Title: Revision of MSN 1823: "The Safety Code for Passenger Ships Operating on UK Categorised Waters"	**Impact Assessment (IA)**
IA No: Click here to enter text.	**Date:** 27/07/2017
RPC Reference No: N/A	**Stage:** Final (Validation)
Lead department or agency: Maritime and Coastguard Agency	**Source of intervention:** Domestic
Other departments or agencies: Department for Transport	**Type of measure:** Other
	Contact for enquiries: Joanna Dormon / Richard Bone
Summary: Intervention and Options	**RPC Opinion:** Not Applicable

Cost of Preferred (or more likely) Option				
Total Net Present Value	**Business Net Present Value**	**Net cost to business per year** (EANDCB in 2014 prices)	**One-In, Three-Out**	**Business Impact Target Status**
£355k	£355k	N/A	N/A	N/A

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

MSN 1823, the Safety Code for Passenger Ships operating solely on UK Categorised Waters, was introduced in 2010, as a statutory code for relevant passenger ships built, or first certificated, on or after 6 April 2010. Since the introduction of MSN 1823, a number of areas have come to light where its safety requirements could be improved, made more proportionate, or simplified. Government intervention is required to revise the code to adopt the lessons learnt since MSN 1823 was first introduced.

What are the policy objectives and the intended effects?

The aim of MSN 1823 (and the revised version) is to ensure we have a code for the design and operation of domestic passenger ships operating on categorised waters, which has standards that:

1) adequately deal with the safety risks to passengers;

2) are proportionate to the nature and level of safety risk involved; and,

3) are simple and as clear to understand as possible.

On that basis, the proposed changes will increase a small number of safety requirements within the Code, whilst relaxing a larger number of others. They will apply only to ships constructed under the code, and will not apply retrospectively.

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

Three options had previously been considered:

Option 0 - Doing nothing is not considered a viable option because it would not solve the problems encountered by some operators, in complying with original MSN 1823 ("Edition 1"), nor in addressing certain safety issues that were not adequately addressed by the standards laid down in it.

Option 1 - A voluntary measure is not considered appropriate because these revisions affect mandatory requirements laid down in a Merchant Shipping Notice.

Option 2 - Revise the existing statutory code. The MCA's preferred option is therefore to revise MSN 1823 Edition 1, and introduce MSN 1823 "Edition 2" to reflect the necessary changes that have been developed and agreed with industry.

Will the policy be reviewed? It will be reviewed. If applicable, set review date: October/2023

Are any of these organisations in scope?	Micro	Small	Medium	Large
	Yes	Yes	Yes	Yes

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

Signed by the responsible SELECT SIGNATORY: ..... **Date :** Enter a date

Summary: Analysis & Evidence

Policy Option 2

Description: **Revise the existing statutory code to introduce MSN 1823 Edition 2**

FULL ECONOMIC ASSESSMENT

Price Base Year: 2017	PV Base Year: 2017	Time Period Years: 10	Net Benefit (Present Value (PV)) (£k)		
			Low: 109.0	**High:** 724.4	**Best Estimate:** 354.9

COSTS (£k)	Total Transition (Constant Price)	Years	Average Annual (excl. Transition) (Constant Price)	Total Cost (Present Value)
Low	0.9	1	1.3	**10.6**
High	3.3		5.0	**41.3**
Best Estimate	2.0		3.0	**24.5**

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

Most of the changes in the revised code are deregulatory. However, there are a few changes where costs will be incurred: new build ships operating in Cat A waters are required to have additional lighting when operating at night (£47 per vessel). Ships constructed under the code operating in Cat C and D waters will also be required to have emergency battery lighting and lifejackets fitted with automatic lights (£150 and £845 per vessel respectively). Total costs are £1,977 in the first year and £2,966 in subsequent years, using some assumptions around the number of new builds per year (see assumptions section).

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

The revised code also 1) introduces stricter rules around where machinery is placed (no expected cost impact); 2) makes explicit the requirement to use fireproof materials (no expected cost impact); and 3) introduces a requirement to have a visual (in addition to an audible) alarm for fire detection in remote machinery spaces (negligible cost).

