**Title:** PIR – Dangerous Goods in Harbour Areas

Regulations 2016 (DGHAR 2016)

PIR No: HSEPIR013

Original IA/RPC No: HSE0096

Lead department or agency: HSE

Other departments or agencies:

N/A

Contact for enquiries: Helen.Baker-Latham@hse.gov.uk

### Post Implementation Review

Date: 15/07/2021

Type of regulation: Domestic

Type of review: Statutory

Date measure came into force:

01/10/2016

Recommendation: Keep

**RPC Opinion:** N/A

### 1. What were the policy objectives of the measure? (Maximum 5 lines)

The objectives of the Dangerous Goods in Harbour Areas Regulations 2016 (DGHAR 2016) were to: "reduce the risk of ... accidents by co-ordinating activities between ship and shore"; and "make it simpler and easier for dutyholders and those responsible for managing health and safety for workers to comply with the law".

### 2. What evidence has informed the PIR? (Maximum 5 lines)

Reflecting government guidance, a proportionate approach was agreed whereby a light-touch, research approach was used to collect evidence for the DGHAR 2016 PIR. To this end, an online survey was used, with the link being sent to; 74 identified relevant stakeholder and duty-holders; three online HSE communities with 173,000 subscribers; and a Department for Transport (DfT) expert committee. 173 full or partial responses to the survey were received.

### 3. To what extent have the policy objectives been achieved? (Maximum 5 lines)

The majority of respondents (around seven in ten across the three 'objective' questions) agree that the DGHAR 2016 objectives as identified and detailed in the Explanatory Memorandum and original Impact Assessment have been achieved. Where there has been disagreement, it has been very minor with only four per cent of respondents for each question falling into this category.

Sign-off for Post Implementation Review: Chief economist/Head of Analysis and Minister

I have read the PIR and I am satisfied that it represents a fair and proportionate assessment of the impact of the measure.

Signed: Date: 26/07/2021

### **Further information sheet**

Please provide additional evidence in subsequent sheets, as required.

4. What were the original assumptions? (Maximum 5
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The original DGHAR 2016 impact assessment (IA) estimated that "no new duties would be imposed" with "... the proposal ... expected to be largely cost neutral". Data from the PIR indicates that the costs have increased somewhat with the Business Net Present Value for DGAR 2016 being -£411,550 with an annual net cost to business (EANCB) of -£47,812.

### **5. Were there any unintended consequences?** (Maximum 5 lines)

Most respondents (about seven in ten) indicated that there were no unintended consequences due to DGHAR 2016. There were also no significant responses to questions about 'other costs' or 'further observations or comments. Of the small number who indicated there were 'benefits', while some of these benefits were potentially quantifiable, it was deemed disproportionate to try and capture these within the current PIR.

# 6. Has the evidence identified any opportunities for reducing the burden on business? (Maximum 5 lines)

No opportunities to reduce burdens were identified. Four in ten respondents do not believe that the aims and objectives of DGHAR 2016 could be achieved with a system that imposes less regulation (whilst a quarter said 'yes'). Of those who supported less regulation there was little consistency in terms of how they would achieve a reduced burden on business with a wide variety of responses provided.

7. How does the UK approach compare with the implementation of similar measures internationally, including how EU member states implemented EU requirements that are comparable or now form part of retained EU law, or how other countries have implemented international agreements? (Maximum 5 lines)

DGHAR 2016 is domestic legislation operating within the scope of Great Britain (GB). It was deemed disproportionate to compare it to other measures operating internationally – to this end no such assessment was undertaken.

**Title:** Dangerous Goods in Post Implementation Review (HSEPIR013) Harbour Areas Regulations 2016 (DGHAR). Source of intervention: Lead department or agency: Type of regulation: Domestic Health and Safety Executive Other departments or agencies: Type of review: Statutory Review None Date of implementation: 1 October 2016 Contact for enquiries: Helen Baker-Latham (Tel 0203) Date review due (if applicable): 028 4314) Helen.Baker-Latham@hse.gov.uk

### Introduction

The Dangerous Goods in Harbour Areas Regulations 2016 (DGHAR) came into force on 1<sup>st</sup> October 2016 and replaced the Dangerous Substances in Harbour Areas Regulations 1987 (DSHAR) following a review undertaken by the Health and Safety Executive (HSE) as part of its response to the Red Tape Challenge.

DSHAR was introduced following an oil tanker explosion in Bantry Bay, Ireland in 1979. The regulations aimed to reduce the risk of such accidents by coordinating activities between ship and shore. They contained various provisions relating to the storage, handling, loading, unloading and transport of dangerous substances in harbour areas. 'Dangerous substances' in this context refers to materials that are, for example, explosive, flammable, toxic, corrosive, infectious or radioactive.

DGHAR is domestic legislation setting out safety provisions aimed at safeguarding ports against major accidents involving dangerous goods when they transit through ports, harbours and harbour areas.

It is a statutory requirement to undertake a Post Implementation Review (PIR) of Regulations within 5 years of them coming into force. The purpose of a PIR is to evaluate whether or not the intended objectives of the regulations have been met, what's working well and what could be improved and determine if the regulations in place are still the best way to regulate, in this case how dangerous goods in harbours are managed.

### 1. What were the policy objectives of the measure?

The policy objectives of the measures were to:

- simplify and modernise the regulations to reflect updated and new working practices or technologies;
- align the regulations with other applicable legislation and standards to make it easier for dutyholders responsible for managing health and safety for workers to understand and comply with the requirements, thereby helping to reduce the risk of such accidents, co-ordinating activities between ship to shore.

### 2. What evidence informed the PIR?

A 'light-touch' quantitative research approach was employed for the research. Justification for this was that as the original scope of DGHAR was narrow, it was only the changes to the regulations that needed to be assessed rather than the regime as a whole and changes were non-contentious and widely consulted on.

The research survey addressed key questions such as whether the consolidation of the regulations had any positive or negative impacts on stakeholders. The research used opportunity sampling via an online survey to collect data. There are risks of such a sampling strategy as it can be unclear how representative of the actual users of the regulations the responses are. This is mitigated by promoting the survey to as many relevant stakeholders and duty-holders as possible. This provides equality of opportunity for people to provide their views.

As businesses were busy preparing for the end of the EU Exit transition period, it was decided the survey would be delayed until 3 months after the transition period end in order to maximise the response rate. The research survey questionnaire ran from 3 March 2021 to 24 March 2021 and was disseminated to:

- a group of 74 relevant identified stakeholders,
- three HSE on-line communities with approximately 173,000 subscribers: Carriage of Dangerous Goods, Civil Explosives and Ports & Logistics
- the Department for Transport Committee, who then distributed it amongst its members.

In total, there were 173 full or partial responses to the survey.

In addition to the survey, analysis was undertaken of HSE's DGHAR enforcement data.

### 3. To what extent have the policy objectives been achieved?

The evidence from the research and analysis demonstrates the majority of people state the overall objectives as detailed in the original Explanatory Memorandum and Impact Assessment (IA) have been achieved and there were no unintended consequences. Only 4% of respondents disagreed.

- Whilst 25% of respondents believed the aims and objectives could be achieved with a system that imposes less regulation, there was inconsistency in their suggestions and too much variation in how that could be achieved.
- The top 'answers' for the questions around 'any other costs', 'any benefits' and 'any further observations or comments', tended to be 'no' or 'none'. Whilst a few replies were suitable for quantification and monetisation, attempting to capture evidence within the current PIR was disproportionate and will be considered in any future PIR.

No significant areas of improvement or concerns were consistently identified within the PIR, but there were some limited mentions of stakeholders not being aware of DGHAR supporting guidance. In the interests of effective modern regulation, guidance for regulations is constantly under review. As part of this work, HSE will work with the relevant stakeholders to better signpost all relevant guidance.

Stakeholder feedback gained from the survey states that the updated regulations are useful, and it is useful having one point of reference.

The responses received indicate that all objectives have been delivered with no consistent or significant unintended consequences being identified.

Prior to DGHAR coming into force, five enforcement notices were issued and one prosecution was taken under DSHAR spanning a period 1998 to 2014. To date, one prosecution has been taken and no enforcement notices have been issued under DGHAR 2016. While this may indicate a higher level of compliance, it is not possible to confirm this is a direct effect of the consolidation exercise as this may also be as a consequence of operational priorities.

Feedback from stakeholders who completed the survey suggest they are generally happy with the regulations, they are simpler to understand and comply with.

The engagement rate received was good and provided enough data to undertake credible analysis. We approached a high number of users through various channels, in the hope relevant stakeholders have been reached and engaged with;

- 173,000 subscribers were notified of the survey
- The survey received 1216 unique clicks directly from the notifications sent to the Communities subscribers
- The survey received 173 full or partial responses from across the sector.

In response to the question 'DGHAR 2016 reduces the risk of accidents by coordinating activities between ship and shore?', the answers 'agree' and 'strongly agree' had higher returns (over 75% of the 173 replies received) suggesting that the regulations appear effective in meeting stakeholder needs. Whilst there were a few 'disagreeing' comments to the above question, there was no consensus about what the issues were. HSE does, however, recognise that as a modern regulator it needs to raise awareness and education within industry possibly highlighting the current ACOP available.

When responding to the question 'Does DGHAR 2016 make it simpler for duty holders and those managing health and safety to comply with the law?' over 68% agreed or strongly agreed with this statement. Of the 168 responses to this question only 8 people responded with 'disagree' or 'strongly disagree'.

From the 168 responses received only two people claimed the regulations were complicated or harder to understand.

### 4. What were the original assumptions?

The 2016 IA estimated that there would be no compliance costs as a result of the changes to the regulations. There were no material changes to the practical workplace standards that industry was expected to comply with. The changes

made to the underlying regulation and existing guidance was expected to only require minimal editorial updates. Therefore, the costs dutyholders faced because of this change were estimated to be one-off familiarisation costs.

The original impact on businesses estimated an initial one-off familiarisation cost of £617,000, this was validated by RPC as equivalent annual net cost to business of zero, and this was successfully tested during the 8-week public consultation.

