Title: The Merchant Shipping (Cargo and Passenger Ship Construction and Miscellaneous Amendments) Regulations 2022	**Impact Assessment (IA)**
	Date: 12/05/2022
IA No: DfT00447	**Stage: Consultation**
	Source of intervention: Domestic
RPC Reference No: N/A	**Type of measure: Secondary Legislation**
Lead department or agency: Department for Transport	**Contact for enquiries:** **VesselStandards@mcga.gov.uk**
Other departments or agencies: Maritime & Coastguard Agency	

Summary: Intervention and Options

RPC Opinion: N/A

Cost of Preferred (or more likely) Option (in 2019 prices)			
Total Net Present Social Value	**Business Net Present Value**	**Net cost to business per year**	**Business Impact Target Status**
NQ	NQ	NQ	Non-qualifying provision

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

The Regulations will implement into UK law the latest construction standards for passenger and cargo ships engaged on international voyages, concerning structure, subdivision and stability, machinery and electrical installations, as laid down in Chapter II-1 of the Annex to the International Convention for the Safety of Life at Sea, 1974 ("SOLAS"). This meets the UK's international obligations to amend domestic law to bring it into line with international requirements.

Government intervention is required to (a) ensure that the UK meets its obligations as a Convention signatory; (b) provide legal certainty and maintain a level playing field for UK ship-owners/operators by enabling enforcement for non-compliance by non-UK ships in UK waters; and (c) implement future changes quickly through ambulatory referencing.

What are the policy objectives and the intended effects?

The objectives are to (i) take into account amendments to SOLAS Chapter II-1 ("Chapter II-1") concerning ship structure, subdivision and stability, machinery and electrical installations, and (ii) to introduce ambulatory referencing.
The intended affects are to (i) enhance existing requirements concerning the design and construction of ships, and (ii) the ambulatory reference will reduce legal uncertainty and red tape for industry by referring always to the most up to date international obligations.

What policy options have been considered, including any alternatives to regulation? Please justify preferred option (further details in Evidence Base)

Option 0: Do nothing. International amendments are not transposed into UK law. This is not a realistic option because the UK, as a signatory to SOLAS, has an obligation to implement any changes into UK law.

Option 1: To bring UK law up to date with changes to Chapter II-1 on the subject of ship construction which have been introduced internationally over the past few years.

Option 2: (**preferred option**): To bring UK law up to date with changes to Chapter II-1 on the subject of construction which have been introduced internationally over the past few years, and to introduce ambulatory reference provision to increase the efficiency of implementing future amendments. This is the preferred option due to fact it achieves the objective of updating UK law and also puts in place efficiencies for the implementation of future amendments.

Will the policy be reviewed? It will be reviewed. **If applicable, set review date:** November 2027

Does implementation go beyond minimum EU requirements?		N/A		
Is this measure likely to impact on international trade and investment?		Yes		
Are any of these organisations in scope?	**Micro** Yes	**Small** Yes	**Medium** Yes	**Large** Yes
What is the CO_2 equivalent change in greenhouse gas emissions? (Million tonnes CO_2 equivalent)		**Traded:** N/A	**Non-traded:** N/A	

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 SELECT SIGNATORY: ..... Date: .....

Summary: Analysis & Evidence

Policy Option 2

Description:

FULL ECONOMIC ASSESSMENT

Price Base Year	PV Base Year	Time Period Years	Net Benefit (Present Value (PV)) (£m)		
			Low: Optional	**High:** Optional	**Best Estimate:** NQ

COSTS (£m)	Total Transition (Constant Price)	Years	Average Annual (excl. Transition) (Constant Price)	Total Cost (Present Value)
Low	Optional		Optional	**Optional**
High	Optional		Optional	**Optional**
Best Estimate	NQ		NQ	NQ

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

No monetised costs.

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

The modifications imposed on ship construction by Chapter II-1 tend to be incremental in nature and as such are not likely to have a significant cost to industry to implement when creating design specifications for ships. In addition, because Chapter II-1 is already in force internationally, shipowners will have incurred any associated costs already in order for the ship to continue operating internationally. The changes consist of many small individual changes to the Chapter II-1 requirements, as listed in Annex A. The large majority are considered to have no impact or to be cost-neutral, but a small number have been highlighted in Annex B as potentially creating an impact on business. These have not been monetised due to uncertainty and the fact the impact is likely to have been different for different types of vessel.

BENEFITS (£m)	Total Transition (Constant Price)	Years	Average Annual (excl. Transition) (Constant Price)	Total Benefit (Present Value)
Low	Optional		Optional	**Optional**
High	Optional		Optional	**Optional**
Best Estimate				

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

No monetised benefits.

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

The key benefit of Chapter II-1 requirements is that they reflect current best practice concerning design and construction. This is likely to improve safety standards, which is likely to save lives and prevent injuries, and which may reduce insurance premiums. There are also reputational benefits to the UK from implementing the latest internationally-agreed standards. With the implementation of ambulatory referencing to future changes to Chapter II-1, there would be resource savings to Government as there would no longer be the need to transpose those amendments into UK legislation. Shipowners will only need to refer to one piece of legislation and therefore familiarisation costs will be lower over time.

Key assumptions/sensitivities/risks

N/A

Discount rate (%) N/A

BUSINESS ASSESSMENT (Option 1)

Direct impact on business (Equivalent Annual) £m:			Score for Business Impact Target (qualifying provisions only) £m:
Costs:	**Benefits:**	**Net:**	
NQ	NQ	NQ	N/A

1 Policy Rationale

Policy background

1.1 This assessment relates to the amendments to the International Convention for the Safety of Life at Sea, 1974 (SOLAS). This Convention is regularly updated by the International Maritime Organization (IMO) which is the United Nations competent body on maritime matters. SOLAS Chapter II-1 deals with ship construction standards.

1.2 SOLAS Chapter II-1 applies to all passenger ships on international voyages and all cargo ships of over 500 Gross Tonnes (GT) on international voyages. The proposed Regulations apply to all UK registered vessels meeting this description, and all non-UK vessels meeting this description when they are in UK territorial waters.

1.3 SOLAS Chapter II-1 sets out the construction standards with respect to the structure of the ship; stability and subdivision requirements including watertight integrity and stability management; machinery installations, electrical installations; requirements for unattended machinery spaces; alternative design and arrangements; and, for ships using low-flashpoint fuels.

1.4 SOLAS Chapter II-1 also gives effect to the International Code on Intact Stability (IS Code); the Code on noise levels on board ships, the Goal-based Ship Construction Standards for Bulk Carriers and Oil Tankers; and, the International Code of Safety for Ships using Gases or other Low-Flashpoint Fuels (IGF Code). The International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (IBC Code); and, the International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk (IGC Code) also contain construction requirements for chemical tankers and gas carriers, but the relevant requirements in those Codes are given effect by SOLAS Chapter VII. All the Codes are amended from time to time by Resolutions made by the IMO's Maritime Safety Committee.

Problem under consideration

1.5 Since UK legislation was last updated to take into account amendments to Chapter II-1, there have been 23 MSC Resolutions (see Annex A) agreed by the IMO which have included changes to the requirements in Chapter II-1 and which have come into force internationally, with the oldest dating back to 1998. This list does not include the most recent amendments to Chapter II-1 which have been adopted by the IMO because these will enter into force on 1 January 2024 at the earliest (i.e. after the UK legislation will be updated to include the ambulatory reference provision, under the preferred option). It is considered that shipowners operating internationally must in practice already be complying with all recent changes to Chapter II-1, due to the fact that any failure to keep up to date could result in their ships being subject to enforcement action during Port State Control inspections in foreign ports. The UK nevertheless has an international obligation to transpose these amendments into UK law.

1.6 The first flag state audit of the UK maritime administration took place during October 2021 (see link), and an examination of the UK's transposition of international obligations, such as those under Chapter II-1, was included in that audit. The arrears in transposition of Chapter II-1 requirements were identified during the audit (along with other arrears in transposition) and this resulted in a finding against the UK. The UK Shipping Minister has made a commitment to the Secondary Legislation Scrutiny Committee to implement outstanding changes to Chapter II-1 by the end of 2022. To avoid reputational damage to the UK, getting Chapter II-1 up to date and ensuring that future amendments will be dealt with more promptly, is therefore crucial to the UK's reputation and our ability to fully prosecute non-compliances in accordance with the latest standards.

1.7 The list of amendments to Chapter II-1 which have been adopted by the IMO, but which have not yet been transposed into UK law, can be found at Annex A. The most significant changes are highlighted in Annex B.

Rationale for intervention

1.8 The rationale for transposing SOLAS standards into UK law is to implement the latest safety standards and regulations. This will help to ensure that the UK sector is safe for seafarers, passengers and vessels, and that UK law enforcement are able to take appropriate action to enforce compliance with international standards. Regulation is necessary to implement these standards to ensure that safety is guaranteed across the sector, and that no operator can benefit by implementing lower standards.

1.9 As an IMO member, the UK has an obligation to implement SOLAS standards. Failing to do so risks punitive action and/or reputational damage which would negatively affect both individual UK operators and the UK shipping industry as a whole. Therefore, to do nothing risks government failure, as government inaction has the potential to create problems for industry. In addition, ensuring UK law is up-to-date provides operators with legal certainty and transparency. Implementing international standards also puts the UK on a level playing field with other IMO member countries, which facilitates the smooth operation of a globalised sector.

1.10 The rationale for including ambulatory reference provisions is to simplify and streamline the process of implementing future updates to international standards. This will ensure timely implementation and provide certainty and clarity for industry, as well as saving administrative costs.

Policy objective

1.11 The policy objective is divided into two distinct areas: transposition of outstanding amendments to SOLAS Chapter II-1; and the introduction of ambulatory referencing.

<u>Transposition of outstanding amendments to SOLAS II-1 into UK law</u>

1.12 The new Regulations will cover both those aspects of Chapter II-1 which have already been transposed and the outstanding amendments listed in Annex A.

