

Title: Merchant Shipping (Standards of Training, Certification and Watchkeeping and Safe Manning) Regulations IA No: DfT00256 Lead department or agency: Maritime and Coastguard Agency (MCA) Other departments or agencies: Department for Transport	Impact Assessment (IA)					
	Date: 18/11/2014					
	Stage: Final					
	Source of intervention: International					
	Type of measure: Secondary legislation					
Contact for enquiries: Louise Binks Tel: 02380 329162 Email: Louise.Binks@mcga.gov.uk						
Summary: Intervention and Options					RPC Opinion: GREEN	

Cost of Preferred (or more likely) Option			
Total Net Present Value	Business Net Present Value	Net cost to business per year (EANCN on 2009 prices)	In scope of One-In, Measure qualifies as Two-Out?
£75.5m	£75.5m	£7.4m	No NA

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

The purpose of the international standards of training, certification and watchkeeping (STCW) legislations for seafarers is to establish basic requirements for the training of seafarers on an international level. Human error is recognised as the cause of a large percentage of maritime casualties and pollution incidents and STCW tackles this problem by setting minimum standards of knowledge, experience and professional competence for seafarers. STCW is being amended due to recent developments in the maritime sector. Furthermore if the UK fails to implement the STCW amendments it would be unable to issue certificates to seafarers meaning they could not work on UK vessels trading internationally or other nations' merchant fleets. The updates to STCW have been included in an amending Directive 2012/35/EU.

What are the policy objectives and the intended effects?

The policy objective is to ensure that seafarers receive the proper level of training needed in order to minimise maritime casualties and pollution incidents. Furthermore if training and certification standards in the UK do not remain compliant with STCW UK-trained seafarers will not be able to continue to work in international waters after 1 January 2017.

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

Option 0 – Do nothing, this is not considered to be an appropriate course of action as amendments to the legislation are required to ensure STCW compliance. The UK Government fully supported the development of the Manila Amendments and the UK shipping industry was consulted throughout the development of this revision. There is an expectation from industry that the UK Government will implement the agreed changes.

Option 1 (preferred option) – Implement the proposed amendments to STCW. The preferred option is therefore to implement the minimum necessary legislative changes to STCW in order to continue to comply with the convention and to implement the additional requirements of Directive 2012/35/EU to continue to comply with European Law.

Will the policy be reviewed? It will be reviewed. **If applicable, set review date:** 07/2019

Does implementation go beyond minimum EU requirements?			No		
Are any of these organisations in scope? If Micros not exempted set out reason in Evidence Base.	Micro Yes	< 20 Yes	Small Yes	Medium Yes	Large Yes

What is the CO ₂ equivalent change in greenhouse gas emissions? (Million tonnes CO ₂ equivalent)	Traded: N/A	Non-traded: N/A
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I have read the Impact Assessment and I am satisfied that, given the available evidence, it represents a reasonable view of the likely costs, benefits and impact of the leading options.

Signed by the responsible Minister:

John Hayes

Date:

11/03/2015

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Summary: Analysis & Evidence

Policy Option 1

Description: Implement the proposed amendments to STCW

FULL ECONOMIC ASSESSMENT

Price Base Year 2012	PV Year 2013	Base Year 2013	Time Period Years 10	Net Benefit (Present Value (PV)) (£m)		
				Low: -£72.48m	High: -£78.57m	Best Estimate: -£75.53m

COSTS (£m)	Total Transition (Constant Price) Years	Average Annual (excl. Transition) (Constant Price)	Total Cost (Present Value)
Low	N/A	£8.41m	£72.48m
High	N/A	£9.12m	£78.57m
Best Estimate	N/A	£8.77m	£75.53m

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

There are two main costs associated with the amendments: a) Training course costs which will be paid by ship owners in the majority of cases; and b) Lost productivity whilst seafarers are attending courses. This cost will also be borne by ship owners in most cases.

These costs do not apply to all of the amendments as a number of them are non-mandatory, have been subsumed into cadet training at no extra cost or the UK is already operating at the STCW standard.

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

A small number of the amendments allow seafarers to substitute courses for qualifying time at sea. We have not been able to monetise the costs here of experienced seafarers not able to meet the qualifying time and therefore having to take the training course. We have not been able to monetise the costs to individual seafarers when they are out of work and require training to gain employment. The MCA is working on a pathway for existing (untrained) electro-technical officers to comply with the new STCW requirements. The cost of this is not yet known.

BENEFITS (£m)	Total Transition (Constant Price) Years	Average Annual (excl. Transition) (Constant Price)	Total Benefit (Present Value)
Low	N/A	NQ	NQ
High	N/A	NQ	NQ
Best Estimate	N/A	NQ	NQ

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

It has not been possible to monetise any of the benefits associated with this option.

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

1) UK Merchant Navy seafarers' qualifications will remain valid for use on ships trading in international waters. 2) Increased safety at sea through consistency of ship operation. 3) UK seafarers will continue to gain employment worldwide both on UK and non-UK registered ships. 4) The UK will maintain its maritime training base and its influence over qualification in the Super Yacht industry. 5) Seafarers will be better trained, increasing safety on ships and reducing the risk of accidents.

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

3.5

1) The total number of UK seafarers will remain approximately the same at 22,900¹ (11,000 officers and 11,900 ratings) over the next 10 years. 2) UK shipping companies will meet the training costs of qualified seafarers in their employment who need to attend additional training courses. 3) Where sea service is an alternative to a training course existing seafarers will opt to choose this method.

BUSINESS ASSESSMENT (Option 1)

Direct impact on business (Equivalent Annual) £m:			In scope of OITO?	Measure qualifies
Costs: £7.4m	Benefits: NQ	Net: -£7.4m	No	as NA

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Evidence Base**1) Background to STCW**

Seafarer training and certification is governed internationally by the International Maritime Organization (IMO) through the International Convention for the Standards of Training, Certification and Watchkeeping for Seafarers (STCW). The purpose of STCW is to establish basic requirements for the training and certification of seafarers on an international level. Human error is recognised as the cause of a large percentage of maritime casualties and pollution incidents and STCW aims to help tackle this problem by setting out minimum standards of knowledge, experience and professional competence for seafarers. The UK is a member of the IMO and a signatory to STCW.

Prior to the introduction of the STCW Convention in 1978 the training standards for seafarers were established by individual governments. As a result standards of seamanship and ship operating procedures varied widely between different countries.

Since its entry into force in 1984, the STCW Convention has been subject to a number of revisions. The revisions were aimed at improving safety at sea through better seafarer training. The UK has supported and implemented all of the previous amendments.

The Manila Amendments, agreed at the STCW Manila Conference in 2010 further update the Convention and the Code. The UK Government fully supported the development of the Manila Amendments and the UK shipping industry was consulted throughout the development of this revision. There is an expectation from industry that the UK Government will implement the agreed changes. The Manila Amendments came into force on 1 January 2012, with a 5 year transitional period ending on the 1 January 2017 by which time training requirements and legislation must be put in place by administrations who wish to remain compliant with the STCW Convention.

¹ DfT Seafarer Statistics 2011 (January 2012), Note on Projections

In 2007 the EU claimed competency for seafarer training on behalf of Europe. They published a directive on the minimum level of training for seafarers which mirrored the STCW Convention. In December 2012 the EU published amending directive 2012/35EC on the minimum level of training for seafarers. This directive includes the Manila amendments and two additional measures added by the EU. These are an increase to the time frame for the European Commission (EC) to recognise training, and certification in non-EU countries to meet the EU requirement to supply the European Commission with details of seafarers' certificates.

