

EXPLANATORY MEMORANDUM TO
THE MERCHANT SHIPPING (PREVENTION OF AIR POLLUTION FROM SHIPS)
(AMENDMENT) REGULATIONS 2021

2021 No. XXXX

1. Introduction

- 1.1 This explanatory memorandum has been prepared by the Department for Transport (“the Department”) and is laid before Parliament by Command of Her Majesty.
- 1.2 This memorandum contains information for the Joint Committee on Statutory Instruments.

2. Purpose of the instrument

- 2.1 This instrument implements changes that have been made to the International Convention for the Prevention of Pollution from Ships 1973 (“MARPOL”) which are designed to control sulphur oxide (“SO_x”) and nitrogen oxide (“NO_x”) emissions from ships. These changes limit the amount of sulphur in marine fuels that are used, or intended for use, by ships to 0.5% (by mass) or less. They also require that new ships and new engines be certified to meet the latest NO_x emission standards – both globally and when ships operate inside waters which have been designated as an ‘emission control area’ (“ECA”) by the International Maritime Organization (“IMO”).

3. Matters of special interest to Parliament

Matters of special interest to the Joint Committee on Statutory Instruments.

- 3.1 The Secondary Legislation Scrutiny Committee, in its 21st Report of Session 2017-19, included an exchange of correspondence between the Committee and the Department in relation to the implementation backlog of international maritime conventions. The Committee, in its 17th Report of Session 2019-21, included further correspondence from the Department which described steps it was taking to address the backlog. These Regulations are one of the statutory instruments which implement outstanding international obligations to which the Department referred in that correspondence.

Matters relevant to Standing Orders Nos. 83P and 83T of the Standing Orders of the House of Commons relating to Public Business (English Votes for English Laws)

- 3.2 The territorial application of this instrument includes Scotland and Northern Ireland.
- 3.3 The instrument is made under powers conferred by articles 2 and 3 of the Merchant Shipping (Prevention of Air Pollution from Ships) Order 2006 (SI 2006/1248), article 2 of the Merchant Shipping (Prevention of Pollution) (Law of the Sea Convention) Order 1996 and sections 128(5) and (6) and 306A of the Merchant Shipping Act 1995.

4. Extent and Territorial Application

- 4.1 The territorial extent of this instrument is the United Kingdom (UK).
- 4.2 The territorial application of this instrument is the UK and UK registered ships wherever they may be.

5. European Convention on Human Rights

- 5.1 The Parliamentary Under Secretary of State Robert Courts MP, has made the following statement regarding Human Rights:

“In my view the provisions of the Merchant Shipping (Prevention of Air Pollution from Ships) (Amendment) Regulations 2021 are compatible with the Convention rights.”

6. Legislative Context

- 6.1 UK legislation on emissions from shipping is primarily based on Annex VI of MARPOL (“Annex VI”) to which the UK is a Party, but some controls on SO_x emissions for shipping have also been introduced through the transposition of European Directives. Most of the European requirements are aligned with those in Annex VI, but others (e.g. the ‘at berth’ sulphur limits – paragraph 6.3) are additional.
- 6.2 This instrument amends the Merchant Shipping (Prevention of Air Pollution from Ships) Regulations 2008 (SI 2008/2924 - “the 2008 Regulations”) to implement revisions to Annex VI agreed in the IMO. Annex VI was modified by the Protocol of 1978 and refers to the prevention of air pollution from ships. Most of the current SO_x and NO_x limits for ships were adopted in 2008 as part of a major revision to Annex VI, and came into force on 1st July 2010.
- 6.3 The 2008 Regulations were amended by the Merchant Shipping (Prevention of Air Pollution from Ships) (Amendment) Regulations 2010 (SI 2010/895), to implement provisions contained in Council Directive 1999/32/EC of 26th April 1999 relating to a reduction in the sulphur content of certain liquid fuels. These included a requirement for ships at berth in a European Union (EU) port for more than two hours to switch to 0.1% sulphur fuel, and a requirement for regular passenger ships using EU ports not to use fuel which exceeds 1.5% sulphur.
- 6.4 The 2008 Regulations were further amended by the Merchant Shipping (Prevention of Air Pollution from Ships) and Motor Fuel (Composition and Content) (Amendment) Regulations 2014 (SI 2014/3076). These regulations implemented Directive 2012/33/EU of 21st November 2012 amending Council Directive 1993/32/EC as regards the sulphur content of marine fuels, which reduced within EU waters the maximum sulphur content of fuel used inside an ECA to 0.1%, and outside an ECA to 3.5% with effect from 1st January 2015, and further reduced the latter to 0.5% with effect from 1st January 2020.
- 6.5 Directives 1999/32/EC and 2012/33/EU were consolidated and repealed by Directive (EU) 2016/802 of 11th May 2016 relating to a reduction in the sulphur content of certain liquid fuels.