1.13 The outstanding elements for transposition cover a variety of functions, in particular incremental technical design changes in the interests of safety, such as subdivision and damage stability requirements; watertight door requirements; protection against noise; flooding detection systems; bilge pumping arrangements; corrosion protection; goal-based ship construction standards; alternative design and arrangements; access to spaces in the cargo areas of oil tankers and bulk carriers; installation of material containing asbestos; and ships using low-flashpoint fuels.

<u>Introduce Ambulatory Referencing</u>

1.14 It is intended that the new Regulations will require ships to comply with SOLAS II-1 in its up to date form and will include ambulatory referencing provision to ensure that the UK is always up to date with its transposition of Chapter II-1.

1.15 In particular, ambulatory referencing will:

Provide legal certainty – A transparent and up to date legal regime will reduce legal uncertainty and red tape for industry.

Reduce administrative burden – It will reduce the administrative burden of implementing future technical changes to Chapter II-1. It will save time and resources for Government as it will no longer have to transpose amendments into UK legislation. However, the Government continues to commit to updating Parliament via a written ministerial statement if the ambulatory referencing powers are used to update or change the legislation.

Level playing field – By ensuring that the UK is always up to date with the transposition of Chapter II-1, ambulatory referencing will provide the UK with legal authority to certify its own ships to the relevant standards. Timely implementation will mean that UK ships trading internationally can properly be issued with certificates that confirm compliance with relevant international rules. This will

mitigate the risk of UK ships being detained in non-UK ports for non-compliance, avoiding expensive delays and inconvenience and for UK-flagged ships trading internationally, ensuring the UK's status as a leading maritime nation. At the same time, it will enable the UK to take enforcement action against non-compliant ships, ensuring that UK owners and operators, most of which comply as a matter of course with Chapter II-1 requirements in order to continue their global operations, are not disadvantaged.

UK reputation and status on the White List – The UK, as a signatory to the SOLAS Convention, has an obligation to implement any changes. Ambulatory referencing would implement future technical changes to Chapter II-1 in a timely manner. This would avoid a poor audit performance under the mandatory IMO Audit Scheme, thus maintaining the UK's "low risk" status and thereby avoiding any increase in frequency, and associated cost, of inspections for UK-flagged vessels in foreign ports.

At the same time, improving the way we implement international law will reflect the UK's ambition to make its flag a more attractive place to do business, as well as protecting our reputation as a world-class maritime administration, both with industry and the international institutions (such as the IMO) with responsibility for maritime policy.

Reduce debates on whether a provision has been "gold-plated" – Ambulatory referencing transposes international provisions without gold plating or adding any additional obligations.

1.16 More information concerning the application of ambulatory referencing can be found in Annex C.

Options considered

Option 0: do nothing

1.17 The "do nothing" option is that the international amendments are not transposed into UK law. The UK, as a signatory to SOLAS, has an obligation to implement any changes into UK law. Without timely implementation:

a. There is a lack of legal certainty for operators due to differing international and domestic requirements;

b. The playing field is not level for UK operators.

1.18 Although amendments are not transposed into UK domestic law, UK ship owners and operators already comply with Chapter II-1 update requirements.

1.19 The 'Do Nothing' is the baseline against which Options 1 and 2 are assessed.

Option 1: Bring UK law in line with recent updates to the Chapter II-1 requirements by transposing them into UK law via traditional statutory instruments and without including an Ambulatory Reference provision for future amendments.

1.20 This option would implement outstanding amendments to Chapter II-1 by transposition in secondary legislation, i.e., without ambulatory reference. This would capture the safety and reputational benefits of implementing SOLAS regulations into UK law. However, by doing this without ambulatory reference, it would be likely to take longer than Option 2, and would fail to address industry's concerns expressed at the time of the Red Tape Challenge. This would only be a temporary fix and, by the time it is implemented, new amendments are likely to have been published so the UK will still be behind and it will be necessary to go through the whole process again. In other words, the UK would always be playing "catch-up". This option would therefore lack effectiveness and be resource intensive, continuing the implementation of legislation inefficiently.

Option 1 is therefore not considered a viable option.

Option 2: Bring UK law in line with recent updates to the Chapter II-1 requirements and introduce ambulatory referencing to refer UK industry to the most up to date requirements for ship construction standards in SOLAS. **This is the preferred Option**.

1.21 This option would incorporate the outstanding international amendments into UK law and, additionally to Option 1, introduce ambulatory referencing by which future amendments would be introduced more efficiently, and at lower cost to the taxpayer.

1.22 By introducing ambulatory referencing, this option will directly fulfil the request of industry to address the delay in transposition of international requirements. This option also:

a. Provides the legal certainty sought by industry as domestic legislation will no-longer be out of step with international requirements;
b. Reduces the administrative burden for industry, as it can focus on the Chapter text in technical areas, rather than also having to refer to national implementing legislation;
c. Meets the industry desire for copy-out text, and reduce debates on whether a provision has been "gold-plated"; and
d. Provides a level playing field between UK ships calling at foreign ports and foreign flagged ships calling at UK ports.

This option has the support of the UK shipping industry because it provides a more timely means of implementing future amendments to Chapter II-1, thus providing legal certainty for internationally trading ships. This is therefore the preferred option.

2 Costs and Benefits

Summary

2.1 Due to the nature of the changes, lack of evidence, and expected fairly low overall impact, all costs and benefits are non-quantified. Only a relatively small number of the individual changes proposed are expected to have any meaningful cost or benefit, and the total impact is not expected to be large. Please note that because the standards under consideration have existed internationally for some time, all costs imposed by higher standards are thought to have already been incurred.

Approach

2.2 The changes implement international standards and regulations, some of which have existed for many years. Although there is no data on compliance, it is expected that many UK operators will already be complying with these regulations, as they have become standard practice internationally, and failure to comply could create problems when operating in other jurisdictions. Therefore, it is unlikely that any significant costs will be incurred in future due to the changes, and the large majority of costs are to be treated as "retrospective", i.e. any costs associated with compliance will already have been incurred.

2.3 Because retrospective costs are in scope of Business Impact Target reporting (see detail below), this impact assessment considers retrospective costs. Although the costs are thought to have been low, evidence around the scale is not very clear due to the nature of the changes, meaning it has not been possible or proportionate to quantify costs. As a result, the approach is as follows: Annex A contains an itemised list of all the SOLAS changes being implemented into UK law. The large majority of these are believed to be cost-neutral due to being clarificatory, technical or extremely minor. For those changes which are not believed to be cost-neutral, Annex B provides a "detailed qualitative description" of the impacts[1]. This section (in the body of the document) provides a brief summary of the key points to justify the non-quantified nature of the impacts.

2.4 Further evidence on impacts will be sought at consultation, and if there is significant evidence that could be used to quantify impacts, this will be taken forward at final stage.

Transition costs (Option 1 and Option 2)

2.5 These costs will be the same in Option 1 and Option 2. The changes impose some familiarisation costs, as industry will need to read and understand the new requirements. As above, vessels are

[1] This is in line with RPC guidance for a medium-impact consultation stage IA.

thought to already be compliant with the changes being transposed into UK law (the regulations already exist at international level), meaning that they will have incurred familiarisation costs in the past and any further familiarisation costs will be minimal.

2.6 Based on discussion with industry, it is believed that the familiarisation costs incurred were small, and that it would be both difficult and disproportionate to retrospectively quantify them.

Ongoing costs (Option 1 and Option 2)

2.7 The large majority of the changes are expected to be cost-neutral. Annex A lists and describes these changes, designated “C”, and justifies their treatment as cost-neutral. There are a relatively small number of changes which are believed to create costs to businesses: these are designated “B” in the annexes, and more detailed explanation of the impacts is available in Annex B.

2.8 Apart from the list of minor, technical and clarificatory changes, those measures with a significant impact mostly concern Chapter II-1 rules on subdivision and stability control. The major change is from the 2009 update to these rules and concerns the way damage stability is calculated (the assessment changed from a deterministic approach to a probabilistic approach). Annex B provides details of changes to the formulae for factor p, factor R and factor s in the damage stability damage regulations. In general terms, the changes raised requirements on shipbuilders, as it is harder for vessels to comply with the required safety standards. Therefore, the changes are believed to have imposed costs on businesses, as shipbuilders have to do more to meet the standard.

2.9 However, although these changes are believed to have increased standards in general terms, it is difficult to draw conclusions about the average increase in costs. The key change was to the way standards are calculated, and the rules do not mandate specific new features or components, and different vessels are likely to have taken different approaches to complying with the new rules. Therefore, it is not possible to reliably assess the “typical” changes to the shipbuilding process that resulted from the new rules.

2.10 In addition, it is not clear that universal conclusions can be drawn about the level of requirements across different types of vessel; for example, it is believed that for some passenger ships the effect of the original 2009 changes (Resolution MSC.194(80)) was to *reduce* requirements and create lower costs to business at the expense of lower safety standards. In this case, the change in question no longer applies as it has subsequently been superseded by the 2020 changes (Resolution MSC.421(98)). However, this illustrates the fact that different ships may be affected differently by the same regulations, making it complicated to attempt to assess an average or an overall impact.

2.11 For these reasons, the costs are not quantified. However, evidence will be sought at consultation for specific ways in which the regulations may have increased the costs of building a ship (for example, common approaches taken by builders to the new probabilistic approach in terms of additional components or demand for materials and labour time). If it is possible to estimate any of the costs on the basis of evidence provided, this will be taken forward at final stage.

Benefits (Option 1 and Option 2)

2.12 These benefits will be the same in Option 1 and Option 2. The main benefits are related to safety: the standards reduce the likelihood of loss due to flooding or capsize following maritime collision incidents. As the amendments involve a large number of mostly small technical amendments, it is difficult to attribute specific safety improvements to specific measures, making it hard to quantify safety benefits, but is expected that the package of measures will achieve incremental improvements in safety.