2) Problem under consideration

The problem under consideration is that the existing internationally agreed standards for seafarer training need to be updated in line with the requirements of the modern seafaring world and to enhance safety and security at sea to protect seafarers and the environment. This includes recognition of modern methods of navigation, broader security awareness training (including piracy) greater awareness of environmental issues, safety requirements and to align STCW with the changes to the Maritime Labour Convention 2006 (MLC). The changes are also intended to increase safety at sea through more regular refresher training of core skills throughout a seafarer's career.

This can be achieved through the timely transposition of the international Manila Amendments and the subsequent 2012 Directive. The Manila Amendments were adopted internationally on 25 June 2010 and came into force officially on 1 January 2012. Under the terms of the STCW Convention signatory governments are required to incorporate any amendments into their national legislation.

As a signatory to STCW the UK needs to have the legislation in place to enable maritime training providers to provide the appropriate courses for seafarers to train under the Manila Amendments. Seafarer training involves both training in colleges and sea time (to gain practical experience on board appropriate ships) and sufficient time is needed to complete both aspects before the transitional period ends on 1 January 2017. STCW requires that national maritime administrations, in this case the Maritime and Coastguard agency (MCA), ensure that training for officers issued with Certificates of Competency (CoCs) meet the required STCW structure. If this does not happen seafarer certificates issued in the UK under the STCW Convention will not be recognised internationally after 1 January 2017.

In addition the 2012 Directive imposes a transposition deadline of 4 July 2014 and if not achieved may result in referral for infraction proceedings.

We have chosen a review date of 5 years from implementation of this policy. This allows time to monitor the effects of the policy change on UK seafarer training. The IMO intends to review the Manila amendments to STCW ten years from the date it came into force. The MCA will take part in the IMO review.

3) Rationale for intervention

Government intervention is required because employers do not bear the full cost of accidents and environmental damage. Without government intervention there would be under investment in safety and security at sea

It is crucial that the UK updates its training and certification requirements in line with the Manila Amendments and with the additional EU requirements, so that UK seafarer training and certification continues to be recognised internationally after the STCW transitional period finishes on 1 January 2017.

The UK government has supported seafarer training through the Support for Maritime Training (SMarT) scheme since 1998 in order to make sure that enough UK seafarers are trained to meet the nation's economic and strategic needs. To this end the UK government subsidises UK seafarer initial cadet training by £12m per year through the SMarT scheme and has made a commitment to continue to do this for the next 3 years. On 9 September 2013 the Transport Secretary, announced that the SMarT budget, over the Spending Review period to the end of 2015/16, would receive an increase of up to £3m a year, in recognition of the importance of sustaining the UK's skills base for this important sector. The Maritime and Coastguard Agency has worked in partnership with industry to make sure that seafarer training in the UK continues to meet industry needs.

The changes introduced through the Manila amendments are intended to enhance levels of competency amongst working seafarers through regular refresher training in the core elements of basic seafarer training and in some specialised areas. This is intended to keep skills sharp and prevent accidents. The IMO consider human error to be the biggest cause of accidents at sea. Accidents at sea can result in loss of life and damage to the marine environment. They can result in expensive clean up and salvage operations for which the shipping industry foots the bill. Accidents involving UK ships or UK seafarers are damaging to the UK's reputation.

The changes to security training are intended to increase ship security by making awareness training mandatory for a wider number of seafarers to help combat the ongoing threat to shipping from piracy and terrorism when operating in the wider world.

In addition to the coming into force date of 1 January 2012, the IMO imposed a date of 1 July 2013 for all signatories to the Manila amendments to have the changes to seafarer training courses in place. This provides time for new trainees to become fully qualified under the new requirements before the end of the transitional period. These changes to seafarer training have been made, however the proposed changes to the legislation must be made in order for trainees to receive the necessary certification upon completion of the course.

If the UK fails to implement the new STCW Amendments then the UK would not be on the IMO White List of countries that have given "full and complete implementation" of the Convention and would be unable to issue STCW compliant certificates to UK seafarers. This would mean that UK seafarers could not work on board UK registered vessels trading internationally and could not seek work in other nations' merchant fleets.

4) Policy objective

There are six policy objectives of implementing the Manila Amendments and the subsequent 2012 Directive into UK legislation:

- to enhance safety and security at sea to protect seafarers and the environment;
- to revise the Merchant Shipping (Training and Certification) regulations to take account of the changes to the International and EU legislation on seafarer training in order that the UK can continue to issue internationally recognised seafarer certification after 1 January 2017;

- to ensure that training and certification standards in the UK remain compliant with STCW so that UK-trained seafarers can continue to work in international waters after 1 January 2017 and that UK registered ships can continue to trade in international waters;
- to maintain and improve the expertise and competence of UK trained seafarers through enhancements to UK training to minimise the possibility of accidents through human error at sea;
- to ensure that the changes to training schemes are made as soon as possible after 1 July 2013 to give seafarers and shipping companies the maximum possible amount of time to comply with the new requirements; and
- to comply with the additional requirements of the 2012 Directive to avoid infraction proceedings against the UK.

5) Description of policy options

Option 0 - Do Nothing, this is not considered to be an appropriate course of action as amendments to the legislation are required to ensure STCW compliance. The UK Government fully supported the development of the Manila Amendments and the UK shipping industry was consulted throughout the development of this revision. There is an expectation from industry that the UK Government will implement the agreed changes.

If the UK were to 'do nothing' the UK seafarer qualifications would only be valid for domestic use from January 2017, i.e. work on coastal traders, in harbours and inter-island ferries. The exact number of actual jobs available within UK waters is unknown however there would not be enough to provide employment opportunities for all UK nationals who are qualified seafaring officers.

Doing nothing would also mean that the eight UK Nautical Colleges and about 140 UK approved training providers would cease to operate as they could not issue internationally accepted certificates to seafarers.

UK trained officers would also be less able to find future employment in marine related jobs such as pilotage, harbour masters, marine superintendents and in Maritime London roles because they would not have the UK sea going experience and STCW compliant qualifications which are highly sought after in these jobs.

Further, the UK has a strong interest in the Super Yacht industry. It is a long established principle in UK law that although the criteria for STCW starts at ships of 500 gross tons (gt) and over, vessels of more than 24m in length or 80gt must be operated by seafarers holding STCW compliant qualifications. Many of the world's super yachts fall into this category. The UK has developed a bespoke yacht qualification through article 9 of the STCW Convention. This saves seafarers who want to work on super yachts but do not want to work on larger ships from having to complete the full STCW Merchant Navy training. The UK is the only provider of these qualifications to those seafarers in the world. These qualifications are accepted by many other countries whose yachtsmen want to become qualified under the UK system. The changes introduced by the Manila Amendments will not significantly affect Super Yacht Training, however if the UK is no longer able to offer internationally recognised seafarer training this training route will no longer be available and the UK's sphere of influence in this sector of maritime industry will be diminished.

The inability of the UK to issue STCW compliant seafarer certification would also be a major loss of UK influence in the international forum. The UK would be removed from the IMO white list. This is the list of countries which are confirmed parties of the STCW Convention as amended and who are assessed by the IMO to have properly implemented the revisions to the Convention into their seafarer training. Seafarer Training. If the UK seafarer training ceased to be STCW compliant, no country that is compliant would accept our seafarer certification and we would have very little influence within the IMO during future discussions about the developments to seafarer training.

Option 1 (preferred option) - Implement the proposed amendments to STCW, and the additional requirements of the 2012 Directive. The preferred option is therefore to implement the minimum necessary changes to STCW in order to continue to comply with the convention.

