

Title: The Merchant Shipping (Ship-to-Ship Transfers) Regulations 2012 IA No: DfT00113 Lead department or agency: Department for Transport Other departments or agencies:	Impact Assessment (IA)		
	Date: 23/12/2011		
	Stage: Final		
	Source of intervention: Domestic		
	Type of measure: Secondary legislation		
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Summary: Intervention and Options		RPC: RPC Opinion Status	

Cost of Preferred (or more likely) Option			
Total Net Present Value	Business Net Present Value	Net cost to business per year (EANCB on 2009 prices)	In scope of One-In, Measure qualifies as One-Out?
£5.36m	£5.44m	-£0.56m	Yes OUT

What is the problem under consideration? Why is government intervention necessary?
Risks to the environment from pollution arise from ship-to-ship (STS) transfers of oil cargo and need to be managed proportionately. Regulations introduced in April 2010 but not yet in force were intended to reduce these risks by restricting STS transfers within the UK territorial sea, but a public review of the 2010 Regulations identified that these may be disproportionate and/or have the unintended consequence of displacing STS transfers to areas where conditions could be less safe. UK shipping also needs to abide by international agreements, so needs to implement new STS transfer provisions for transfers in international waters agreed under the International Convention for the Prevention of Pollution from Ships (MARPOL). Government intervention is necessary to amend legislation to address all these issues.

What are the policy objectives and the intended effects?
The objective of the proposed 2012 Regulations is to ensure STS transfers are conducted safely but in a less restrictive way than allowed for under the 2010 regulations. The intended effects of the 2012 Regulations are that operators should have a wider choice of locations for operations, that small scale bunkering and lightering operations should be unaffected by the regulations and that ships carrying out STS transfers outside territorial waters should provide the information required by MARPOL.

What policy options have been considered, including any alternatives to regulation? Please justify preferred option (further details in Evidence Base)
'Doing Nothing' would mean that the 2010 Regulations would enter into force on 1 April 2012. This would impose unnecessary restrictions on operators and increase the risk of activities being displaced to less safe international waters. The policy option is to implement new Regulations to amend the 2010 Regulations and add the MARPOL provisions. These will allow the Government to restrict STS operations within UK territorial waters to the specific location already used by STS operators; introduce a simple but statutory permitting system; ensure best practice; introduce legal sanctions to ensure compliance; and give effect to MARPOL in UK law, including introducing a notification regime for STS transfers which take place outside the UK territorial sea but within the UK's counter pollution zone.
An alternative option would be to maintain an existing non-statutory procedure under which operators are asked to provide details of their operations within UK territorial waters to the MCA. This option has been discounted as it would not address the potentially serious economic and environmental risks associated with STS transfers.

Will the policy be reviewed? It will be reviewed. If applicable, set review date: January /2017					
Does implementation go beyond minimum EU requirements?				N/A	
Are any of these organisations in scope? If Micros not exempted set out reason in Evidence Base.	Micro Yes	< 20 Yes	Small Yes	Medium Yes	Large Yes
What is the CO₂ equivalent change in greenhouse gas emissions? (Million tonnes CO₂ equivalent)			Traded: N/A		Non-traded: N/A

I have read the Impact Assessment and I am satisfied that (a) it represents a fair and reasonable view of the expected costs, benefits and impact of the policy, and (b) that the benefits justify the costs.

Signed by the responsible Minister Mike Penning Date: 05/03/2012

Summary: Analysis & Evidence Policy Option 1

Description: To regulate the location of STS transfers that take place in the UK territorial sea and the procedures that are used; and give effect in national law to Chapter 8 of the MARPOL Annex I.

FULL ECONOMIC ASSESSMENT

Price Base	PV Base Year	Time Period	Net Benefit (Present Value (PV)) (£m)		
			Low: -0.08	High: 49.22	Best Estimate:

COSTS (£m)	Total Transition (Constant Price) Years	Average Annual (excl. Transition) (Constant	Total Cost (Present Value)
Low	N/A	N/A	N/A
High	N/A	N/A	N/A
Best Estimate	0	0.01	0.08

Description and scale of key monetised costs by 'main affected groups'

The cost to the Maritime and Coastguard Agency (MCA) of dealing with applications for STS transfers has been estimated at approximately £9,500 per year from 2012.

Other key non-monetised costs by 'main affected groups'

1.) There may be additional compliance costs for operators from changes to the reporting requirements when undertaking STS transfers and preparation of STS operations plans (Section 5.3.1). 2.) There would be familiarisation costs for operators (Section 5.3.2). 3.) There could be additional costs to the MCA of processing notifications for STS transfers outside the UK territorial sea (Section 5.3.3). 4.) There could be environmental costs from any incidents outside the waters of harbour authorities (Section 5.3.4).

BENEFITS (£m)	Total Transition (Constant Price) Years	Average Annual (excl. Transition) (Constant	Total Benefit (Present Value)
Low	0	0	0
High	0	5.73	49.30
Best Estimate	0	0.63	5.44

Description and scale of key monetised benefits by 'main affected groups'

Operators would be allowed to carry out STS transfers in a designated area in the UK territorial sea outside of the waters of harbour authorities. There is consequently the potential for operators to benefit from a corresponding reduction in the port charges they would incur relative to the situation once the 2010 regulations come into force under the do-nothing scenario. The value of this benefit has been estimated at around £0 to £5.7 million per year, with a best estimate of around £0.6 million per year.

Other key non-monetised benefits by 'main affected groups'

1.) There could potentially be other benefits to operators if the number of STS transfers undertaken within the waters of harbour authorities declines (Section 5.2.2). 2.) There could potentially be environmental benefits if ships required shorter journeys and/or carried out fewer transfers outside the UK territorial sea and from new notification arrangements reducing response times (Section 5.2.3). 3.) There could potentially be benefits for operators due to relaxing regulations on bunkering operations and lightering (Section 5.2.4).

Key assumptions/sensitivities/risks

Discount 3.5%

It has not been possible to monetise some of the costs and benefits that have been identified, and a number of assumptions have had to be made. These assumptions are described in the Evidence Base. The estimates of the monetised costs and benefits are sensitive to the assumptions that have been made, and should therefore be interpreted as indicative estimates of the order of magnitude of these costs and benefits. Finally, other limitations are discussed in the Evidence Base.

BUSINESS ASSESSMENT (Option 1)

Direct impact on business (Equivalent Annual) £m: Costs: NQ	Benefits: 0.56	Net: 0.56	In scope of Yes	Measure qualifies OUT
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Evidence Base (for summary sheets)

1. Background

1.1. Ship-to-Ship Transfers

There is a practice known as “ship-to-ship transfers” (STS transfers) which involves 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 Maritime Forum (OCIMF), which set out the procedures to be followed when carrying out STS transfers. This practice is also known as cargo transfers. It should not be confused with bunkering operations, where oil is conveyed from one ship to another for the purpose of burning in its engines as a means of propulsion.

STS transfers are carried out in response to oil market conditions. In particular the practice is used to transfer oil from larger tankers to smaller vessels for delivery to smaller ports, or from smaller tankers bringing oil from producers within relatively confined waters, such as the Baltic, to larger vessels for onward shipment, a practice known as reverse lightering. The growth in demand for Russian oil via the Baltic during 2009/10 was responsible for a marked up-surge in STS transfers in UK waters in 2009/10 which has since subsided with declining world-wide economic activity. Difficulties in forecasting both the demand and supply of oil, and particularly the pattern of supply and demand for oil from particular producers or locations, mean that it is not easy to forecast future levels of STS transfer activity around the UK. The approach taken in this assessment has been to take data collected by the MCA on STS transfers over the last 5 years as providing a measure of both the high and low end of likely STS activity in the future.

STS transfers involve the risk of oil spillages and pollution. These risks are generally mitigated by good practice by operators and by the availability of counter-pollution resources and personnel able to respond in a timely fashion and prevent any pollution affecting shore lines or environmentally sensitive areas.

1.2. Ship-to-Ship Transfers in the UK territorial sea outside the waters of harbour authorities

Data on STS transfers in the UK territorial sea outside the waters of harbour authorities

STS operations have been historically conducted in a range of locations around the UK, including within harbour authority areas at Orkney’s Scapa Flow, Shetland’s Sullom Voe and Nigg in the Cromarty Firth.