2.13 Higher safety standards have the potential to reduce insurance premia by reducing the risk of loss following an incident. When this has been investigated for previous impact assessments, it has been difficult to link specific regulatory interventions with a change in insurance premia.

2.14 The changes are expected to benefit the reputation of the UK maritime sector (or at the least, avoid damage that would be incurred in the do-nothing option). This has the potential to increase

investment and economic activity. However, these benefits have not been quantified, as it is difficult to attribute the specific impact of a positive reputation on economic activity.

2.15 A few of the measures are expected to create small and unquantifiable cost savings. These are designated "E" in the annexes, and explanation of the likely impacts is available in Annex B. None of the changes are believed to create significant cost savings.

Ambulatory reference (Option 2 only)

2.16 Unlike the main costs and benefits above, this impact is only relevant in Option 2. Option 2 proposes to introduce ambulatory reference (AR), which would have the effect of automatically transposing any new Chapter II-1 requirements into UK law without the need for a separate legislative process. Benefits include ensuring timely implementation of the latest safety standards; providing greater clarity and certainty for industry; reducing administrative and legislative processes; and ensuring a level playing field by keeping UK law equivalent to that of other IMO member states.

2.17 By automatically implementing future updates to international instruments such as Chapter II-1, AR creates a risk of unintended consequences as future regulations may create problems for UK industry. This risk is thought to be very low (and far outweighed by the benefits). Future updates are expected to be mostly technical in nature. Any updates will also be subject to UK input at international negotiations in the IMO, which will include consultation with stakeholders, giving them a chance to feed in. Even in the unlikely event that significant changes which would materially damage UK interests appear to have a chance of passing, there is likely to be enough time for the UK to take legislative action to avoid them.

Business Impact Target (BIT) analysis

2.18 The impacts of the changes are not monetised or quantified for the reasons set out above. Therefore, all BIT outputs are "non-quantified".

2.19 As described above, the costs of the measures are almost entirely retrospective, because operators will have been following these regulations since they were introduced internationally. Therefore, the costs are "sunk costs" which will not be incurred in the future. For this reason they would be excluded from net present value (NPV) calculations, meaning the NPV[2] would be expected to equal £0 or approximately £0 if it were monetised.

2.20 It is arguable that UK operators complied with the international regulations at least partly due to the implied prospect of future codification in UK law. In this case, the Regulatory Policy Committee (RPC) recommends including retrospective costs in the BIT score and equivalent annual net direct cost to business (EANDCB)[3]. As a result, we would expect non-zero values for these outputs if they were monetised. Because the overall costs are unlikely to have been significant, it is not believed that the EANDCB would be large. However, in the absence of evidence, it is not possible to attach certainty to it falling below the *de minimis* threshold of £5m. More evidence will be sought at consultation.

3 Risks and unintended consequences

3.1 The objective of implementing this legislation is to align UK legislation with international requirements. As a member of the IMO and signatory to the SOLAS Convention, the UK is obliged to do this. As such, it is considered that the risks and unintended consequences of not implementing the legislation are actually greater. The requirements being introduced purely mirror the international requirements which it is considered that UK ships will already be complying with. This means it is highly likely that the vast majority of the costs discussed are retrospective, i.e. they have already been incurred. Although we expect operators to be fully compliant already, it is possible that some may not be, which may create a greater forward impact than anticipated. This risk is considered low,

[2] Because all costs are costs to business, the net present value (NPV) refers to both the net present social value (NPSV) and the business net present value (business NPV).

[3] See RPC guidance on counterfactuals here. In particular, including retrospective costs in the BIT score is based on the assumption that vessels complied with previous recommendations on the understanding such recommendations may become legal requirements in the future (see p12-13 of the guidance).

and even if it occurs, the total costs are expected to be low, meaning the changes will not be imposing a significant burden on business.

3.2 Additionally, the draft legislation itself has been vigorously scrutinised to ensure that it achieves the desired outcome. As such, from a legal perspective it is considered there should be no risks or unintended consequences.

4 Wider impacts

Small and micro business assessment (SaMBA)

4.1 It is not appropriate to consider or create exemptions for small and micro businesses. Although these changes apply to all businesses, it is not expected that small businesses will be affected by the changes. Constructing or ordering a newbuild vessel is a very expensive activity and it is very unlikely that any small businesses would have sufficient capital to do so.

4.2 This is supported by the available data. A list was available of companies known to have ordered new UK-flagged vessels since 2009 (these were ship operators, and were considered the most likely companies to bear costs as construction companies are assumed to pass on additional shipbuilding costs to their customers). Of these companies, some are very large multinational corporations, and some are mid-sized companies based in the UK[4]. There are two companies who publish small company accounts, which may suggest they qualify as small businesses; however, news reports suggest that the smaller such company employs well over 50 people[5]. This makes it extremely unlikely that any small companies (under the Better Regulation definition of fewer than 50 employees) have bought a newbuild UK-flagged ship in recent years. This evidence supports the conclusion that it is extremely unlikely that small businesses will be affected by the changes.

Competition assessment

4.3 The changes are not expected to have significant impacts on competition in the sector. By ensuring consistent implementation of the latest international standards, a "level playing field" is maintained both among UK operators and between the UK sector and other countries.

5 Post implementation review

1. **Review status:** Please classify with an 'x' and provide any explanations below.

	Sunset clause		Other review clause		Political commitment		Other reason		No plan to review
		X							

Regulations to be reviewed every five years to ensure continued suitability.

2. **Expected review date** (month and year, xx/xx):

1	1	/	2	7

Five years from when the Regulations come into force

[4] There are eight unique UK-based companies in this dataset. Data on employment is not available, and Companies House accounts data suggests a wide range of turnover: two have annual turnover in excess of 1bn USD; two have turnover between 100-200m GBP; two have turnover between 2-40m GBP.

[5] See e.g. https://www.offshore-energy.biz/sentinel-marine-to-create-80-new-jobs-by-ordering-three-new-errvs/ which suggests employment of least around 400 individuals.

3. Rationale for PIR approach:

Circle the level of evidence and resourcing that will be adopted for this PIR (see Guidance for Conducting PIRs):

Describe the rationale for the evidence that will be sought and the level of resources that will be used to collect it.

- **Will the level of evidence and resourcing be low, medium or high? (See Guidance for Conducting PIRs)**

The level of evidence and resourcing for this review will be low. The Regulations will implement Chapter II-1 of SOLAS.

- **What forms of monitoring data will be collected?**

The review will include analysing data contained on the MCA ship survey and inspection databases - known as Pelorus and Thetis, to identify non-compliances with the requirements of SOLAS Chapter II-1 established through Port State Control inspections.

- **What evaluation approaches will be used? (e.g. impact, process, economic)**

The MCA will check whether the shipping industry is complying with the new Regulations and, where possible, also whether they are having the desired effect on improving safety.

- **How will stakeholder views be collected? (e.g. feedback mechanisms, consultations, research)**

MCA regularly host or attend stakeholder meetings – their feedback on whether measures have had the desired effect or problems have been encountered will be sought as part of ongoing stakeholder engagement.

Annex A: full list of amendments

Cost categories have been appended to each change, as follows:

Cost Classification	Meaning
A	There could have been significant costs which can be quantified.
B	There could have been significant costs which cannot be quantified.
C	Change was cost-neutral.
D	Change was cost saving which can be quantified.
E	Change was cost saving which cannot be quantified.

Resolution reference	**Amending Regulation** **SOLAS II-1**	**Subject matter**	**Cost**	**Remarks**
Resolution MSC.436(99) Entry into force 1 January 2020	Part A General Regulation 1	Application	C	See under Res. MSC.421(98) Part A, General, Regulation 1 below for full details.
"	Part B1 Stability Regulation 8-1	System capabilities and operational information after a flooding casualty on passenger ships	C	See under Res. MSC.421(98) Part A, General, Regulation 8-1 below for full details.
Resolution MSC.421(98) Entry into force 1 January 2020	Part A General Regulation 1	Application	B	These are the so-called SOLAS 2020 amendments which further refine the probabilistic damage stability regulations introduced by MSC Resolutions 194(80) and 216(82). These amendments entered into force on 1/1/2020 as described in new SOLAS 2020 Part A Reg. 1. Any cost implications will be dealt with under each amended regulation below. The new costs relate to any changes made to Res. A216(82) as amended by Resolutions A269(85) and A325(90).
"	Part A General Regulation 2	Definitions	C	Changes the definition of amidships resulting in consequential amendments to 2.9 (draught) and 2.13 (trim). Definitions of deepest subdivision draught (2.10) and bulkhead deck (2.19) are clarified. Unlikely to be any cost impacts
"	Part B Subdivision and Stability Regulation 4	General	C	Footnotes do not carry the same legal weight as regulation text and so could potentially be challenged. Converting footnotes to regulatory text is not likely to have any cost impact as the footnotes were generally used, irrespective of their legal status.
"	Part B1 Stability	Intact stability	C	Minor adjustments to the regulation text only.