In order to do this the following 7 areas of STCW amendments have been identified:

1. Strengthened provisions concerning training and assessment, the issue of certificates of competency (CoCs) and the prevention of fraudulent practices.

The Manila Amendments update STCW to set out a more explicit overview of the responsibilities of the flag state to monitor and maintain an overview of training responsibilities and to have a control mechanism to ensure that training and certification remains compliant with the international requirements. It is a requirement to have a mechanism in place to prevent fraudulent practice and to include disciplinary measures when fraud is detected. All these elements were previously considered good practice and so have previously been adopted. Therefore the UK has to make changes to legislation only.

2. Updated standards relating to medical fitness, fitness for duty and alcohol abuse.

This includes the recognition of the importance of the medical fitness of officers and crew at sea to the safety of life and property at sea and to the protection of the marine environment. The STCW Code has been updated to include the standards of medical fitness set by the International Labour Organization's (ILO) Marine Labour Convention 2006 (MLC), and the section specific to fitness for duty has set out the criteria for required hours of rest in a more specific and detailed way. The minimum of ten hours of rest in any 24 hour period remains the same, however The Manila Amendments amend STCW to state that seafarers have to have 77 hours rest rather than 70 hours rest in any 7 day period. The UK regulations were amended in 2002 to require 77 hours of rest in any 7 day period as part of the implementation of ILO 180 and Directive 1999/63EC. Concerning the Agreement on the organisation of working time of seafarers concluded by the European Community Shipowners' Association (ECSA) and the Federation of Transport Workers' Unions in the European Union (FST).

Concerning the agreement these elements of the Manila Amendments have passed into UK law and do not form part of this impact assessment. No Changes to legislation or current practice are required.

It has also become mandatory for the flag state to enforce standards of 0.05% Blood Alcohol Content and 0.25mg/l alcohol in the breath for all seafarers on duty. This is a reduction from the current level 0.08% and 0.35mg/l which is set by part 4 of the Railways and Transport Safety Act 2003. There are no expected costs associated with this change. Changes to legislation and current practice are required.

3. New requirements concerning certification for able seafarers, for electro-technical officers (ETOs) and security-related training for all seafarers.

The Convention has been altered to include a new non-mandatory provision which enables flag states to insist that shipping companies employ certificated able seafarers (the existing voluntary certification system for able seafarers remains unchanged). The UK does not seek to make this mandatory and therefore this amendment will have no effect. Changes to legislation required

An ETO is a non-mandatory specialist role that exists only on certain ships. The ETO is responsible for monitoring all electronic and electrical equipment. This work is carried out by engineers or electricians on ships that do not carry ETOs. The UK will not seek to make this role mandatory and therefore this amendment will have no effect. Changes to legislation required.

However there will be two new mandatory security training courses. Proficiency in Security Awareness for all seafarers working on board ships and Proficiency in Designated Security duties for those seafarers who have a specific security role on board. These new courses are additional to the existing role of the Ship Security Officer who remains responsible for the ship's security plan, and are designed to enhance ship security through wider training of seafarers particularly with respect to piracy and terrorist threats. As these courses are mandatory this amendment will have an effect. Changes to legislation and current practice are required.

4. Updated requirements for personnel on certain types of ships (i.e. tankers).

Changes to the process for revalidating tanker endorsements to ensure that seafarers' specific knowledge for each of the different types of cargo that they work with remains up to date.

Seafarers who work on board tankers have to complete some additional specialised training because they handle dangerous cargoes and specialised equipment. Officers who have completed the specialised training requirements get a tanker endorsement added to their CoC. They may not work on board a tanker if they do not have a tanker endorsement. They must get their tanker endorsements

revalidated every 5 years. This measure changes the criteria for revalidating a tanker endorsement. Changes to legislation and current practice are required.

5. Clarification and simplification of the definition of “certificate”.

The Manila Amendments define “Certificate” as a valid document issued by or under the authority of an administration and authorising the holder to serve as stated on the document or as authorised by the administration. This statement has been included to make sure that all signatory countries share an understanding of what a certificate is. The redefinition concurs with how the MCA has previously drafted the certificate and therefore this amendment will have no effect. Changes to legislation required.

6. Five yearly refresher training for some courses which are currently undertaken once at the beginning of every seafarer’s career.

All seafarers will be required to complete a refresher training module every five years covering Firefighting and Fire Prevention, Advanced Firefighting, Personal Survival Techniques (PST) and Personal Survival Craft and Rescue Boats other than fast rescue boats (PSC+RB). These form the core of seafarer basic training. The intention is to make sure seafarers remain competent in all these areas throughout their career. Changes to legislation and current practice are required.

7. Additional training in Human Element, Leadership and Management (HELM), electronic chart display system (ECDIS) and high voltage.

HELM training is designed to improve leadership and management skills on board ships. It encompasses bridge resource management, engine-room resource management and leadership and team working skills.

The use of ECDIS as a navigation tool instead of paper charts is established in the merchant fleet. Training courses exist and its inclusion as part of the Manila amendments updates STCW to reflect this.

The increasing demand for electrical power on certain types of ships such as those powered by diesel electric propulsion or operating specialist equipment has led to the use of High Voltage power systems. Typical Marine High Voltage systems run at 3.3kv, 6.6kv and 11kv. This is significantly higher than the common shipboard low voltage supply of 440v but the existing standard training for engineer officer only includes low voltage systems. High voltage electrical shock is a significant danger to anyone carrying out electrical work and contact with a part of the body and a live conductor is likely to result in a fatal electric shock. It is important that all engineer officers fully understand the dangers of high voltage systems and it is to this end that it has been incorporated into STCW. Changes to legislation and current practice required.

Additional elements of Directive 2012/35

There are two elements of amending Directive 2012/35 EC which are additional to the requirements of the Manila Amendments;

- To change the time frame for the EC to recognise the training and certification from non EU countries for use on ships flagged to EU member states from 3 months to a more realistic 18 months
- A requirement for EU member States to submit the individualised details of seafarers certificates to the EC via a database developed by the European Maritime Safety Agency, (EMSA) in order to gather concise and up to date information about the seafaring profession across Europe. The UK collates the required data in electronic form and EMSA have supplied encryption software to enable us to send them the information in the required format.

6) Costs and Benefits

Please note that figures in this section may not sum due to rounding. Option

0 – the baseline of ‘Do Nothing’

The impacts of the do nothing option have been briefly described under the Policy Option. This Option acts as the baseline for the assessment of costs and benefits of the preferred option.

Option 1 - Implement the Manila Amendments to the STCW Convention and the additional areas included in the amending Directive – the preferred option.

Overarching Benefits

The benefits of adopting the Manila Amendments and the amending 2012 Directive are as follows:

- UK Merchant Navy seafarers' qualifications remain compliant with the STCW Convention as amended and are valid for use on ships trading in international waters.
- STCW provides a clear agreed international minimum standard of training throughout the world increasing safety at sea through consistency of ship operation.
- Adopting the changes enables seafarers to continue to gain employment worldwide both on UK and non-UK ships registered ships trading internationally; and
- The UK will maintain its maritime training base and its influence over qualifications in the Super Yacht industry.
- Seafarers will be better trained, increasing safety on UK ships and reducing the risk of accidents at sea.
- UK trained officers continue to find future shore based employment in marine related jobs such as pilotage, harbour masters, marine superintendents and in Maritime London roles where UK sea going experience and qualifications are sought after
- Continuing to issue STCW compliant seafarer certification ensures that the UK retains influence in the international forum and the UK remains on the IMO white list.
- The eight UK Nautical Colleges and about 140 UK approved training providers would continue to operate and issue internationally accepted certificates to seafarers

We could find no existing evidence to enable us to accurately quantify the likely benefits of these amendments. The extent of the research needed meant that it would not be proportionate to monetise the benefits; however we asked consultees to provide any evidence where possible and none were able to.