BENEFITS (£k)	Total Transition (Constant Price)	Years	Average Annual (excl. Transition) (Constant Price)	Total Cost (Present Value)
Low	9.6	1	14.4	**119.5**
High	61.7		92.5	**765.7**
Best Estimate	30.6		45.9	**379.5**

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

There are a number of benefits in terms of reduced equipment requirements where it has been deemed by MCA technical experts that the existing requirements can be relaxed without impairing safety. The reduced equipment requirements lower the cost of constructing new vessels. The key savings that have been monetised are the ones where there are reduced equipment are relatively straightforward to cost, and do not vary significantly by vessel.

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

There are a number of benefits in terms of reduced requirements where it has been deemed by MCA technical experts that the existing requirements can be relaxed without impairing safety. Some of these changes are relatively minor and will not have a significant benefit in terms of reduced costs of construction and operation. Others will potentially have larger benefits but will be dependent on the individual vessel, and therefore it is difficult to quantify the savings without making significant simplifying assumptions.

Key assumptions/sensitivities/risks **Discount rate (%)** 3.5%

The key assumption relates to how many vessels we expect to be built. The 5-year average has been 3-4 vessels per year, which we assume will be similar in type of operation as the existing fleet. However, given there is a backlog of vessels waiting to be built under the new Code, we expect this to increase to 4 in the first year, and 6 in subsequent years. The range in estimates is primarily driven by uncertainties around the number of new builds per year, but also reflects uncertainties around equipment costs.

BUSINESS ASSESSMENT (Option 1)

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

Evidence Base

1 Background

Merchant Shipping Notice (MSN) 1823: the "Safety Code for Passenger Ships Operating Solely in UK Categorised Waters" was introduced in April 2010. It was underpinned by The Merchant Shipping (Passenger Ships) (Safety Code for UK Categorised Waters) Regulations 2010. MSN 1823 covers passenger ships not operating at sea, but on UK categorised waters (or "inland waterways")[1].

It applies only to "new" passenger ships; those considered as constructed on or after 6 April 2010, or which have not held a valid Passenger Ship Safety Certificate for more than five years. Existing ships (those not considered as new) continue to be subject to a number of older SIs and guidance documents instead of MSN 1823.

The Code was developed as a result of the Formal Safety Assessment (FSA) of Domestic Passenger Ships, commissioned by the MCA, and undertaken in 2004/5. This FSA was commissioned in response to the Thames Safety Inquiry, led by Lord Justice Clarke, and presented to Parliament in early 2000; and the MARCHIONESS/BOWBELLE Formal Investigation, published in 2001. One purpose of this FSA study was to set down a baseline for a risk-based approach in developing domestic passenger ship safety legislation.

The Code's purpose was two-fold:

- to improve standards in the construction, equipment and operation of "new" passenger ships operating on UK categorised waters, on the basis of risk; and,
- to bring all of the diverse statutory requirements for such ships within one document. Previously those requirements were contained within numerous separate Statutory Instruments and guidance documents.

The introduction of the original Code in 2010 marked a step forward in the approach to regulation and setting safety standards, being more risk and goal based as well as more user-friendly and manageable. Requirements that were previously spread over some 11 different SIs plus their associated guidance documents, now appeared within a single publication, for those ships applicable to the Code.

2 Problem under consideration and policy objective

As the Code has become established over the past five years, it has been seen that a number of areas could be improved by being made more proportionate (to the risks concerned), better focussed and/or simplified. There are instances of some requirements being disproportionate for the levels of risk involved, or unworkable for the type of vessel or area of operation. On the other hand, certain other requirements did not prove sufficiently robust to ensure an appropriate level of safety for the travelling public. Additionally, a number of textual additions in the revised Code simply clarify (or make more explicit) existing safety policy and requirements. These shortcomings have been identified both by the industry itself in its day-to-day operations, and MCA surveyors, chiefly during the course of their surveys and inspections. A need to revise and re-focus the Code has therefore been identified by industry experts.

The proposed amendments to the revised Code reflect the principle of periodic review and revision of legislation and statutory guidance, thus allowing it to develop and evolve in accordance with operators' and MCA's experience, as well as developments in technology, engineering and materials. This principle also ensures that the revised Code keeps pace with current safety expectations.

The revised Code includes changes aimed at addressing these issues, all of which have been discussed, and developed in consultation and partnership with industry. The result is considered to be a robust, more proportionate and workable safety Code for passenger ships on UK categorised waters. After a targeted

[1] These are defined in MSN 1837 "Categorisation of Waters".

public consultation, this revised Code has been fine-tuned, to an optimum degree, in the light of responses to that consultation.