7. Policy background

What is being done and why?

- 7.1 Air pollution poses one of the biggest environmental threats to public health. Short-term exposure to high levels of air pollution can cause a range of effects including exacerbation of asthma, effects on lung function, increases in hospital admissions and mortality.
- 7.2 This instrument implements a series of pollution control measures agreed in the IMO, designed to reduce emissions of SO_x and NO_x from ships. This will allow the UK to

comply with its obligations as a Party to MARPOL and reduce the risk of reputational damage to the UK from not meeting our obligations. The new Regulations will also enable UK ship inspectors to enforce the international pollutant limits and standards more effectively (see paragraph 7.14 and 7.15).

- 7.3 The new international requirements are set out in Annex VI, which regulates emissions from shipping in two ways. Firstly, there are controls on emissions which apply globally to ships – such as the global 0.5% limit on the amount of sulphur contained in marine fuels that can be used, and the NO_x Tier I and Tier II standards for new engines. Then there are regional controls which impose stricter SO_x limits and the NO_x Tier III standard on ships engines when operating in waters that are designated as ECAs. There are currently four such areas:
- The North American ECA – extending 200 miles of the west and east coasts of the USA and Canada;
 - The US Caribbean ECA;
 - The Baltic Sea ECA;
 - The North Sea ECA (which includes the English Channel east of Falmouth).
- 7.4 Until 1st January 2020, ships operating outside an ECA were allowed to use fuel oil which has a sulphur content of up to 3.5%. In October 2016 – following a review on fuel availability – the IMO’s Marine Environment Protection Committee (MEPC 70) confirmed that a global 0.5% sulphur cap would come into force on 1 January 2020. The decision made by MEPC 70 was supported by the UK, because it meant that the implementation of IMO’s global sulphur cap would align with the implementation of the 0.5% sulphur limit in EU waters.
- 7.5 In October 2018 at MEPC 73, the UK supported additional measures to prevent ships using non-compliant fuel in international waters, where it is much harder to police the sulphur limits. Consequently, the IMO banned the carriage of fuel oil exceeding 0.5% sulphur in ships’ bunkers (i.e. in fuel tanks).
- 7.6 This instrument amends paragraph 2 of Schedule 2A of the 2008 Regulations to ban the use and carriage of marine fuel which has a sulphur content exceeding 0.5%. Our existing legislation already bans the use of fuel exceeding 0.5% limit in UK waters (implemented by SI 2014/3076), so the main impact of the measure will be on UK flagged vessels which operate outside of UK (and EU) waters.
- 7.7 Annex VI includes three standards (Tier I, Tier II and Tier III) to control NO_x emissions from ships’ engines based on the IMO’s NO_x Technical Code. The 2008 Regulations only require engines with a power output of 130kW or above constructed on or after 1st January 2000 to be certified to meet the NO_x Tier I standard. The new instrument updates the 2008 Regulations to apply the Tier I standard to engines installed on larger vessels between 1st January 1990 and 1st January 2000. It also applies a stricter NO_x Tier II standard to all new ships constructed on or after 1st January 2011 with a power output of more than 130kW. The instrument also updates Schedule 2 in the 2008 Regulations for ships exempted from NO_x emissions control, including engines for large recreational craft constructed before 1 January 2021.
- 7.8 Neither the global NO_x Tier I nor Tier II standards are particularly difficult to achieve and most ships’ engines are designed to comply with these limits without the need to use a post combustion abatement technology. NO_x Tier III is much stricter however,