Based on the data collected as part of the PIR process, it appears that the costs have increased by £413,000 over the 10-year appraisal period (from £617,000 to £1,030,000). The driver for this increase is the amount of time taken by dutyholders in familiarising themselves with the new regulations increasing from 3 hours to 5 hours. On the other side of the equation, the indicative 21-minute annual savings benefit estimated in the original IA was validated through this PIR. In summary, the equivalent annual net cost to business (EANCB) is:

Summary - Cost Benefit Analysis				
Price year	Implementation date	Duration of Policy	Business Net Present Value	Annual Net cost to Business (EANCB)
2014	2016	10	-£411,550	-£47,812

The cost impact of this policy could remain as break even given limited data on familiarisation benefits and unmonetized benefits that are not proportionate to assess at this time.

### 5. Were there any unintended consequences?

No unintended consequences were identified.

# 6. Has the evidence identified any opportunities for reducing the burden on business?

The responses received displayed no emerging themes and reflected a general agreement that the objectives of the regulations have been met, and there being no significant issues which suggest the regulations place burden on business. It is proposed to 'keep' DGHAR (i.e. remain/renewal); the regulations will be reviewed again in 5 years to check they continue to be relevant and deliver their intended objectives.

Evidence gathered as part of this review did not highlight any areas for improvement.

7. How does the UK approach compare with the implementation of similar measures internationally, including how EU member states implemented EU requirements that are comparable or now form part of retained EU law, or how other countries have implemented international agreements?

Not applicable, as DGHAR is domestic GB legislation.

# Post Implementation Review (PIR) of The Dangerous Goods in Harbour Areas Regulations 2016 (SI 2016/721)

## **Evidence Review**

Author(s): Conrad Schwab, Beomsung Kim, Rachel

Wilson and Miles Burger

Date: 25/05/2021

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### **SUMMARY**

- ➤ Regulation 35 of The Dangerous Goods in Harbour Areas Regulations 2016 (SI 2016/721) ('DGHAR 2016') requires a review of DGHAR 2016 to take place before 1<sup>st</sup> October 2021.
- ➤ The review known as a post-implementation review (PIR) requires that the objectives of DGHAR 2016 be set out, assessed to see whether they have been achieved and whether they can be achieved with less regulation.
- ➤ The objectives of DGHAR 2016 were to "reduce the risk of ... accidents by coordinating activities between ship and shore"; and to "make it simpler and easier for dutyholders and those responsible for managing health and safety for workers to comply with the law".
- ➤ A light-touch quantitative research approach was employed to collect primary evidence. This consisted of an on-line survey link being: sent to a group of 74 relevant identified stakeholders; included onto three HSE forums with approximately 173,000 subscribers; and sent to a Department for Transport committee, who then distributed it amongst its members. In total, there were 173 full or partial responses to the survey.
- ➤ In terms of meeting the objectives of DGHAR 2016, the majority of respondents (around seven in ten across the three 'objective' questions) agree that the DGHAR 2016 objectives as identified and detailed in the Explanatory Memorandum and original Impact Assessment have been achieved. Where there has been disagreement, it has been very minor with only four per cent of respondents for each question falling into this category.
- Most respondents (nearly seven in ten) indicated that they didn't feel that there were any unintended consequences due to the DGHAR 2016 changes.
- The top 'answers' for the questions around 'any other costs', 'any benefits' and 'any further observations or comments' tended to be 'no' or 'none'. Where there was a more positive response for the 'any benefits' question respondents didn't go into much further detail.
- ➤ Of the potential savings which were identified under 'any benefits' a number were potentially suitable for quantification and monetisation; these included no Explosives Security Officer (ESO) required; no requirement for licence *if passing through* harbour with explosives; and to a lesser extent less paperwork/shorter retention of records. Attempting to capture evidence for these benefits within the current PIR was deemed disproportionate. As such they should be considered for the next PIR in five years' time.
- ➤ Based on the data collected as part of the DGHAR 2016 PIR, it appears that the costs have increased by £413,000 over the 10-year appraisal period (from £617,000 to £1,030,000). The driver for this increase is the amount of time taken by duty-holders in familiarising themselves with the new regulations going up from 3 hours to 5 hours. On the other side of the equation, the indicative 21-

The Dangerous Goods in Harbour Areas Regulations 2016 (SI2016/721) – Post Implementation Review (PIR)

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minute annual savings benefit estimated in the original IA was validated through this PIR. In summary, the annual net cost to business (EANCB<sup>1</sup>) is:

Summary - Cost Benefit Analysis					
				Annual Net	
			Business Net	cost to	
	Implementatio	Duration of	Present	Business	
Price year	n date	Policy	Value	(EANCB)	
2014	2016	10	-£411,550	-£47,812	

- > The cost impact of this policy could remain as break even given limited data on familiarisation benefits and unmonetized benefits that are not proportionate to assess at this time.
- ➤ It is slightly unclear about whether respondents believe that the objectives of DGHAR can be achieved in a less onerous system, with a quarter of respondents sharing this view but three-quarters either disagreeing or not knowing. There is also no consistent option for what this alternative system would look like
- ➤ DGHAR 2016 is domestic legislation extending only to Great Britain (GB). It was deemed disproportionate to compare it to other measures operating internationally to this end no such assessment was undertaken.

<sup>&</sup>lt;sup>1</sup> Equivalent annual net cost to business (EANCB)

### Introduction

- 1. This Evidence Review has been undertaken by the Health and Safety Executive (HSE) to accompany and support the Post-Implementation Review (PIR) of The Dangerous Goods in Harbour Areas Regulations 2016 (SI 2016/721) ('DGHAR 2016').
- 2. DGHAR 2016 is a set of safety provisions aimed at safeguarding ports against major accidents involving dangerous goods when they transit through ports, harbours and harbour areas. The purpose of the regulations is to put in place certain specific measures to reduce the risk of a serious incident occurring.
- 3. The PIR, and the corresponding report, must meet the legislative requirements set out in regulation 35(1) of DGHAR 2016 to "(a) carry out a review of these Regulations; (b) set out the conclusions of the review in a report; and (c) publish the report" within five years of the regulations coming into force (so 1<sup>st</sup> October 2021). Regulation 35(2) specifies that the PIR report must:
  - (a) set out the objectives intended to be achieved by the regulatory system established by these Regulations;
  - (b) assess the extent to which those objectives are achieved (e.g. has DGHAR 2016 achieved what it originally set out to?); and
  - (c) assess whether those objectives remain appropriate and, if so, the extent to which they could be achieved with a system that imposes less regulation (e.g. is government intervention in the transit of dangerous goods through ports and harbours still required? Is DGHAR 2016 still the most appropriate approach?).
- 4. As background, the Dangerous Substances in Harbour Areas Regulations 1987 ('DSHAR 1987') were originally introduced following an oil tanker explosion in Bantry Bay, Ireland in 1979. The regulations aimed to reduce the risk of such accidents by co-ordinating activities between ship and shore. They contained various provisions relating to the storage, handling, loading, unloading and transport of dangerous substances in harbour areas. 'Dangerous substances' in this context refers to materials that are, for example, explosive, flammable, toxic, corrosive, infectious or radioactive.
- 5. During 2014 and 2015 HSE undertook a review of DSHAR 1987 as part of its response to the Red Tape Challenge. The review found that many sections of DSHAR 1987 were redundant, duplicated by other legislation, or no longer in line with modern working practices or technologies. To this end, DGHAR 2016 came into force on 1<sup>st</sup> October 2016 following consultation. The content of the regulations was simplified, updated and aligned with other applicable legislation and standards to make it as easy as possible for affected businesses

to understand and comply with the requirements. After five years, DGHAR 2016 was required to undergo a post-implementation review (PIR).

- 6. As part of the PIR planning process, HSE's Regulation Committee assessed the DGHAR 2016 PIR in terms of its scope and scale. 'Scope' refers to whether the PIR needs to look at the impact of the specific legislative changes or, alternatively, whether it should consider the appropriateness of the overarching legislative framework in which the changes sit. Alongside this, 'scale' considers the wider importance of the PIR in terms of its political visibility, predicted economic impact, number of duty-holders it affects, etc. and therefore the level of resource which is required (high, medium or low). In the case of the DGHAR 2016, the scope was considered narrow as the changes were driven by the Red Tape Challenge and were intended to modernise and update the regulations, reflecting regulatory good practice (so the PIR needs to only consider the changes within the particular set of regulations, not the regime as a whole), while the scale was 'low'. It was considered 'low' in terms of scale due to the following reasons:
  - The Equivalent Annual Net Costs to Business (EANCB) from the original DGHAR 2016 impact assessment (IA) was 'Nil' in 2014 prices<sup>2</sup>. This is well below the £5 million *de minimis* threshold required by the Regulatory Policy Committee (RPC)<sup>3</sup>, so the work would not need external RPC scrutiny.
  - The changes within DGHAR 2016 were largely non-contentious, and widely consulted on, and had the intent of streamlining and updating the regulations, removing redundant material while retaining the parts that are still critical for the prevention and mitigation of major accidents.
  - Furthermore, the DGHAR 2016 changes didn't impose significant additional burdens on duty-holders, with the costs to business expected to be limited to one-off familiarisation costs for those businesses operating in sectors affected by DSHAR 1987 that take time to read and understand the changes.
- 7. While Regulation Committee determined scope and scale, HSE's Evaluation Governance Group (EGG) considered whether the proposed research approach was proportionate and sensible. To this end, EGG assessed whether the suggested data collection methods were appropriate to get the required evidence but not so onerous as to place an undue burden on duty-holders. The EGG

<sup>&</sup>lt;sup>2</sup> Review of Dangerous Substances in Harbour Areas Regulations 1987 (DSHAR) impact assessment (IA No: HSE0096) (https://www.legislation.gov.uk/ukia/2016/170/pdfs/ukia\_20160170\_en.pdf)

<sup>&</sup>lt;sup>3</sup> https://www.gov.uk/government/organisations/regulatory-policy-committee

agreed that the proposed research approach lent itself to a low-level, or 'light-touch' PIR.

- 8. To answer the specific questions within Regulation 35(2), and to ensure a suitably proportionate approach was used, a light-touch quantitative research approach was employed to collect primary evidence. This consisted of an online survey link being sent to a group of 74 relevant identified stakeholders, the link being included onto a number of HSE forums and a Department for Transport committee being asked to distribute it amongst its members.
- 9. The structure of the Evidence Review is detailed in Diagram 1 (below), with the numbered sections directly mapping onto headings within the main document (e.g 'i. What were the policy objectives ...' in the diagram equates to the 'i. What were the policy objectives ...' headed section in the main document).