As the Code is a statutory document, supported by an SI, any amendments to it must be undertaken on a formal basis via legislation, with the Code reissued as a revised MSN.

The main changes included in the revised Code are detailed in the costs and benefits section.

3 Description of options and issues considered

3.1 Option 0: Do nothing

Doing nothing is not considered a viable option because it will not enable the changes that have been developed and agreed with industry, to be formally introduced and enforced. This is because MSN 1823 comprises statutory requirements, and is underpinned by an SI. The changes, many of which have been called for, and are supported, by the industry could not be introduced, and operators would simply be obliged to comply with the existing Code. To do otherwise would likely constitute an offence under the regulations within the supporting SI.

3.2 Option 1: Introduce a voluntary measure

For the same reasons, it would not be appropriate or viable to introduce changes on a voluntary basis; many of them would simply amount to contraventions of existing legislation. There would also be the risk that more responsible and reliable operators would comply with the more onerous changes, and bear the costs of doing so, whilst less reliable operators would not. Apart from undermining safety standards and best practice, such operators would then enjoy an unwarranted and unfair commercial advantage over their more responsible rivals. The unintended but probable effect would the introduction of inconsistencies and uncertainty with regard to the safety standards of ships in this sector.

3.2.1 More stringent requirements

a) **Night lights** - Requirement for category A vessels to have additional lighting when operating at night.

b) **Battery lights** - Requirement for emergency battery lighting to aid emergency situations.

c) **Lifejacket lights** - Lifejackets on ships operating in category C and D waters are to be equipped with lights.

d) **Machinery placement** - Embarkation and assembly stations must not be sited in way of machinery, or other high fire risk, spaces unless insulated to the A-30 standard of fire protection.

e) **Visual alarms** - Applicable ships to have a visual (in addition to an audible) alarm for fire detection in remote machinery spaces. Visual alarms provide an important supplementary signal in circumstances when high ambient noise levels render an audible alarm less effective (such as machinery spaces).

f) **Fire retardant materials** - Passenger accommodation furnishings must be made from approved fire retardant materials. (However, such furnishings should comply anyway, by virtue of being manufactured to appropriate BS/ISO standard/s.)

3.2.2 Relaxed requirements

a) **Emergency power** - Those ships that operate only on category A or/and B waters face lower levels of risk because: these waters are non-tidal; shallower in general; and, a bank or towpath is always relatively near. Emergency power is therefore needed for less time.

b) **Fire detection** - Ships under 24m in length can now have a machinery space fire detection system that is not Marine Equipment Directive (MED) approved, and instead owners can opt for equipment that has ISO approval (which is typically cheaper).

c) **Steel deck fittings** - There is a reduction in the required height of coamings (e.g. hatches etc.) from 460mm to 380mm. This provides some saving in steel at the ship's design and construction stage, but the chief benefits are improved ease of movement around the ship's deck, and a consequent reduction in tripping hazards.

d) **VHF** – There is now allowance for alternative means of primary communication for ships in areas without adequate VHF coverage, where the fixed VHF equipment previously required cannot serve its intended purpose. Such areas are likely to be on more remote stretches of water, inland and away from the coast.

e) **Powered fire pump** - Ships operating (only) on Category A waters, and those under 15m length on B, C or D waters, need not have a power-operated fire pump. They must however carry an additional portable fire extinguisher to compensate.

f) **Fire extinguisher** – Ships' machinery spaces with a power output of 375kW or more no longer required to carry a large (wheeled) foam or carbon dioxide fire extinguisher. This is balanced by the fact that such spaces have to be fitted with a suitable, fixed fire extinguishing system and must also have adequate portable fire extinguishers, suitable for oil fires, within easy reach.

g) **Less insulation** - Flexibility for alternative methods of managing the high fire risk associated with galleys is introduced. For example, this may be accomplished by fitting a water-mist system rather than conventional "A0" insulation at every boundary of the galley.

h) **Bilge pumps** - Where, on a smaller ship, an MCA surveyor considers that fitting a conventional bilge main system (with a pump driven by or off the ship's engine) is not practicable, they may agree to the use of individual electric submersible pumps instead.

i) **Liferaft** - Ships operating on category B waters are not required to carry liferafts or ORLs (Open Reversible Liferafts) provided they are never more than 80m from an accessible bank.