More recently through a voluntary arrangement between the MCA and operators the only location used in the UK territorial sea outside of the waters of harbour authorities has been Southwold. Maritime and Coastguard Agency (MCA) data on STS transfers undertaken off Southwold in recent years are shown in Table 1 below. This data indicates that both the number of STS transfers undertaken off Southwold and the total tonnes of cargo transferred were substantially higher in 2009 and 2010 than in 2006, 2007 and 2008. However, it also indicates that both the number of STS transfers

undertaken off Southwold and the total tonnes of cargo transferred have declined substantially in the period to 30 August in 2011 compared to the same period in 2010.

Table 1: Ship-to-ship transfers undertaken off Southwold (no official data was collected prior to 2006)

Year	Number of Ship-to-Ship Transfers	Total Tonnes of Cargo Transferred
2006	52	3.1 million
2007	33	2.5 million
2008	18	0.8 million
2009	349	14.5 million
2010	274	11.1 million
2011 (to 30 August)	69	3.4 million

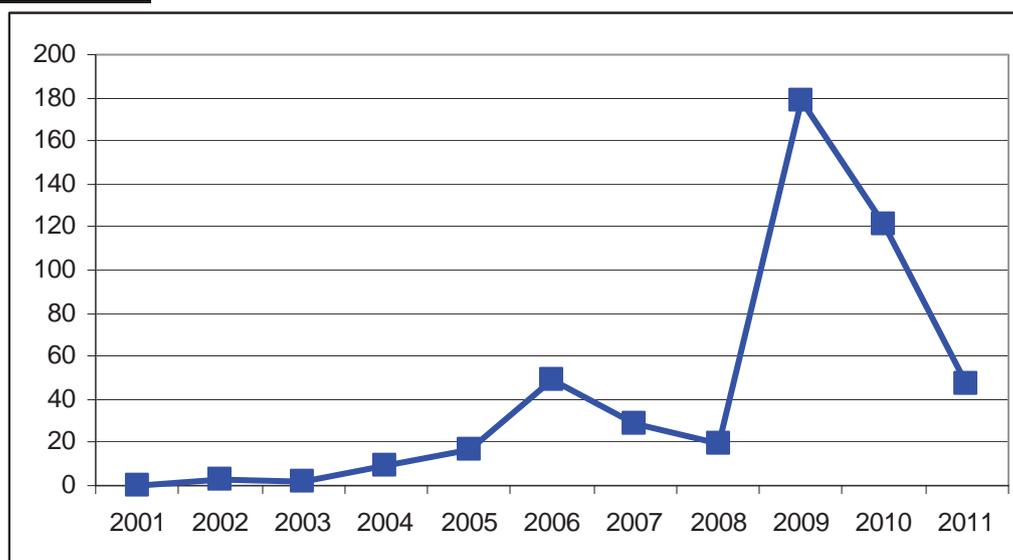
Source: MCA data

These conclusions are supported by data provided by one of the operators, Fendercare, on the STS transfers operations it undertook off Southwold between 2001 and October 2011. This data indicates that there was a very substantial increase in both the number of STS transfers operations undertaken by Fendercare off Southwold and the total cargo transferred in these operations in 2009; Fendercare has advised that this was due to market conditions in 2009, which resulted in many vessels being anchored off Southwold and used for storage, with cargo being transferred from and to these vessels in response to changing market conditions. In addition, this data also indicates that both the number of STS transfer operations undertaken by Fendercare off Southwold and the total cargo transferred in these operations have declined substantially in 2011 relative to 2009 and 2010 levels (assuming that STS transfers are evenly distributed throughout the year).

The data supplied by Fendercare also indicates that the number of STS transfers operations undertaken by Fendercare off Southwold in the period 2005 to 2008 was substantially higher than in the period 2001 to 2004. Fendercare has advised that the main driver of STS transfers operations in this period was the practice of “reverse lightering”, which involves cargo being transferred from smaller vessels to a larger vessel for onward transport.

The data on the number of STS transfer operations undertaken by Fendercare off Southwold between 2001 and 2011 is presented in Figure 1 below.

Figure 1: Number of ship-to-ship transfer operations undertaken by Fendercare off Southwold



Source: Fendercare

This information indicates that the number of STS transfers undertaken off Southwold is influenced by market conditions but how this might develop in future years under business as usual (i.e. if the current non-statutory permitting arrangements for STS transfers were maintained) is not known.

1.3. The current non-statutory permitting arrangements for STS transfers

There is currently no statutory requirement in the UK requiring operators to notify the authorities responsible for pollution control of STS transfers (which in the UK is the MCA); and there is currently no legal framework in the UK under which to control the location or procedures used in STS transfers. This means that STS transfers could take place without the MCA being aware of them, delaying the response in the event of a pollution incident, or in unsafe areas or areas of particularly high environmental importance. In addition, there is no legal recourse in the event of an incident. However, the MCA has put in place voluntary non-statutory permitting arrangements for STS transfers. Under this arrangement operators who wish to carry out any STS transfer in waters which are within the UK territorial sea and outside a harbour authority area apply in writing to the MCA. This practice has worked well. However, a voluntary arrangement is considered inadequate against the background of the kind of increase in the number of STS transfers that occurred between 2008 and 2009, and which could potentially reoccur. Relying on a voluntary arrangement would also mean that there were less strict reporting requirements on those conducting STS transfers close to the UK coast than those that will apply under Chapter 8 of MARPOL for those conducting transfers outside territorial waters.

In UK waters, STS transfer operations within harbour areas and at sea have had an excellent record, both in respect of safety and in respect of the environment. In particular, STS transfer operations have taken place in Scapa Flow for over 25 years without any spills damaging the environment. However, five collisions (including the collision between Saetta and Conger which was the subject of a report by the Marine

Accident Investigation Branch) occurred between oil tankers off Southwold conducting STS transfers between 3 July and 1 December 2009 – a peak period for STS transfers - although it should be noted that none of these collisions resulted in pollution. Increases in the number of STS transfers, as occurred between 2008 and 2009 and which could potentially reoccur, clearly generate an increase in the risk to the UK from an oil pollution incident. The MCA have advised that this increased risk would result from the simple increase in the number of operations but could be exacerbated in the case of a significant, unregulated increase by operators utilising higher risk locations around the coast if safe anchorages are congested.

1.4. Merchant Shipping (Ship-to-Ship Transfers) Regulations 2010

The ‘Merchant Shipping (Ship-to-Ship Transfers) Regulations 2010’ (“2010 Regulations”) were laid before Parliament on 9 April 2010 with an original coming into force date of 1 October 2010. The 2010 Regulations were designed to control STS transfers and maintain their good safety record. The coming into force of the 2010 Regulations would have ensured that all STS transfers within the UK territorial sea took place within harbour areas where additional resources are available to combat any pollution incidents that might occur.

In order for STS transfers to be undertaken within a statutory harbour area under the 2010 Regulations, the harbour authority would have to apply for an oil transfer licence. Application for this licence would be processed by the MCA, and would involve consultation with appropriate bodies, such as Scottish Natural Heritage, Natural England and the Countryside Council for Wales, as is deemed necessary. 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 as defined in regulation 8 of the Conservation of Habitats and Species Regulations 2010 within the harbour authority area. If required, a full environmental impact assessment would have to be undertaken prior to a licence being granted. 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 STS transfers.

On entering office the Coalition Government laid a Statutory Instrument, the *Merchant Shipping (Ship-to-Ship Transfers) (Amendment) Regulations 2010 (SI 2010 No.1769)*, to defer the entry into force of the 2010 Regulations to allow time for a review of the regulations, including representations by affected parties.

Given the time taken to conduct the review and complete regulatory scrutiny, entry into force of the 2010 regulations has had to be further delayed by a succession of additional Statutory Instruments. Unless new regulations are laid, the 2010 Regulations will come in to force on 1 April 2012. This would mean that no STS transfers could take place anywhere within the 12 nautical limit of the UK territorial sea except within a harbour authority area, and consequently all STS transfers off the Suffolk coast would be prohibited. On the basis of the MCA data for 2011, approximately 9 STS transfers were carried out in those waters, on average, each month in the period to 30 August, so this would be a matter of significant concern to the industry.

1.5. Issues highlighted by the Review

The Review, which considered evidence submitted by operators, harbour authorities, NGOs, local groups and members of the public, highlighted several areas of concern regarding the 2010 Regulations.

Firstly, the Review identified that a restriction of STS transfers to harbour authority areas only was seen as disproportionate. It noted that the STS industry has a good safety and environmental record and operations carried out outside of harbour authority areas have shown no evidence of being less safe than those within harbour limits when carried out in line with industry best practice. However, the review also concluded that a hypothetical pollution incident would be likely to be more effectively dealt with where counter pollution resources were located in close proximity suggesting a total relaxation of the 2010 regulations would potentially increase the potential for a significant pollution incident.