Note that this impact assessment has used UK registered ships as a proxy for UK businesses because good data is not available on the number of UK businesses and this is complicated by the complex ownership arrangements within the shipping industry.

Costs

Information provided in this section is taken from discussions with the Merchant Navy Training Board (MNTB), UK nautical colleges and the Maritime and Coastguard Agency's (MCA) Seafarer Documentation System (SDS). The costs are indicative and it should be noted that they may vary slightly, higher or lower, than stated in this impact assessment. The Seafarer Training Providers in the UK are all privately run businesses who individually set their own course fees. However, the variance is not expected to be significant as colleges and training providers remain competitive within the industry. Where courses are still under development estimates have been used of approximately £100 per day per person for non-practical courses and £150 per day for courses with a practical element (these figures are used by the MCA when estimating the cost of SMarT Funding and were calculated by asking the 8 main seafarer training colleges for their average daily course costs). Where course costs are known actual costs have been used.

Most of the changes to training have been subsumed into existing courses with no additional teaching time. Despite these efforts, there are additional costs arising from a new requirement for some basic safety courses to be refreshed every 5 years and existing seafarers and new trainees having to undertake extra training.

Where additional courses are necessary it is assumed that employers will pay course fees on behalf of seafarers in their employment. This follows advice given by the Chamber of Shipping (Please refer to

section 8, Risks and Assumptions). The proposed changes to legislation require UK registered ship owners to employ seafarers with the necessary certification, therefore the main cost to UK businesses are both the course costs of the training as well as the man hours lost when a seafarer must attend a course. These are detailed by each amendment below.

UK seafarers working on non-UK ships have not been included in estimates of the number of seafarers affected below. We expect the costs for this group to be paid by non UK ship owners. This falls outside the scope of the impact assessment.

There may be a small number of seafarers who will not be employed at the time of the changes to UK legislation, and who will subsequently need to gain the necessary certification when re-entering the workforce. It is not clear whether these seafarers will need to pay for the necessary training courses themselves or whether the costs will be covered by their future employer. It is however assumed that the number of seafarers in this position will be low and therefore they are not considered further within this Impact Assessment.

In the following section we have included questions to be used at consultation stage to gather more information about the impacts discussed.

Costs by each area of amendments²

6.1) Strengthened provisions concerning training and assessment, the issue of Certificates of Competency (CoC) and the prevention of fraudulent practices

These changes are aimed at improving the capacity of flag state administrations to prevent fraud and will not incur extra costs for the UK administration as we have already implemented the required standard which is considered good practice for a quality administration. The UK has a secure electronic database to record the details of CoC issued and complies with the requirements for the issue of CoC as described in the Manila amendments. There is an existing audit schedule to monitor the maritime training providers. The UK administration was audited by the European Maritime Safety Agency on behalf of the EU Commission in October 2011 and will be subject to audit by the IMO to ensure ongoing compliance.

6.2) Updated standards relating to medical fitness, fitness for duty and alcohol abuse 6.2.1) Medical fitness & Fitness for duty

This component has already been incorporated into the Merchant Shipping (Maritime Labour Convention) (Medical Certification) Regulations 2010³. They have been included in the Manila Amendments to bring STCW into line with the existing ILO MLC 2006. Therefore there will be no extra costs as this is already an existing requirement.

6.2.2) Changes in alcohol limits to be enforced

The update for prevention of alcohol abuse introduces new lower alcohol limits for professional mariners. There will be no change to the obligations on ship-owners or others in relation to the enforcement of alcohol limits; the change is in the limit itself. Companies already have procedures in place to enforce existing limits and the change will simply mean they have to revise the limits. Ships operating internationally should already have procedures in place to enforce the current limits. Many shipping companies have a zero tolerance policy to alcohol, so these firms already self-regulate beyond the existing limits. **Therefore we do not anticipate any significant costs from this change amendment.**

6.3) New requirements concerning certification for able seafarers, for electro-technical officers (ETOs) and security-related training for all seafarers 6.3.1) Able Seafarer Certification (AB)

Able Seafarer Certification is non mandatory and the UK administration does not intend to impose this requirement on the shipping industry. The training for ABs has changed little and shipping companies who wish to employ certificated ABs may do so.

² Approximate figures are rounded as appropriate so may not sum

³ <http://www.legislation.gov.uk/ukxi/2010/737/contents/made>

6.3.2) ETO Certification

This is a non-mandatory specialist role that exists only on certain ships. It is determined by individual shipping companies whether it would be prudent to carry an ETO.

At present there are only six ships in the UK fleet that have requested a designated ETO to be included on their safe manning document.⁴ Many other ships carry an ETO on a voluntary basis and there are no figures to show how many do this. The inclusion of the ETO role within the Manila Amendments provides an internationally recognised qualification for this role for the first time. Up until now ETO roles have been filled by seafarers who may have completed an engineering cadetship, qualified as an Engineer Officer and who hold an Engineering CoC or who have trained as an electrician. They then complete some additional electrical specialist training. When the Manila amendment is implemented those who want to work in this area can train as an ETO Cadet and gain a CoC as an ETO.

Number of Seafarers: According to unpublished MCA certification data six people have already trained in the UK as ETOs with a possible 15 more to train in 2013/14. (Please note that these seafarers are not necessarily working on the ships that have an ETO included on their Safe manning documents)

Costs: There are no additional costs for new seafarers as this training route has been fully developed and incorporated into the normal cadet training programme. A few individuals will become ETO Cadets instead of Engineering Cadets. The total number of cadets per year will not increase.

The MCA is working to develop a pathway for existing (untrained) ETOs to comply with the new requirements. There will be training costs for this route which are not yet known, and do not form part of this impact assessment because the carriage of ETOs is non mandatory.

6.3.3) Security-related training

There are two new compulsory training courses relating to this STCW amendment:

6.3.3a) Proficiency in Security Awareness

The course is designed to enhance security awareness on board ships for all seafarers. It is to be completed by all new seafarers after 1 January 2014. Existing seafarers are not required to take the training if they have proof of having spent six months working at sea (known as sea going service or sea service) in the three years before 1 January 2014. Seafarers will only be required to take the course once in their career.

Number of Seafarers: Based on the average numbers of new cadets from financial years 2007-2013, the MCA estimates there are 832 Cadets who are likely to train each year. There may also be a small number of experienced seafarers who do not have six months sea service at the cut-off date and have to take the course.

Course Costs: Initial estimates based on discussions with the main training colleges suggested that this would be a one day course with a potential cost of £150 per person. Since these discussions one training college has advertised this as a 2 hour course costing £50 per seafarer. Therefore we estimate that this course will cost between £50 and £150, with a best estimate of £100.

Total Cost: Using the figures above the estimated cost of introducing this amendment is approximately **£83,000 per year** in current prices (£100 per seafarer x 832 seafarers) with a total cost over the appraisal period of **£0.71m** in present value terms. We assume that there will be no lost productivity costs for cadets as this will be completed as part of their seafarer training and have been told by industry that it will be incorporated into existing college based training time. Cadets receive a training allowance from their sponsoring company to cover their subsistence costs in College. They are not paid employees and are supernumerary to the officers and crew required to operate a ship. There will also be a cost to business of lost productivity from experienced seafarers who do not have six months sea service and will therefore have to take time away from ships to receive the training. This cost has not been quantified because we do not have any figures to show how many experienced seafarers there are who do not have six months sea service, however the number is likely to be small.