j) **Compass** - Ships operating category B waters are no longer required to carry a magnetic compass or equivalent, or satellite/radio navigation equipment. It is considered by MCA technical experts that the previous, mandatory carriage of this equipment was disproportionate to the level of safety risk commonly encountered in category B waters.

k) **Rescue boats** - The requirement for ships over 24m in length, operating on category C and/or D waters, to carry a rescue boat may be relaxed where an MCA surveyor considers that it would be physically impossible to install one. Where this is the case however, the ship must still have adequate means to recover helpless persons from the water.

l) **Windows: moderation of toughened safety glass requirement** – For ships in lower-risk operating environments, such as categories A and B, windows that form part of their weathertight integrity need not be of "toughened safety glass". (This glass undergoes testing and is marked accordingly, and these processes increase its cost.) These windows must still however be of the tempered glass type so that they are less likely to shatter if broken.

m) **Catamaran[2] emergency power** – Where catamarans have an engine room with a generator in both hulls, they are not required to have a third generator fitted for emergency use. It is highly unlikely that both main generators will be put out of action at the same time. This gives a saving in the costs of an emergency generator and its associated wiring and connections.

n) **Bilge pumps** – In addition to the monetised benefit at 4.3.1 (h) above, there is an associated non-monetised benefit due to the saving (for eligible smaller ships) in fitting and installation costs. For individual submersible, electric pumps, these can be very much less than for conventional bilge-pumping systems, which involve dedicated pipework and connections in addition to the pumps themselves.

o) **Relaxation of freeboard check for stability verifications** – The tolerance in freeboard measurement is increase by 1cm; to 3cm at the ship's bow and stern, 2cm amidships. This will

[2] A catamaran is a boat with two parallel hulls (watertight bodies of boats/ships)

effectively allow more modifications through the ship's life, without it requiring the costly and lengthy process of re-inclining.

p) **Draught marks relaxation** – The revised Code simply refers to datum being marked. This allows more flexibility as, depending on the ship, it is not necessary for all draught marks to be displayed.

q) **Damage stability requirements: relaxation of maximum passenger numbers** – Ships operating in category B or C waters are now required to undergo a less onerous damage stability test, and may now carry 60, instead of 50, passengers. As well as providing a saving in the costs of the requisite testing, this change means that eligible ships can carry a standard coachload of passengers.

r) **Damage stability requirements: simplification for catamarans** – This means that, for the purpose of determining their damage stability, catamarans need assume damage to only one hull instead of both, as previously. This adjustment is considered to make the standard of the catamaran requirements more in line with that for mono-hull ships.

s) **Damage stability requirements: relaxation for certain ships in categories B, C and D** – Such ships carrying up to 100 passengers may be designed and built to satisfy slightly less onerous testing standards than those developed for passenger ships on international voyages, which were required under Edition 1 of the Code. This provides a saving in construction costs and in surveyor fees.

t) **Damage stability requirements: greater flexibility for certain ships** – Section 10.2.8 of the revised Code provides the flexibility of an alternative testing procedure for undecked, partially decked or single-deck ships operating in category B and C waters, and carrying up to 60 passengers.

3.3 Develop and issue MSN 1823 "Edition 2"

Option 2 – Develop and issue a revised version of MSN 1823 – Edition 2, ("the revised Code") - is the MCA's preferred option, and the only one that it considers viable. This option will maintain a "level playing field" for operators to compete fairly and effectively, as well as underpinning a robust safety regime for the benefit of the paying, travelling public, and indeed the crews and other workers on these passenger ships. As the Code is a statutory document, underpinned by an SI, it can only be revised and developed by the formal revision and amendment of MSN 1823.

Revising the Code will continue the acknowledged benefits of having the principal statutory requirements concerning the construction, equipment and operation of UK passenger ships operating on categorised waters, in one comprehensive document. The revised Code will apply only to ships constructed or first certificated on or after the coming into force date, and those requirements within it that have changed will not be retrospective.

4 Costs and benefits preferred policy option (Policy Option 2)

To identify all of the changes following its revision, a detailed comparison has been undertaken between the requirements of original MSN 1823 Edition 1, and Edition 2 – the revised Code. Where certain requirements have been relaxed under the revised Code, and a smaller number of others increased, the resulting indicative savings or costs were obtained from manufacturers or/and suppliers of marine equipment, either on-line or by liaising with them directly. Because of the diversity of ships sizes and characteristics, it is not possible to give quantitative indications of all such savings and costs, particularly when the costs are linked to the design of the ship.