Secondly, the Review highlighted that an absolute prohibition of STS transfers outside harbour authority areas within the UK territorial sea could result in STS transfers moving beyond the 12 nautical mile limit. The MCA have advised that beyond 12 nautical miles, the seas would be less sheltered and more likely to be rougher, with poorer holding ground for the ships and would therefore pose a greater risk to any STS transfer. They would also be further away from any emergency response personnel and equipment.

Thirdly, the Review identified that the 2010 Regulations had captured several types of transfer operations which it was not intended to cover, including rescue vessel operations, ferries' bunkering operations and tanker lightering operations. Consequently, the Review identified the need to relax the Regulations on bunkering operations for ferries, fast rescue boats and cruise ship tenders, as well as the need to adjust the Regulations concerning lightering to allow a tanker to lighten in the waters of one harbour authority before proceeding to a berth in the waters of another harbour authority.

1.6. Chapter 8 to Annex I of MARPOL

Chapter 8 of Annex I to the International Convention for the Prevention of Pollution from Ships (commonly known as MARPOL) came into force internationally on 1 January 2011. The UK is required to implement this through UK law. This is an international treaty obligation.

Chapter 8 of MARPOL Annex I applies to oil tankers of 150 gross tonnage and above that are engaged in STS transfers; it makes it necessary for ships carrying out STS transfers to have an approved STS operations plan on board and to keep records for not less than three years of all STS transfers. It also requires them to inform the relevant coastguard authorities of the STS transfer not less than 48 hours in advance. STS transfers conducted on or after 1 April 2012 will need to be conducted according to the regulations in Chapter 8 of MARPOL Annex I. Prior to 1 April 2012, ships wishing to conduct STS transfers should be arranging preparation and approval of their STS operations plan; this plan must be approved by the flag State (i.e. the State which has granted to a ship the right to sail under its flag). In addition, STS transfer operations

conducted before 1 April 2012 but after the approval of the plan should be carried out in accordance with the plan as far as possible.

More details on Chapter 8 of MARPOL Annex I can be found at

http://www.imo.org/Publications/Documents/Supplements%20and%20CDs/English/I_C520E_supplement_web.pdf under RESOLUTION MEPC.86(59).

2. Why Intervention is Required

Intervention is required to ensure that the disproportionate and unintended restrictions identified within the 2010 regulations do not come into effect as currently planned on 1 April 2012 with the additional and unnecessary costs for industry that these would generate.

In addition, new legislation is also required to implement the STS transfer provisions in Chapter 8 of Annex I to MARPOL to which the UK is a party. The MARPOL regulations which the UK must introduce apply to oil tankers of 150 tonne gross tonnage and above engaged in the transfer of oil cargo between oil tankers at sea and their STS operations conducted after 1 April 2012. They require any oil tanker involved in STS operations to carry any STS operations plan which has been approved by the Flag Administration. Further, any tanker that plans STS operations within the territorial sea or the economic exclusion zone of a Party to the MARPOL Convention shall notify the Party not less than 48 hours in advance of the scheduled STS operations.

Some of the statutory controls over STS transfers in UK waters included in the 2010 regulations will however continue to be required as STS transfers create the potential for significant external costs in the event of a pollution incident.

The problem under consideration is therefore how to more proportionately address the risks posed by STS transfers than was achieved by the 2010 regulations, particularly how to minimise the risk of pollution from ships undertaking STS transfers affecting UK seas and coastline, including environmentally sensitive areas, which could potentially result in such 'external costs' while not imposing disproportionate burdens.

3. Policy objectives

The policy objective of the 'Merchant Shipping (Ship-to-Ship Transfers) Regulations 2012' ("2012 Regulations") is to ensure STS transfers are conducted safely but in a less restrictive way than allowed for under the 2010 regulations while minimising the risk to the UK's seas and coasts by reducing the likelihood of the activity being displaced to less safe international waters.

The intended effects of the 2012 Regulations are:

a) that operators should have a wider choice of safe locations for STS operations either within approved harbour areas or within a designated area of the UK territorial sea while not compromising safety;

b) to reduce the risks of STS transfers being undertaken in less safe areas outside of the UK territorial sea by allowing STS transfers to be undertaken within the UK territorial sea at a designated area;

c) to implement the notification system set out in Chapter 8 of MARPOL Annex I for transfers outside UK territorial waters in UK law; and

d) that small scale bunkering and lightering operations should be unaffected by the regulations.

4. Description of Options Considered

4.1 Do-nothing

Doing nothing would mean that the 2010 Regulations would come into force on 1 April 2012. The 2010 Regulations would ban STS transfers in the UK territorial sea outside of statutory harbour areas. STS transfers could only take place in statutory harbour areas where the harbour authority holds an appropriate oil transfer licence.

The Review identified that the restriction of STS operations to harbour authority areas was disproportionate and could result in STS transfers being undertaken outside the UK territorial sea where it is considered that conditions could be less safe. It also identified several other issues with the 2010 Regulations capturing safe activities such as lightering; in the absence of new legislation, these issues would not be addressed. Furthermore, in the absence of new legislation, Chapter 8 of Annex I of MARPOL would not be implemented in UK law. Because the UK is a Party to MARPOL, the UK has a binding treaty obligation to implement Chapter 8 of Annex I.

4.2 Revoke the 2010 Regulations before they come into force and introduce new 2012 regulations to implement only the UK's international obligations under Chapter 8 of MARPOL Annex 1.

This option would perpetuate the current position (where the 2010 regulations have not yet entered into force) where transfers between ships within the UK's territorial waters are not subject to any statutory regime.

The MCA has put in place voluntary permitting arrangements which have worked well. But these voluntary arrangements cannot ensure complete control of the risks posed by STS transfers, particularly if STS numbers were again to increase in response to oil market conditions and new, potentially lower quality, operators were to enter the market. In particular, voluntary controls cannot totally eliminate the risk of operators choosing to conduct STS transfer operations in less safe and/or more environmentally sensitive locations within UK territorial waters than at present, including locations at greater distance from counter pollution resources and personnel to respond in the event of an incident. Such incidents could generate potentially serious environmental and economic consequences. The absence of a statutory framework for such transfers also reduces the options for legal recourse in the event of an incident.

In addition, this option would also mean that there would be less prescriptive reporting requirements for transfers within the UK territorial seas and close to the UK coast than

would apply under Chapter 8 of MARPOL Annex 1 to transfers in international waters beyond the 12 mile limit, potentially meaning a slower response in the event of a pollution incident. For these reasons, this option has not been pursued.

4.3. Introduce new 2012 Regulations (the preferred option) to allow STS transfer operations within the 12 nautical mile limit of the territorial sea with a permit and implement Chapter 8 of MARPOL Annex I in UK law.

The proposed 2012 Regulations would give the Government the ability to control the location and conduct of STS transfers, and introduce legal sanctions which can be deployed in the event of non-compliance. The 2012 Regulations would also give effect to the Chapter 8 of MARPOL Annex I for STS transfers and make several other specific amendments to the 2010 Regulations to address issues identified during the Review. Under the 2012 Regulations, STS transfers would be allowed outside harbour authority areas, but restricted to one designated area within the UK territorial sea. This area of sea is located off Southwold in Suffolk defined by a circle of radius 1.5 nautical miles centred on position 52° 16'N. 01° 57.3'E. These waters are the only location (outside harbour authority waters) where industry has been, with the agreement of the MCA, conducting STS transfers within the UK's territorial sea for the last five years. These waters are recognised by the MCA and by the industry as a suitable area for carrying out STS transfers on navigational safety grounds.

A system of permits for STS transfers would be established and run by the MCA. This would be substantially based on the non-statutory permitting arrangements which the MCA currently has in place. In particular, the information required in the application for a permit will be the same as the notification information required under Chapter 8 of MARPOL Annex I. This system will encompass the UK's domestic requirements and the requirements contained in Chapter 8 of MARPOL Annex I. When seeking to carry out a STS transfer, the operator would have to apply for a permit at least 48 hours in advance.

Giving effect in UK law to Chapter 8 of MARPOL Annex I would ensure that anyone who wishes to carry out a STS transfer outside of the UK territorial sea but within the UK's counter pollution zone (which extends out to 200 nautical miles or to the half-way point between the UK and a neighbouring state, whichever is the shorter distance) must inform the UK at least 48 hours ahead of the operation. These notification arrangements would mean that the UK can carry out appropriate monitoring and if necessary, arrange for contingency measures to be in place before the operation takes place. If the UK authorities consider that the ships involved in the STS transfer are in breach of the international regulations contained in chapter 8 of MARPOL Annex I, the UK would be able to inform the Flag State(s) of the ships involved and request that they take action.