⁴ A safe manning document is a document issued by the flag state to ships on its register that are more than 500gt stating the number of officers and crew that a vessel must carry for the safe manning of the ship. It is an international requirement for such ships to have a safe manning document and to comply with the manning levels set. Vessels less than 500gt may request a safe manning document but this is not an international requirement.

6.3.3b) Proficiency in Designated Security Duties

This course will have to be completed by seafarers who have designated security duties on board ships unless they have six months approved sea going service in the three years preceding 1 January 2014. Seafarers with this sea service can be issued with a certificate of proficiency without undertaking further training. However, newly qualified seafarers after 1 January 2014 will have to complete the course before taking a job that includes designated security duties.

Number of Seafarers: Because so many job roles at sea include designated security duties it is likely that that most newly qualified officers will complete this training in the early stages of their career and some may complete the training as cadets. Based on the average numbers of new cadets from financial years 2007-2013, the MCA estimates there are 832 Cadets who are likely to train each year. It is assumed that all UK trained Cadets are employed on UK registered ships. There may also be a small number of experienced seafarers who do not have six months sea service at the cut-off date and have to take the course.

Course Costs: The course costs are estimated at approximately £300 per person for a 2-3 day course. This is a once only course with no requirement for refresher training.

Total Cost: Using the figures above the estimated cost of introducing this amendment is approximately **£250,000 per year** in current prices (£300 per seafarer x 832 seafarers) with a total cost over the appraisal period of **£2.15m** in present value terms. There will also be a cost to business of lost productivity from experienced seafarers who do not have six months sea service and will therefore have to take time away from ships to receive the training. This cost has not been quantified because we do not have any figures to show how many experienced seafarers there are who do not have six months sea service, however the number is likely to be small. The costs will be greater than for the Proficiency in Security Awareness course because the cost of the course per person is higher than that for security awareness training.

In response to the consultation consultees were not able to provide additional evidence on the number of experienced seafarers who would be affected by the changes. A response from a maritime academy stated that 45% of their new entry cadets were undertaking Designated Security Duties training. This fits with our assumption that some seafarers will complete the training as cadets.

6.4) Updated requirements for personnel on certain types of ships (i.e. tankers)

This change means that seafarers who want to revalidate a tanker endorsement using sea time will have to have served for at least three months in the last five years on board each specific type of tanker for the endorsement which they want to revalidate. Under the current system seafarers need three months sea time on any type of tanker to revalidate any type of tanker endorsement, so, for example, sea time from a gas tanker can be used in order to revalidate an oil tanker endorsement, or a seafarer may revalidate their endorsement following successful completion of an MCA-approved refresher training course if the appropriate sea service hasn't been undertaken and this option will remain.

Numbers of Seafarers: Under the present system only one or two seafarers a year opt to complete refresher training. The majority revalidate using the sea time route because it is cheaper and does not require them to stop work or use leave to attend a training course. Seafarers do not in general revalidate or apply for endorsements that they do not need for work. Seafarers will automatically have enough sea service to qualify for revalidation for the types of tankers that they are working on and shipping companies who run tankers move their personnel between the different types that they run which enables them to gain qualifying sea service. We consider it unlikely that this change will cause more seafarers to take refresher training.

Costs: No significant additional costs are anticipated because the majority of seafarers will not have to complete the training course. If seafarers need to retrain, specialised tanker training is a 5 day course costing between £600 and £750 per seafarer. The average price is £688. (One college offers a remote learning option comprising 30 hours study time including assignments submitted online at a price of £715 per seafarer.)

No evidence was provided by consultees on whether seafarers are more likely to qualify for tanker endorsements by sea service than by completing the training course

6.5) Clarification and simplification of the definition of 'certificate'

This is a redefinition within the text of the Manila Amendments to STCW. It concurs with the way that the MCA understands the definition of certificate and will not result in extra cost to UK business or the UK administration.

6.6) Five yearly refresher training for some courses which are currently undertaken once at the beginning of every seafarer's career.

Please note that all per year cost figures are annualised PV figures.

This change seeks to increase safety and competency at sea by making seafarers complete refresher training every five years to keep knowledge at a high level.

The MCA has negotiated with the UK maritime colleges for the development of short refresher courses which meet the requirements of the Manila Amendments and will be much cheaper than repeating five separate full basic training units every five years. Table 1 shows which refresher training can be completed on board ship and how much shore based training is necessary.

Table 1:

Type of Refresher Training	Permitted Training completed on Board	Length of Approved shore based training course
Personal Survival Techniques(PST)	Yes	4 Hours
	No	Full PST Course 1 day
Proficiency in Survival Craft and Rescue Boats	Yes	3 Hours
	No	7 Hours
Fast Rescue Boat	Yes	4 Hours
	No	7 Hours
Fire Prevention and Fire Fighting	Not Applicable	7 Hours
Advanced Fire fighting	Yes	4 Hours
	No	7 Hours

Numbers of Seafarers: Based on MCA data about safe manning level of UK ships, the number of seafarers is estimated at 39,665 (26,045 ratings and 13,620 officers). It is assumed that this will remain the same over the 10 year appraisal period. All of these will need to complete refresher training every five years. That means that they will complete refresher training twice over a ten year period.

Costs: Refresher training courses could cost between £300 and £500 per person at college with the range in costs dependent on the training undertaken and it is hoped that most seafarers will be able to complete it in 3 days depending on the amount of training completed on board ship. Ratings need only refresh PST, Fire Prevention and Fire Fighting. Officers need to automatically refresh all the courses except proficiency in fast rescue boats.

Proficiency in Fast Rescue Boats is only needed by persons involved in the operation of fast rescue boats. We do not have figures to show how many seafarers will need this course.

Assuming that on average one fifth of the 26,045 ratings complete the training each year (so that all of them complete it once every five years and twice over the 10 year appraisal period) and a course costs £300 then this costs approximately **£1.56m per year** in current prices (£300 per rating x 26,045 ratings x 1/5). In present value terms this comes to **£13.45m** over the appraisal period.

Similarly, for the 13,620 officers with 1/5 completing the training per year at a cost of £500 per course this is approximately **£1.36m per year** in current prices (£500 per officer x 13,620 officers x 1/5), or in present value terms **£11.72m** over the appraisal period.

The total cost of these refresher training courses is averaged at approximately **£2.92m per year** in current prices (£1.56m+ £1.36m) or **£25.17m** in present value terms over the appraisal period.

There will also be further costs to ship owners as existing seafarers will be unavailable for duty whilst on training courses. This lost productivity is equal to the cost incurred by the ship owner in employing the seafarer.

For all seafarers this is averaged at approximately **£3.97m** per year in current prices (**£34.15m** present value terms over the appraisal period). This is calculated as the average wage costs per day of a seafarer⁵ with a 30% uplift to give the full-time equivalent cost⁶, multiplied by the 3 days of the training course, multiplied by 2 courses over the 10 years. This figure is only approximate as officers will tend to earn more than ratings, but there are fewer of them. This uncertainty applies to each estimate of lost productivity within this section.

The total cost of this amendment is therefore approximately **£6.89m** per year in current prices (course costs and lost productivity) or **£59.33m** in present value terms over the appraisal period.

6.7) Additional training in Human Element, Leadership and Management (HELM), electronic charts (ECDIS) and high voltage 6.7.1) HELM course (leadership and management) at operational level

This has been absorbed into the existing Higher National Diploma (HND) cadet training programme and will incur no extra costs for most cadets. Colleges will run a standalone course for the benefit of the few experienced ratings transferring to officer training.

