf and <http://www.shetland.gov.uk/ports/transshipment/charges.asp>.

³ The average quantity of oil transferred per ship movement has been estimated by dividing the total quantity of oil that was transferred in 2009 by the total number of ship movements that took place in 2009.

⁴ £16,000 per ship movement x 600 ship movements per year = £9.6 million per year.

⁵ £16,000 per ship movement x 50 ship movements per year = £0.8 million per year.

are incurred by non-UK firms to be estimated. Therefore, the above estimates have been used on the Summary Sheets.

7.1.8 The port charges outlined in paragraph 7.1.4 are expected to cover all of the additional costs for ports, such as the cost of the labour involved in the provision of these services to ships. In the absence of evidence on the mark-up on port charges, it is assumed that the port charges will equal the additional costs for ports. Should the additional revenues received by UK ports under Option 2 exceed the additional costs incurred by UK ports under Option 2, the above estimates of the total cost to ship operators explained in paragraphs 7.1.5 and 7.1.6 would overestimate the cost to the UK.

7.1.9 There could be some costs associated with delays and additional journey time if ships have to alter course to enter suitable ports in which to carry out cargo transfer operations. However, the location of those ports currently conducting STS operations is such that they require little deviation from trading routes, and moving a transfer into port could potentially increase the speed of processing a transfer as there would be no requirement to wait for a suitable window of weather conditions. Given that the additional time, if any, required for a transfer is uncertain, it has not been possible to monetise this cost in this impact assessment.

7.2 Environmental Costs

7.2.1 For communities that are located near to ports and harbours that allow new / additional cargo transfer operations to be carried out inside their statutory harbour areas, it is possible that the risk of an oil spill occurring in their area could increase, with associated environmental costs to their locality. However, the MCA expect that bringing operations under the control of the OPRC Regulation, and ensuring harbour authorities consider potential environmental impact in advance of the transfer taking place, would outweigh the risk from bringing the transfers closer to shore. The probability and seriousness of oil spills is thus considered in the benefits section of this impact assessment.

7.2.2 By requiring ships to divert to a port to conduct an STS transfer, Option 2 could entail a small increase in greenhouse gas emissions. However, given that the ships involved in the transfers are unlikely to travel a significant additional distance in order to come into port, the MCA consider that this is unlikely to lead to a significant change in greenhouse gas emissions.

7.2.3 There could also be costs associated with a reduction in local air quality attached to the increase in port visits and transfer operations conducted in port. This could include localised health impacts, such as higher incidence of respiratory conditions. No Analysis of the magnitude of these costs has been possible.

7.3 Costs to the Regulator

7.3.1 Option 2 could create a new role for the MCA additional to those it already performs. The cost of approving applications to conduct oil transfers would be likely to increase in the years directly following the introduction of Option 2 compared to the counterfactual case (Option 1). However, it has not been possible to monetise this cost.

7.4 Summary of Costs of Option 2

7.4.1 For the purposes of this impact assessment, it has been assumed that all of one-off costs and the reoccurring costs are incurred in full in 2010. These costs have been discounted on this basis when estimating the present value (PV) of the costs of Option 2. However, it is noted that the timing that Option 2 would become law is uncertain, so this could represent an overestimate of the present value (PV) of the costs of Option 2.

7.4.2 Given the inherent uncertainties surrounding the assumptions that have been made, the estimated monetised costs reported below are subject to significant uncertainties.

Costs of Option 2	One-Off	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	PV Costs
Costs (£2010 million)	0.03	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	
Discounted Costs (£2010 million)	0.03	9.6	9.3	8.9	8.6	8.3	8.0	7.8	7.5	7.2	7.0	82.2

8 Costs of the proposed Regulations (Option 3)

8.1 Costs for the Ports and Shipping sectors

8.1.1 The costs of the proposed Regulations (Option 3) for the Ports and Shipping sectors would include all of the costs of Option 2 that are identified in Section 7.1. In addition, the proposed Regulations (Option 3) would also require additional consideration of the environmental impact of any program of cargo transfers.

8.1.2 In particular, the proposed Regulations (Option 3) would also require a port or harbour to assess the impact upon European sites and to obtain environmental consent from the appropriate authority ahead of a program of cargo transfers occurring within its waters. This would represent an additional fixed cost to the port or harbour. This cost could alternatively be borne by the cargo transfer service providers who provide the resources to carry out the operation safely, or shared between the organisations. This cost is likely to vary between ports. An Industry estimate suggests that the cost of conducting this environmental impact assessment could be up to £100,000.