Diagram 1: Structure of DGHAR 2016 PIR evidence review **Dangerous Goods in DGHAR 2016 Objectives Harbour Areas** The objectives of DGHAR 2016 were **Regulations 2016 (DGHAR** 2016) (SI 2016/721) post-• "reduce the risk of such accidents by implementation review co-ordinating activities between ship (PIR) questions & and shore"; and Reg. 35 'Review' • "make it simpler and easier for requirements dutyholders and those responsible for managing health and safety for workers i. What were the policy to comply with the law". objectives of the measure? \*see Reg. 35(2)(a) ii. What evidence has informed Unintended consequences of the PIR? **DGHAR 2016** This includes: Any other costs iii. To what extent have the Any other benefits policy objectives been Any further observations or comments achieved? \*see Reg. 35(2)(b) Original assumptions in DGHAR iv. Were there any unintended 2016 impact assessment (IA) and realised costs & benefits consequences? Savings due to shorter regulations and a shorter, simpler ACOP v. What were the original Familiarisation costs assumptions? Number of businesses affected by changes vi. Has the evidence identified any opportunities for reducing the burden on Reg. 35(2) (c) "...the extent to which business? [the DGHAR 2016 objectives] could \*see Reg. 35(2)(c) be achieved with a system that imposes less regulation". vii. How does the UK approach compare with the implementation of similar Not applicable (N/A) as DGHAR 2016 measures internationally, is domestic legislation extending only including how EU member to Great Britain (GB). states implemented EU requirements that are comparable or now form part of retained EU law, or how other countries have

# Summary of the Dangerous Goods in Harbour Areas Regulations 2016 (DGHAR 2016)

10. DGHAR 2016 came into force on 1<sup>st</sup> October 2016 with the following main provisions:

### **Overview of DGHAR 2016**

- Anyone bringing dangerous goods into a harbour must pre-notify the arrival of the goods to the harbour master and/or berth operator.
- The harbour master is given powers to regulate the movement of dangerous goods within the harbour area when they create risks to health and safety.
- The master of a vessel carrying defined quantities of specified dangerous goods must display appropriate flags and lights.
- Harbour authorities must produce emergency plans to deal with potential consequences of an emergency involving dangerous goods in the harbour area, and any 'untoward incidents' (incidents involving or threatening the containment of dangerous goods) must be reported to the harbour master.
- Berth operators must provide certain information on emergency arrangements to masters of vessels.
- Harbour authorities must provide a designated parking area for road vehicles carrying dangerous goods.
- Harbour areas where explosives are to be brought in or handled must be licensed by HSE or, in certain cases, the Office for Nuclear Regulation (ONR). This also applies to any loading or unloading of explosives on the coast of Great Britain or in territorial waters.
- Associated safety and security requirements for explosives in harbour areas.
- Statutory harbour authorities are given powers to make byelaws on dangerous goods in their harbour area.

# What has changed between Dangerous Substances in Harbour Areas Regulations 1987 (DSHAR 1987) and DGHAR 2016

DGHAR 2016 replaced and revoked DSHAR 1987 from 1st October 2016 with the accompanying approved code of practice (ACOP) (COP 18) and guidance document HS(R)27 also being withdrawn. Redundant, superseded and duplicated provisions of DSHAR have been removed and the remaining sections have been updated and simplified in a new, shorter set of regulations.

### The main changes are:

- DGHAR contains a simpler definition of 'dangerous goods' based on the International Maritime Organisation's International Maritime Dangerous Goods Code (IMDG Code). The exemptions to DSHAR have also been simplified and aligned with dangerous goods legislation.
- Military exemptions have been simplified to align with other recent explosives legislation.
- Harbour masters are now given greater flexibility to accept a shorter notice period for dangerous goods arriving in the harbour area when it is safe to do so.
- There is now a requirement for ships carrying explosives to notify the harbour master before passing through a harbour where they are not loading or unloading. This replaces the requirement in DSHAR for the harbour to be licensed for handling explosives.

### **Overview of DGHAR 2016**

Details of the sections of DSHAR 1987 which were revoked as they were redundant or superseded by other legislation can be found at: https://www.hse.gov.uk/ports/dangerous-goods.htm.

### Post-Implementation Review (PIR) questions

- 11. The following PIR therefore considers the legislative changes made by DGHAR 2016 in terms of the following questions:
  - i. What were the policy objectives of the measure?
  - ii. What evidence has informed the PIR?
- iii. To what extent have the policy objectives been achieved?
- iv. What were the original assumptions?
- v. Were there any unintended consequences?
- vi. Has the evidence identified any opportunities for reducing the burden on business?
- vii. How does the UK approach compare with the implementation of similar measures internationally, including how EU member states implemented EU requirements that are comparable or now form part of retained EU law, or how other countries have implemented international agreements?

### i. What were the policy objectives of the measure?

- 12. The objectives of DGHAR 2016 are two-fold, and are detailed in the regulation's Explanatory Memorandum (EM) and its original Impact Assessment (IA), respectively:
  - To "reduce the risk of such accidents by co-ordinating activities between ship and shore" 4; and
  - To "make it simpler and easier for dutyholders and those responsible for managing health and safety for workers to comply with the law"<sup>5</sup>.

As to whether these stated policy objectives of DGHAR 2016 have been achieved, this will be covered below in section 'iii. To what extent have the policy objectives been achieved?'.

### ii. What evidence has informed the PIR?

- 13. The evidence which has informed the DGHAR 2016 PIR is detailed in this document, the 'Evidence Review'.
- 14. Assessment of HSE's enforcement data indicates that there was a total of five notices issued prior to DGHAR 2016 coming into effect on 1<sup>st</sup> October 2016, with a single

<sup>&</sup>lt;sup>4</sup> Paragraph 7.1, page 2 – DGHAR 2016 Explanatory Memorandum (http://www.legislation.gov.uk/uksi/2016/721/pdfs/uksiem 20160721 en.pdf).

<sup>&</sup>lt;sup>5</sup> Paragraph 8[e], page 5 -DGHAR 2016 Impact Assessment (http://www.legislation.gov.uk/ukia/2016/170/pdfs/ukia\_20160170\_en.pdf)

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notice in each of the following years: 1998; 1999; 2003; 2012; and 2014. There was also one prosecution in 2001. There has been only one prosecution (in 2020) since DGHAR 2016 came into effect.

- 15. To capture views of stakeholders on DGHAR 2016 a survey was developed using the online survey tool SurveyMonkey<sup>6</sup>. The questions were hosted online, with a web-link sent to stakeholders. The survey asks questions about respondents' general experience of the DGHAR 2016 regulations as well as specific examples of costs and benefits experienced as part of the changes (e.g. areas identified within the original impact assessment  $[IA]^7$ ).
- 16. The survey web-link was sent out to the following groups of contacts on Wednesday 3<sup>rd</sup> March 2021 with a deadline for replies by Wednesday 24<sup>th</sup> March 2021 (a chasing e-mail was sent on Wednesday 17<sup>th</sup> March 2021). (Blank copies of the survey can be found at Annex A):

Type of recipient	No. of contacts	Comments
recipient General DGHAR 2016 stakeholder group	contacts 74	Included contacts at:  Department for Transport (DfT)  Marine and Coastguard Agency (MCGA)  Ministry of Defence  Port Skills and Safety  UK Harbour Masters' Association (UKHMA)  Unite  Nautilus International  Port of Dover  Associated British Ports  Harwich Haven Authority  Road Haulage Association  QinetiQ  Aberdeen Harbour  Tank Storage Association  Manchester Port Health Authority  Port of Tilbury London Limited  London Container Terminal  Cornwall Council  Transport Scotland  Welsh Government  International Cargo Handling Coordination Association

<sup>&</sup>lt;sup>6</sup> https://www.surveymonkey.co.uk/

http://www.legislation.gov.uk/ukia/2016/170/pdfs/ukia\_20160170\_en.pdf

Type of recipient	No. of contacts	Comments
HSE e- Bulletins	172,897 recipients	The survey web-link was included on the following HSE e-bulletins: - Explosives - Ports and Logistics - Carriage of Dangerous Goods
Members of the Department for Transport's (DfT) ADR/RID advisory committees	Unknown	Transporting dangerous goods securely is governed by both the European Agreement Concerning the International Carriage of Dangerous Goods by Road (ADR) and the Regulations concerning the International Carriage of Dangerous Goods by Rail (RID).

- 17. In total, there were 173 full or partial responses to the survey, which were subsequently used for the following analysis.
- 18. Further details of the online survey are provided below in terms of the demographics of respondents (main focus of their business; whether they bring dangerous goods into harbours, and if so, what percentage of their business involves doing this; how many people work in their organisation; what their current job is; and whether they have any other job role responsibilities):

Title of survey	Date undertaken	No. of respondents
DGHAR 2016 stakeholder	Weds 3 <sup>rd</sup> March to 24 <sup>th</sup>	n = 173 (full or partial
survey	March 2021	responses to survey)

Q. What is the main focus of your business / your employer's			
business? Please selec	t only ONE.		
Main focus of business			No. of responses
			(n = 90)
Freight transport by rail			1 (1%)
Freight transport by road			6 (7%)
Sea and coastal freight water transport			22 (24%)
Inland freight water transport			2 (2%)
Service activities incidental to water transportation			3 (3%)
Cargo handling for water transport activities of division			5 (6%)
50			
Other transportation support activities			9 (10%)
Other (please specify) (see below for responses)			42 (47%)
Other (please specify)			
Trade Association Fire and Rescue [C]or			nsultant

Fuel trading	Dispatching dangerous good that are transported by sea	Marina
Chemical manufacture and associate raw material imports	Kuwait Oil Company including drilling, process facilities, tank farms, crude export piers, loading / offloading harbour activities.	[P]ort authority
Defence	State government dangerous goods safety regulator in Australia	[A]dvice
Government shipping	Public Health	Retired Safety officer [come] Trainer
Port with associated dedicated quarry	Insurance	Import and Export of Chemicals
Safety	Inspection and certification of tanks carrying DG	We use these services on an infrequent and ad-hoc basis
Offshore oil and gas	Harbour Management	[P]ort authority
Environmental assessments	Regulatory activity	Dangerous Goods Safety Adviser all modes and qualified stevedoree [sic]
[P]rocess safety consultancy	Port	Port Authority
N/A	Regulator	Port Authority
Consulting Engineers advising on COMAH, DGHAR, PADHI+ etc	Health and safety consultancy in relation to cargo handling	Flag State Harbour Authority
[M]inistry of defence	[C]onsignor / manufacturer	Retired Offshore Safety Officer
Chemical blending	Military vessel repair.	Policy, IMDG Code