	Regulation 5			
“	Part B1 Stability Regulation 5-1	Stability information to be supplied to the master	C	This regulation has been extensively revised but largely for clarification purposes rather than for technical changes.
“	Regulation 6	Required subdivision index *R*	B	See Annex B.
“	Regulation 7	Attained subdivision index *A*	C	There have been some refinements made to the calculation of *A,* mostly in Regulation 7.2 with respect to clarification of the treatment of trim. Likely to be cost neutral.
“	Regulation 7-1	Calculation of the factor p_i	C	Virtually unchanged from SOLAS 2009, which, however, did result in a significant, if unquantifiable, cost impact in comparison with S90. Given a “C” here relative to SOLAS 2009.
“	Regulation 7-2	Calculation of the factor s_i	B	See Annex B.
“	Regulation 8	Special requirements concerning passenger ship stability	C	Clarification of SOLAS 2009 text in Regulations 8.1, 8.2 and 8.3.
“	Regulation 8-1	System capabilities and operational information	C	New Regulation 8-1.3.2 added saying that passenger ships constructed before 1/1/2014 shall meet regulation 8-1.3.1 (either be fitted with an onboard stability computer or have shore-based support) not later than their first renewal survey after 1/1/2025. As it is understood that most large passenger ships already comply with regulation. 8-1.3.1 the cost impact is likely to be neutral.
“	Part B2 Subdivision, watertight and weathertight integrity Regulation 9	Double bottoms in passenger ships and cargo ships other than tankers	C	There are modifications to SOLAS 2009 Regulations 9.3, 9.6, 9.7 and 9.8 which are largely for clarification purposes relating to the treatment of wells in the double bottom and the treatment of the DB of cargo ships of L <= 80 m. None are likely to have a significant cost impact in comparison to SOLAS 2009.
“	Regulation 10	Construction of watertight bulkheads	C	An amendment to Regulation 10.1 is made to clarify that this regulation now applies to both passenger and cargo ships.
“	Regulation 12	Peak and machinery space bulkheads, shaft tunnels, etc	B	See Annex B.
“	Regulation 13	Openings in watertight bulkheads below the bulkhead deck in passenger ships	C	There are no significant changes to the regulation text itself, only extensive new explanatory notes for Regulation 13.2.3 concerning the use of lead or other heat

				sensitive materials in systems which penetrate watertight bulkheads.
“	Regulation 15	Openings in the shell plating below the bulkhead deck of passenger ships and the freeboard deck of cargo ships	C	There are several changes made to confirm that this regulation now applies to both dry cargo and passenger ships. One or two obsolete terms (e.g. steerage passengers in reg. 12.4) deleted.
“	Regulation 16	Construction and initials tests of watertight ~~doors, sidescuttles, etc~~ closures	C	The title of the regulation has been changed as shown left to make it more general. Hatches are now included in the text as constituting watertight closures. Regulation 16.2 now clarifies the test water pressure to be applied to closures, including on dry cargo ships not subject to damage stability requirements. Likely to be cost neutral.
“	Regulation 16-1	Construction and initial tests of watertight decks, trunks, etc	C	Minor clarification of Regulation 16-1.2 where “a watertight area” is added to emphasize that the bulkhead deck of passenger ships is no longer necessarily watertight throughout.
“	Regulation 17	Internal watertight integrity of passenger ships above the bulkhead deck	C	SOLAS 2009 Regulation 17.3 concerning open-ended airpipes terminating in a superstructure has been re-written such that in SOLAS 2020 they will now be considered as unprotected openings subject to downflooding when calculating the “s” factor. The effect of this change on the “*A*” index is likely to be minor and therefore cost neutral.
“	Part B4 Stability Management Regulation 19	Damage control information	C	SOLAS 2009 Regulation 19.2 concerning the indication of watertight doors in passenger ships permitted to remain open during navigation in the ship’s stability information has been deleted.
“	Regulation 19-1	Damage control drills for passenger ships	C	This new Regulation in SOLAS 2020 applies to all passenger ships, including a retrospective application to those constructed before 1/1/2020 and came about as a result of gaps in the regulations found following the loss of the “Costa Concordia”. No new hardware is required as these are operational issues, so costs will be minimal.
“	Regulation 20	Loading of ships	C	The word “passenger” is deleted in the title indicating application to both dry cargo and passenger ships. The changes in Regulation 20.1 are minor and are operational in nature.

“	Regulation 21	Periodical operation and inspection of watertight doors, etc in passenger ships	C	Changes involve mostly the replacement of the word “drills” in SOLAS 2009 with “operational tests” as “drills” are now covered in the new Reg. 19-1 (see above).
“	Regulation 22	Prevention and control of water ingress, etc	C	Changes to this regulation in SOLAS 2020 are to clarify that it applies to dry cargo ships as well as passenger ships and also to avoid use of the word “port” in connection with commencing a voyage. Changes are largely an operational matter with no significant cost implications.
“	Regulation 22-1	Flooding detection systems for passenger carrying 36 or more persons constructed on or after 1 July 2010	C	No changes from SOLAS 2009.
“	Regulation 23	Special requirements for ro-ro passenger ships	C	Only minor amendments relating to “during navigation” and “voyage commences” etc.
“	Regulation 24	Additional requirements for prevention and control of water ingress, etc in cargo ships	C	Only minor amendments relating to “during navigation” and “voyage commences” etc. and the recording of the opening of doors and ramps in the log-book.
“	Part C Machinery Installations Regulation 35-1	Bilge pumping arrangements	C	The only significant change from SOLAS 2009 is to regulation 35-1.3.4 where the term “all flooding conditions” is expanded to include flooding conditions derived from minor damages as specified in Reg. 8. Although significant, the change is not thought likely to incur additional costs so is cost neutral.
Resolution MSC.409(97) Entry into force 1 January 2020	Part A-1 Structure of ships Regulation 3-12	Protection against noise	C	Editorial amendment to the text dealing with construction and keel laying dates
Resolution MSC.392(95) Entry into force 1 January 2017	Part A General Regulation 2	Definitions	C	Introduces definitions for IGF Code and low-flashpoint fuels
“	Part F Alternative design and arrangements Regulation 55	Alternative design and arrangements	C	Replaces existing paragraphs 1 (Purpose), 2 (General), 3 (Engineering analysis)
“	Part G Ships using low-flashpoint fuels Regulation 56	Application	C	New part to Chapter II-1 introduced by this Resolution. Regulation 56 sets out scope of application
“	Regulation 57	Requirements for ships using low-flashpoint fuels	C	States compliance with the IGF Code is required

Resolution MSC.365(93) Entry into force 1 January 2016	Part C Machinery Installations Regulation 29	Steering gear	C	New text added concerning rudder immersion during sea trials
Resolution MSC.338(91) Entry into force 1 July 2014	Part A-1 Structure of ships Regulation 3-12	Protection against noise	C	Revised requirements for protection against noise taking account of those acceptable to the Administration, and MSC.337(91)
"	Part C Machinery Installations Regulation 36	Protection against noise	C	Regulation deleted. Now replaced by Regulation 3-12
Resolution MSC.325(90) Entry into force 1 January 2014	Part B-1 Stability Regulation 8-1	System capabilities and operational information after a flooding casualty on passenger ships	B	See Annex B.
Resolution MSC.308(88) Entry into force 1 July 2012	Part D Electrical installations Regulation 41	Main source of electrical power and lighting systems	C	Editorial clarification provided
Resolution MSC.291(87) Entry into force 1 January 2012	Part A-1 Structure of ships Regulation 3-11	Corrosion protection of cargo oil tanks of crude oil tankers	C	Applies to oil tankers built on or after 1 January 2013 at earliest
Resolution MSC.290(87) Entry into force 1 January 2012	Part A General Regulation 2	Definitions	C	Provides a definition of Goal-based ship construction standards for bulk carriers and oil tankers
"	Part A-1 Structure of ships Regulation 3-10	Goal-based ship construction standards for bulk carriers and oil tankers	C	New regulation. Applies to bulk carriers and oil tankers minimum 150m length built on or after 1 July 2016 at earliest
Resolution MSC.282(86) Entry into force 1 January 2011	Part A-1 Structure of ships Regulation 3-5	New installation of materials containing asbestos	C	From 1 January 2011 material containing asbestos is prohibited from installation onboard all ships
"	Part C Machinery installations Regulation 35-1	Bilge pumping arrangements	C	Requires the drainage of closed vehicle and ro-ro spaces and speciasl category spaces to comply with certain fixed fire extinguishing systems set out in Chapter II-2
Resolution MSC.269(85) Entry into force 1 July 2010	Part A General Regulation 2	Definitions	C	Adopts the 2008 IS Code to replace the previous Intact Stability Code in IMO Res. A.749(18) A.749 was recommendatory rather than mandatory so in theory there may be some cost impact, but this will be minor as A.749 tended to be treated as mandatory anyway in the absence of any other suitable international regulations.

“	Part B-1 Stability Regulation 5	Intact stability information	C	The word “information” is deleted from the title.
Resolution MSC.256(84) Compliance at the first renewal survey on or after 1 January 2010	Part A-1 Structure of ships Regulation 3-4	Emergency towing arrangements and procedures	C	Applies to tankers constructed on or after 1 July 2002, minimum 20,000 dwt.
“	Regulation 3-9	Means of embarkation	C	Concerns fitting of gangways and accommodation ladders
Resolution MSC.216(82) Annex I entered into force 1 July 2008	Part A-1 Structure of ships Regulation 3-2	Protective coatings of dedicated seawater ballast tanks in all types of ships and double-side skin spaces of bulk carriers	C	Replaces existing requirements for corrosion prevention of seawater ballast tanks in oil tankers and bulk carriers
“ Annex II entered into force 1 January 2009	Part A General Regulation 1	Application	C	Provides scope of application and interpretation of various expressions used
“	Regulation 2	Definitions	C	List of definitions applicable to terms used in SOLAS II-1
“	Regulation 3	Definitions relating to parts C, D and E	C	List of definitions for terms which are more specific to parts C, D and E of SOLAS II-1
“	Part B Subdivision and stability Regulation 4	General	B	See Annex B – under Resolution MSC.194(80), Regulation 4
“	Part B-1 Stability Regulation 5	Intact stability information	C	This is largely similar to SOLAS 1990 Part B regulation 22 on inclining experiments for determining the lightship weight and centre of gravity. No extra costs in comparison with SOLAS 1990 and UK law.
“	Regulation 5-1	Stability information to be supplied to the master	C	This is based on SOLAS 1990 Part B-1 reg. 25-8 (the SOLAS 1990 dry cargo ship probabilistic regulations) but is now applied to passenger ships too. No extra costs in comparison with SOLAS 1990.
“	Regulation 6	Required subdivision index *R*	B	See Annex B – under Resolution MSC.194(80), Regulation 6
“	Regulation 7	Attained subdivision index *A*	B	See Annex B – under Resolution MSC.194(80), Regulation 7
“	Regulation 7-1	Calculation of the factor p_i	B	See Annex B – under Resolution MSC.194(80), Regulation 7-1
“	Regulation 7-2	Calculation of the factor s_i	B	See Annex B – under Resolution MSC.194(80), Regulation 7-2