Because the 2010 Regulations were only supposed to impact on commercial STS transfers, the 2012 Regulations would also introduce two detailed amendments arising from responses to the Review. One of these would relax the Regulations on bunkering to allow ferries and cruise ships to refuel their fast rescue boats and tenders outside harbour authority areas, and the other would adjust the Regulations concerning lightering to allow a tanker to lighten in the waters of one harbour authority before proceeding to a berth in the waters of another harbour authority.

This is the only option identified that would achieve the policy objective and intended effects outlined in Section 3. Amending the 2010 Regulations by introducing the 2012 Regulations is therefore the preferred option.

5. Costs and Benefits

For the purposes of this impact assessment, the costs and benefits of the policy option have been monetised to the extent that is possible. Given the limitations of the available evidence base, it has not been possible to monetise some of the costs and benefits. Where it has not been possible to monetise a cost or benefit, a full qualitative description of the cost or benefit has been provided below. Due to the limitations of the available evidence base, a number of assumptions have had to be made; these are explained below. It should be noted that the estimates of the monetised costs and benefits that are presented in this impact assessment are sensitive to the assumptions that have been made, and should therefore be interpreted as indicative estimates of the order of magnitude of these costs and benefits.

5.1. Scope of this assessment

As the Do-nothing scenario involves the entry into force of the 2010 Regulations, this section assesses the additional costs and benefits of introducing the 2012 Regulations relative to a scenario where the 2010 Regulations enter into force without any further amendments.

Because the 2010 Regulations have not yet entered into force, the current situation is different to the Do-nothing scenario. Therefore, to help clarify the additional impact of the proposal, Table 2 summarises the changes between:

- the Do-nothing scenario i.e. the situation after the entry into force of the 2010 Regulations, compared to the current situation;
- the situation after the entry into force of the 2012 Regulations compared to the Do-nothing scenario i.e. the situation after the entry into force of the 2010 Regulations; and
- the situation after the entry into force of the 2012 Regulations compared to the current situation.

Table 2: Impacts of the 2012 Regulations and the 2010 Regulations

	Do-nothing scenario (2010 Regulations) compared to current situation	Proposed 2012 Regulations compared to Do-nothing scenario (2010 Regulations)	2012 Regulations compared to current situation
Impacts on STS operators of changes to restrictions on the location of STS transfers	Costs to operators of undertaking more STS transfers in the waters of harbour authorities (Sections 6.1.1 and 6.1.2)	Benefits to operators as these costs would no longer arise if they choose to continue STS operations outside harbour areas (Sections 5.2.1 and 5.2.2)	No change (i.e. the 2012 Regulations would remove the cost associated with the 2010 Regulations)
Environmental impacts of changes to restrictions on the location of STS transfers	Potential environmental impacts of prohibiting STS transfers in the UK territorial sea outside the waters of harbour authorities	These potential environmental impacts would no longer arise (Sections 5.2.3 and 5.3.4)	Reduced risk of STS transfers taking place in environmentally sensitive or economically important locations as a consequence of no statutory limitation on the location of STS transfers in UK territorial waters.
Impacts on bunkering operations and lightering	Costs to business associated with bunkering operations and lightering being caught (Section 6.1.5)	Benefits to business as these costs would no longer arise (Section 5.2.4)	No change (i.e. the 2012 Regulations would remove the cost associated with the 2010 Regulations)
Impacts on MCA	Savings to the MCA from no longer dealing with applications for permits to carry out STS transfers in the UK territorial sea	Costs to the MCA as these savings would no longer arise and potential costs of processing notifications of STS transfers outside the UK territorial sea (Section 5.3.3)	Potential costs of processing notifications of STS transfers outside the UK territorial sea (Section 5.3.3). No change in costs of dealing with applications for permits to carry out STS transfers in the UK territorial sea (i.e. the 2012 Regulations would remove the savings associated with the 2010 Regulations).
Impacts on business of changes to reporting requirements	Impacts on business of changes to reporting requirements for STS transfers (Section 6.1.6)	These impacts on business would no longer arise (Section 5.3.1)	No change expected
Familiarisation costs to business	Familiarisation costs (Section 6.1.7)	Familiarisation costs (Section 5.3.2)	Familiarisation costs (Sections 5.3.2 and 6.1.7)
Impact on harbour authorities of requirement to obtain an oil transfer license	Costs to harbour authorities of requirement to obtain an oil transfer license (Sections 6.1.3 and 6.1.4)	There would be no change	Costs to harbour authorities of requirement to obtain an oil transfer license (Sections 6.1.3 and 6.1.4)
Environmental impacts of requirement to obtain an oil transfer license	Environmental protection benefits of requirement to obtain an oil transfer license	There would be no change	Environmental protection benefits of requirement to obtain an oil transfer license
Impacts on business of implementation of Chapter 8 of MARPOL Annex I	N/A	Costs associated with implementation of Chapter 8 of MARPOL Annex I (Section 5.3.1 and 5.3.3)	Costs associated with implementation of Chapter 8 of MARPOL Annex I (Section 5.3.1 and 5.3.3)
Environmental impacts of implementation of Chapter 8 of MARPOL Annex I	N/A	Environmental benefits associated with implementation of Chapter 8 of MARPOL Annex I (Section 5.2.3)	Environmental benefits associated with implementation of Chapter 8 of MARPOL Annex I (Section 5.2.3)

It should be noted that, as many of the costs and benefits of the 2010 Regulations are effectively removed by the amendments brought about by the 2012 Regulations, the magnitude of many of the costs and benefits of the 2012 Regulations looked at in isolation does not affect the overall net cost to business of the 2010 Regulations as amended by the 2012 Regulations (ie the overall impact on business of both sets of Regulations) relative to the current situation (ie the current non-statutory permitting arrangements for STS transfers) . Where this is the case, this is stated below.

5.2. Benefits

5.2.1. Benefits to the operators of vessels undertaking ship-to-ship transfers in terms of the port charges avoided [Monetised]

Under the Do-nothing scenario, the 2010 Regulations would restrict the locations at which businesses could undertake STS transfers in the UK territorial sea to the waters of harbour authorities with an oil transfer license from 1 April 2012 (i.e. the 2010 Regulations would prohibit STS transfers from being undertaken in the UK territorial sea outside the waters of harbour authorities from 1 April 2012). Therefore, any business that wishes to undertake a STS transfer in the UK territorial sea would need to undertake the STS transfer in the waters of a harbour authority with an oil transfer license from 1 April 2012. Businesses undertaking STS transfers in the waters of a harbour authority would incur costs in the form of port charges. In the absence of any evidence of a mark-up on port charges, based on the current practices of the ports that currently undertake STS, it is assumed that the port charges would equal the additional costs for ports of undertaking STS transfers. Available evidence indicates that the average cost of port charges in the UK could be in the region of £0.40 per tonne of cargo transferred¹ (2011 prices). It would not be expected that ports would increase their charges since any STS transfers undertaken would be welcome additional income to the port and an increase in charges may deter operators.

In contrast, under the preferred option, the 2012 Regulations would remove this restriction. In particular, operators with a valid permit would be allowed to carry out STS transfers in the designated area in the UK territorial sea and would not incur any port charges when undertaking STS transfers at this location. Therefore, compared to the Do-nothing scenario, the 2012 Regulations would benefit any operators that would have undertaken STS transfers in the waters of harbour authorities as a result of the restriction imposed by the 2010 Regulations. This benefit would be equal to the additional costs in the form of port charges that would be incurred by operators as a result of the 2010 Regulations under the Do-nothing scenario.

However, it should be noted that there are a number of significant uncertainties surrounding the magnitude of this benefit.

Firstly, there is no evidence over whether operators would undertake STS transfers affected by the 2010 Regulations in the waters of harbour authorities as a result of the restriction imposed by the 2010 Regulations under the Do-nothing scenario. In

¹ This is based on the average price charged by two port operators that currently permit STS transfers & publish their schedule of port charges: http://www.orkneyharbours.com/Schedule_of_Charges_2011.asp and <http://www.shetland.gov.uk/ports/tableofdues/documents/TableofDues1112SullomVoe.pdf>.

particular, it is possible that operators could alternatively respond to the 2010 Regulations by undertaking STS transfers outside of the UK territorial sea as no compliant location would exist that did not attract port charges.