Q. As part of your business / your employer's business, do you bring dangerous goods into harbours and harbour areas?			
Do you bring dangerous goods into harbours and	No. of responses		
harbour areas?	(n = 92)		
Yes	55 (60%)		
No	33 (36%)		
Don't know / unsure	4 (4%)		
Approximately what percentage of your business / your	No. of responses		
employer's business involves bringing dangerous	(n = 51)		
goods into harbours and harbour areas?			
Average Percentage	31%		
Median Percentage	15%		
Mode Percentage	10%		

Q. Approximately how many people work in your organisation?  Please select only ONE.		
Number of workers	No. of responses	
	(n = 91)	
Only me (self-employed)	5 (5%)	
1 - 4 employees	7 (8%)	
5 - 9 employees	4 (4%)	
10 - 24 employees	6 (7%)	
25 - 49 employees	2 (2%)	
50 - 99 employees	12 (13%)	
100 - 249 employees	10 (11%)	
250 - 499 employees	7 (8%)	
500 - 999 employees	12 (13%)	
1000+ employees	23 (25%)	
Unsure / don't know	3 (3%)	

Q. What is your current job role? Please select only ONE.				
Current job role	No. of responses			
		(n = 89)		
Health and Safety manage		23 (26%)		
Other type of manager o		35 (39%)		
Other (please specify) (s	ee below for responses)	31 (35%)		
Other (please specify)				
Technical manager	Nuclear Safety	Harbour Authority		
	Evaluator	Management		
Surveyor	Marine Consultant	H&S Advisor		
Senior Engineer	Laboratory staff	DGSA / Port Explosives		
		Officer		
Safety Advisor	Jetty Manager	DGSA		
Risk consultant	I do not have a job role	Dangerous Goods		
		Inspector (State		
		Government)		
Retired Offshore Safety	_	[D]angeroud [sic] goods		
Officer	[come] Trainer	safety advisor		
[R]et.H&S mngr.	HM Inspector of H&S	Customer Service		
advisor		Manager		
Regulating Director for	Harbour Master	Corporate Health and		
3 others also on board		Safety Officer		
of DG consulting				
company all qualified				
PSM Consultant	Harbour Master	Civil Servant		
Production Engineer	Harbour master	Advisor		
policy advisor				

Q. Do you currently have any other job role responsibilities? Please select ALL which apply.			
Other job role responsibilities			No. of responses
Other job role responsibilities			(n = 55)
Trade Union Representa	tive		4 (7%)
Dangerous Goods Safety			19 (35%)
Other (please specify) (s			32 (58%)
Other (please specify)			, ,
Technical Manager	none	for medium sized	
		comp	anies I give
		safety	training and
		suppo	
Designated person	HSE Coach & Mentor		[sic] Designated
(PMSC)			on Ashore (ISM
		Code	,
		Comp	
Duty Manager	N/A		onmental
		Mana	ger
Harbour Master	Respsonsible [sic]	DPA	
	Officer and Credit		
Llaubarra Mandan	Manager	D = ==4	Facility Consults
Harbour Master	no		Facility Security
Environmental	training manager		er (Deputy)
	training manager	no	
manager No	Asbestos	None	
NO	Analyst/Deputy Quality	INOHE	
	Manager		
H&S Advisor to	Safe systems of work.	Safet	y advisor
Construction and	Care systems of work.	Jaiot	y 4471001
Development			
businesses			
GAER	No	Port	facility security
		office	
No	Consultant	evnlo	sives officer
INO	Consultant	CAPIO	SIVES UTILICET

19. Respondents to the DGHAR 2016 PIR survey came from a variety of backgrounds, with a quarter (24%, 22) of those who responded (90 in all) coming from the sea and coastal freight water transport sector. Nearly half (47%, 42) came from outside of an identified sector and included a number of port authorities alongside respondents from defence, fuel trading, safety, public health, insurance and consulting engineers (to name but a few). About six in ten (60%, 55) respondents (of the 92 who responded) indicated that they brought dangerous goods into harbours and harbour areas. This suggests that a lot of the comments provided throughout the survey come from those dealing with dangerous goods in harbours on a regular basis. (Indeed, of those who bring dangerous goods into harbour areas [n = 51], on average this constitute about a third [31%] of their overall work.)

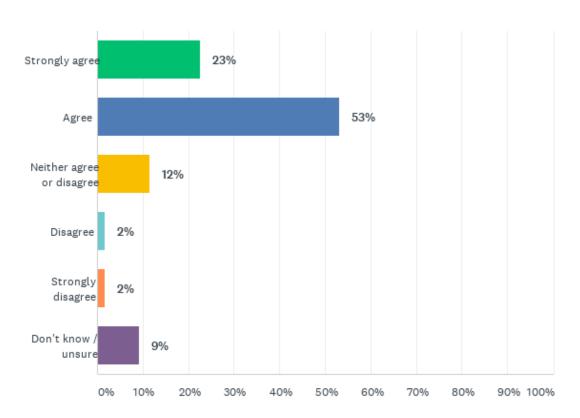
20. While there is representation from across all sizes of businesses, a quarter (23, 25%) of the 91 people who responded are from very large companies (1000+ employees). This may reflect the make-up of businesses in this sector, which may employ significant numbers of people – e.g. large shipping and freight companies; harbours. Of the 89 who provided information about their job role, it is encouraging to note that a quarter (26%, 23) are health and safety managers or directors, a further four in ten (39%, 35) are other types of directors and the remaining third (35%, 31) have a variety of relevant and pertinent roles to responding about DGHAR 2016 (e.g. Harbour Master; Harbour Authority Management; Health and Safety Advisor; Dangerous Goods Safety Advisor (DGSA)/Port Explosives Officer; Jetty Manager). Furthermore, 55 respondents have additional roles which they undertake which provides further depth to their knowledge and their ability to respond knowledgably about DGHAR 2016. For example, a third (35%, 19) are Dangerous Goods Safety Advisers (DGSAs).

### iii. To what extent have the policy objectives been achieved?

21. In order to capture whether the policy objectives and intended outcomes for DGHAR 2016 have been achieved, each objective detailed in section 'i. What were the policy objectives of the measure?' (above) will be considered alongside any evidence either supporting or challenging it.

# DGHAR 2016 will 'reduce the risk of ... accidents [e.g. oil tanker explosion, like Bantry Bay] by co-ordinating activities between ship and shore'

22. Respondents were asked to indicate how strongly they agree or disagree with the following statement: "DGHAR 2016 reduces the risk of accidents by co-ordinating activities between ship and shore".



No. of respondents	Evidence
n = 173 (full or partial responses to survey)	All respondents answered this question (so 173 responses), with over half (53%, 92) agreeing with the statement and nearly a further quarter (23%, 39) strongly agreeing. A further one in ten (12%, 20) neither agreed nor disagreed, leaving less than five per cent (4%, 6) disagreeing or strongly disagreeing. (About one in ten [9%, 16] didn't know or were unsure).

- 23. The majority of respondents over three-quarters (76%, 131) agreed with the statement, indicating that they felt that DGHAR 2016 *does* reduce the risk of accidents by co-ordinating activities between ship and shore.
- 24. Of the six respondents (4%) who disagreed with the statement, only five provided further details with some of their comments including:

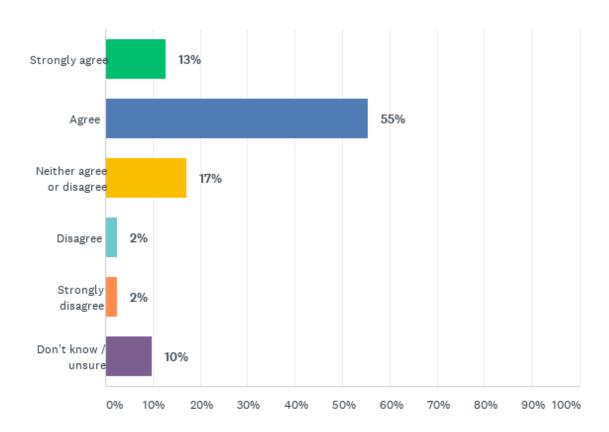
"Only reduces incidents if followed, unfortunately I see it not being followed"

"While the DGHAR may co-orodinate [sic] activities between ship and harbour master, there is little or no reference to the co-ordination of loading/unloading operations between ship and terminal operator ..."

"There is quite a lot of misunderstanding between what is hazardous and what is not and the difference on storage and stowage categories ..."

# DGHAR 2016 will 'make it simpler and easier for dutyholders and those responsible for managing health and safety for workers to comply with the law'

25. The DGHAR 2016 objective from the original Impact Assessment (IA) has two components – simplicity and ease. While these concepts are very closely related, they are not necessarily analogous. As such respondents were asked to indicate how strongly they agree or disagree with the following statement which asks about simplicity: "DGHAR 2016 makes it *simpler* for duty-holders and those responsible for managing health and safety for workers to comply with the law" (emphasis added).



No. of respondents	Evidence
n = 173 (full or partial responses to survey)	This question again had a good response rate, with 164 (or 95%) of the 173 respondents answering this question. Of those who answered, over half (55%, 91) agree with the objective statement, with a further one in six (13%, 21) strongly agreeing. At the other end of the scale only four per cent (4%, 8) indicated that they disagreed or strongly disagreed. Of the remaining responses, about one in six (17%, 28) were neutral (neither agreeing nor disagreeing) and one in ten (10%, 16) did not know or were unsure.