“	Regulation 7-3	Permeability	C	This new regulation 7-3 is based on SOLAS 1990 Part B-1 Regulation 25-7 for dry cargo ships (which was in UK law) but has been slightly modified, principally to allow for the variation in permeability with draught of dry cargo spaces and those carrying liquid cargo
“	Regulation 8	Special requirements concerning passenger ship stability	B	See Annex B – under Resolution MSC.194(80) Regulation 8
“	Regulation 8-1	System capabilities after a flooding casualty on passenger ships	B	See Annex B
“	Part B-2 Subdivision, watertight and weathertight integrity Regulation 9	Double bottoms in passenger ships and cargo ships other than tankers	B	See Annex B – under Resolution MSC.194(80), Regulation 9
“	Regulation 10	Construction of watertight bulkheads	C	New Regulation 10 consists of SOLAS 1990 Part B regulation 14.1 and 14.2.1 regarding scantlings, assumed pressure heads and the strength of steps & recesses in bulkheads. Applies to dry cargo and passenger ships and is very similar to what is in UK law, so is cost neutral.
“	Regulation 11	Initial testing of watertight bulkheads	C	New Regulation 11 consists of SOLAS 19 90 Part B regulation 14.3 to 14.6 regarding the testing of watertight bulkheads. The testing for tanks holding liquids in Regulation 11.3 has a revised pressure head compared to SOLAS 1990 but otherwise this was all in UK law
“	Regulation 12	Peak and machinery space bulkheads, shaft tunnels	C	New Regulation 12 is based on SOLAS 1990 Part B regulation 11 which applied only to cargo ships. It has been modified and harmonized so that it now covers passenger ships too and includes SOLAS 1990 Part B Regulation 15.3.2 & 3.3 concerning piercing of the collision bulkhead. All was in UK law and changes are only relatively minor.
“	Regulation 13	Openings in watertight bulkheads below the bulkhead deck in passenger ships	C	New Regulation 13 is based on SOLAS 1990 Part B regulation 15. As mentioned above, SOLAS 1990 regulations 15.3.2 & 3 were moved to SOLAS 2009 Regulation 12. SOLAS 1990 Regulation 15 is in UK law and any changes made for SOLAS 2009 are minor.

“	Regulation 13-1	Openings in watertight doors and internal decks in cargo ships	C	New Regulation 13-1 is taken unaltered from SOLAS 1990 Part B-1 Regulation 25-9. Already in UK law.
“	Regulation 14	Passenger ships carrying goods vehicles and accompanying personnel	C	New Regulation 14 is based on SOLAS 1990 Part B-1 Regulation 16. It has been subject to minor amendments only e.g., paragraph 16.4 on permeability has been removed because a separate new SOLAS 2009 Part B-1 Regulation 7-3 on permeability has been included. Already in UK law.
“	Regulation 15	Openings in the shell plating below the bulkhead deck of passenger ships and the freeboard deck of cargo ships	C	New Regulation 15 is based very closely on SOLAS 1990 Part B Regulation 17 which only applied to passenger ships. Overall, the changes are minimal and were in UK law so costs will be neutral
“	Regulation 15-1	External openings in cargo ships	C	New Regulation 15-1 is similar to SOLAS 1990 B-1 Regulation 25-10. The references to “strength” in SOLAS 1990 Regulation 25-10.2 and “permanent closure at sea” in 25-10.3 are omitted. Already - included in UK law and so these changes will be cost neutral
“	Regulation 16	Construction and initial tests of watertight doors, sidescuttles	E	See Annex B – under Resolution MSC.194(80), Regulation 6
“	Regulation 16-1	Construction and initial tests of watertight decks, trunks	C	New Regulation 16-1 is similar to SOLAS 1990 Part B Regulation 19 with minor amendments consequential to the change from deterministic to probabilistic damage. Already In UK law
“	Regulation 17	Internal watertight integrity of passenger ships above the bulkhead deck	E	See Annex B – under Resolution MSC.194(80), Regulation 17
“	Regulation 17-1	Integrity of the hull and superstructure, damage prevention and control on ro-ro passenger ships	C	New Regulation 17-1.1 is from SOLAS 1990 Part B Regulation 20-2 whereas Regulations 17-1.2 & 3 come from SOLAS 1990 Part B Regulation 23-2.1 & 2. There are no substantive text changes from SOLAS 1990, which is already in UK law therefore no effect on costs.
“	Part B-3 Subdivision load line assignment for passenger ships Regulation 18	Assigning, marking and recording of subdivision load lines for passenger ships	C	New Part B-3 Regulation 18 is a straight copy from SOLAS 1990 Part B Regulation 13 which is already in UK law.
“	Part B-4 Stability Management Regulation 19	Damage control information	C	New Part B-4 Regulation 19.1 is a straight copy of SOLAS 1990 Part B Reg.23 for passenger ships and Reg. 23-1 for dry cargo ships. Any changes in SOLAS 2009 are organisational rather than substantive text changes from

				SOLAS 1990 and are already in UK law
“	Regulation 20	Loading of passengers	C	New Part B-4 Regulation 20.1 is taken from SOLAS 1990 Part B Reg. 8.7.4. No significant text changes. Already in UK law
“	Regulation 21	Periodical operation and inspection of watertight doors, etc in passenger ships	C	New Part B-4 Regulations 21.1 .2 and .3 are identical to SOLAS 1990 Part B Regulations 24.2.1 .2 and 24.3.1 New Part B-4 Regulation 21.4 is the same as SOLAS 1990 Part B Regulation 25.2. Already in UK law so no effect on costs
“	Regulation 22-1	Flooding detection systems for passenger ships carrying 36 or more persons constructed on or after 1 July 2010	B	See Annex B.
“	Regulation 23	Special provisions for ro-ro passenger ships	C	Largely re-organisational changes to regulations which were already in SOLAS 1990 and therefore in UK law
“	Regulation 24	Prevention and control of water ingress, etc in cargo ships	C	New Part B-4 Regulation 24.1 is similar to SOLAS 1990 Part B-1 Regulation 25-10.3 except fitting of device to prevent unauthorised opening is omitted. Other regulations were already in SOLAS 1990 and therefore in UK law
“	Regulation 25	Water detector levels on single hold cargo ships other than bulk carriers	B	See Annex B.
“ Annex III entered into force 1 July 2010	Part D Electrical installations Regulation 41	Main source of electrical power and lighting systems	C	Requirements for supplementary lighting in passenger ships
“	Part F Alternative design and arrangements Regulation 55	Alternative design and arrangements	C	Provides a methodology for alternative design and arrangements for machinery and electrical installations
Resolution MSC.194(80) Annex I entered into force 1 January 2007	Part A General Regulation 2	Definitions	C	Provides a definition of bulk carrier
“	Part A-1 Structure of ships Regulation 3-1	Structural, mechanical and electrical requirements for ships	C	Requires ships to be designed, constructed and maintained with the structural, mechanical and electrical requirements of a Classification Society or equivalent national standards

“	Regulation 3-2	Corrosion prevention of seawater ballast tanks in oil tankers and bulk carriers	C	Requires an efficient corrosion prevention system.
“	Regulation 3-3	Safe access to tanker bows	C	Requires safe means of access to the bow even in heavy weather
“	Regulation 3-4	Emergency towing arrangements on tankers	C	Provisions concerning rapid deployment and adequate strength
“	Regulation 3-5	New installation of materials containing asbestos	C	Prohibits the installation of asbestos except in limited circumstances
“	Regulation 3-6	Access to and within spaces in, and forward of, the cargo area of oil tankers and bulk carriers	C	Concerns access to cargo tanks and other spaces, and the requirements for a ship structure access manual
“	Regulation 3-7	Construction drawings maintained on board and ashore	C	A copy of the as-built construction drawings to be kept on board and ashore
“	Regulation 3-8	Towing and mooring equipment	C	Requires arrangements, equipment and fittings to be of sufficient safe working load
“	Part B Stability and subdivision Regulation 23-3	Water level detectors on single hold cargo ships other than bulk carriers	B	See Annex B – under Resolution MSC.194(80), Regulation 25
“	Part C Machinery Installations Regulation 31	Machinery controls	C	Revised requirements for automation systems
“ Annex II entered into force 1 January 2009	Part A General Regulation 1	Application	C	This resolution is included in the 2014 SOLAS Consolidated Edition and marks a major transition from deterministically calculated damage stability (SOLAS 1990) to probabilistic (SOLAS 2009) for passenger ships and dry cargo ships. Many of the regulations are new but some, particularly those not relating directly to the calculation of damage stability, have been transferred unchanged from SOLAS 1990 to SOLAS 2009 and hence are included in our existing regulations. The UK had separate regulations for passenger ships and dry cargo ships whereas SOLAS 2009 now covers both types. Regulation 1 specifies the SOLAS 2009 application date, 1/1/2009. There are some consequential amendments, but none which involve cost increases.
“	Regulation 2	Definitions	C	Revised considerably to reflect the transition from deterministic to