Numbers of Seafarers: The seafarer Training and Certification Branch at the MCA receives a very low number of applications from experienced UK seafarers who want to transfer to officer training. Although these seafarers will have to complete some college based training they do not follow the same training programme as the cadets and will need to complete HELM training as a standalone unit. The MCA Seafarer Training Branch estimate that approximately forty five UK nationals a year transfer to Officer Training via the experienced seafarer route but do not have actual figures to show this.⁷

Costs: The stand alone course is estimated to be 3-4 days long with an approximate cost of £400 per person. If 45 ratings per year transfer to Officer Training the total cost can be calculated at **£18,000 per year** (£400 per rating x 45 ratings) with a total cost over the appraisal period of **£0.15m** in present value terms.

There will also be further costs to ship owners as existing seafarers will be unavailable for duty whilst on training courses. This lost productivity is equal to the cost incurred by the ship owner in employing the seafarer.

For all seafarers this is averaged at approximately **£30,000** per year (£0.26m present value terms over the appraisal period). This is calculated as the average wage costs per day of a seafarer⁸ with a 30% uplift to give the full-time equivalent cost, multiplied by the 4 days of the training course, over the 10 years.

The total cost of this amendment is therefore approximately **£48,000** per year (course costs and lost productivity) or **£0.41m** in present value terms over the appraisal period.

One maritime academy responded to the consultation stating that 11 seafarers had undertaken HELM operational level training as a standalone course in 2013/14. No other responses addressed this issue and therefore we feel that our estimate of 45 is still the best available.

Another respondent agreed that the number of seafarers was reasonable, but noted that this may increase as the numbers of existing ETOs apply for certification. They also suggested that there will be

⁵ Mean gross hourly pay in the water transport sector (a proxy for seafarers) is estimated at £16.03. This multiplied by 8 hours to give an estimate for the per day wage costs. This comes from Office of National Statistics, Annual Survey of Hours and Earnings, 2012 Provisional results. <http://www.ons.gov.uk/ons/rel/ashe/annual-survey-of-hours-and-earnings/2012-provisional-results/index.html>. This figure is used throughout the rest of this section where applicable.

⁶ Better Regulation Executive, Measuring Administrative Costs: UK Standard Cost Model Manual <http://www.berr.gov.uk/files/file44503.pdf>

⁷ Applicants who are engineers apply to Seafarer Training and Certification Branch of the MCA for a letter of Initial Assessment (LIA) which details what training they must complete based on their sea service. This is done on a case by case basis by Marine Examiners and statistical records have not been kept.

⁸ As above in section 6.6.

an additional cost from existing ETOs going for certification requiring a standalone HELM (Op level) course. However there is no need for existing cadets on the old Merchant Navy Training Board training routes to take a stand alone HELM Course as the elements are covered in their existing training course. This is published in the MCA Marine Information Note MIN 482 (M).

6.7.2) HELM course (leadership and management) Management Level

This course will have to be completed by Senior Officers once during the course of their career. After 2017 all new deck and engineer senior officers will have to complete this course. Existing officers do not have to take it retrospectively.

Numbers of Seafarers: The yearly total for training will be the number of newly qualified Chief Officers and Second Engineers. From unpublished MCA data on how many Certificates of Competency (CoC) are issued per year we estimate that 450 officers per year qualify as Chief Officers or Second Engineers. We have made the assumption that this number will remain constant.

Costs: This is a 5 day course and 2 training colleges have published course costs of £550 and £675 respectively. The average cost of the course is likely to be just over £600 per person. Therefore the total cost is likely to be **£270,000 per year** (£600 per officer x 450 officers) with a total cost over the appraisal period of **£2.32m** in present value terms.

There will also be further costs to ship owners as existing seafarers will be unavailable for duty whilst on training courses. This lost productivity is equal to the cost incurred by the ship owner in employing the seafarer.

For all seafarers this is averaged at approximately **£375,000** per year (£3.23m present value terms over the appraisal period). This is calculated as the average wage costs per day of a seafarer with a 30% uplift to give the full-time equivalent cost, multiplied by the 5 days of the training course, over the 10 years. We note that the wage rate used here is an average for all seafarers, but that the course is only for officers and therefore the cost may be underestimated.

The total cost of this amendment is therefore approximately **£645,000** per year (course costs and lost productivity) or **£5.55m** in present value terms over the appraisal period.

6.7.3) Electronic Chart Display Information System (ECDIS) course

This course will have to be completed once by all deck officers who completed their training before 2006 and wish to work on board ships fitted with ECDIS. It is not mandatory and officers who choose not to complete the course will be able to continue to work in ships that have not been fitted with ECDIS. All new cadets will complete ECDIS Training as part of their basic training without additional cost. After 1 January 2017 deck officers who have not completed this training will not be able to work on board ships fitted with ECDIS. These officers may continue to work at sea on ships which do not use ECDIS.

Numbers of Seafarers: Based on the MCA SDS database it is estimated that in total 7,884 deck officers may need this training because they completed their training before January 2006. In reality some will choose not to take it because they do not intend to work in ships fitted with ECDIS others may have already completed ECDIS training. This figure may also drop over the ten year period as some seafarers retire.

Costs: This is a 5 day course. Courses advertised by the main nautical colleges vary between £800 and £1,150 per seafarer. The average cost from the available data is around £960 per seafarer. If multiplied by the estimated 7,884 seafarers, the potential maximum cost for ECDIS is therefore around £7.6m over the 10 year period but may be significantly lower. We do not have data to show how many officers may have already completed training or may not want to do so. We therefore propose three scenarios:

- A high estimate of 60% of the maximum 7,884 seafarers, giving a one-off cost of £454,000 per year;
- A low estimate of 10% of the maximum 7,884 seafarers, giving a one-off cost of £76,000 per year; and
- A best estimate of 35% of the maximum 7,884 seafarers, giving a one-off cost of **£265,000** per year or **£2.28m** in present value terms over the appraisal period.

There will also be further costs to ship owners as existing seafarers will be unavailable for duty whilst on training courses. This lost productivity is equal to the cost incurred by the ship owner in employing the seafarer.

For all seafarers this is averaged at approximately £394,000 per year in the high scenario, £66,000 in the low scenario and **£230,000** as our best estimate (£1.98m present value terms over the appraisal period). Note that we do not have figures on wage data split by officer/rating so have used the average for all seafarers. This is therefore likely to underestimate the cost in this instance. This is calculated as the average wage costs per day of a seafarer with a 30% uplift to give the full-time equivalent cost, multiplied by the 5 days of the training course, over the 10 years.

The total cost of this amendment is therefore approximately **£495,000** per year in the best estimate scenario (course costs and lost productivity) or **£4.26m** in present value terms over the appraisal period. The high and low scenarios give costs of £848,000 and £66,000 per year, respectively.

In response to the consultation one maritime academy agreed that the medium assumption was reasonable based on the number of seafarers attending their academy per year.

Two respondents highlighted their concern with the variance in design by manufacturers of ECDIS equipment and explained that the analysis does not take account of these costs. However, type specific training is not a requirement of STCW and therefore has not been included within this impact assessment. These respondents also provided a cost estimate of £1,000 for generic ECDIS training, however there was no evidence to suggest this is more appropriate than the £960 figure used above.

One respondent also suggested that the financial impact on businesses of seafarers attending training courses should also include the cost of employing other seafarers to cover them. However, in this impact assessment we are focusing solely on the additional impact of the regulation. It is assumed that seafarers who are already in employment will be already being paid for their work time (whether training or working). Therefore the additional cost to the company from seafarers attending further training courses is simply the cost of lost productivity (if no replacement is employed for that time) or the cost of employing a replacement for that time (at the same wage rate).