- 26. As with the first objective, not only did a large portion of the respondents answer the question, but most agree with the statement (about seven in ten [68%, 112]) agreeing), suggesting that DGHAR 2016 does makes it simpler for duty-holders to comply with the law.
- 27. Of the eight respondents (4%) who disagreed with the statement, seven provided further details. These responses broadly breakdown into the following primary themes:

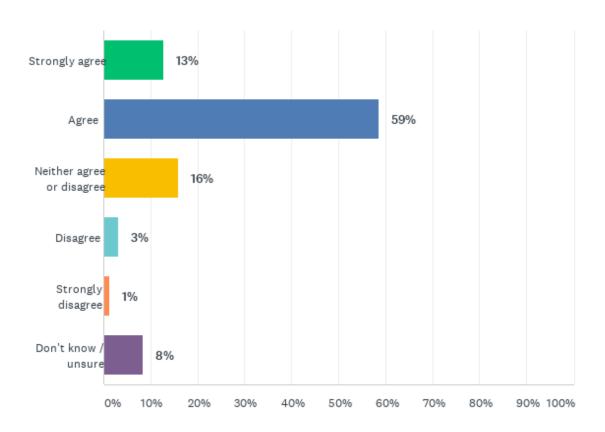
Primary theme	No. of
	responses
Regulations too complex	3 (43%)
Regulations unclear	2 (29%)
Regulations insufficient	1 (14%)
Lack of compliance	1 (14%)
Total	7 (100%)

28. It should be emphasised that the number of people disagreeing was very low and the following quotes from the above themes reflect only two to three similar responses:

"What is clear is that DGHAR made [too] much more complex and for people with limited chemical knowledge often misunderstandings on similar sounding chemicals or where similar chemicals have different hazard profiles".

"What is clear is that DGHAR made [too] much more complex and for people with limited chemical knowledge often misunderstandings on similar sounding chemicals or where similar chemicals have different hazard profiles

29. As described above, the objective that DGHAR 2016 will 'make it simpler and easier for dutyholders and those responsible for managing health and safety for workers to comply with the law' has two elements. The second of these elements – 'ease' – was captured via respondents agreeing or disagreeing with the following statement: DGHAR 2016 makes it *easier* for dutyholders and those responsible for managing health and safety for workers to comply with the law' (emphasis added).



No. of respondents	Evidence
n = 173 (full or partial responses to survey)	Over nine in ten (91%, 157) respondents out of the 173 completed this question, with nearly three-quarters (72%, 112) agreeing overall with the 'easier' objective statement (of which 13%, or 20, strongly agreed). Reflecting the other objective questions, only a small number of respondents disagreed (7 in total, representing only 4% of those responding). One in six (16%, 25) did not have a strong opinion (neither agreeing or disagreeing), while the remining one in ten (8%, 13) didn't know or were unsure.

- 30. The findings for this question reflect the pattern of responses to the two previous objective questions namely a high response rate (so over 90%), with most of them (nearly three-quarters) agreeing with the statement about the DGHAR objective; in this case, DGHAR 2016 *does* make it easier for duty-holders to comply with the law.
- 31. Of the seven respondents (4%) who disagreed with the statement, all expanded on their answer to provide further details along the following themes:

Primary theme	No. of
	responses
Regulations unclear	4 (29%)

Primary theme	No. of
	responses
Regulations too complex	1 (43%)
Regulations insufficient	1 (14%)
Lack of compliance	1 (14%)
Total	7 (100%)

32. One of the 'disagreeing' respondents indicated that 'easier' and 'simpler' were "practically synonymous", with another respondent echoing their response to the previous question. A detailed technical response was provided reflecting the 'regulations unclear' theme; it stated:

"There appears no provision for RoRo [roll-on/roll-off] vessels, which may be transporting DG in bulk (Road Tankers). IMDG code has more stringent requirements to tanks than UK CDG Regulations/ADR which may not be identifiable in operation. Are RoRo vessels exempt? DGHAR 2016 only appears to reference Containers & Portable tanks. Significant amount of DG is transported to/from EU and NI under IMO4, IMO6, IMO8 (IMDG 6.8.3)"

33. Overall, the majority of respondents (around seven in ten across the three 'objective' questions) agree that the DGHAR 2016 objectives as identified and detailed in the Explanatory Memorandum and original Impact Assessment have been achieved. The low number of enforcement actions (see paragraph 14) seems to bear this out (although this may be due to operational priorities rather than the effect of the revised regulations under DGHAR 2016). Where there has been disagreement in the survey data, it has been very minor with only four per cent of respondents for each question falling into this category. While comments provided by those who disagree have been included, it should be remembered that they reflect a small fraction of the overall responses, most of which support the stated DGHAR 2016 objectives.

### iv. Were there any unintended consequences?

- 34. Respondents to the online survey were asked whether there have 'been any unintended consequences due to the DGHAR 2016 changes' and provided with a 'free-text' box in which to detail their thoughts.
- 35. Out of the 173 respondents to the survey, about a third (35%, 61) entered something into the free-text box. Of these, a couple were nonsensical entries (e.g. a couple of full stops) so have been discounted. The remaining 59 responses can be broadly broken down in the following way:

Any unintended consequences due to the DGHAR 2016 changes?	No. of responses
No	40 (68%)
Yes	9 (15%)
N/A	5 (8%)
Don't know	4 (7%)

Any unintended consequences due to the DGHAR	No. of
2016 changes?	responses
Unclear	1 (2%)
Total	59 (100%)

36. Focusing on the nine responses which indicated that there had been unintended consequences, six chose to supply more detail about the nature of them. There was, however, no consistent themes amongst their comments; the themes they mentioned included the following:

Themes	No. of
	responses
Increased storage required	1 (16.6%)
Load dates for no reason	1 (16.6%)
Lower dangerous goods (DG) safety awareness	1 (16.6%)
Perception of increased risk	1 (16.6%)
Possibility of emergency management by harbour	1 (16.6%)
managers	
Roll-on/roll-off (RoRo) vessels not considered	1 (16.6%)
Total	59 (100%)

37. The comments which were made in terms of unintended consequences due to the DGHAR 2016 changes were:

"Potential unintended consequences are: Although risk is lower since there is no loading/off loading, notifying the harbour master (before passing through) is good communication, however in case of freak incident frequency of explosion, would Harbour Master be ready for emergency crisis management, safe distance between passing vessel and harbor [sic] site personnel & buildings? Also, there could have been some specific explosives passed by 5 years ago & excluded in previous 3-years archive, which could require some specific crisis management procedure / emergency personnel/ fire fighting units / skills and 3rd party mutual response? also, there could be rare scenario when Operator(s) might not have the required skills and hands-on competency to manage a crisis in absence of ESO [Explosives Security Officer] at site? I guess this needs to identify a MAR scenario (major accident risk) to identify if existing personnel, procedure, plant & equipment are adequate to manage such potential risk to ALARP level [as low as reasonably practicable]?"

"Potential of gap in transportation via RoRo vessels [roll-on/roll-off]"

"some of the previous level of DG [dangerous goods] training our workers held was no longer required and we found there a loss of other DG safety awareness as a result, some complacency as no longer perceived as such a significant hazard"

"more changes coming with net zero implications ie increase in storage capacity required"

"As a supervisor of containers with Class 1 going to meet a vessel for loading it is obvious many changes happen of ;load [sic] dates for no "apparent" reason. Is this due to tghe [sic] current legislation"

38. In summary, it appears that respondents felt that there were no substantial unintended consequences due to the DGHAR 2016 changes. Where consequences were mentioned, they were hugely varied and did not identify a reoccurring or consistent issue.

### Have there been any other costs as part of the DGHAR 2016 changes?

- 39. Respondents were also asked "[h]ave there been any other costs as part of the DGHAR 2016 changes?". A number of additional costs were mentioned in the original impact assessment but weren't quantified. In order to see if these non-quantified costs were considered relevant, they were included as examples within the question itself. So, the question included the following examples and asked whether there were any other costs associated with:
  - aligning the definition of 'dangerous goods' in DGHAR 2016 with international standards;
  - previously a licence was required where a vessel carrying explosives was passing through a harbour even if no unloading or loading of explosives took place. This requirement has been replaced with a duty for vessels carrying explosives, but not unloading or loading explosives, to notify the harbour master before passing through.
- 40. Out of the 173 people who responded (either fully or partially) to the survey, about a third (37%, 64) provided a response of some description to this question. A couple of responses were non-appropriate and disregarded; this left 62 responses. These responses fell along the following themes and answers.

Answers / Themes	No. of responses
None	34 (55%)
Yes - not quantified	10 (16%)
N/A	8 (13%)
Don't know	6 (10%)
Yes - time	2 (3%)
Unclear	1 (2%)
Yes - licence	1 (2%)
Total	62 (100%)

41. Over half (55%, 34) of the responders to the question stated that they had not experienced any additional costs as a result of the changes in DGHAR 2016. A further one in five (21%, 13) indicated that 'yes' they had encountered additional costs due to the changes, but 10 out of the 13 chose not to quantify these costs or to pinpoint the cause of them. This ultimately means that only three (5%) substantive responses were provided; these were:

<sup>&</sup>quot;Replacement of licence to duty to inform if DG passing through."

<sup>&</sup>quot;The time taken has a cost and there has been zero saving in time for most goods."

"Yes time cost"

### Have there been any benefits as part of the DGHAR 2016 changes?

- 42. As well as capturing 'other' costs, the survey also asked about any benefits associated with the DGHAR 2016 changes. A number of possible benefits were detailed in the original impact assessment and, in a similar fashion to the above costs question, were included as examples within the benefits question. As such, respondents were asked whether there had been "any benefits as part of the DGHAR 2016 changes", namely any benefits associated with:
  - previously a licence was required where a vessel carrying explosives was passing through a harbour even if no unloading or loading of explosives took place. This requirement has been replaced with a duty for vessels carrying explosives, but not unloading or loading explosives, to notify the harbour master before passing through;
  - harbours only having to retain records of explosives handled, loaded or unloaded over the past 3 years rather than the past 5 years;
  - greater degree of flexibility around notice of the arrival of dangerous goods in harbour areas; or
  - berth operators securing explosives without the explicit need for an Explosives Security Officer (ESO).
- 43. As with 'other' costs, about a third (36%, 62) of the 173 survey respondents provided a response to this question. Two of these responses had to be removed due to them not meaning anything (e.g. the number 0; full stops), leaving 60 to be considered. These responses were:

Any benefits as part of the DGHAR 2016 changes?	No. of responses
Yes	25 (42%)
No	21 (35%)
N/A	8 (13%)
Don't know	4 (7%)
Unclear	2 (3%)
Total	60 (100%)

44. Of those respondents providing a definite 'yes' or 'no' answer, four in ten (42%, 25) indicated that the changes in DGHAR 2016 had brought about some benefits. The benefits in question were expanded on by eight in ten (80%, 20) of these respondents, with their comments reflecting the following themes:

Themes	No. of
	responses
Better management of DGs (dangerous goods)	4 (20%)
All the above (i.e. examples provided in the question)	2 (10%)
Clearer regulations	2 (10%)
Less paperwork	2 (10%)

Themes	No. of
	responses
No ESO required	2 (10%)
No requirement for licence if passing through harbour	2 (10%)
with explosives	
Greater flexibility	1 (5%)
Greater efficiency	1 (5%)
Clearer notification	1 (5%)
Clearer responsibilities	1 (5%)
Time	1 (5%)
Time, clearer regulations	1 (5%)
Total	20 (100%)

45. The benefits mentioned were relatively wide-ranging with no single benefit being significantly mentioned more than the others. The 'top' benefit mentioned (but still only four times) was that DGHAR 2016 led to the better management of dangerous goods. This is positive as the regulations are intended for this exact purpose. Some of the quotes provided were:

"The benefits have been enormous with the DGHAR since it's [sic] insertion."