reducing NOx emissions from new ships by around three quarters. To comply, most ships within scope will either need to use an effective mitigation technology such as a selective catalytic reduction system, or use an alternative fuel such as liquefied natural gas. However, NOx Tier III only applies to new ships when operating inside an ECA; for the rest of the time they need only comply with the NOx Tier II standard.

- 7.9 The new instrument applies the NOx Tier III standard to new ships constructed since 1st January 2021 that operate in the North Sea and the Baltic Sea ECAs. It also acknowledges that Tier III standards have applied to new ships operating in the North American and US Caribbean ECAs since 2016. A new schedule (Schedule 2ZA) exempts ships from the NOx Tier III requirements if they suffer a malfunction and need to enter an ECA for repairs, or when conducting sea trials for a new engine.
- 7.10 As well as amendments to the global sulphur cap and NOx standards, this instrument makes other changes to update and align domestic legislation with Annex VI. The most significant ones are explained in paragraphs 7.11 to 7.16 below.
- 7.11 Ambulatory provision (within the meaning of section 306A(4) of the Merchant Shipping Act 1995) is made in relation to references in the 2008 Regulations to the Convention and its Annexes, including Annex VI. This will facilitate the implementation of subsequent modifications to Annex VI by reducing the need for domestic legislation. One consequence of this, is that Schedule 3 (information to be included in a bunker delivery note) of the 2008 Regulations is no longer needed and has been revoked. The latest version of the bunker delivery note for fuel suppliers is contained in Marine Information Notice MIN 610.
- 7.12 The ambulatory reference procedure under section 306A will allow future amendments to the technical provisions in Annex VI to be incorporated automatically into domestic law. Nevertheless, the UK will continue to scrutinise (and if necessary, object to) proposed changes considered at the IMO and assess their impact well before any amendment is due to come into force. UK industry and workers' representatives will also be able to influence and be involved at an early stage when the UK negotiating strategy is being formulated.
- 7.13 If the UK strongly objects to an amendment which is due to come into force internationally, the Secretary of State will make amending secondary legislation to prevent that amendment coming into force domestically. An amendment that is accepted will be publicised in advance of its coming into force date by means of a Parliamentary Statement to both Houses of Parliament. It could also be found by way of a Marine Guidance Note, which will be available from the Maritime and Coastguard Agency (MCA) at Spring Place, 105 Commercial Road, Southampton SO15 1EG and on <https://www.gov.uk>.
- 7.14 Regulation 32(1) (offences) of the 2008 Regulations is amended to enable more effective enforcement action to be taken against owners, managers and demise charterers, as well as the masters of ships, in respect of certain existing offences and to create new offences in respect of the new requirements.
- 7.15 Currently, inspectors from the MCA have a limited number of sanctions they can apply to foreign registered ships that breach Annex VI requirements which the UK has yet to implement. Ship inspectors can record a deficiency and temporarily detain the vessel, or order the ship to debunker if the ship is using non-compliant fuel. But until the new instrument comes into force, they will not be able to use the criminal justice system to impose fines. This sanction would be an important deterrent for

foreign registered vessels calling at UK ports, particularly those which are persistent offenders. Nevertheless, enforcement action by the MCA through the Courts is extremely rare and would be funded through existing resources if it were to occur.

7.16 A number of definitions, including ‘fuel oil’ and ‘emission control area’ are updated to align these with the current versions in Annex VI. The definition of ‘electronic record book’ has also been added so that information needed for operations required under Annex VI can be entered and stored electronically.