One respondent disagreed with our statement that "In reality some will choose not to take it because they do not intend to work in ships fitted with ECDIS" because amendments to SOLAS mean that tankers must have ECDIS fitted by 1 JULY 2015. We acknowledge that tankers must comply by this date and that there are a 100 tankers currently registered on the UK ship register, however we believe our statement is reasonable and reflects the situation for seafarers working on ships other than tankers.

Further they provided estimates on travel and accommodation costs for seafarers attending the course. This has not been included in this impact assessment because of the degree of variance of costs depending on where people travel to and from for training it is hard to give a meaningful figure. Anecdotal evidence from the industry suggests that companies try to arrange training in the most cost effective way for them.

6.7.4) High Voltage course at operational level

This course will have to be completed by all new engineering officers that work on high-voltage vessels (i.e. cruise ships, large gas tankers and specialised drill ships). Existing seafarers will not have to complete the training.

Numbers of Seafarers: There is an expectation that this will be absorbed into HND training courses for cadets within five years and all engineering cadets will complete it. Therefore we have made the conservative assumption that there will be a course cost until year 5 of the appraisal period, but nothing thereafter. Based on the DfT Statistics for the likely number of new engineering cadets, this will affect 3,180 seafarers over the next ten years, averaged at 318 per year.

Costs: This will be a one day course with estimated course costs approximately £100 per person. Therefore the overall cost will be **£31,800 per year** (£100 per cadet x 318 cadets) for the first 5 years, or **£0.12m** in present value terms over the appraisal period.

There will also be further costs to ship owners as existing seafarers will be unavailable for duty whilst on training courses. This lost productivity is equal to the cost incurred by the ship owner in employing the seafarer. This cost remains even after the course costs are subsumed in the 5th year.

For all seafarers this is averaged at approximately **£265,000** per year with a total cost over the appraisal period of **£2.28m** in present value terms. As above, note that we do not have figures on wage data split by officer/rating so have used the average for all seafarers. This is therefore likely to underestimate the cost in this instance. This is calculated as the average wage costs per day of a seafarer with a 30% uplift to give the full-time equivalent cost, multiplied by 1 day of training, over the first 5 years of the appraisal period.

The total cost of this amendment is therefore approximately **£297,000** per year (course costs and lost productivity) or **£2.40m** in present value terms over the appraisal period.

6.7.5) High Voltage course at management Level

This course becomes mandatory for all Chief Engineers and Second Engineers who want to work on high-voltage vessels (i.e. cruise ships, large ferries and specialised drill ships). There are no figures available to show how many high voltage ships are on the UK ship register. This information has not been collated by any organisation. By looking at the number of the type of ships that might be high voltage registered to the UK the MCA estimates that there are 45 such ships. There is no requirement for engineer officers who do not intend to work on High Voltages ships to complete this training.

Numbers of Seafarers: The majority of potential high voltage ships identified are Drill ships working in the North Sea off shore oil fields where officers work a two week on two week off pattern. Ships working to this pattern need two Chief Engineers and two Second Officers per ship. Therefore there could be a total of 180 Officers who initially need the training. There are no hard figures to show what the turnover of employment is on high voltage ships. If we assumed a turnover rate of 15%⁹ an additional 27 officers per year might need the training.

Costs: One college has published details of this course. It is a 5 day practical training course and will cost approximately £1,000 per seafarer. Therefore the overall cost in the first year will be £180,000 (£1,000 per seafarer x 180 seafarers). In subsequent years the cost will be the number of additional officers employed per year through turnover multiplied by the cost of training at £1,000 per officer i.e. £27,000 per year. This gives an average cost per year over the 10 year appraisal period of **£42,300**, or total cost of **£0.39m** in present value terms over the appraisal period.

There will also be further costs to ship owners as existing seafarers will be unavailable for duty whilst on training courses. This lost productivity is equal to the cost incurred by the ship owner in employing the seafarer. This is averaged at approximately **£150,000** in the first year (180 seafarers) and **£23,000** thereafter (27 seafarers), with a total cost over the appraisal period of **£0.32m** in present value terms. This is calculated as the average wage costs per day of seafarer with a 30% uplift to give the full-time equivalent cost, multiplied by the 5 days of the training course.

The total cost of this amendment is therefore approximately **£73,800** per year (course costs and lost productivity) or **£0.71m** in present value terms over the appraisal period.

In response to the consultation one maritime academy noted that they were experiencing higher demand than usual from existing UK officers for High Voltage Training. They thought that it was likely this was for service on non-UK ships, but did not have any evidence of which ships the officers are serving on. They therefore felt the estimate of 180 seafarers in the first year was conservative. If the number of seafarers were twice as many (360) the impact would be an additional £180,000 cost in the first year.

Another respondent suggested that the calculations above do not cover the real costs and additional problems associated with sourcing the High Voltage (M) training in the UK. However no supporting evidence was provided and no amendment has been made to the calculations.

No additional evidence was submitted during the consultation on the wage split between officers and ratings.

6.8 Implementation costs

The MCA has been working with the Merchant Navy Training Board (MNTB) to ensure that the Manila Amendments can be implemented into seafarer training and certification in the most cost effective way for seafarers and the UK shipping Industry. The MNTB is a voluntary body which is part of the UK Chamber of Shipping but operates independently and has a separate management board. It is the UK

⁹ This is an average from unpublished industry estimates of officer turnover rates for 2012/13

shipping industries central body for promoting and developing seafarer education and training. The International Association of Maritime Institutions (IAMI), Nautilus International (the seafarer's officers' union), the National Union of Rail, Maritime and Transport Workers (RMT) and the Chamber of Shipping are all members of the MNTB. It is therefore estimated that there will be no significant implementation costs.

No additional evidence was submitted during the consultation on the start-up costs of implementing the proposals.

Summary of costs Table

2:

	Amendment	Cost over appraisal period (£Pvm)
6.1	Strengthened provisions concerning training and assessment, the issue of Certificates of Competency (CoC) and the prevention of fraudulent practices	£0
6.2	Updated standards relating to medical fitness, fitness for duty and alcohol abuse :	£0
6.2.1	Medical fitness and fitness for duty	£0
6.2.2	Changes in alcohol limits to be enforced	£0
6.3	New requirements concerning certification for able seafarers, for electro-technical officers (ETOs) and security-related training for all seafarers:	£3
6.3.1	Able Seafarer Certification (AB)	£0
6.3.2	ETO Certification	£0
6.3.3	Security-related training:	£3
6.3.3a)	Proficiency in Security Awareness	£0.716
6.3.3b)	Proficiency in Designated Security Duties	£2.148
6.4	Updated requirements for personnel on certain types of ships (i.e. tankers)	£0
6.5	Clarification and simplification of the definition of 'certificate'	£0
6.6	Five yearly refresher training for some courses which are currently undertaken once at the beginning of every seafarer's career	£59.33
6.7	Additional training in Human Element, Leadership and Management (HELM), electronic charts (ECDIS) and high voltage:	£13.34
6.7.1	HELM course (leadership and management) at operational level	£0.41
6.7.2	HELM course (leadership and management) Management Level	£5.55
6.7.3	Electronic Chart Display Information System (ECDIS) course	£4.26
6.7.4	High Voltage course at operational level	£2.40
6.7.5	High Voltage course at management Level	£0.71
	Total	£75.53

In answer to general questions about the assessment of costs and benefits one respondent again highlighted noted that they felt the costs were too low due to the need for extra seafarers to cover those

on training. They also noted the additional costs of leave and/or the duration of training and suggest that this may make UK cadets and officers uncompetitive against other countries. The first point was addressed in section 6.7.3 above. On the second around competitiveness it is noted that the UK are implementing the minimum standards of the STCW so should not be at a disadvantage to other member states in this regard.