				probabilistic damage calculation methods, e.g., “margin line” is removed and the definition of “bulkhead deck” is expanded and clarified for passenger ships. Definitions of deadweight and lightweight were moved here from SOLAS 19 90 Regulation 3.
“	Regulation 3	Definitions relating to parts C, D and E	C	List of definitions for terms which are more specific to parts C, D and E of SOLAS II-1
“	Part B Subdivision and stability Regulation 4	General	B	See Annex B.
“	Part B-1 Stability Regulation 5	Intact stability information	C	This is largely similar to SOLAS 1990 Part B regulation 22 on inclining experiments for determining the lightship weight and centre of gravity. No extra costs in comparison with SOLAS 1990 and UK law.
“	Regulation 5-1	Stability information to be supplied to the master	C	This is based on SOLAS 1990 Part B-1 reg. 25-8 (the SOLAS 1990 dry cargo ship probabilistic regulations) but is now applied to passenger ships too. No extra costs in comparison with SOLAS 1990.
“	Regulation 6	Required subdivision index *R*	B	See Annex B
“	Regulation 7	Attained subdivision index *A*	B	See Annex B
“	Regulation 7-1	Calculation of the factor p_i	B	See Annex B
“	Regulation 7-2	Calculation of the factor s_i	B	See Annex B
“	Regulation 7-3	Permeability	C	This new regulation 7-3 is based on SOLAS 1990 Part B-1 Regulation 25-7 for dry cargo ships (which was in UK law) but has been slightly modified, principally to allow for the variation in permeability with draught of dry cargo spaces and those carrying liquid cargo
“	Regulation 8	Special requirements concerning passenger ship stability	B	See Annex B
“	Part B-2 Subdivision, watertight and weathertight integrity Regulation 9	Double bottoms in passenger ships and cargo ships other than tankers	B	See Annex B
“	Regulation 10	Construction of watertight bulkheads, etc	C	New Regulation 10 consists of SOLAS 1990 Part B regulation 14.1 and 14.2.1 regarding

				scantlings, assumed pressure heads and the strength of steps & recesses in bulkheads. Applies to dry cargo and passenger ships and is very similar to what is in UK law, so is cost neutral.
“	Regulation 11	Initial testing of watertight bulkheads, etc	C	New Regulation 11 consists of SOLAS 19 90 Part B regulation 14.3 to 14.6 regarding the testing of watertight bulkheads. The testing for tanks holding liquids in Regulation 11.3 has a revised pressure head compared to SOLAS 1990 but otherwise this was all in UK law
“	Regulation 12	Peak and machinery space bulkheads, shaft tunnels, etc	C	New Regulation 12 is based on SOLAS 1990 Part B regulation 11 which applied only to cargo ships. It has been modified and harmonized so that it now covers passenger ships too and includes SOLAS 1990 Part B Regulation 15.3.2 & 3.3 concerning piercing of the collision bulkhead. All was in UK law and changes are only relatively minor.
“	Regulation 13	Openings in watertight bulkheads below the bulkhead deck in passenger ships	C	New Regulation 13 is based on SOLAS 1990 Part B regulation 15. As mentioned above, SOLAS 1990 regulations 15.3.2 & 3 were moved to SOLAS 2009 Regulation 12. SOLAS 1990 Regulation 15 is in UK law and any changes made for SOLAS 2009 are minor
“	Regulation 13-1	Openings in watertight doors and internal decks in cargo ships	C	New Regulation 13-1 is taken unaltered from SOLAS 1990 Part B-1 Regulation 25-9. Already in UK law
“	Regulation 14	Passenger ships carrying goods vehicles and accompanying personnel	C	New Regulation 14 is based on SOLAS 1990 Part B-1 Regulation 16. It has been subject to minor amendments only e.g., paragraph 16.4 on permeability has been removed because a separate new SOLAS 2009 Part B-1 Regulation 7-3 on permeability has been included. Already in UK law
“	Regulation 15	Openings in the shell plating below the bulkhead deck of passenger ships and the freeboard deck of cargo ships	C	New Regulation 15 is based very closely on SOLAS 1990 Part B Regulation 17 which only applied to passenger ships. Overall, the changes are minimal and were in UK law so costs will be neutral
“	Regulation 15-1	External openings in cargo ships	C	New Regulation 15-1 is similar to SOLAS 1990 B-1 Regulation 25-10. The references to “strength” in SOLAS 1990 Regulation 25-10.2 and “permanent closure at sea” in 25-10.3 are omitted. Already - iIncluded in UK law and so these changes will be cost neutral

“	Regulation 16	Construction and initial tests of watertight doors, sidescuttles, etc	E	See Annex B
“	Regulation 16-1	Construction and initial tests of watertight decks, trunks, etc	C	New Regulation 16-1 is similar to SOLAS 1990 Part B Regulation 19 with minor amendments consequential to the change from deterministic to probabilistic damage. Already In UK law
“	Regulation 17	Internal watertight integrity of passenger ships above the bulkhead deck	E	See Annex B
“	Regulation 17-1	Integrity of the hull and superstructure, damage prevention and control on ro-ro passenger ships	C	New Regulation 17-1.1 is from SOLAS 1990 Part B Regulation 20-2 whereas Regulations 17-1.2 & 3 come from SOLAS 1990 Part B Regulation 23-2.1 & 2. There are no substantive text changes from SOLAS 1990, which is already in UK law therefore no effect on costs.
“	Part B-3 Subdivision load line assignment for passenger ships Regulation 18	Assigning, marking and recording of subdivision load lines for passenger ships	C	New Part B-3 Regulation 18 is a straight copy of SOLAS 1990 Part B Regulation 13 which is already in UK law
“	Part B-4 Stability Management Regulation 19	Damage control information	C	New Part B-4 Regulation 19.1 is a straight copy of SOLAS 1990 Part B Reg.23 for passenger ships and Reg. 23-1 for dry cargo ships. Any changes in SOLAS 2009 are organisational rather than substantive text changes from SOLAS 1990 and are already in UK law
“	Regulation 20	Loading of passenger ships	C	New Part B-4 Regulation 20.1 is taken from SOLAS 1990 Part B Reg. 8.7.4. No significant text changes. Already in UK law
“	Regulation 21	Periodical operation and inspection of watertight doors, etc in passenger ships	C	New Part B-4 Regulations 21.1 .2 and .3 are identical to SOLAS 1990 Part B Regulations 24.2.1 .2 and 24.3.1 New Part B-4 Regulation 21.4 is the same as SOLAS 1990 Part B Regulation 25.2. Already in UK law so no effect on costs
“	Regulation 22	Prevention and control of water ingress, etc	C	Largely re-organisational changes to regulations which were already in SOLAS 1990 and therefore in UK law. New Part B-4 Regulation 22.5 concerns portable plates and appears to be based on SOLAS 1990 Part B Regulation 15 but has been considerably revised

				and therefore is not in UK law; still likely to be cost neutral
"	Regulation 22-1	Flooding detection systems for passenger ships carrying 36 or more persons constructed on or after 1 July 2010	B	See Annex B
"	Regulation 23	Special provisions for ro-ro passenger ships	C	Largely re-organisational changes to regulations which were already in SOLAS 1990 and therefore in UK law
"	Regulation 24	Prevention and control of water ingress, etc in cargo ships	C	New Part B-4 Regulation 24.1 is similar to SOLAS 1990 Part B-1 Regulation 25-10.3 except fitting of device to prevent unauthorised opening is omitted. Other regulations were already in SOLAS 1990 and therefore in UK law
"	Regulation 25	Water detector levels on single hold cargo ships other than bulk carriers	B	See Annex B
"	Part C Machinery installations Regulation 35-1	Bilge pumping arrangements	C	This is SOLAS 1990 Part B Reg. 21 transferred to SOLAS 2009 Part C Regulation 35-1 with no substantive changes
Resolution MSC.170(79) Entered into force on 1 July 2006	Part A General Regulation 2	Definitions	C	Adds a definition of bulk carrier to SOLAS 1990. This definition does not appear in our cargo ship regulations SI 1997/1509, MSN 1671 or MSN 1715. It was transferred to SOLAS 2009 Part A regulation 2.24
"	Part B-2 Subdivision, watertight and weathertight integrity Regulation 18	Construction and initial tests of watertight doors, sidesuttles, etc., in passenger ships and cargo ships	E	See Annex B
"	Part D Electrical installations Regulation 45	Precautions against shock, fire and other hazards of electrical origin	C	Changes to the installation of electrical equipment
Resolution MSC.151(78) Entered into force on 1 January 2006	Part A-1 Structure of ships Regulation 3-6	Access to and within spaces in, and forward of, the cargo area of oil tankers and bulk carriers	C	Concerns access to cargo tanks and other spaces, and the requirements for a ship structure access manual
Resolution MSC.134(76) Entered into force on 1 July 2004	Part A-1 Structure of ships Regulation 3-6	Access to and within spaces in the cargo area of oil tankers and bulk carriers	C	Concerns access to cargo tanks and other spaces, and the requirements for a ship structure access manual
"	Part B	Access to spaces in the cargo area of oil tankers	C	Regulation deleted

	Subdivision and stability Regulation 12-2			
“	Part C Machinery installations Regulation 31	Machinery Control	C	Improved automation system to assist OOW with time to assess navigational circumstances in an emergency
Resolution MSC.99(73) Entered into force 1 July 2002	Part A-1 Structure of ships Regulation 3-4	Emergency towing arrangements for tankers	C	Enhanced provisions concerning rapid deployment and adequate strength
“	Regulation 3-5	New installation of materials containing asbestos	C	Prohibits the installation of asbestos on new ships except in limited circumstances
“	Part D Electrical installations Regulation 43	Emergency source of electrical power in cargo ships	C	Editorial changes
Resolution MSC.69(69) Entered into force 1 July 2002	Part B Subdivision and stability Regulation 14	Construction and initial testing of watertight bulkheads, etc., in passenger ships and cargo ships	C	Regulation 14 states that water testing is not compulsory & can now be done by hose testing if practicable. If not practicable inspection and use of dye penetrant is acceptable. Brought in to limit potential water damage during testing. Cost neutral or slight saving if anything.
Resolution MSC.65(68) Entered into force 1 July 1999	Part B Subdivision and stability Regulation 8-3	Special requirements for passenger ships, other than ro-ro passenger ships, carrying 400 persons or more	C	SI 1998/2514 regulation 46.1 and MSN 1698 only apply this Resolution to ro-pax ships and not passenger ships. This change to SOLAS 1990 was made to ensure that a 2-compartment standard was applied to passenger ships carrying >=400 passengers. It has now been superseded by the SOLAS 2009/2020 amendments so was only in force for ships constructed between 1/7/99 and 31/12/08
Resolution MSC.57(67) Entered into force 1 July 1998	Part A-1 Structure of ships Regulation 3-3	Safe access to tanker bows	C	Requires safe means of access to the bow even in heavy weather
“	Regulation 3-4	Emergency towing arrangements on tankers	C	Emergency towing arrangment to be fitted to bow and stern of tankers minimum 20,000 dwt
“	Part B Subdivision and stability Regulation 17-1	Openings in the shell plating below the bulkhead deck of passenger ships and the freeboard deck of cargo ships	C	Removes reference to “margin line” in SOLAS 1990 reg 17; replaced with “bhd deck of pax ships and fbd deck of cargo ships”. Resolution MSC.57(67) was accounted for in UK cargo ship