"Better management of dangerous goods"

"Much Much [sic] better description for military explosives"

"Potentially some benefits can be attained due to time saving to issue Licence, 2 years less digital recording of handled explosives, some manhour cost of engaging ESO [Explosives Security Officer]"

"No requirement for a licence, saves resources in applying/receiving licence, record retention management benefit"

"There should be benefits in terms of speed and ease of application if the businesses involved are qualified to process these regulations, but it also relies on the consignor and consignee."

### Any further observations or comments about DGHAR 2016

46. The survey concluded by asking respondents if they had anything more they wanted to mention in terms of DGHAR 2016. Of the 173 people who started the survey, only about one in five (18%, 32) entered anything. The responses to the question '[i]f you have any further observations or comments about DGHAR 2016, please briefly detail these below' fell into the following themes:

Themes	No. of
	responses
None	15 (47%)
Greater clarity required	2 (6%)
Content of regs unchanged	1 (3%)
Dangerous goods (DGs) essential to business	1 (3%)
Exclude low risk DGs from regs	1 (3%)
Harbour masters excluded from consultation	1 (3%)
Lack of health & safety knowledge	1 (3%)
Lack of knowledge & competence re DG transportation	1 (3%)

Themes	No. of responses
Minimise paperwork	1 (3%)
Consolidated European Reporting System (CERS) workbooks useful	1 (3%)
Reducing costs shouldn't compromise health & safety	1 (3%)
Revision of regs should include solid DG cargo	1 (3%)
Separate regs/guidance for harbour authorities, ship owners, terminal operators	1 (3%)
Simpler regs are an improvement	1 (3%)
Site security & major accident risk should be considered	1 (3%)
Thanks for consultation	1 (3%)
Unclear	1 (3%)
Total	32 (100%)

47. Ironically, just under half (47%, 15) of the respondents who entered something indicated they didn't have anything further they wanted to add. Otherwise the concluding comments which were provided ranged over a variety of issues and points. Some of the comments which were provided include:

"DGHAR 2016 does not apply to solid bulk cargoes that are classified as Group B - MHB. This classification includes cargoes that can evolve flammable/explosives gasses when shipped in bulk. They include Coal, DRI A,B and C and many other cargoes that are not classified under the IMDG Code but could precipitate a methane or hydrogen gas explosion on a ship in port. There are also new cargoes being added to the IMSBC Code list all the time. The hydrogen gas explosion on the MV Nortrader incident in Plymouth in 2017 is an example of the kind of incident that can occur, and there have been a number of similar accidents on ships carrying solid bulk cargoes at sea and in port worldwide. In addition to evolving flammable and explosive gases (typically methane and hydrogen), these cargoes also emit emit toxic gasses [sic] (mainly CO and CO2) and cause oxygen depletion in cargo holds and adjacent spaces. They have caused some 150 asphyxia fatalities and at least 20 explosion fatalities on ships during period 1999-2020, including a number in UK ports. The dangers presented by MHB solid bulk cargoes should not be ignored in any revision of the 2016 Regs."

"exclude all low risk hazardous goods of packing group 3 and for Class 9 PG2."

48. While there were responses for all the four questions covered in this section (unintended consequences, any other costs, any benefits and any further observations or comments) there was little consistency or agreement. The top 'answer' for many of the questions was 'no' (68%), 'none' (55%), 'no' (35%) and 'none' (47%), respectively. The only question which generated a number of positive responses was about whether there had been any benefits to the DGHAR 2016 changes, with 42% indicating 'yes' (in comparison to the 35% who said 'no'). Respondents didn't, however, go into much further detail about what these benefits were, despite including examples from the original impact assessment about possible areas of change.

### v. What were the original assumptions?

- 49. As part of the original impact assessment (IA) which accompanied DGHAR 2016 it was estimated that "no new duties would be imposed" with the "costs to business to be limited to one-off familiarisation costs for those businesses operating in sectors affected by DSHAR that take time to read and understand the changes". The best estimate of the costs is "£617,000 (ten-year present values)". In terms of benefits it was estimated that "any one-off costs of familiarisation to be at least offset by ongoing savings to business as a result of consulting shorter regulations and a shorter, simpler ACOP. Accordingly, the proposal is expected to be largely cost neutral". As such, to "offset the total costs of familiarisation, this would require total savings to businesses … with a best estimate of £72,000 [per annum]. This is equivalent to time savings in the region of [21] minutes per business per year".
- 50. A number of other possible benefits were identified, but not quantified; these were provided as examples in the question about 'any benefits' and included:
  - adding a greater degree of flexibility for ports to accept less than the current requirement of 24 hours' notice of the arrival of dangerous goods in harbour areas when it is safe for them to do so;
  - removing a requirement for harbours to be licensed by HSE to handle explosives when ships are passing through without loading or unloading; and a
  - reduction in the time for which records for explosives handled in the harbour areas need to be kept from 5 years to 3 years.
- 51. While respondents were asked about 'any benefits' due to DGHAR and 'prompted' by the above identified possible benefits, the number of responses did not identify any particular benefit as being significant and justifying further research. As such they have not been quantified, or monetised, further in this PIR.
- 52. The cost of time assumptions from the original impact assessment (IA) have not been re-validated or updated as part of the PIR. As such the following cost benefit analysis (CBA) assumes a working week of 37.5 hours, with 7.5 hours in a working day and a cost of time of £36.22 per hour<sup>10</sup>.
- 53. As for the number of businesses affected by DGHAR 2016, it was suggested in the original IA that the businesses which were identified (see table below) were "relatively mature sectors with little "churn"" to this end these figures have been retained for the PIR.

<sup>&</sup>lt;sup>8</sup> Page 3, 'Description and scale of key monetised costs by 'main affected groups'' - Review of Dangerous Substances in Harbour Areas Regulations 1987 (DSHAR) (IA No: HSE0096) (<a href="https://www.legislation.gov.uk/ukia/2016/170/pdfs/ukia\_20160170\_en.pdf">https://www.legislation.gov.uk/ukia/2016/170/pdfs/ukia\_20160170\_en.pdf</a>)

<sup>&</sup>lt;sup>9</sup> Ibid 8 – page 3, 'Description and scale of key monetised benefits by 'main affected groups'

<sup>&</sup>lt;sup>10</sup> This comprises the median hourly wage rate of a functional (Health and Safety) manager of £27.86 per hour, uprated by 30% in accordance with HMT Green Book guidance.

<sup>&</sup>lt;sup>11</sup> Ibid 8 – page 10, paragraph 34

Standard	Description	Number of Enterprises
Industry		
Classification		
(SIC) <sup>12</sup>		
49200	Freight transport by rail	35
49410	Freight transport by road	31,375
	Of which the original IA estimated that	3,138
	"only a small proportion (around 10%)	
	of the enterprises involved in the	
	transportation of freight by road (SIC	
	code 49410) will bring dangerous	
	goods into harbours and harbour	
	areas" <sup>13</sup>	
50200	Sea and coastal freight water transport	635
50400	Inland freight water transport	80
52220	Service activities incidental to water	785
	transportation	
52241	Cargo handling for water transport	110
	activities of	
	division 50	
52290	Other transportation support activities	3,785
TOTAL		36,805

54. It was estimated in the original IA that "only a small proportion (around 10%) of the enterprises involved in the transportation of freight by road (SIC code 49410 ...) will bring dangerous goods into harbours and harbour areas" 14. As part of the PIR, the online survey asked about whether the respondents' business brought dangerous goods (DGs) into harbour areas, and if so, how much of their business this work constituted. Sadly, only six respondents indicated that the focus of their business was 'freight transport by road', and of these only half (50%, 3) said that they bring dangerous goods into harbour areas. The percentage figure these three respondents provide, respectively, in terms of how much of their business deals with DG's in harbour areas is 75%, 65% and 8%. This provides a mean average of 49%. Due to the low response numbers, and the high variance between the figures provided, it was decided not to amend or revise the 10% assumption from the original impact assessment.

### Familiarisation (costs)

55. In section 7.1.1 of the original impact assessment it was estimated that familiarisation would involve one person at each of the affected businesses taking about three hours to read, understand and subsequently communicate the changes under DGHAR 2016. The accuracy of this three hour figure was subsequently tested via the online survey using the following question: 'It was originally estimated that it would take 1 person at each affected business approximately 3 hours to read, understand and subsequently

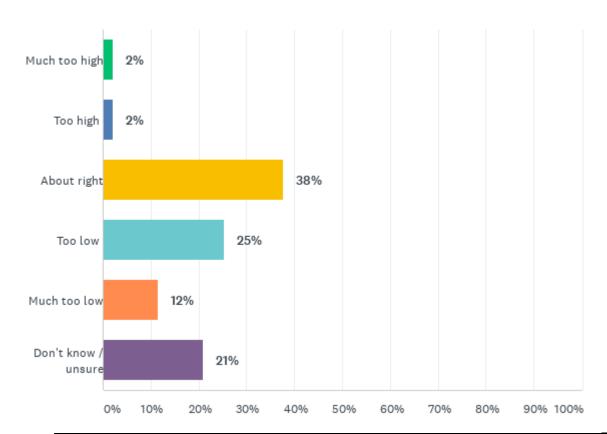
<sup>&</sup>lt;sup>2</sup> See

https://www.ons.gov.uk/methodology/classificationsandstandards/ukstandardindustrialclassificationofeconomicactivities/uksic2007

<sup>13</sup> Ibid 8 - page 10, paragraph 33

<sup>&</sup>lt;sup>14</sup> *Ibid* 8 - page 10, paragraph 33

communicate changes about DGHAR 2016. Based on your experience, how accurate is this estimate?'.