The respondent also felt that the assumption that ship owners would pay for training courses for their seafarers was not always true and suggested it only applies to 50% of officers on annual contracts of employment. However, no evidence was provided to support this estimate.

7) DIRECT COSTS AND BENEFITS TO BUSINESS CALCULATIONS

7.1) "One-in/Two-out" (OITO)

Option 1 implements the minimum requirements of the Manila Amendments to the STCW amendment and the additional areas of EC Directive 2012/35 and thus Option 1 falls outside the scope of "One In - Two Out".

No other policy options have been deemed to be appropriate and have therefore not been assessed.

7.2 Equivalent annual net cost to business calculations

The monetised costs of these amendments are listed in table 2 in section 6.8 above.

On the basis of the Best estimates of these costs, the EANCB has been estimated at a cost of around **£7.4m per year**. This has been calculated in accordance with the OITO methodology in 2009 prices. These are direct costs to business as the costs of training and lost productivity whilst seafarers are attending courses fall on ship owners as assumed in section 6 above.

8) Risks and assumptions

8.1 Risks

Risks of not adopting the Manila Amendments and the 2012 Directive are discussed under the costs and benefits of Option 0, further detail is given below:

- Without internationally valid seafarer training in the UK, UK nationals wanting to pursue a career at sea would have to train abroad. The cost of this is not known. We assume that the majority of UK seafarers would need to train in countries where both teaching and examination takes place in English. The MCA is aware of 15 countries which teach and examine in English. These are Australia, Canada, Hong Kong, India, Iran, Republic of Ireland, Jamaica, Malaysia, Malta, New Zealand, Pakistan, South Africa, Sri Lanka and USA. Of these we know that the US Coastguard does not issue qualifications to foreign nationals. UK nationals would need to find funding to travel and train abroad for a period of up to three years. They would also have to find placements on board non UK registered vessels as supernumeraries¹⁰ in order to complete their sea time.
- Most UK based colleges and training providers would close, ceasing to employ lecturers and all support staff including caretakers, catering staff, administrators etc. UK seafarer training is highly desirable and many foreign students train at UK colleges. The loss of students from the 8 main teaching colleges would have a knock on effect to small businesses in each local area. It would have a negative impact on the bed and breakfast establishments that offer off-site accommodation; it would affect the small shops close to the colleges, local pubs and restaurants, and taxi services.
- The UK would be liable to infraction proceedings if it failed to implement the new 2012 Directive on seafarer training by July 2014. An infraction fine currently stands at a £6 million one-off fine, with possible daily fines included thereafter until transposition is achieved.

8.2 Assumptions

¹⁰ Supernumeraries are seafarers serving on board a ship who are additional to the required number of Officers and Crew. Cadets in training are supernumeraries.

- a) The main assumption is that the safe manning number of seafarers will remain approximately the same at 39,665 (26,045 ratings and 13,620 officers) over the next 10 years which is the length of the appraisal period.
- b) Following advice from the Chamber of Shipping it is understood that it is usual practice in the UK for shipping companies to meet the training costs of qualified seafarers in their employment who need to attend additional training courses. It is therefore assumed that the majority of costs for additional training to qualified seafarers will be met by shipping companies and should be considered a cost to industry. If in some circumstances companies decline to pay seafarers training costs they will be met by individual seafarers. There will be no additional cost to the UK Government.
- c) It is also assumed that where sea service is considered an alternative to a training course, then existing seafarers will opt to choose this method rather than pay for a specialised training course.
- d) Finally, we have used a single hourly wage rate for all seafarers regardless of rank. This will be an over estimate in some cases and an under estimate in others.

9) Rationale and evidence that justify the level of analysis used in the IA (proportionality approach)

Where possible these costs are based on the number of UK seafarers from DfT Seafarer Statistics 2011 (January 2012), The DfT statistics are the most comprehensive available, drawing on data from the MCA seafarer data system (SDS), a membership survey carried out by the Chamber of Shipping and data about the likely number of cadets from claims from training providers for reimbursement under the Government's Support for Maritime Training (SMarT) scheme. They are produced to high professional standards set out in the National Statistics Code of Practice.

The costs for designated security training are based on an approximation of the number of jobs on board UK-registered ships requiring designated security training and the costs for HELM Management level and High voltage management have been extracted from MCA raw data. This is the only data readily available.

The course costs are based on discussions with the MNTB based on estimated course length and type of learning, i.e. classroom based or practical. Representatives of the MCA sit on the MNTB technical committee alongside representatives from the UK training colleges and industry. This has given the opportunity for regular informal discussion about costs and course length. We have taken account of actual course fees where these are published.

Efforts were during the consultation to improve the evidence base and the Impact Assessment was updated accordingly. Where quantitative analysis has not been possible detailed qualitative explanations have been used.

10) Wider impacts

Equalities Assessment

The policy will be applied universally to all seafarers therefore there will be no effect positive or negative, on outcomes for persons in relation to age, disability, gender assignment, pregnancy and maternity, race, religion or belief, sex and sexual orientation. Small Firms Impact Test

The majority of companies affected by these changes are large, multinational or subsidiaries of multinationals and fall outside of the scope of the small firms Impact test. Some sections of the industry are made up of companies which may employ less than 20 people. These smaller companies include the operators of tugs and inter Island ferries.

The changes to the regulations are concerned with the qualifications for the seafarers on board vessels, who must be appropriately qualified for the job they do regardless of the number of people employed by the company. It is not possible to exempt small companies from the changes to the regulations. In the interests of safety we cannot make seafarer training requirements different because a company has fewer employees. The regulations will not disproportionately affect small businesses because the average cost of additional training per seafarer will be the same for both large and small employers.

Competition Assessment

By introducing a set of minimum standards that apply internationally, the STCW amendments should promote a more level competitive playing field internationally and reduce the ability of ship operators to gain a competitive advantage by employing poorly qualified seafarers and thus avoiding the costs of providing adequate training for seafarers.

Environmental Impact Assessment

There will be no specific measurable environmental impact (other than the ongoing aim of the STCW Convention to prevent maritime pollution by better seafarer training).

11) Summary and preferred option with description of implementation plan

The preferred Option is the implementation of the Manila amendments to the STCW amendment and the additional areas of EC Directive 2012/35.

The international convention which regulates seafarer training (STCW) has been updated. The UK government signed the Manila amendments in 2010 and they have passed into European Law via amending directive 2012/35EC which comes into force on 4 July 2014. It is important that the UK updates its seafarer training programme to comply with the new International requirements so that UK seafarer training and certification continues to be recognised internationally and that UK seafarers can be employed on ships undertaking international voyages after the end of the transitional period on 1 January 2017.

The UK training colleges and the Merchant Navy training board (MNTB) have been working to restructure seafarer training courses so that courses compliant with the Manila amendments are available for seafarers from July 2013. This means that because it can take up to 4 years to become a qualified seafarer all new entrants to the training programme from July 2013 will be able to gain a CoC issued in line with the Manila amendments by January 2017. Implementation Plan

IMO date for compliant training courses to be in place	1 July 2013
Security training becomes mandatory	1 January 2014
Deadline for transposition of EC Directive 2012/35	4 July 2014
Final deadline for implementation of Manila amendment	1 January 2017

(End of 5 year international transition period).