				regulations but not for passenger ships. No effect on costs.
“	Part C Machinery installations Regulation 26	General	C	Concerns non-metallic expansion joints in piping systems; operating instructions to be written in language recognised by the crew; and, location and arrangment of vent pipes for fuel oil service
“	Regulation 31	Machinery controls	C	Amended requirements for propulsion and control of main and auxiliary engines
“	Part D Electrical installations Regulation 41	Main source of electrical power and lighting systems	C	Requires the electrical supply to be restored immediately following the loss of any generators; load shedding arrangements; and the main busbar to be divided into two parts connected by circuit breakers
“	Regulation 42	Emergency source of electrical power in passenger ships	C	Propulsion to be restored from dead ship condition within 30mins after blackout (passenger ship)
“	Regulation 43	Emergency source of electrical power in cargo ships	C	Propulsion to be restored from dead ship condition within 30mins after blackout (cargo ship)
Resolution MSC.47(66) Entered into force 1 July 1998	Part A-1 Structure of ships Regulation 3-1	Structural, mechanical and electrical requirements for ships	C	Requires ships to be designed, constructed and maintained with the structural, mechanical and electrical requirements of a Classification Society or equivalent national standards
“	Regulation 3-2	Corrosion prevention of seawater ballast tanks	C	Requires an efficient corrosion prevention system.
“	Part B-1 Stability Regulation 8	Stability of passenger ships in damaged condition	C	Was already implemented by MSN 1698
“	Regulation 25-1	Application	C	Was already implemented by MSN 1715
“	Regulation 25-3	Required subdivision index *R*	C	Was already implemented by MSN 1715
“	Part D Electrical installations Regulation 45	Precautions against shock, fire and other hazards of electrical origin	C	Editorial change – “55 V” replaced by “50 V”

Annex B: changes considered not to be cost-neutral

B There could have been significant costs which cannot be quantified.

E Change was cost saving which cannot be quantified.

Resolution MSC.421(98). Entry into force 1 January 2020

Part A; General; Regulation 1 *Application* **B**

These are the so-called SOLAS 2020 amendments which further refine the probabilistic damage stability regulations introduced by MSC Resolutions 194(80) and 216(82). These amendments entered into force on 1/1/2020 as described in new S2020 Part A Reg. 1. Any cost implications will be dealt with under each amended regulation below and the new costs relate to any changes made to Res. A216(82) as amended by Resolutions A269(85) and A325(90).

Part B-1; Stability; Regulation 6 *Required subdivision index R* **B**

There has been a very significant change in the formula for "R" in Reg. 6.3. There was extensive research undertaken post 2009 following doubts which arose as to whether the S2009 "R" index provided a sufficiently high safety level. Research proved these doubts to be justified with the result that R has been uplifted and the formula is now based on the number of persons on board rather than the lifeboat capacity. The biggest uplift (around 10%) is for pax ships (including ro-pax) carrying around 1500-1800 persons. R for dry cargo ships is unchanged. There could be very significant cost increases if certain pax ships (particularly ro-pax) are to attain the newly increased required index R but these are not easily quantifiable.

Part B-1; Stability; Regulation 7-2 *Calculation of the factor si* **B**

A very significant change for ro-pax ships has occurred in Reg. 7-2.3 where the formula for s (which determines how well the ship responds to a particular damage case) has been adjusted to take better account of possible water accumulation on the car deck, a phenomenon which can lead to very rapid loss of the ship. The net result in the change to the "s" formula is that, if the ro-ro space is breached in any given damage scenario, the contribution made to the "A" index by that scenario will be reduced, making it harder for the ship as a whole to achieve the required index "R". This, combined with the increase in "R" mentioned under regulation 6 above, could result in significant though unquantifiable cost increases arising from potential extra subdivision, reduction in operating profitability etc.

Part B-2; Subdivision, watertight and weathertight integrity

Part B-2; Regulation 12 *Peak & machinery space bulkheads, shaft tunnels, etc.* **B**

There are several changes made to indicate that this regulation now applies to dry cargo ships as well as pax ships. A new Reg. 12.2 is introduced requiring that the "s" factor shall not be less than 1 (i.e., the ship must survive) if any part of the ship forward of the collision bulkhead is flooded when the ship is at deepest load draught and heaviest bow trim. Reg. 12.6 (now 12.7 in S2020) includes text to clarify that if a long forward superstructure is fitted, the collision bulkhead must extend up to it and be located so as to preclude the possibility of a damaged or detached bow door or ramp in turn damaging the collision bulkhead. These last two amendments are significant and could have cost impacts which are not readily quantifiable.

Resolution MSC.325(90). Entry into force 1 January 2014

Part B-1; Stability; Regulation 8-1 *System capabilities and operational information after a flooding casualty on passenger ships* **B**

This expands the reg. text first introduced by MSC.216 (below) for safe return to port and this is the text included in the 2014 Consolidated Edition of SOLAS. The main change is the new requirement for pax ships constructed on or after 1/1/2014 to be fitted with an onboard stability computer or to have links to a shore-based support station. Although significant, the cost implications should not be too severe since many large pax ships were already fitted with stability computers before this reg. entered into force.

Resolution MSC.216(82) Annex II. Entry into force 1 July 2008

Part B-1; Stability; Regulation 8-1 *System capabilities after a flooding casualty on passenger ships* **B**

This marks the first appearance of the so-called "Safe return to Port" regulation which requires that certain key functions of larger pax ships constructed on or after 1/7/2010 shall remain operational when the ship is subject to

flooding of any single watertight compartment. This is not in UK law and has large unquantifiable cost implications (e.g., the need to duplicate and separate key systems such as main propulsion and steering).

Part B-4; Stability Management; Regulation 22-1 *Flooding detection systems for passenger ships carrying 36 or more persons constructed on or after 1 July 2010* **B**

New Part B-4 Reg. 22-1 was introduced after the S2009 amendments entered into force and cross-refers to MSC.1/Circ.1291 which are guidelines on flooding detection systems to be applied to pax ships constructed after 1/7/2010. Not in UK law and will have significant cost implications; difficult to quantify.

Part B-4; Stability Management; Regulation 25 *Water detector levels on single hold cargo ships other than bulk carriers* **B**

See Res MSC.194 (80) Annex 1 Part B Reg.23-3 (below) for comments on costs.

Resolution MSC.194(80) Annex II. Entry into force 1 January 2009

Part B; Subdivision and stability; Regulation 4 *General* **B**

Part B now contains only a new regulation 4 with sub-paragraphs relating to application, alternative methodologies, degree of subdivision and the effectiveness of the subdivision. The old S90 Part B regulations 4 to 7 on the determination of the subdivision of passenger ships using floodable lengths, factor of subdivision, margin line etc. were removed altogether and regulations 8, 8-1, 8-2 and 8-3 relating to the deterministic assessment of the damage stability of pax & ro-pax ships were replaced by the new probabilistic regulations and placed in a new Part B-1 under the heading “Stability”. A footnote was introduced to clarify which ship types were excluded from applying the new probabilistic regs.

The overall cost changes are likely to be significant but cannot be readily quantified.

Part B-1; Stability; Regulation 6 *Required subdivision index R* **B**

The formula for cargo ships between 80 and 100 m in length is the same as S90 Part B-1 Reg. 25-3 but it is slightly changed for cargo ships over 100 m in length. For pax ships the formula in 6.2.3 is completely new. Costs for cargo ships unchanged but for pax ships likely to be significant and unquantifiable.

Part B-1; Stability; Regulation 7 *Attained subdivision index A* **B**

This calculation of this index is based on the probabilistic S90 Part B-1 Reg. 25-4 for dry cargo ships which was implemented into UK law. It has now been modified and expanded to include pax ships with the damage calculations carried out for 3 draughts and a range of trims rather than 2 draughts and level trim. The A index is a summation of the product of p (see reg 7-1) and s (see reg 7-2) for a large number of individual damage cases. The effects of the changes to A from S90 cannot be readily quantified.

Part B-1; Stability; Regulation 7-1 *Calculation of the factor p_i* **B**

One of the key parameters of probabilistic damage stability calculations, p_i represents the probability of flooding each single compartment and each possible group of two or more adjacent compartments. It is derived from an analysis of thousands of actual damage scenarios from an IMO database. This new reg 7-1 is based on S90 Part B-1 Reg 25-5 for dry cargo ships (which was in UK law) but has been significantly changed to incorporate passenger ships. It is not possible to readily quantify what effect these changes will have on cost.

Part B-1; Stability; Regulation 7-2 *Calculation of the factor s_i* **B**

This is the other key parameter used to calculate A in Reg 7. “s_i” represents the probability that the stability after flooding every damage case derived from “p_i”, above, will be sufficient to prevent capsizing or dangerous heeling due to loss of stability or heeling moments. Every analysed damage case which the ship survives is said to make a contribution towards “A”. Overall, for the ship to comply with S2009, “A” must be greater than or equal to “R”. This new reg 7-2 is based on S90 Part B-1 Reg 25-6 for dry cargo ships (which was in UK law) but has been significantly modified to incorporate passenger ships and there are several other refinements. Overall, the S2009 amendments were supposed to result in ships which were at least as safe as S90 ships. For some passenger ships it was found that compliance with S2009 could be achieved by using a lower level of transverse subdivision than would have been the case with S90, For these designs it is likely that significant cost savings could be made but it is not possible to readily quantify what the overall effect of all these changes will have on cost.