Secondly, as discussed in Section 1.2, future trends relating to STS transfers are very uncertain and there is no evidence available on how the amount of cargo transferred in such STS transfers would change in future years in the absence of the 2010 Regulations; this remains very much dependent on the global oil market and in particular fluctuations in supply such as might be experienced through sanctions against Iran. Furthermore, whilst annual data covering the period between 2006 and 2010 is available from the MCA, this data shows that there has been significant annual variation over this period.

Thirdly, the extent that any benefits would be received by UK businesses is also very uncertain. In particular, it is unclear which businesses would incur any port charges for undertaking these STS transfers under the Do-nothing scenario. For example, UK registered ships may be owned by non-UK businesses and/or carry cargo for non-UK businesses, and non-UK registered ships may be owned by UK businesses and/or carry cargo for UK businesses.

Fourthly, the additional costs of undertaking STS transfers in the waters of harbour authorities in future years are not known. For example, there is uncertainty surrounding how port charges might change as a result of commercial imperatives and the extent that these charges could vary between different harbour areas. In addition, it is assumed that the value of this benefit to the UK would be equal to UK's businesses share of the total port charges that operators undertaking these STS transfers would incur under the Do-nothing scenario. However, should the level of port charges exceed the additional costs for ports of undertaking these STS transfers, the above estimates would overestimate the benefit to the UK under a scenario where these STS transfers would be undertaken in the waters of harbour areas in the UK under the Do-nothing scenario. This is because the costs to UK ports of undertaking affected STS transfers in the waters of harbour authorities under the Do-Nothing scenario would be lower than the total port charges that operators would incur.

The magnitude of this benefit is therefore very uncertain. However, as shown in Table 2, the magnitude of this benefit would **not affect the overall net cost to business of the 2010 Regulations as amended by the 2012 Regulations relative to the current situation**. This is because this benefit arises from negating the additional costs in the form of port charges that would be incurred by operators as a result of the 2010 Regulations when these regulations enter force under the Do-nothing scenario, and consequently the magnitude of this benefit relative to the Do-nothing scenario is necessarily equal to the additional costs in the form of port charges that would be incurred by operators under the Do-nothing scenario relative to the current situation.

Estimates demonstrating the order of magnitude of this benefit are presented below. A relatively wide range is presented due to the uncertainty discussed above. It should be noted that the estimates presented below are sensitive to the assumptions that have been made in this impact assessment. For example, the following estimates would be higher (lower) if the total amount of cargo transferred in affected STS transfers is more (less) than has been assumed below. This also applies to the other assumptions.

High estimates

The high estimates reflect the following assumptions:

- a) in the absence of the 2010 Regulations, the amount of cargo transferred in STS transfers undertaken off Southwold in future years would be around 14.5 million tonnes per year²;
- b) under the Do-nothing scenario, all of these STS transfers would take place within the waters of harbour areas as a result of the restriction imposed by the 2010 Regulations;
- c) under the policy option, all of these STS transfers would be undertaken off Southwold in the designated area in the UK territorial sea (i.e. the location of these STS transfers would be the same as the location they would take place at in the absence of the 2010 Regulations);
- d) the benefits for operators under the policy option would be equal to the port charges that they would have incurred when undertaking these STS transfers in the waters of harbour authorities under the Do-nothing scenario. Based on the above evidence, it is assumed that the average cost of port charges is in the region of £0.40 per tonne of cargo transferred (2011 prices); and
- e) all of this benefit would be received by UK businesses.

On this basis, the value of this benefit to UK businesses under this scenario is estimated at around £5.7 million per year³ (2011 prices), and the present value⁴ of this benefit over the standard 10 year appraisal period is estimated at around £49.3 million (2011 prices) at a discount rate of 3.5%. These estimates are shown as the high estimates on the 'Summary: Analysis and Evidence' sheet for the preferred option.

Low estimates

The low estimates reflect the following assumptions:

- a) in the absence of the 2010 Regulations, the amount of cargo transferred in STS transfers undertaken off Southwold in future years would be around 0.8 million tonnes per year⁵;
- b) under the Do-nothing scenario, all of these STS transfers would take place outside the UK territorial sea as a result of the restriction imposed by the 2010 Regulations (i.e. none of these STS transfers would take place within the waters of harbour areas under the Do-nothing scenario);
- c) under the policy option, all of these STS transfers would be undertaken off Southwold in the designated area in the UK territorial sea;
- d) the benefits for operators under the policy option would be equal to the port charges that they would have incurred when undertaking these STS transfers in the waters of harbour authorities under the Do-nothing scenario; and
- e) none of this benefit would be received by UK businesses.

² This is the highest annual quantity of cargo transferred in STS transfers undertaken off Southwold between 2006 and 2010.

³ Around £0.40 per tonne multiplied by around 14.5 million tonnes multiplied by 100% (of STS transfers) multiplied by 100% (UK businesses). Note figures have been rounded.

⁴ The present value base year is 2012.

⁵ This is the lowest annual quantity of cargo transferred in STS transfers undertaken off Southwold between 2006 and 2010.

Because no UK businesses would incur port charges when undertaking STS transfers affected by the restriction imposed by the 2010 Regulations under the Do-nothing scenario, there would be no benefits for UK businesses in the form of avoided port charges. On this basis, the value of this benefit to UK businesses under this scenario is estimated at £0 per year (2011 prices) and the present value of this benefit over the 10 year appraisal period is estimated at £0 (2011 prices). These estimates are shown as the low estimates on the ‘Summary: Analysis and Evidence’ sheet for the preferred option.

Best estimates

As explained above, there is significant uncertainty about the key factors influencing the costs. Consequently, the most likely point in the range between the low estimate and the high estimate is unknown. Given this uncertainty, the best estimate is based on the following assumptions:

- a) in the absence of the 2010 Regulations, the amount of cargo transferred in STS transfers undertaken off Southwold in future years would be around 6.4 million tonnes per year⁶;
- b) under the Do-nothing scenario, half of these STS transfers would take place within the waters of harbour areas as a result of the restriction imposed by the 2010 Regulations (the MCA does not have detailed records of the number of STS transfers, including bunkering and lightening operations, within UK ports limits and doubts whether all ports would hold detailed, long term records; in addition, the number of offshore bunkering operations is unknown, particularly with regard to the operations surrounding the construction of offshore wind farms. Since the Government does not have access to facts which would reliably inform a prediction on the behaviour of operators who may choose to undertake STS transfers within UK port limits, outside UK territorial waters or within the territorial waters of another neighbouring European State as a working assumption the mid-point of the range has been used);
- c) under the policy option, all of these STS transfers would be undertaken off Southwold in the designated area in the UK territorial sea;
- d) the benefits for operators under the policy option would be equal to the port charges that they would have incurred when undertaking these STS transfers in the waters of harbour authorities under the Do-nothing scenario; and
- e) half of this benefit would be received by UK businesses (again, the mid-point of the range).

In line with the Better Regulation Executive’s Impact Assessment Toolkit, the mid-points of ranges have been selected as the best estimates where necessary in the absence of evidence on the most likely point in these ranges.

On this basis, the best estimate of the value of this benefit to UK businesses is around £0.6 million per year (2011 prices)⁷, and the Best estimate of the present value of this benefit over the 10 year appraisal period is around £5.4 million (2011 prices). These estimates are shown as the best estimates on the ‘Summary: Analysis and Evidence’ sheet for the preferred option.

⁶ This is the average annual quantity of cargo transferred in STS transfers undertaken off Southwold between 2006 and 2010.

⁷ Around £0.40 per tonne multiplied by around 6.4 million tonnes multiplied by 50% multiplied by 50%.

5.2.2. Other potential benefits to the shipping industry associated with operators undertaking fewer ship-to-ship transfers in the waters of harbour authorities [Non-monetised]

Two other potential benefits to the shipping industry associated with operators undertaking fewer affected STS transfers in the waters of harbour authorities under the preferred option have been identified in this impact assessment.

a.) Compared to the Do-nothing scenario, it is possible that there could be some benefits for operators undertaking STS transfers affected by the 2010 Regulations in the form of time and fuel savings with accompanying reduced carbon emissions. Under the preferred option, there is the potential for reduced delays and journey times if ships do not have to alter course to enter the waters of harbour areas to undertake STS transfers, particularly since the ports currently licensed to undertake STS operations are located in Scottish waters and away from a significant proportion of shipping lanes used by the majority of tankers. However, the magnitude of this potential benefit is not known.

b.) There could potentially be benefits to the shipping industry due to reduced congestion and disruption in harbour areas if fewer STS transfers are undertaken in the waters of harbour areas under the preferred option compared to the Do-nothing scenario; the same problem exists i.e. there is no evidence on the impact that the 2010 Regulations might have on congestion and disruption in harbour areas.