No. of	Evidence
respondents	
n = 173 (full or partial responses to survey)	Eight out of ten (80%, 138) of the 173 respondents answered this question. About four in ten (38%, 52) felt that the three hour figure was about right, whilst bout the same number felt that the figure was too low (37%, 51) (with a quarter [25%, 35] saying 'too low; and one in ten [12%, 16] saying 'much too low'). Very few respondents indicated that the figure was too high (a combined 4% or 6 responses). Finally, over one in five (21%, 29) said that they didn't know or were unsure.

56. All respondents were then asked to provide a general estimate of what they thought the figure was in terms of how long it took to familiarise themselves with DGHAR 2016 provisions. The figures which were provided can be broken down as follows:

No. of hours	Count
0	1 (1%)
2	9 (9%)
3	19 (18%)
3.5	1 (1%)
4	26 (25%)

No. of hours	Count
5	6 (6%)
5.5	1 (1%)
6	7 (7%)
8	5 (5%)
10	3 (3%)
12	2 (2%)
16	3(3%)
20	3(3%)
24	3(3%)
40	1 (1%)
48	1 (1%)
Don't know	7 (7%)
N/A	4 (4%)
Unclear	1 (1%)
Total	103 (100%)

- 57. Looking at the spread of figures provided, nearly six in ten (59%, 61) fall between 2 hours and 5 hours. Overall, the responses were quite broadly spread, but clearer trends are apparent when the numbers of hours taken are grouped together. For instance, over half (54%, 56) of respondents reported taking up to 4 hours, and nearly three-quarters (72.8%, 75) of respondents reported taking up to 8 hours to read, understand and pass on the changes in DGHAR 2016.
- 58. When all 91 of the substantive figures are considered (so answers 0 hours to 48 hours, minus 'don't know', 'N/A' and 'unclear' from the table above) the mean average is 6.8 hours (with the median and mode both being 4 hours). Due to the fact that about a third of responses (37%) to the "[i]t was originally estimated that it would take 1 person at each affected business approximately 3 hours to read, understand and subsequently communicate changes about DGHAR 2016. Based on your experience, how accurate is this estimate?" question indicated the three hours figure was 'too low/much too low' and a further third (38%) indicated that the figure was 'about right' suggests a directionality to the actual figure of something slightly higher than three hours. (It is also worth noting that the figures indicate that 79% of respondents have indicated a direction to their responses either too high, too low or just right with fewer choosing 'don't know/unsure'. This is hopefully indicative of more considered answers, based on actual experience. In contrast, if respondents didn't have any experience about an estimate, they are more likely to choose 'don't know/unsure').
- 59. To this end, the 'about right' figure of 3 hours was combined with the higher figure suggested by the responses to the 'provide an general estimate' question so 6.8 hours and then divided by two to come to an average. The subsequent average was 4.9 hours, or 4 hours, 54 minutes, which was rounded to 5 hours. (Cross-referencing with the median and mode figure of 4 hours from the 'provide an general estimate' question suggest that 5 hours is a sensible figure to use and reflects the slightly higher than three

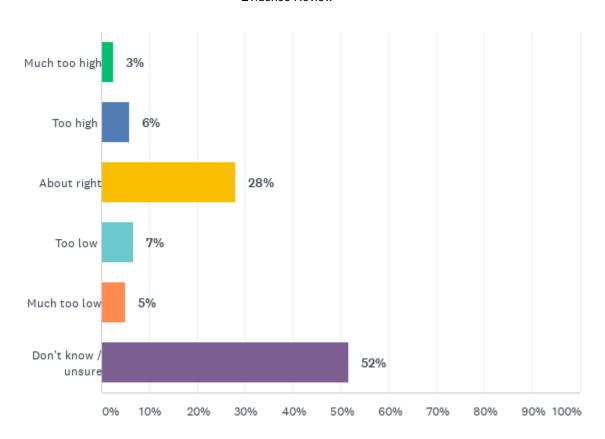
hours figure suggested by the responses to the 'how accurate is this estimate' question.) To this end, the 5-hour familiarisation cost figure will be used in the PIR cost-benefit analysis calculations instead of the 3-hour estimate from the IA.

### Familiarisation (benefits)

- 60. The original IA suggests that due to the fact that DGHAR 2016 replaces the previous "redundant and outdated material in the regulations, guidance and ACOP" with a "shorter, simpler set of regulations ... making the regulations much simpler and clearer for duty-holders to use" will result in any familiarisation costs being "offset by ongoing savings to existing businesses" as a result of these "simpler set of regulations and consolidated guidance" In order to offset these costs, total savings to businesses would need to be approximately £72,000 per annum. With 5,680 affected businesses and a full economic cost of time of approximately £36 per hour, this would require each business to save about 0.35 hours (equivalent to 21 minutes) per year over the course of the ten-year appraisal period. This assumption was made to illustrate an argument that, although familiarisation savings were uncertain, it would be reasonable to assume that the policy would break even overall with even a small amount of savings (21 minutes annually) per dutyholder.
- 61. The online survey tests this 21-minute savings figure via the following question: 'DGHAR 2016 was intended to be a shorter, simpler set of regulations which were clearer for duty-holders to use. The previous guidance and approved code of practice (ACOP) were also replaced with a single, consolidated ACOP. It was therefore estimated that businesses would take less time to familiarise themselves with the new regulations and ACOP. It was originally estimated that the DGHAR 2016 changes would save businesses approximately 21 minutes a year. Based on your experience, how accurate is this estimate?'.

<sup>&</sup>lt;sup>15</sup> *Ibid* 8 – page 5, paragraph 8

<sup>&</sup>lt;sup>16</sup> *Ibid* 8 – page 13, paragraph 52



No. of	Evidence
respondents	
n = 173 (full or partial responses to survey)	Just under seven in ten (68%, 118) of the 173 respondents answered this question. Over half (52%, 61) indicated that they didn't know the answer to this question or were unsure. Of those who did feel able to answer the question, over a quarter (28%, 33) felt that the 21-minute figure was about right. In terms of the remaining answers, about one in ten (9%, 10) felt that the figure was too high and about one in ten (12%, 14) felt that the figure was too low.

62. Respondents were then asked to provide general estimate of how much time they saved in minutes over a year (if any) due to the DGHAR 2016 changes. In total 81 respondents provided a response (so about 68% of the original 118 responses to the previous question). Their answers fell into the following categories:

No. of minutes saved	Count
0	34 (42%)
1	2 (2%)
3	1 (1%)
5	1 (1%)
10	4 (5%)
12	1 (1%)
15	2 (2%)
20	6 (7%)
22	1 (1%)
30	7 (9%)
45	3 (4%)
58	1 (1%)
60	2 (2%)
150	1 (1%)
Don't know	8 (10%)
N/A	7 (9%)
Total	81 (100%)

- 63. About a third (42%, 34) of responses came from participants who stated that they had not saved any time due to the DGHAR 2016 changes. A further one in ten (9%, 7) responders claimed to have saved 30 minutes per year, while about 6 (7%) claimed that they had saved 20 minutes per year due to the changes. Overall, there doesn't appear to be a consistent pattern of responses.
- 64. Looking at the substantive responses only (0 minutes saved to 150 minutes saved, minus 'don't know' and 'N/A') leaves 66 data points. The mean average of these is 13.7 minutes, or 13 minutes and 42 seconds, which can be rounded to 14 minutes saved. (The median and mode of the data is 0 minutes saved).
- 65. However, eight in ten (80%, 94) of the 118 responses to the question "...It was originally estimated that the DGHAR 2016 changes would save businesses approximately 21 minutes a year. Based on your experience, how accurate is this estimate?" did not indicate any sort of directionality in respect of the 21-minute estimate. Over half of respondents indicated that they 'didn't know' or were 'unsure' of how many minutes DGHAR 2016 saved, and a quarter thought that the 21-minute figure was 'about right'. In addition, the vast majority of responses to the question "Can you please provide an general estimate of how much time you saved in minutes over a year (if any) due to the DGHAR 2016 changes?" were zero (42%, 34 out of 81). If this was indicative of DGHAR 2016 not saving businesses any time per year, then the figures for 'too high' and 'much too high' would have been more readily selected and the numbers would have been higher than the nine per cent who chose these options. As such, with 'too high' and 'much too high' not being selected, the prevalence of zero responses to the 'provide a general estimate' question suggest that they may actually represent a 'don't know/unsure' view for instance respondents may have thought 'Tm

not sure, so I'll put in zero'. If this is combined with the lack of a clear steer in terms of directionality for the 'how accurate is this estimate' question, it doesn't provide enough evidence (and certainly not enough strong evidence) to dispute or challenge the original IA assumption of 21-minutes time saved. To this end, the 21-minute figure from the IA is retained and carried forward to the PIR cost-benefit analysis calculations.

66. Alongside the monetised familiarisation benefits detailed above, there were additional benefits of DGHAR 2016 mentioned in response to the question 'Have there been any benefits as part of the DGHAR 2016 changes?'. These responses have already been considered earlier in the report in a descriptive, qualitative sense (see paragraphs 42 to 45, above). In order to provide a full holistic costs picture, however, they are also being considered here.