7.17 This instrument does not affect the existing 0.1% sulphur requirements for ships at berth in a UK port, which are being retained. However, obsolete references in the 2008 Regulations are removed, most notably, references in Schedule 2A to the 1% sulphur limit for ships inside an ECA, which expired on 31 December 2014. Paragraph 3 of Schedule 2A, which applied a 1.5% sulphur limit for passenger ships operating outside an ECA, has also been removed. Passenger ships, like other vessels, are now subject to the stricter 0.5% sulphur limit.

8. European Union Withdrawal and Future Relationship

8.1 This instrument does not relate to withdrawal from the EU / trigger the statement requirements under the European Union (Withdrawal) Act 2018 (c. 16).

9. Consolidation

9.1 No consolidation is necessary.

10. Consultation outcome

10.1 Industry was represented at the IMO through non-governmental organisations when the sulphur limits and NO_x standards were agreed. They were heavily involved in early stage policy development, contributing to working and drafting groups where policy is designed, as well as participating in plenary sessions where policy is examined. They were also involved when the IMO considered and published guidelines to help shipowners comply with the 0.5% global sulphur cap.

10.2 The IMO requirements are widely known across the sector. The Department did not conduct a formal consultation exercise, but a draft of this instrument was discussed with key stakeholders, such as the UK Chamber of Shipping and the fuel suppliers, during 2020. The feedback received confirmed that industry is content.

11. Guidance

11.1 Guidance for industry about amendments to the SO_x and NO_x regime has been published by the MCA in Merchant Shipping Notice MSN 1819 and MSN 1819 (Amendment). Advice can also be found in Marine Information Notice MIN 519 and MIN 610. A copy of the guidance and information notices can be found at www.gov.uk/topic/ships-cargoes/m-notices.

12. Impact

12.1 The impact on business, charities or voluntary bodies is estimated to be approximately £118 million per year (equivalent annual net direct cost to business). More specifically, this is the cost to UK owned ships of complying with the international requirements - which are not already incorporated in UK legislation.

- 12.2 Costs resulting from this instrument would be much lower than this, because ships which do not comply with international requirements risk being detained, fined, or banned from foreign ports. Regardless of what legislation is in the place in the UK, it is expected that UK owned ships operating internationally would need to comply with the new limits and standards to avoid enforcement action in foreign ports. Consequently, the costs of this instrument to UK owned ships operating internationally are considered to be neutral.
- 12.3 In contrast, without this instrument, the UK would not be able to effectively enforce the relevant requirements for UK owned ships that only operate on domestic voyages between UK ports. The additional costs of this instrument to UK owned ships that only operate domestically are estimated at around £2 million per year.
- 12.4 There is no significant impact on the public sector.
- 12.5 A full Impact Assessment is submitted with this memorandum and published alongside the Explanatory Memorandum on the legislation.gov.uk website.

13. Regulating small business

- 13.1 The legislation applies to activities that are undertaken by small businesses.
- 13.2 To minimise the impact of the requirements on small businesses (employing up to 50 people), the approach taken is to implement the derogations and exemptions which are permitted under Annex VI.
- 13.3 The basis for the final decision on what action to take to assist small businesses is constrained by what is permitted under international law. It would not be practical to apply different standards to vessels operated by these companies and any attempt to do so could distort competition. The regulations are an overall target and the legislation does not prescribe the means or technology that businesses must use to comply with the new sulphur limits and NOx standards. This allows businesses to meet those targets in the most cost-effective way for their business model and size.

14. Monitoring & review

- 14.1 The approach to monitoring of this legislation is to undertake a post implementation review of the 2008 Regulations, as amended, every 5 years. The Department also consults key stakeholders when proposals to amend Annex VI are discussed at the IMO.
- 14.2 A statutory review clause is included in the 2008 Regulations.

15. Contact

- 15.1 Ian Timpson at the Department for Transport, telephone: 020 7944 4446 or email: ian.timpson@dft.gov.uk, can be contacted with any queries regarding the instrument.
- 15.2 Sandra Dewhurst and Sarah Francis, Deputy Directors of Maritime Environment, Technology and International Division at the Department for Transport can confirm that this Explanatory Memorandum meets the required standard.
- 15.3 Robert Courts MP, Parliamentary Under Secretary of State at the Department for Transport can confirm that this Explanatory Memorandum meets the required standard.