It is anticipated and hoped that the Code, once established, will encourage a higher number of new ships to be built over the next five years, than has been the case recently. The annual average of new builds for the five years from 2011 to 2015 was 3.4.

The targeted public consultation package included a spreadsheet detailing all of the changes to the original Code, and showing for each one:

- the original Code text and the revised Code text, side by side;
- an explanation of the change;

- the reasons for the change/s;
- whether those changes represent an increase or saving in the cost of compliance, or are assumed cost-neutral;
- the factors or items giving rise to the cost savings or increases; and,
- the estimated indicative savings or savings that arise.

Consultees were invited to comment on the information and indicative figures shown in the spreadsheet and, in particular, to a set of specific questions regarding the estimated figures of benefits and costs relating to certain changes to requirements, or items of equipment. The input from that consultation has informed the development of this IA.

The savings and costs figures presented in the consultation spreadsheet have been revised and refined in the light of the responses received, and those revised figures are utilised in this Impact Assessment (IA).

4.1 Assumptions

4.1.1 Policy assumptions

We assume that Directive EU 2016/1629 (replacing 2006/87/EC) on Technical Standards for Inland Waterway Vessels will continue not to apply to passenger ships operating only on UK categorised waters, and will therefore not affect the revised Code, which is a purely domestic UK measure.

Directive 2016/1629 lays down comprehensive technical standards for inland waterway vessels, including passenger vessels. It is largely based on standards developed by the Rhine Commission (CCNR) for vessels operating on the River Rhine and its tributaries. In transposing this Directive, the UK took full advantage of a derogation that allows it not to apply to vessels on waterways not linked to those of another member State. These technical standards do not therefore affect any vessels that operate only on UK categorised waters.

4.1.2 Numbers of vessels affected

The proposals only affect new build vessels. The average annual number of new build vessels from 2011 to 2015 was 3.4. Based on anecdotal feedback from industry, we are aware of several instances where industry is holding back on building new vessels until Edition 2 of MSN 1823 is introduced. This is due to the belief that Edition 2 is more proportionate than the existing code. Many current passenger vessels operating in categorised waters will be reaching the end of their life over the next decade, and will need to be replaced.

Based on anecdotal evidence from industry, we believe that the number of new vessels being built could rise to nine vessels per year, which we have used as the high estimate. In the central estimate, we have taken a more cautious approach, assuming that the number of new build vessels will rise to four in the first year (as industry adapts to the new code) and then six per year subsequently (as the backlog of demand for the new code is fulfilled). For the low estimate, we assume a 50% lower estimate relative to the central estimate.

Given we do not have data on the types of vessels that are likely to be built, we use the current fleet as or assumption. We use the current split of vessels in terms of the categories of water they operate in to provide a view on the types of vessels that are likely to be built. The table below summarises the assumptions made regarding the numbers and types of vessels affected. Due to rounding the numbers do not always add up. Unrounded numbers have been used in the subsequent analysis.

	Category A			***Category B***			***Category C***			***Category D***		
	Low	Cent.	High	Low	Cent.	High	Low	Cent.	High	Low	Cent.	High
Year 1	1	2	2	0	1	1	0	1	1	1	1	2
Year 2+	*1*	*2*	*4*	*0*	*1*	*1*	*1*	*1*	*2*	*1*	*2*	*2*

	Total		
	Low	Cent.	High
Year 1	2	4	6
Year 2+	*3*	*6*	*9*

4.2 Assumed costs per vessel

4.2.1 Monetised costs

	Category A			Category B			Category C			Category D		
	Low	Cen.	High	Low	Cen.	High	Low	Cen.	High	Low	Cen.	High
a) Night lights	£35	£47	£60	-	-	-	-	-	-	-	-	-
b) Battery lights	-	-	-	-	-	-	£100	£150	£180	£100	£150	£180
c) Lifejacket lights	-	-	-	-	-	-	£761	£845	£930	£761	£845	£930

In the appraisal, we have monetised three out of the six additional requirements on vessels. The requirements above correspond to the changes where we have been able to gather monetary estimates, as market prices for the equipment are readily available. The costs are market prices for the relevant pieces of equipment with a small sample of 2/3 quotes obtained from suppliers of marine equipment at the time this IA was prepared. Where we have been able to gather multiple quotes, the range has been used as the high and low estimates with the mean quote used as the central estimate. Where we have only been able to find a single cost estimate, we have varied it by +/- 10% to get high and low estimates.