Themes	No. of respon ses	Type of benefit	Comments
Better managemen t of DGs (dangerous goods)	4 (20%)	Qualitative	'Better management' would be a subjective assessment and not easily quantified nor monetizable.
All the above (i.e. examples provided in the question) (quant)	2 (10%)	Quantitativ e	There are multiple benefits captured here including: not having to purchase a license if you are a vessel carrying explosives; reduced retention of records; greater flexibility; and no explicit need for an Explosives Security Officer (ESO). While some of these could be captured quantitively, it wouldn't be possible to do this as monetised 'package'.
Clearer regulations (qual, but time saving already captured)	2 (10%)	Qualitative	Regulations which are clearer and more straight-forward would a subjective judgement and is therefore a qualitative benefit. Although a possible measure of greater clarity could be a reduction in the time taken to familiarise with the new regulations. Time to familiarise — which is a quantitative benefit — is already being captured in the survey, so capturing it here as well would lead to double counting.
Less paperwork	2 (10%)	Qualitative	Similar to the above benefit, less paperwork is a subjective, qualitative benefit (what is less? One page less? Or a million pages less?). This benefit could potentially be measured in

Themes	No. of respon	Type of benefit	Comments	
	ses	bellett		
			terms of 'time saved' and would not be part of the familiarisation 'time' figures so would avoid double-counting. Another quantitative measure could be the reduction in the cost of storage (although there would have to be a <i>significant</i> reduction in paperwork to see tangible monetizable benefits).	
No ESO required	2 (10%)	Quantitativ e	If a business went from 'x' number of ESO's to 'y' number of ESO's, or none, it could be measured and monetised in terms of the 'cost' of each ESO (e.g. salary, pension, etc.) being saved.	
No requirement for licence if passing through harbour with explosives	2 (10%)	Quantitativ e	In DSHAR 1987, harbours had to be licensed for handling explosives, regardless of whether a vessel was loading/unloading explosives or just passing through. DGHAR 2016 has replaced this with a requirement for ships carrying explosives to notify the harbour master before passing through a harbour where they are not loading or unloading. The monetizable benefit would therefore be the reduction in license fees for harbours which are not involved in the loading/unloading and/or handling of explosives, yet have ships passing through which are carrying explosives.	
Greater flexibility	1 (5%)	Qualitative	Greater flexibility is again one of those benefits which tends to be subjective and qualitative (how would you define 'greater' flexibility? Can you put a number on it?). One possibility is that you assume that greater flexibility means that dutyholders can use their time more effectively and efficiently. This may, in turn, lead to time savings (which is a monetizable quantitative benefit).	
Greater	1 (5%)		N/A	
efficiency Clearer	1 (5%)		N/A	
notification	1 (0/0)		14/74	
Hountauton				

Themes	No. of respon ses	Type of benefit	Comments
Clearer responsibiliti	1 (5%)		N/A
Time	1 (5%)		N/A
Time, clearer regulations	1 (5%)		N/A
Total	20 (100%)		

- 67. Please note that the responses from single respondents have not been considered further (so are greyed-out) as they represent the views of individuals and may not reflect wide-spread benefits. The above analysis has consequently focused on benefits which multiple respondents have identified. ('Greater flexibility' has been included as it is mentioned as an example in the original question and could be seen to fall into the 'All of the above' category.)
- 68. A number of the additional benefits which were identified could potentially be quantitatively monetised (e.g. no ESO required; no requirement for licence *if passing through* harbour with explosives; and, to a lesser extent, less paperwork/shorter retention of records). While the benefits may be relatively minor due to small sample sizes, if they were scaled-up they could potentially represent significant savings due to DGHAR 2016. (Any scaling-up, however, would need to take account of the fact that the data comes from an opportunity sample and therefore may not be suitably representative of the *actual* target population i.e. DGHAR 2016 duty-holders. Scaling-up could then simply magnify any unrepresentative data.)
- 69. Following consideration, it was agreed that it would <u>not</u> be proportionate for the current PIR to try and quantify/monetise these identified benefits. It may, however, be something which the next PIR (in five years' time) may want to consider doing.
- 70. Using the above figures from the PIR, and applying them to the original IA's cost model, would produce the following findings.

Category of costs / benefits	Original IA estimates	Actuals from PIR
	*All businesses (except 'Freight transport by road') = 5,430	'Freight transport by road') = 5,430
Familiarisation (costs)	*Freight transport by road - Road Haulage Association (RHA) identified large	*Freight transport by road - Road Haulage Association (RHA) identified large

	businesses (>50 employees) = 250 <u>Total</u> businesses affected = 5,430 + 250 = 5,680	businesses (>50 employees) = 250 <u>Total</u> businesses affected = 5,430 + 250 = 5,680
	One person taking 3 hours at £36.22 per hour = £108.66	One person taking 5 hours at £36 per hour = £181.11
	5,680 x £108.66 = £617,188.80 = £617,000*	5,680 x £181.11 = £1,028,704.80 = £1,030,000*
Familiarisation (benefits)	*All businesses (except 'Freight transport by road') = 5,430 *Freight transport by road - Road Haulage Association (RHA) identified large businesses (>50 employees) = 250 Total businesses affected = 5,430 + 250 = 5,680	i
	Each business saving 21 minutes per year over the course of the ten-year appraisal period at £36.22 per hour = £12.68  5,680 x £12.68 = £72,022.40 = £72,000*	Each business saving 21 minutes per year over the course of the ten-year appraisal period at £36.22 per hour = £12.68  5,680 x £12.68 = £72,022.40 = £72,000*

\*rounded to 3 digits, front to back

71. Based on the data collected as part of the DGHAR 2016 PIR, it appears that the costs have increased by £413,000 over the 10-year appraisal period (from £617,000 to £1,030,000); this is an increase of two-thirds (67%). The driver for this increase is the amount of time taken by duty-holders in familiarising themselves with the new regulations. In the original IA it was estimated it would take 3 hours for duty-holders to familiarise themselves, whereas the feedback from the PIR is that this figure is closer to 5 hours. On the other side of the equation, the 21-minute annual savings benefit estimated in the original IA has been retained due to a lack of compelling data to suggest that it is something else. Although the original IA estimated the 21-minute saving as an illustrative example of what might be needed to break even in cost terms, it is a reasonable and cautious approach to retain the original familiarisation benefit without compelling evidence to change it given the compelling evidence to raise the familiarisation costs on the grounds that it is conservative to over-estimate new costs than to risk under-estimating them. (It is worth noting, however, that the data which

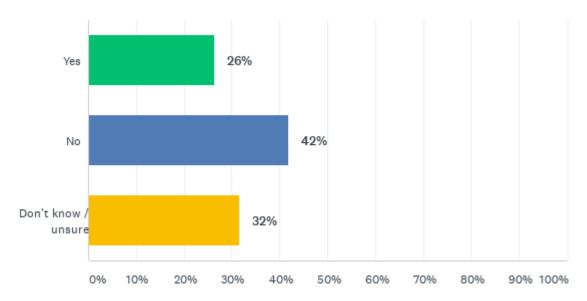
was collected suggests a lower figure of 14 minutes saved, so would have increased the difference between familiarisation costs and benefits further, with costs rising.)

	PIR Best Estimate Present Value	IA Best Estimate Present Value
Cost	£1,028,705	617,154.72
Benefit	£617,189	617,154.72
Net Present Value		
(NPV)	-£411,550	0
EANDCB	-£47,812	0

72. In summary, the estimated maximum annual cost of DGHAR 2016 is -£48,000 Equivalent Annual Net Cost to Business (EANCB), which is well below the business impact target (BIT) *de minimis* of £5 million. Additional benefits may be achievable and may be explored at the next PIR. The cost impact of this policy could remain as break even given limited data on familiarisation benefits and unmonetized benefits that are not proportionate to assess at this time.

# vi. Has the evidence identified any opportunities for reducing the burden on business?

73. The review clause in DGHAR 2016 stipulates that the objectives need to be assessed to see if they are still appropriate and the "extent to which they could be achieved with a system that imposes less regulation". To this end the survey asks directly 'Do you believe that the aims and objectives of DGHAR 2016 could be achieved with a system that imposes less regulation?'.



No. of	Evidence
respondents	
<i>n</i> = 173 (full or	Nine in ten (90%, 155) respondents to the survey
partial responses	answered this question (from the 173 who replied
to survey)	overall). While four in ten (42%, 65) respondents

No. of	Evidence
respondents	
	indicated that they didn't think the objectives of DGHAR
	2016 could be achieved with less regulation, a further
	quarter (26%, 41) suggested that the objective could be
	achieved with less regulation. The final third (32%) didn't
	know or weren't sure.

74. Of the 41 respondents who indicated that the objectives of DGHAR 2016 could be achieved with a system which imposes less regulation, over half (56%, 23) provided further information. These responses fell into the following themes.

Themes	No. of
	responses
Simple guidance and regs	4 (17%)
Adequate regulation exists	3 (13%)
ACOP based	2 (9%)
Based on hazard classification	2 (9%)
Unclear	2 (9%)
Based on harbour rules	1 (4%)
Appropriate storage	1 (4%)
Combined policy	1 (4%)
Desk based review	1 (4%)
Duty-holders monitoring/regulating themselves	1 (4%)
Flexible and adaptable systems	1 (4%)
Goal setting regs	1 (4%)
Online guidance system	1 (4%)
Radio Frequency Identification (RFID) based system	1 (4%)
Site specific systems	1 (4%)
Total	23 (100%)

75. The proposals and ideas put forward by respondents as a replacement for the current DGHAR 2016 regulations were a mixed bag, with the 'top' two responses referencing 'regulation'. Four responses did, however, emphasise the need for any guidance and regulations to be simple and easy to understand and implement. Some of the suggestions provided included:

"Simple structure, guidelines and regulations. Try and avoid red tape and "if this ... then ... do something else" routine. Get grassroutes [sic] advice."

"A more clearer [sic] simple system would ensure less [sic] mistakes as those responsible could not miss-read [sic] what is required"

"To the point, straightforward and in plain English."

"I applaud the desire to simplify the legislation and give greater autonomy to Harbour Masters. The focus must be on ship to shore communication and appropriate storage facilities."

76. It is slightly unclear about whether respondents believe that the objectives of DGHAR (e.g. reduce the risk of such accidents by co-ordinating activities between ship and

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shore; and make it simpler and easier for duty-holders and those responsible for managing health and safety for workers to comply with the law) can be achieved in a less onerous system than DGHAR 2016. While a quarter appear to have this view, three-quarters of respondents either disagree or don't know. There is also no consistent option for what this alternate system would look like in the responses received; this may suggest that there is not a 'ready and waiting' alternate system in place which could be readily applied.

vii. How does the UK approach compare with the implementation of similar measures internationally, including how EU member states implemented EU requirements that are comparable or now form part of retained EU law, or how other countries have implemented international agreements?

77. DGHAR 2016 is domestic legislation extending only to Great Britain (GB). It was deemed disproportionate to compare it to other measures operating internationally – to this end no such assessment was undertaken.