Given the significant uncertainties and limitations of the available evidence base that are mentioned above, it has not been possible to monetise these potential benefits in this impact assessment.

As shown in Table 2, the magnitude of this benefit would **not affect the overall net cost to business of the 2010 Regulations as amended by the 2012 Regulations relative to the current situation**. This is because the magnitude of this benefit relative to the Do-nothing scenario is necessarily equal to the additional costs that would be incurred by operators as a result of the 2010 Regulations under the Do-nothing scenario relative to the current situation.

5.2.3. Potential environmental benefits [Non-monetised]

Relative to the do-nothing scenario, three potential environmental benefits of the preferred option have been identified in this impact assessment.

a.) If ships would have diverted to the waters of harbour authorities to undertake affected STS transfers under the Do-nothing scenario, there is the potential that the preferred option could result in a small decrease in greenhouse gas emissions by enabling affected STS transfers to be undertaken at the designated location in the UK territorial sea. Without knowing the impact that undertaking affected STS transfers in the water of harbour authorities instead of the designated area might have on fuel consumption, the magnitude of this potential benefit cannot be quantified. In particular, unless the type of fuel being used by the ship, for example high or low sulphur content, and the prevailing conditions under which the ship is sailing are known and whether it can therefore proceed at optimum speed for fuel efficiency any meaningful figures are

impossible to calculate. In addition, Southwold and the approaches to the English Channel are located within an internationally agreed emissions control area so vessels undertaking STS operations will be required to comply with the requirements for low sulphur fuel; this is not necessarily a requirement for vessels accessing ports licensed to carry out STS operations although the ports themselves do have this requirement.

b.) The Review identified that the 2010 Regulations could increase the risk of affected STS transfers being undertaken outside the UK territorial sea. By allowing STS transfers to take place in one designated area in the UK territorial sea, the 2012 Regulations should help to limit the incentives for operators to undertake these transfers in the UK's counter pollution zone outside the UK territorial sea. The MCA have advised that the area outside the UK territorial sea tends to be less sheltered and have rougher seas. It is also further away from emergency equipment and personnel. Consequently, allowing STS transfers to take place in one designated area has the potential to result in environmental benefits

c.) Giving effect in UK law to Chapter 8 of MARPOL Annex I would ensure that anyone who wishes to carry out a STS transfer outside of the UK territorial sea but within the UK's counter pollution zone must inform the UK at least 48 hours ahead of the operation. These notification arrangements would mean that the UK can carry out appropriate monitoring and if necessary, arrange for contingency measures to be in place before the operation takes place. If the UK authorities consider that the ships involved in the STS transfer are in breach of the international regulations contained in Chapter 8 of MARPOL Annex I, the UK would be able to inform the Flag State(s) of the ships involved and request that they take action. Consequently, implementing Chapter 8 of MARPOL Annex I has the potential to result in environmental benefits although to what extent is uncertain.

Given the significant uncertainties and limitations of the available evidence base that are mentioned above, it has not been possible to monetise these potential environmental benefits in this impact assessment.

5.2.4 Potential benefits of relaxing regulations on bunkering operations and lightering [Non-monetised]

The Review identified that the 2010 Regulations captured several types of transfer operations which it was not intended to capture, including the refuelling by ferries and cruise ships of the boats (fast rescue boats and tenders respectively) which they use for the purposes of saving life at sea, and tanker lightering operations. In addition, offshore wind farm developers have expressed concerns that the proposed regulations would impose an unnecessary burden on their construction and maintenance works; re-fuelling of work vessels around any site within territorial waters would be banned effectively requiring vessels to incur additional fuel costs through having to return to port to re-fuel as well as losing valuable on-site construction and maintenance time. Unfortunately, no offshore wind farm developer that has expressed concern has provided any costs to support their claim. The MCA is engaged in on-going discussions with the developers over this matter

- Compared to the Do-nothing scenario, it is possible that the preferred option has the potential to result in additional benefits as the 2012 Regulations would relax

the regulations on bunkering operations for ferries, fast rescue boats and cruise ship tenders, and allow a tanker to lighter in the waters of one harbour authority before proceeding to a berth in the waters of another harbour authority. However, the 2010 Regulations were never intended to impact on non-commercial STS transfer operations and the likely impact of the 2010 Regulations is uncertain

Given the significant uncertainties and limitations of the available evidence base that are mentioned above, it has not been possible to monetise this potential benefit in this impact assessment.

As shown in Table 2, the magnitude of any benefits to business would **not affect the overall net cost to business of the 2010 Regulations as amended by the 2012 Regulations relative to the current situation**. This is because this benefit relative to the Do-nothing scenario would be necessarily equal to any additional costs that would be incurred by businesses as a result of the 2010 Regulations under the Do-nothing scenario relative to the current situation.

5.3. Costs

5.3.1. Compliance costs for operators [Non-monetised]

Two potential costs for operators as a result of the preferred option have been identified in this impact assessment.

a.) Compared to the Do-nothing scenario, there could be additional compliance costs for some operators due to changes to the reporting requirements when undertaking STS transfers under the preferred option. Under the preferred option, operators would be required to apply to the MCA for a permit to carry out a STS transfer in the UK territorial sea. In addition, as a result of the implementation of Chapter 8 of MARPOL Annex I in UK law, operators would be required to notify the MCA of the intention to carry out a STS transfer outside of the UK territorial sea but within the UK's counter pollution zone. In contrast, under the Do-nothing scenario, operators would only be required to apply to the harbour authority for authorisation to undertake a STS transfer. Should it take more time to comply with the reporting requirements under the preferred option compared to the Do-nothing scenario, this would represent an economic opportunity cost that would be equal to the value of the additional time taken to undertake the necessary reporting. However, there is no evidence on the impact that the preferred option would have on the time it takes operators to comply with the reporting requirements of UK legislation. With regards to the costs of notifying the MCA of the intention to carry out a STS transfer outside of the UK territorial sea but within the UK's counter pollution zone, the MCA have advised that this is likely to take the form of a radio message to the local coastguard, so this is expected to have an insignificant cost.

b.) There could be additional compliance costs for some operators due to the requirement for ships involved in STS transfers to have an approved STS operations plan on board as a result of the implementation of Chapter 8 of MARPOL Annex I in UK law. The MCA have advised that STS Operations Plans are being approved by class already since they form part of the Safety Management System of the ship which

is overseen by the classification societies, and that the cost of such a plan varies by ship but is not expected to be more than £1000 as a one off cost per tanker based on current class charges for other surveys; it is not possible to estimate the number of additional STS Operations Plans that would need to be prepared as a result of the 2012 Regulations, although Fendercare has advised that most vessels already have STS Operations Plans.

Given the significant uncertainties and limitations of the available evidence base that are explained above, it has not been possible to monetise these potential costs in this impact assessment.

As shown in Table 2, it is considered that the magnitude of any costs (benefits) to business associated with the changes to the reporting requirements for STS transfers undertaken in the UK territorial sea would **not affect the overall net cost to business of the 2010 Regulations and 2012 Regulations relative to the current situation**. This is because as the statutory permitting arrangements are substantially based on the non-statutory permitting arrangements which the MCA currently has in place and indications are that all service providers comply with this regime on a voluntary basis, it is assumed that moving from a non-statutory to a statutory permitting regime would result in no additional costs to business; in addition, any other costs (benefits) to business would be necessarily equal to the benefits (costs) associated with the changes to the reporting requirements for STS transfers undertaken in the UK territorial sea as a result of the 2010 Regulations.

The additional costs to business of complying with the requirements to have an STS operations plan and notify the MCA of the intention to carry out a STS transfer outside the UK territorial sea but within the UK's counter pollution zone would **affect the overall net cost to business of the 2010 Regulations as amended by the 2012 Regulations relative to the current situation**. However, these costs relate to the implementation of Chapter 8 of MARPOL Annex I in UK. As this is an international measure, these costs are therefore out of scope of the One-In, One-Out (OIOO) rule.

Following the completion of the consultation exercise some concerns have been raised regarding the planned regulations. Within the Thames, harbour Vessel Traffic Services (VTS) extends beyond port limits due to local issues; in the Thames case the Tongue anchorage sits partially outside of agreed port limits but fully within the VTS limits as it is the only deepwater anchorage in the area. Currently the regulations will allow bunkering within the inner Tongue and the very edge of the outer Tongue but will prohibit bunkering in the majority of the outer anchorage. The MCA is continuing its dialogue with those concerned.