4.2.2 Non-monetised costs

The following are additional requirements where we have been unable to monetise the costs, as they are either largely dependent on the design of the ship, or we have been unable to assume a sensible counterfactual.

c) Machinery placement - The requirement is unlikely to lead to an opportunity cost for new build vessels, as it largely concerns the placement of machinery rather than requiring the use of more space. This has been confirmed during prior informal consultations when Edition 2 was being developed and during the more recent formal targeted consultation.

d) Visual alarm - The requirement to have a visual alarm in remote machinery spaces is designed to ensure adequate signalling in the event of a fire, when the sound of machinery may make audible alarms less effective. Whilst we have been unable to cost the requirement, as it will not apply to every vessel, the cost of such alarms is typically less than £100 plus installation costs.

e) Fire retardant materials - This requirement is also unlikely to lead to additional costs when building vessels. Such furnishings should comply anyway, by virtue of being manufactured to appropriate BS/ISO standards. This change therefore only makes explicit this requirement.

4.3 Assumed benefits per vessel

4.3.1 Monetised benefits (i.e. avoided costs)

	Category A			***Category B***			***Category C***			***Category D***		
	Low	Cen.	High	Low	Cen.	High	Low	Cen.	High	Low	Cen.	High
a) Emergency power	£297	£330	£363	£297	£330	£363	-	-	-	-	-	-
b) Fire detection	£364	£484	£532	£364	£484	£532	£364	£484	£532	£364	£484	£532
c) Steel requirement	£300	£650	£1,000	£300	£650	£1,000	£650	£1,000	£1,100	£650	£1,000	£1,100
d) VHF	£122	£135	£149	£122	£135	£149	-	-	-	-	-	-
e) Powered fire pump	£536	£595	£655	£536	£595	£655	-	-	-	-	-	-
f) Fire extinguisher	£630	£700	£770	£630	£700	£770	£630	£700	£770	£630	£700	£770
g) Less insulation	£1,000	£3,000	£5,000	£1,000	£3,000	£5,000	£1,000	£3,000	£5,000	£1,000	£3,000	£5,000
h) Bilge pump	£200	£250	£300	£200	£250	£300	£200	£250	£300	£200	£250	£300
i) liferaft/ORIL	-	-	-	£6,300	£7,000	£7,700	-	-	-	-	-	-
j) compass	-	-	-	£540	£600	£660	-	-	-	-	-	-
k) rescue boat	-	-	-	-	-	-	£3,510	£3,900	£4,290	-	-	-

We have been able to monetise 11 of the 20 changes in the code that are a relaxation of existing requirements. The requirements that have been monetised are ones where we have been able to gather monetary estimates and where the benefits are significant. They are described in more detail below. The costs are market prices for the relevant pieces of equipment with a small sample of 2/3 quotes obtained from suppliers of marine equipment at the time this IA was prepared. The cost associated with the installation of equipment and modification of vessels has been gathered from operators and shipyards. Where we have only been able to find a single cost estimate, we have varied it by +/- 10% to get a high and low estimates.

The table above should be read in conjunction with the notes a) to k) in section 3.2.2.

4.3.2 Non-monetised benefits

There are a number of reduced requirements where we have been unable to monetise the benefits (avoided costs), as they are either largely dependent on the design of the ship, or we have been unable to assume a sensible counterfactual. The scale of the benefits below are also by large less significant than the monetised benefits.

The key non-monetised benefits are outlined in points l) to t) in section 3.2.2.

4.4 Familiarisation costs

We have assumed that there will be no additional familiarisation costs associated with the change in the code. Given the low volume of vessels produced under the code, we believe vessel manufacturers would need to read the code each time they produce a vessel. Therefore, under both the counterfactual of the current code, and the preferred policy option of the new code, vessel manufacturers will be required to familiarise themselves with the contents of the code.

The MCA has worked with industry to simplify the code and to make sure it continues to act as a 'one-stop shop' for manufacturers. The 'one-stop shop' nature of the code helps manufacturers avoid having to refer to alternative sources to find appropriate safety advice. Therefore, we would expect familiarisation costs to be lower under Edition 2 of MSN 1823. However, we have been unable to gather sufficiently robust evidence to monetise this benefit.