Part B-1; Stability; Regulation 8 *Special requirements concerning passenger ship stability* **B**

This is a new provision for pax ships only. It was introduced because of concerns that the probabilistic method could allow loss of the ship following a relatively minor damage scenario. These deterministic regulations are designed to prevent that possibility and could result in some extra local subdivision being required. Costs could be significant but are not readily quantifiable.

Part B-2; Subdivision, watertight and weathertight integrity; Regulation 9 *Double bottoms in passenger ships and cargo ships other than tankers* **B**

New reg 9 is partly based on S90 Part B Reg 12 for pax ships & 12-1 for dry cargo ships (which were in UK law) but has been expanded & harmonized. It is designed to minimize the impact of flooding from minor grounding. It is largely deterministic although use is made of the probabilistic "s" factor as a determinant of the level of survivability to be achieved following specified damage extents. Costs could be significant but are not readily quantifiable.

Part B-2; Subdivision, watertight and weathertight integrity; Regulation 16 *Construction and initial tests of watertight doors, sidescuttles, etc* **E**

New Reg. 16 is based on S90 Part B reg. 18 but is now harmonized to include cargo and pax ships. The main change is in S2009 B-2 Reg 16.2 where testing of doors may now be carried out on a prototype in the factory rather than onboard to limit damage to outfit, insulation etc. This was not in UK law and could represent a slight cost saving albeit one which cannot be readily quantified.

Part B-2; Subdivision, watertight and weathertight integrity; Regulation 17 *Internal watertight integrity of passenger ships above the bulkhead deck* **E**

New Reg. 17 is based on S90 Part B Reg. 20. The title is changed by adding "internal" and replacing "margin line" with "bulkhead deck". In S90 Reg. 20.2 the sentence "The bulkhead deck or a deck above it shall be weathertight" has been removed in transit to S2009 Reg. 17.2. The reason for this is that any unprotected openings on the bulkhead deck which are liable to be submerged after damage are now to be treated as downflooding points in the new probabilistic calculation of "A". The removal of this sentence (which remains in place in UK law for S90) does have significant cost reduction implications in that the bulkhead deck or the deck above no longer needs to be completely weathertight. It is not possible to quantify these potential savings.

Part B-4; Stability management; Regulation 22-1 *Flooding detection systems for passenger ships carrying 36 or more persons constructed on or after 1 July 2010* **B**

New Reg. 22-1 was introduced after the S2009 amendments entered into force and cross-refers to MSC.1/Circ.1291 which are guidelines applied to pax ships constructed after 1/7/2010. Not in UK law. May have significant cost implications which are difficult to quantify.

Part B-4; Stability management; Regulation 25 *Water detector levels on single hold cargo ships other than bulk carriers* **B**

This is a new regulation, introduced at the same time as the S2009 amendments but with no precedent in S90 and therefore not covered in UK law. There will therefore be unquantifiable cost impacts.

Resolution MSC.170(79). Entry into force on 1 July 2006

Part B-2; Subdivision, watertight and weathertight integrity Regulation 18 *Construction and initial tests of watertight doors, sidescuttles, etc., in passenger ships and cargo ships* **E**

This Resolution introduces a replacement for Reg. 18.2 in SOLAS90: -
"2 In passenger ships and cargo ships watertight doors shall be tested by water pressure to a head up to the bulkhead deck or freeboard deck respectively. Where testing of individual doors is not carried out because of possible damage to insulation or outfitting items, testing of individual doors may be replaced by a prototype pressure test of each type and size of door with a test pressure corresponding at least to the head required for the intended location. The prototype test shall be carried out before the door is fitted. The installation method and procedure for fitting the door on board shall correspond to that of the prototype test. When fitted on board, each door shall be checked for proper seating between the bulkhead, the frame and the door."

For UK passenger ships, MSN 1698 Sched 4 Section 2 states, for tests of watertight doors: -
"6. In every ship constructed on or after 1st September 1984, every watertight door shall be tested either before or after the door is fitted by water pressure to a head of water measured from the bottom of the door up to the bulkhead deck or the freeboard deck whichever is higher in way of the bulkhead to which the door is to be fitted."

For UK cargo ships SI 1997/1509 Reg. 11 states, for tests of watertight doors: -
“Requirements for ships constructed on or after 1st September 1984

11. Each watertight door shall be tested by water pressure equivalent to the head up to the freeboard deck. The test shall be made before the ship is put into service, either before or after the door is fitted.”

SOLAS90 Reg. 18.2 as amended by this resolution was transferred to S2009 Part B-2 Reg. 16.2 (see under Res.MSC.194(80) above) then subsequently amended in S2020 Resolution MSC.421(98).

Neither UK passenger nor cargo ship regulations mention prototype testing. They therefore are more demanding than this Resolution and subsequent amendments in S2009/2020 implying a likely cost saving (not readily quantifiable).

Annex C: ambulatory reference

Definition of ambulatory reference

An ambulatory reference for the purposes of this Impact Assessment is a reference in domestic legislation to an international instrument which is interpreted as a reference to the international instrument as modified from time to time (and not simply the version of the instrument that exists at the time the domestic legislation is made).

What does an ambulatory reference achieve?
Once an ambulatory reference to an international Convention, or part of an international Convention, is introduced into a Statutory Instrument (SI), new amendments to the Convention (or the referenced part of the Convention, if only part of it is referenced) will automatically become UK law. No additional SIs/ amendments to existing SIs will be required to bring such amendments into force.

Enabling Power to make Ambulatory Reference

On 26 March 2015, the Deregulation Act 2015 received Royal Assent. The Act introduced a new power to make ambulatory references to international instruments under a new section 306A of the Merchant Shipping Act 1995 (MSA 95). This power will only be used for "technical", and therefore non-controversial, aspects of the Convention.

What assurances are in place to prevent undesirable amendments to international Conventions automatically coming into force?

A new SI must be created to introduce an ambulatory reference to an international Convention. The suitability of the international Convention will be assessed (taking into consideration the nature of amendments and the likelihood of whether they will be controversial) prior to the use of ambulatory reference being approved.

There is the facility for the Secretary of State (SoS) to block measures coming into force with which the UK does not agree. This facility will be available for exceptional circumstances, however, this "opt-out" it is not expected to be used frequently, if at all, because:

- any UK arguments deemed necessary to shape the amendments will have been applied in the international negotiation stage;
- the amendments, being of a technical nature, are not expected to be politically controversial;
- the amendments, once agreed, will in any case be binding on the international community and therefore it will be necessary for UK ships wishing to operate internationally without hindrance to comply anyway.

Regulatory process supported by the Better Regulation Executive for Ambulatory Reference measures

The agreed scrutiny process, in essence, requires:

- an ambulatory reference provision to be included in secondary legislation which will follow the full Parliamentary and Regulatory processes;
- subsequent technical amendments during the international negotiation process, will continue to be subject to:
    - consideration of high level impacts
    - stakeholder engagement
- full Post Implementation Review to be undertaken to evaluate whether the policy has achieved its goal and is still valid, and also evaluate the costs and benefits of all the technical amendments enacted since the previous review (or impact assessment)

The proposed approach streamlines the traditional regulatory process and directs it where the greatest influence can be achieved, at negotiation stage. The principles of Better Regulation are still captured:

- Alternatives to Regulation – prior to work commencing on any proposal at the IMO, a case for action must be demonstrated against the following criteria: practicality, feasibility and proportionality; costs and benefits to industry, including legislative and administrative burdens; and alternatives to regulation.
- Consultation – industry is represented at the IMO through non-governmental organisations, which are heavily involved in early stage policy development, contributing to working and drafting groups where policy is designed, as well as participating in plenary where policy is examined. Industry representatives are invited to meetings hosted by the MCA prior to IMO sessions to assist with the development of the UK's negotiating position.
- Assessment of Impact – a high level consideration of impact is undertaken at proposal stage to inform the UK's negotiation position. Post Implementation Reviews will be used to assess the robustness of the original assessment and will be timed to ensure they can feed into negotiations for future rounds of amendments.

How does Ambulatory Reference support Economic Growth?

The UK's ability to implement international agreements efficiently and effectively is important to the commercial shipping sector for a number of reasons:

- timely implementation means that UK ships plying internationally can properly be issued with certificates that confirm compliance with relevant international rules. Recent experience with the Maritime Labour Convention has highlighted a risk that current implementation practice could result in the UK delaying ratification of major agreements, potentially restricting the participation of UK shipping in international trade;
- the uniform implementation of international rules in all contracting states is vital in order to achieve a level playing field for UK ships that trade internationally. The UK must be capable of certifying its own ships to the relevant standards; failure to do so makes it much more likely that a UK ship will be detained in a non-UK port for non-compliance. We must also be able to enforce those same standards against non-UK ships in UK ports, to ensure that compliant UK ships are not disadvantaged;
- current implementation practice has created a complicated and disjointed regulatory regime that diverges significantly from the international structure. This creates administrative burden for industry, because of the needless duplication of effort needed to ascertain the domestic legal position, and because of the unnecessary complexity of the domestic regime;
- a transparent, accessible and up-to-date legal regime is a vital component of a quality flag. Improving the way we implement international law will reflect the UK's ambition to make its flag a more attractive place to do business, as well as protecting our reputation as a world-class maritime administration, both with industry and the international institutions (such as the IMO) with responsibility for maritime policy;
- when discussing technical matters with overseas clients or shipyards and designers, it helps to have a common source of reference. Those working within the UK regime will be familiar with the UK's implementation, but those in other states will have no knowledge of it;
- when an owner wishes to change flag to the UK, the ship will have been constructed to the international requirements. Differences in UK law (occasionally deliberate gold-plating, but mostly differences in legislative drafting styles and delays in implementing amendments) make assessing a ship's compliance unnecessarily complicated, and may create additional hurdles capable of discouraging owners from transferring to the UK.