8.1.3 The MCA is aware of three additional ports that have sufficient depth of water to take the draft of vessel used in the transfer operations that may begin to allow STS transfers as a result of the proposed Regulations (Option 3), although no evidence as to their intentions is available. On the basis of this assumption, the total cost could be up to £300,000. In addition to this, there could be additional costs incurred by the three ports that already allow STS transfers within their waters to conduct an environmental impact assessment in compliance with the Regulations. On the assumption that six ports would incur this cost, the total cost of these environmental impact assessments has thus been estimated at around £0.6million. However, it should be noted that the number of ports that would complete an environmental impact assessment and the cost of this are both uncertain.

8.2 Summary of Costs of the proposed Regulations (Option 3)

8.2.1 The costs of the proposed Regulations (Option 3) would also include the Environmental Costs of Option 2 that are identified in Section 7.2 and the Costs to the Regulator of Option 2 identified in Section 7.3.

8.2.2 Given the inherent uncertainties surrounding the assumptions that have been made, the estimated monetised costs reported below are subject to significant uncertainties.

Costs of Option 3	One-Off	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	PV Costs
Costs (£2010 million)	0.60	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	
Discounted Costs (£2010 million)	0.60	9.6	9.3	8.9	8.6	8.3	8.0	7.8	7.5	7.2	7.0	82.8

9 Benefits of Option 2

9.1 Environmental Benefits

9.1.1 The main environmental benefit under Option 2 is a reduction in the probability of a serious pollution incident occurring. The MCA considers that the overall environmental impact of Option 2 is more likely to be an environmental benefit since by forcing cargo transfer and bunkering transfer operations into statutory harbour areas, where there is a legal requirement to conduct suitable oil

spill contingency planning under the OPRC Regulations, the likelihood of an oil spill occurring is reduced.

9.1.2 A second environmental benefit of Option 2 is that it could reduce the cost of any environmental incident that does occur because the port or harbour area would have additional resources that could be beneficial in containing an oil spill, such as harbour tugs, that would not have been available at sea.

9.1.3 It has not been possible to quantify the above environmental benefits and consequently it has not been possible to monetise this benefit. It is noted that the extent that the above environmental benefits would be realised is likely to be sensitive to how ship operators would respond to Option 2. In this impact assessment, it is assumed that ship operators would respond by undertaking STS transfers inside statutory harbour areas. However, it is also possible that ship operators could respond by undertaking STS transfers outside UK territorial waters.

9.1.4 The evidence on the cost of oil spills is not clear. Many costs associated with the clean-up of oil spills are the subject of confidential business arrangements, and are not readily available. There are also a number of variables that make it difficult to quantify the cost of an 'average' oil spill. In many cases, the amount of oil spilled has had less impact upon the overall cost of the spill than the location of the spill or the type of oil spilled (something that is touched on further in the environmental benefits), and the rate of spillage is another factor that should be considered.

9.1.5 However, estimated total clean-up costs are available for some of the world's most serious oil spills (see Figure 1 below). The variance in cost per tonne of oil spilled emphasises the uncertainty surrounding the cost of cleaning up an oil spill.

Figure 1: Costs associated with some of the world's major oil spills:

SHIP	YEAR	OIL (TONNES)	COST (£)	APPROXIMATE COST PER TONNE (£)
Amoco Cadiz	1978	223,000	£150 million	£700
Exxon Valdez	1989	37,000	£1.3 billion	£35,100
Braer	1993	84,000	£52 million	£600
Sea Empress	1996	73,000	£36.8 million	£500
Erika	1999	19,800	£165 million	£8,300
Prestige	2002	63,000	£962 million	£15,300
AVERAGE COST PER TONNE (£):				£10,100

Source: IOPC <http://www.iopcfund.org/publications.htm>

9.1.6 By providing further control over cargo transfer operations, Option 2 would minimise the risks of a serious oil spill requiring a tier 3 response (according to the OPRC regulations) occurring as a result of such an operation. As a consequence, the risk of extremely high-cost clean up operations similar to those above occurring is also reduced.

9.2 Economic Benefits to Local Communities

9.2.1 The proposed Regulations could potentially result in local economic benefits for communities in the vicinity of ports and harbours that permit STS transfers. For example, this could arise if the crew operating such vessels spend money on goods and services in these communities. However, it is not possible to quantify and monetise this impact.