Annex

Statements under the European Union (Withdrawal) Act 2018 and the European Union (Future Relationship) Act 2020

Part 1A

Table of Statements under the 2018 Act

This table sets out the statements that may be required under the 2018 Act.

Statement	Where the requirement sits	To whom it applies	What it requires
Sifting	Paragraphs 3(3), 3(7) and 17(3) and 17(7) of Schedule 7	Ministers of the Crown exercising sections 8(1) or 23(1) to make a Negative SI	Explain why the instrument should be subject to the negative procedure and, if applicable, why they disagree with the recommendation(s) of the SLSC/Sifting Committees
Appropriateness	Sub-paragraph (2) of paragraph 28, Schedule 7	Ministers of the Crown exercising sections 8(1) or 23(1) or jointly exercising powers in Schedule 2	A statement that the SI does no more than is appropriate.
Good Reasons	Sub-paragraph (3) of paragraph 28, Schedule 7	Ministers of the Crown exercising sections 8(1) or 23(1) or jointly exercising powers in Schedule 2	Explain the good reasons for making the instrument and that what is being done is a reasonable course of action.
Equalities	Sub-paragraphs (4) and (5) of paragraph 28, Schedule 7	Ministers of the Crown exercising sections 8(1) or 23(1) or jointly exercising powers in Schedule 2	Explain what, if any, amendment, repeals or revocations are being made to the Equalities Acts 2006 and 2010 and legislation made under them. State that the Minister has had due regard to the need to eliminate discrimination and other conduct prohibited under the Equality Act 2010.
Explanations	Sub-paragraph (6) of paragraph 28, Schedule 7	Ministers of the Crown exercising sections 8(1) or 23(1) or jointly exercising powers in Schedule 2 In addition to the statutory obligation the Government has made a political commitment to include these statements alongside all EUWA SIs	Explain the instrument, identify the relevant law before IP completion day, explain the instrument's effect on retained EU law and give information about the purpose of the instrument, e.g., whether minor or technical changes only are intended to the EU retained law.

Criminal offences	Sub-paragraphs (3) and (7) of paragraph 28, Schedule 7	Ministers of the Crown exercising sections 8(1) or 23(1) or jointly exercising powers in Schedule 2 to create a criminal offence	Set out the ‘good reasons’ for creating a criminal offence, and the penalty attached.
Sub-delegation	Paragraph 30, Schedule 7	Ministers of the Crown exercising section 8 or part 1 of Schedule 4 to create a legislative power exercisable not by a Minister of the Crown or a Devolved Authority by Statutory Instrument.	State why it is appropriate to create such a sub-delegated power.
Urgency	Paragraph 34, Schedule 7	Ministers of the Crown using the urgent procedure in paragraphs 5 or 19, Schedule 7.	Statement of the reasons for the Minister’s opinion that the SI is urgent.
Scrutiny statement where amending regulations under 2(2) ECA 1972	Paragraph 14, Schedule 8	Anybody making an SI after IP completion day under powers conferred before the start of the 2017-19 session of Parliament which modifies subordinate legislation made under s. 2(2) ECA	Statement setting out: a) the steps which the relevant authority has taken to make the draft instrument published in accordance with paragraph 16(2), Schedule 8 available to each House of Parliament, b) containing information about the relevant authority’s response to— (i) any recommendations made by a committee of either House of Parliament about the published draft instrument, and (ii) any other representations made to the relevant authority about the published draft instrument, and, c) containing any other information that the relevant authority considers appropriate in relation to the scrutiny of the instrument or draft instrument which is to be laid.
Explanations where amending regulations under 2(2) ECA 1972	Paragraph 15, Schedule 8	Anybody making an SI after IP completion day under powers outside the European Union (Withdrawal) Act 2018 which modifies subordinate legislation made under s. 2(2) ECA	Statement explaining the good reasons for modifying the instrument made under s. 2(2) ECA, identifying the relevant law before IP completion day, and explaining the instrument’s effect on retained EU law.