4.5 Summary

The tables below gives a general summary of the impacts of the revised Code, on ships constructed on or after the coming into force date operating in Category A, B, C and D waters respectively. Clearly, in practice these impacts will vary according to the size and characteristics of the ship.

The table below shows the central estimates of the impact, by vessel type, in current prices. Tables showing the high and low estimates can be found in the annex.

	Category A	***Category B***	***Category C***	***Category D***
Single vessel				
Costs	£47	-	£995	£995
Benefits	£6,144	£13,744	£9,334	£5,434
Net Benefit	£6,097	£13,744	£8,339	£4,439
No of vessels				
Year 1	1.57	0.52	0.87	1.04
Year 2+	2.35	0.78	1.30	1.57
Net benefit				
Year 1	£9,543	£7,171	£7,251	£4,632
Year 2+	£14,315	£10,756	£10,877	£6,948
10 years	£66,802	£93,834	£50,759	£32,424

The table below shows the total impact on business in discounted and undiscounted terms, over a 10-year appraisal period.

	Low	***Central***	***High***
Undiscounted			
Costs	£12,332	£28,667	£48,207
Benefits	£139,616	£443,327	£894,501

Net Impact	£127,284	£414,660	£846,293
Discounted			
Costs	£10,556	£24,538	£41,264
Benefits	£119,507	£379,473	£765,664
Net Impact	£108,951	£354,935	£724,400

5 Risks

There is a marginal risk that small or micro inland passenger ship operators may consider the small number of changes that do involve increased requirements burdensome, and may as a result be reluctant to commission or purchase new build ships. Nevertheless, the MCA is convinced that those changes are essential to maintain safety standards on the ships concerned, in accordance with:-

- Lord Justice Clarke's recommendations in the Thames Safety Inquiry;
- the findings of the FSA study on domestic passenger ships;
- the collective experience of both MCA surveyors and owners/operators in using the original Code; and,
- current safety perceptions and expectations.

There may be a low risk of mildly adverse local reaction and publicity in connection with certain proposed revisions to the Code. The MCA does not anticipate that such reactions will be supported by the majority of responsible and diligent operators, a number of whom have been involved in development of the revised Code, and have expressed support for it.

6 Small and Micro Business Assessment

As the revised Code comprises safety requirements for passenger ships, it applies to all relevant businesses, from micro-businesses to large companies.

There are then no new wider impacts. The revised Code will remain a purely domestic measure, and will apply to the same vessels as the original version. Those vessels are passenger ships (more than 12 passengers) operating only on categorised waters within the UK.

It is not anticipated that the revised Code will have any significant effect on either employment within the inland sector of the shipping industry, or the vibrant tourism that it attracts, particularly upon major waterways, including the River Thames.

It is possible that the few changes where the standards have been strengthened, and carry consequent cost increases, may discourage small or micro operators from the purchase of new build ships. It is also possible however, that the more proportionate safety requirements that now prevail in the Code, may be reflected in a marginal increase in employment within the sector, due to anticipated slightly higher numbers of new ships being built across the sector as a whole.

7 Post-implementation Review

It is expected that a review of the Code will be undertaken by the end of 2023, and again in full consultation with the industry.

Annex - High and low estimates of monetised impact

7.1 High estimates (2017 prices)

	Category A	Category B	Category C	Category D
Single vessel				
Costs	£60	-	£1,110	£1,110
Benefits	£8,768	£17,128	£11,992	£7,702
Net Benefit	£8,708	£17,128	£10,883	£6,593
No of vessels				
Year 1	2.35	0.78	1.30	1.57
Year 2+	3.52	1.17	1.96	2.35
Net benefit				
Year 1	£20,446	£13,405	£14,195	£10,319
Year 2+	£30,669	£20,107	£21,293	£15,479
10 years	£143,121	£93,834	£99,366	£72,235

7.2 Low estimates (2017 prices)

	Category A	Category B	Category C	Category D
Single vessel				
Costs	£35	-	£861	£861
Benefits	£3,448	£10,288	£6,354	£2,844
Net Benefit	£3,413	£10,288	£5,494	£1,984
No of vessels				
Year 1	0.78	0.26	0.43	0.52
Year 2+	1.17	0.39	0.65	0.78
Net benefit				
Year 1	£2,671	£2,684	£2,388	£1,035
Year 2+	£4,007	£4,026	£3,583	£1,552
10 years	£18,697	£18,787	£16,719	£7,244