10 Benefits of the proposed Regulations (Option 3)

10.1 The benefits of the proposed Regulations (Option 3) would be similar to those of Option 2. The main difference between the policies is that the proposed Regulations (Option 3) would also require a detailed environmental impact assessment to be undertaken. The MCA expect that this is likely to increase the environmental benefit compared to Option 2 in that it also ensures that the impact on the marine environment arising from cargo transfers has been adequately considered.

10.2 It has not been possible to quantify any of the benefits of the proposed Regulations (Option 3), and consequently it has not been possible to monetise these benefits. As for Option 2, it is noted that the extent that the environmental benefits would be realised is likely to be sensitive to how ship operators would respond to the proposed Regulations (Option 3). In this impact assessment, it is assumed that ship operators would respond by undertaking STS transfers inside statutory harbour areas. However, it is also possible that ship operators could respond by undertaking STS transfers outside UK territorial waters.

11 Competition Assessment

11.1 Both Option 2 and Option 3 could have some impact upon the international competitiveness of UK cargo transfer service providers / oil spill responders. At this stage, there is no international legislation in place via MARPOL governing STS operations. Therefore, it is possible to envisage that operations could potentially take place in other nations territorial seas, using cargo transfer service providers / oil spill responders from the nation in question.

11.2 It should also be noted that owners, operators, agents, brokers, oil spill responders and cargo transfer service providers that would be involved in cargo transfer between ships and also larger scale bunkering operations are often of a global nature. However, due to the UK's location on the trading route for export oil originating from Russia / the Baltic, the MCA consider that is highly likely that operators would choose to carry out operations inside UK ports.

11.3 Work is also underway at IMO to draft an 8th chapter to Annex I of the MARPOL convention entitled "Prevention of Pollution during oil transfer operations between ships at sea" which, if adopted would provide for an international control measure for transfer operations and a responsibility for all parties to the convention to implement domestic legislation.

12 Specific Impact Tests

12.1 The MCA consider that a small firms impact assessment is not required in this case as no small firms, as described by the Better Regulation Unit, are likely to be affected. Due to the size and scale of the operations that are under consideration, the MCA do not envisage that there would be an impact to smaller firms. It is likely that both Option 2 and Option 3 would impact, in one way or another upon cargo transfer service providers, bunkering companies, oil spill response organisations, major (large) ports, tanker owners and oil traders. The MCA consider that it is likely that the companies involved are large scale organisations, capable of undertaking high-finance operations. However, a wide range of industry representatives, such as the British Ports Association, the Chamber of Shipping and UK Spill are included in the consultation exercise to enable these assumptions to be tested.

12.2 Both Option 2 and Option 3 are of a technical nature, and are therefore race, gender and disability non-specific.

12.3 No other specific impact tests have been completed as they are not relevant or do not apply due to the technical nature of the proposals.

13 Enforcement, Sanctions and monitoring

13.1 Enforcement would be carried out by the Maritime and Coastguard Agency as part of its existing enforcement activities. The proposed Regulations (Option 3) would provide for sanctions and would impose criminal sanctions for non-compliance. This would include provisions on summary conviction to fine the relevant parties an amount not exceeding £25,000, and on conviction on indictment to imprisonment for a term not exceeding two years, or a fine, or both. These penalties would be in line with those for other maritime offences and are considered to be proportionate to the nature of the offences.

- 13.2 It should be noted that if a transfer is made to or from a ship in contravention of the proposed Regulations (Option 3), the owner, the manager and the master of the ship shall each be guilty of an offence. It would however be a defence when charged under the proposed Regulations (Option 3) to prove that the transfer was for the purpose of securing the safety of a ship, prevention of damage to a ship or its cargo or for the purpose of saving life.
- 13.3 The Home Office and the Scottish Executive Justice Department have indicated their satisfaction with these provisions.

Specific Impact Tests: Checklist

Type of testing undertaken	<i>Results in Evidence Base?</i>	<i>Results annexed?</i>
Competition Assessment	Yes	No
Small Firms Impact Test	Yes	No
Legal Aid	No	No
Sustainable Development	No	No
Carbon Assessment	No	No
Other Environment	No	No
Health Impact Assessment	No	No
Race Equality	Yes	No
Disability Equality	Yes	No
Gender Equality	Yes	No
Human Rights	No	No
Rural Proofing	No	No