Part 1B

Table of Statements under the 2020 Act

This table sets out the statements that may be required under the 2020 Act.

Statement	Where the requirement sits	To whom it applies	What it requires
Sifting	Paragraph 8 Schedule 5	Ministers of the Crown exercising section 31 to make a Negative SI	Explain why the instrument should be subject to the negative procedure and, if applicable, why they disagree with the recommendation(s) of the SLSC/Sifting Committees

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Part 2

Statements required under the European Union (Withdrawal) 2018 Act or the European Union (Future Relationship) Act 2020

1. **Scrutiny statement where amending or revoking regulations etc. made under made under section 2(2) of the European Communities Act 1972**

1.1 The Parliamentary Under Secretary of State Robert Courts MP has made the following statement regarding this instrument:

“I have taken the following steps to make the draft instrument published in accordance with paragraph 14(2) of Schedule 8 to the European Union (Withdrawal) Act 2018 available to each House of Parliament: a draft of the Merchant Shipping (Prevention of Air Pollution from Ships) (Amendment) Regulations 2021 was published on the Gov.UK website on 27th May and the Written Ministerial Statement title was tabled in the House of Commons on 26th May. Copies of the draft instrument were also deposited in the libraries of both Houses of Parliament on 27th May. The clerks to the European Scrutiny Committee, the Transport Select Committee and the House of Lords Secondary Legislation Scrutiny Committee were also notified of the publication of the draft of the Regulations.

1.2 [The following recommendations and representations were received and responded to as follows.]

2. **Explanations where amending or revoking regulations etc. made under section 2(2) of the European Communities Act 1972**

2.1 The Parliamentary Under Secretary of State Robert Courts MP has made the following statement regarding regulations made under the European Communities Act 1972:

“In my opinion there are good reasons for the Merchant Shipping (Prevention of Air Pollution from Ships) (Amendment) Regulations 2021 to amend certain provisions of the Merchant Shipping (Prevention of Air Pollution from Ships) Regulations 2008 (“the 2008 Regulations”) that were inserted by:

- the Merchant Shipping (Prevention of Air Pollution from Ships) (Amendment) Regulations 2010 (“the 2010 Regulations”); and

- the Merchant Shipping (Prevention of Air Pollution from Ships) and Motor Fuel (Composition and Content) (Amendment) Regulations 2014 (“the 2014 Regulations”), both of which were made under section 2(2) of the European Communities Act 1972.

The 2010 Regulations implemented Council Directive 1999/32/EC of 26th April 1999 relating to a reduction in the sulphur content of certain liquid fuels. The 2014 Regulations implemented Directive 2012/33/EU of 21st November 2012 amending Council Directive 1993/32/EC as regards the sulphur content of marine fuels. These two Directives were later consolidated and repealed by Directive (EU) 2016/802 of 11th May 2016 relating to a reduction in the sulphur content of certain liquid fuels.

The effect of the new Regulations is to remove references to sulphur limits for marine fuels inserted in the 2008 Regulations by the 2010 and 2014 Regulations which have become obsolete.

Specifically, regulations 2(8)(b) and (16)(b), (c) and (e) of the new Regulations remove the following references to sulphur limits in the following provisions of the 2008 Regulations:

- in regulation 25(6) and paragraphs 2 and 5 of Schedule 2A, to the 1% sulphur limit for ships operating inside an emission control area (“ECA”), which expired on 31st December 2014, and the 3.5% sulphur limit for ships operating outside an ECA, which has been superseded by the 0.5% limit with effect from 1st January 2020; and
- in paragraph 3 of Schedule 2A, to a 1.5% sulphur limit which applied to passenger ships operating outside an ECA because, like all vessels, these are now subject to the stricter 0.5% sulphur limit.

However, the new Regulations do not affect stricter sulphur limits that were inserted in the 2008 Regulations under section 2(2) of the European Communities Act 1972, such as the 0.1% sulphur requirements for ships at berth in a UK port.

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