5.3.2. Familiarisation Costs [Non-monetised]

Familiarisation means reaching the point where a manager or relevant employee is aware of the (new) changes in the law and how they impact on their business or organisation. Familiarisation costs are an economic opportunity cost that arises due to workers responding to guidance and new information as opposed to engaging in productive work. Some UK businesses could incur such costs as a result of the preferred option.

Given the uncertainties and limitations of the available evidence base that are mentioned above, it has not been possible to monetise this cost. However, the additional familiarisation costs of the 2012 Regulations are expected to be insignificant as the statutory permitting arrangements are substantially based on the non-statutory permitting arrangements which the MCA currently has in place, Chapter 8 of MARPOL Annex I came into force internationally on 1 January 2011 and there are no changes for ports compared to the Do-nothing scenario. The number of UK businesses that would be affected is uncertain and the time it would take them to familiarise themselves with the 2012 Regulations is not known.

Furthermore, it should be noted that MCA statistics indicate that there were 274 STS transfers in UK territorial waters in 2010 and that only 5 STS transfer operators were responsible for facilitating these STS transfers, which implies that the number of UK businesses that would need to familiarise themselves with the proposed Regulations is likely to be relatively small.

5.3.3. Potential Costs to the MCA [Partially monetised]

Under the preferred option, the MCA would need to deal with applications for permits to carry out STS transfers in the UK territorial sea. The MCA expect that the cost of dealing with these applications would be similar to the cost of dealing with applications for permits under the non-statutory permitting arrangements that are currently in place. As this cost would not be incurred under the Do-nothing scenario, this cost would represent an additional cost to the MCA under the preferred option compared to the Do-nothing scenario.

MCA data indicates that there were 323 applications for permits and a further 89 requests for information relating to applications for a permit in 2010. The MCA estimate that responding to these applications and requests took approximately 368 hours, assuming that applications for permits take approximately 1 hour to deal with and that requests for information take approximately ½ hour to deal with. The cost to the MCA has been estimated at around £25.90 per hour (2011 prices)⁸. Therefore, it is estimated that the cost to the MCA was approximately £9,500 in 2010 (2011 prices). In the absence of any evidence on how the number of applications for permits would change in future years, it is assumed that this cost would remain at this level in each year of the appraisal period under the preferred option. Therefore, the present value of this cost over the standard 10 year appraisal period is estimated at around £0.08 million (2011 prices) at a discount rate of 3.5%. The actual cost that would be incurred by the MCA in future years is uncertain, for example, it would depend on the number of applications for permits that are made in future years.

The above estimates are shown on the ‘Summary: Analysis and Evidence’ sheet for the preferred option. However, it should be noted that the MCA could potentially incur additional costs due to the need to process notifications of the intention to carry out a STS transfer outside of the UK territorial sea but within the UK’s counter pollution zone. It has not been possible to monetise this potential cost in this impact assessment as it is not possible to estimate the number of notifications that would be made.

⁸ This reflects the labour costs for the grades that undertake this work and incorporates overheads.

Furthermore, it should be noted that it is possible that there could be fewer applications by harbour authorities for oil transfer licenses compared to the Do-nothing scenario, which could reduce the work that the MCA needs to do on such applications and offset some or all of these additional costs. In particular, there is significant uncertainty over whether any additional harbour authorities would choose to undertake STS transfers in the future as a result of the introduction of the 2010 Regulations under the Do-nothing scenario. None have so far indicated any intention of becoming involved in STS operations.

5.3.4 Potential Environmental Costs [Non-monetised]

Compared to the Do-nothing scenario, it is possible that the preferred option has the potential to result in some additional environmental costs. In particular, under the Do-nothing scenario, it is assumed that some of the STS transfers affected by the 2010 Regulations would be undertaken in the waters of harbour authorities. Under the preferred option, it is assumed that all of these STS transfers would be undertaken at the designated location in the UK territorial sea. As additional resources are available in the waters of harbour authorities to combat any pollution incidents that might occur, there is therefore the potential that any incident resulting from one of these STS transfers could result in additional environmental costs relative to the Do-nothing scenario. As no quantitative evidence is currently available on how this would affect the risks of undertaking STS transfers, it has not been possible to monetise this potential cost in this impact assessment. However, Section 1.3 provides some detail on recent incidents off Southwold.

6. One In, One Out and Direct Costs and Benefits to Business

The policy option is in scope of the One In, One Out (OIOO) Rule. Compared to the Do-nothing option (where the 2010 Regulations come into force on 1 April 2012), the policy option reduces restrictions, resulting in benefits to business, and therefore counts as an Out (as noted in the summary sheet; calculations explained in detail below).

However, as described above the Do-nothing scenario is different to the current situation, because the 2010 Regulations are not yet in force. To understand the impact on business of the changes in this area, the overall net cost to business of the 2010 Regulations as amended by the 2012 Regulations (ie the overall impact on business of both sets of Regulations) relative to the current situation (ie the current non-statutory permitting arrangements for STS transfers) needs to be assessed.

Therefore, the following analysis examines the impact on business firstly of the introduction of the 2010 Regulations (the Do-nothing scenario), secondly of the additional impact of the policy option (the 2012 Regulations), and finally of the situation after the 2012 Regulations have entered into force and amended the 2010 Regulations, compared to the current situation.

6.1 Direct costs and benefits to business of the 2010 Regulations compared to the current situation

The baseline for the analysis presented in this section is the current situation (i.e. the current non-statutory permitting arrangements for STS transfers). Following the Review

and the development of this impact assessment, the impact assessment of the 2010 Regulations has been reviewed, and our assessment of the costs and benefits of the 2010 Regulations to business relative to the current situation has been updated to take account of improvements to the available evidence base; this is presented below. In particular, our assessment has been updated to ensure consistency with our assessment of the costs and benefits of the 2012 Regulations that is presented in this impact assessment.

6.1.1. Charges to operators undertaking affected STS transfers in the waters of harbour authorities as a result of the 2010 Regulations (Monetised)

Undertaking STS transfers outside of the waters of harbour authorities in the UK territorial sea would be prohibited under the 2010 Regulations. Therefore, any businesses that wish to undertake a STS transfer in the UK territorial sea would need to undertake the STS transfer in the waters of a harbour authority with an oil transfer license. Businesses undertaking affected STS transfers in the waters of a harbour authority would incur additional costs in the form of port charges although in practice these are unlikely to be different under the proposed regulations than under a fully de-regulated scenario.

The additional costs to UK businesses of introducing this restriction under the 2010 Regulations are necessarily equal to the benefits to UK businesses of relaxing this restriction under the 2012 Regulations. The value of the additional costs to UK business has been estimated (see Section 5.2.1) at around £0 to £5.7 million per year (2011 prices), with a best estimate of around £0.6 million per year (2011 prices). The best estimate of the present value of this cost over the 10 year appraisal period is estimated at around £0 to £49.3 million at a discount rate of 3.5%, with a best estimate of around £5.4 million (2011 prices).

6.1.2. Other costs associated with operators undertaking affected STS transfers in the waters of harbour authorities as a result of the 2010 Regulations (Non-monetised)

There is the potential for delays and increased journey times if ships have to alter course to enter the waters of harbour areas to undertake STS transfers affected by the 2010 Regulations, which could result in additional time and fuel costs. Furthermore, there could be increased congestion and disruption in harbour areas if more STS transfers are undertaken in the waters of harbour areas. For the reasons explained in Section 5.2.2, it has not been possible to monetise these costs.

6.1.3. Costs of preparing an environmental statement for harbour authorities that already allow STS transfers (Monetised)

The three harbour authorities that already allow STS transfers would be required to prepare an environmental statement as a result of the 2010 Regulations. An Industry estimate suggested that the cost of preparing this environmental statement could be up to £100,000⁹ (2010 prices), although we consider that it would normally be appreciably less than that. In the absence of any other precise figures, this higher cost has been

⁹ The price base of this estimate is uncertain, so it has been assumed that it is in 2010 prices in line with the impact assessment for the 2010 Regulations.

assumed for the purposes of this impact assessment. On the basis of this assumption, the total cost to business has been estimated at £300,000 (2010 prices)¹⁰.

6.1.4 Costs to any additional harbour authorities that wish to undertake STS transfers (Non-monetised)

If any additional harbour authorities want to undertake STS transfers, they would be required to prepare a new OPRC Oil Spill Contingency Plan¹¹ and prepare an environmental statement. The MCA is aware of three additional harbour authorities that have sufficient depth of water to take the draft of vessel used in STS transfer operations that could begin to allow STS transfers as a result of the 2010 Regulations. However, there is significant uncertainty over whether any of these additional harbour authorities would choose to undertake STS transfers in the future. Therefore, this cost has not been included in this impact assessment.

6.1.5 Costs associated with banning bunkering and lightering operations (Non-monetised)

It is possible that there could be costs associated with banning bunkering and lightering operations. For the reasons explained in Section 5.2.4, it has not been possible to monetise these costs. In particular, the 2010 Regulations were never intended to impact on non-commercial STS transfer operations and no evidence of the likely impact exists.

6.1.6 Costs (benefits) associated with changes to reporting requirements (Non-monetised)

Operators would be required to apply to the harbour authority for authorisation to undertake a STS transfer. Should it take more time to comply with the reporting requirements than applying to the MCA for a permit under the non-statutory permitting arrangements that are currently in place, this would represent an economic opportunity cost that would be equal to the value of the additional time taken to apply for the permit. The alternative is that this could take less time, benefiting operators. For the reasons explained in Section 5.3.1, it has not been possible to monetise this potential cost or benefit.

6.1.7 Familiarisation costs (Non-monetised)

Familiarisation costs are an economic opportunity cost that arises due to workers responding to guidance and new information as opposed to engaging in productive work. For the reasons explained in Section 5.3.2, it has not been possible to monetise these costs.

¹⁰ For the purpose of this impact assessment, this estimate has been inflated to 2011 prices using HMT's GDP deflator series

¹¹ The MCA assume that a harbour authority would incur a one-off cost of around £10,000 for preparation of a new OPRC Oil Spill Contingency Plan on the basis of informal discussions with industry sources.

6.1.8 Summary

On the basis of the best estimates of the monetised costs that are presented above, the equivalent annual costs, benefits and net costs to business of the 2010 Regulations have been estimated as shown below. In line with the OIOO methodology, these estimates are for a Price Base Year of 2009 and a Present Value (PV) Base Year of 2010. HMT's GDP deflator series has been used to deflate the best estimates of the monetised costs and benefits from a Price Base Year of 2011 to a Price Base Year of 2009.

	Present Value (£m) (Price Base Year: 2011) (Present Value (PV) Base Year: 2012)	Equivalent Annual (£m) (Price Base Year: 2009) (Present Value (PV) Base Year: 2010)
Costs to Business	£5.75	£0.59
Benefits to Business	0	0
Net Costs to Business	£5.75	£0.59

6.2 Direct costs and benefits to business of the 2012 Regulations compared to the Do-nothing scenario

The baseline for the analysis presented in this section is the Do-nothing situation (i.e. a scenario where the 2010 Regulations enter into force without any amendments). On the basis of the best estimates of the monetised costs and benefits to business identified in this impact assessment that fall within the scope of One In, One Out (OIOO), the equivalent annual costs, benefits and net costs to business of the 2012 Regulations (the preferred option) relative to the Do-nothing scenario have been estimated as shown below. These estimates have been inflated or deflated as necessary using HMT's GDP deflator series.

	Present Value (£m) (Price Base Year: 2011) (Present Value (PV) Base Year: 2012)	Equivalent Annual (£m) (Price Base Year: 2009) (Present Value (PV) Base Year: 2010)
Costs to Business	0	0
Benefits to Business	£5.44	£0.56
Net Costs to Business	-£5.44	-£0.56

In effect, the key impact of the 2012 Regulations on business is to remove the costs associated with the 2010 Regulations (section 6.1 above) in relation to:

- Charges to operators undertaking affected STS transfers in the waters of harbour authorities as a result of the 2010 Regulations (see section 5.2.1);
- Other costs associated with operators undertaking affected STS transfers in the waters of harbour authorities as a result of the 2010 Regulations (see section 5.2.2);
- Costs associated with banning bunkering and lightering operations (see section 5.2.4); and

- Costs (benefits) associated with changes to reporting requirements (see section 5.3.1).

Therefore the magnitude of these costs associated with the 2010 regulations has **no effect on the overall net cost to business of the 2010 Regulations as amended by the 2012 Regulations (relative to the current situation)**, as the amending 2012 Regulations remove them.

6.3. Overall direct costs and benefits to business of the 2010 Regulations as amended by the 2012 Regulations compared to the current situation

The baseline for the analysis presented in this section is the current situation. As discussed in Section 5 and Section 6.2 many of the costs and benefits of the 2010 Regulations and 2012 Regulations effectively cancel each other out. Therefore, the overall net cost to business of the 2010 Regulations as amended by the 2012 Regulations relative to the current situation, would be the sum of:

- the costs (monetised) of preparing an environmental statement for harbour authorities that already allow STS transfers, which are discussed in Section 6.1.3;
- the costs (non-monetised) to any additional harbour authorities that wish to undertake STS transfers, which are discussed in Section 6.1.4;
- the costs (non-monetised) to business associated with the implementation of Chapter 8 of MARPOL Annex I, which are discussed in Section 5.3.1; and
- the familiarisation costs (non-monetised), which are discussed in Sections 5.3.2 and 6.1.7.

On the basis of the best estimates of the relevant costs that it has been possible to monetise, the overall equivalent annual costs, benefits and net costs to business of the 2010 Regulations as amended by the 2012 Regulations relative to the current situation have been estimated below. The table below shows that the overall ‘IN’ of the 2010 Regulations as amended by the 2012 Regulations relative to the current situation has been estimated at approximately £0.03 million per year (Equivalent Annual) (Price Base Year: 2009) (Present Value (PV) Base Year: 2010). As it has not been possible to monetise any of the other relevant costs (and indeed the costs associated with the implementation of Chapter 8 of MARPOL Annex I are outside the scope of OIOO as this is an international measure), this only incorporates the costs to harbour authorities that already allow STS transfers of preparing an environmental statement, which are discussed in Section 6.1.3.

	Present Value (£m) (Price Base Year: 2011) (Present Value (PV) Base Year: 2012)	Equivalent Annual (£m) (Price Base Year: 2009) (Present Value (PV) Base Year: 2010)
Costs to Business	£0.31	£0.03
Benefits to Business	0	0
Net Costs to Business	£0.31	£0.03

7. Specific Impact Tests

7.1. Competition Assessment

Under the Do-nothing scenario, STS transfers in the UK territorial sea would be restricted to the waters of harbour authorities from 1 April 2012. These restrictions could potentially limit the ability of certain suppliers to compete. The 2012 Regulations would enable STS transfers to continue to be undertaken outside the waters of harbour authorities in the UK territorial sea. If the restrictions under the Do-nothing scenario restricted the ability of suppliers to compete, by expanding the geographical locations at which STS transfers would be able to be undertaken in the UK territorial sea, the 2012 Regulations could impact positively on competition. However, given the limited evidence, the potential for the 2012 Regulations to impact on competition in this manner is very uncertain. No further potential impacts on competition have been identified.

7.2. Small Firms Impact Test

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 Executive, 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. Although it is likely that there would be some impact 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 all the companies involved are large scale organisations.

7.3 Equalities Assessment

The preferred option covers operational matters and is of a technical nature and is therefore race, gender and disability non-specific.

8. Implementation

The 2012 Regulations would allow STS transfer operations within the UK territorial sea, with a permit; implement Chapter 8 of MARPOL Annex I in UK law; and make two detailed amendments arising from responses to the Review in order to relax the regulations on bunkering operations for ferries, fast rescue boats and cruise ship tenders, and adjust the regulations concerning lightering to allow a tanker to lighten in the waters of one harbour authority before proceeding to a berth in the waters of another harbour authority.

It is not anticipated that the shipping industry would have any issues in complying with these Regulations as the shipping industry generally has an excellent record with co-operation on matters regarding STS transfers and bunkering transfer operations. In particular, 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 would be any significant level of opposition other than concerns expressed by the residents of Southwold and its environs to the introduction of the 2012 Regulations.

It is not considered that the application process for the permits required for ships and associated costs would be burdensome to those who wish to apply. There is however some concern from elements of the ports industry regarding the cost of application for an oil transfer licence. As such, the DfT will ensure that a review of the application processes and associated costs are included as part of the Department's post implementation review of the 2012 Regulations. 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.

9. Post-implementation Review

The MCA is committed to reviewing the effectiveness of the 2012 Regulations within five years of implementation, to ensure that they meet the needs of the environment and industry. The implementation of the 2012 Regulations would be reviewed domestically through the MCA's normal contact with industry and non-governmental organisation (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.

