EXPLANATORY MEMORANDUM TO

THE WEIGHTS AND MEASURES ACT 1985 (DEFINITIONS OF "METRE" AND "KILOGRAM") (AMENDMENT) ORDER 2020

2020 No. [XXXX]

1. Introduction

1.1 This explanatory memorandum has been prepared by the Department for Business, Energy and Industrial Strategy 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 draft Order amends the definitions of the metre and the kilogram in Schedule 1 to the Weights and Measures Act 1985, to come into force on 13th June 2020. It completes the UK implementation of Commission Directive 2019/1258, thereby ensuring definitions of units forming part of the International System of Units (SI units) are consistent across UK legislation. The Commission Directive amends Council Directive 80/181/EEC, which defines the units of measurement to be used in the European Union and, by virtue of the Withdrawal Agreement, the UK, reflecting new international definitions adopted under the International System of Units. This draft Order is associated with the Weights and Measures Act 1985 (Amendment) and Units of Measurement Regulations 1986 (Amendment) Regulations 2019 (SI 2019/1211), which also implements the Commission Directive and also comes into force on 13th June 2020.

3. Matters of special interest to Parliament

Matters of special interest to the Joint Committee on Statutory Instruments

3.1 This draft Order amends primary legislation. The amendments are technical in nature, intended to provide for consistency with European Union and international scientific standards (explained in more detail in sections 6 and 7 of this Memorandum).

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 In the view of the Department, for the purposes of House of Commons Standing Order No. 83P of the Standing Orders of the House of Commons relating to Public Business, the subject-matter of this instrument would not be within the devolved legislative competence of any of the Northern Ireland Assembly as a transferred matter, the Scottish Parliament or the National Assembly for Wales if equivalent provision in relation to the relevant territory were included in an Act of the relevant devolved legislature.

4. Extent and Territorial Application

4.1 The territorial extent of this instrument is the United Kingdom.

4.2 The territorial application is to the United Kingdom.

5. European Convention on Human Rights

5.1 Paul Scully, Minister for Small Business, Consumers and Corporate Responsibility has made the following statement regarding Human Rights:

"In my view the provisions of the Weights and Measures Act 1985 (Definition of "Metre" and "Kilogram") (Amendment) Order 2020 are compatible with the Convention on Human Rights."

6. Legislative Context

6.1 The Order partially implements Commission Directive 2019/1258 of 23rd July 2019 amending, for the purpose of its adaptation to technical progress, the Annex to Council Directive 80/181/EEC as regards the definitions of the SI base units ("the Commission Directive"). The Commission Directive is made under Article 16 of Directive 2009/34/EC of the European Parliament and of the Council of 23 April 2009 relating to common provisions for both measuring instruments and methods of metrological control. Article 16 allows the Commission to make certain amendments for the purposes of adapting legislation in light of technical progress.

6.2 Council Directive 80/181/EEC of 20 December 1979 on the approximation of the laws of the Member States relating to units of measurement and on the repeal of Directive 71/354/EEC ("the Council Directive") defines in European Union law the legal units of measurement relating to measuring instruments used, measurements made and indications of quantity expressed in units of measurement. (There are certain exceptions in respect of measurements used in the field of air and sea transport and rail traffic.) Section 1.1 of Chapter 1 to the Annex of the Council Directive defines the seven base units of the International System of Units ("the SI base units") (namely the second, metre, kilogram, ampere, kelvin, mole, and the candela) as well as the SI derived unit, the degree Celsius. The Commission Directive provides for new definitions for those units, by substituting a new section 1.1 in Chapter 1 to the Annex to the Council Directive. Member states and the UK are required to give effect to these new definitions on 13th June 2020.

6.3 The SI base units in European Union law derive from internationally agreed conventions as to weights and measures under the International System of Units (for which the internationally recognised abbreviation is "SI"). The International System of Units was established by the General Conference on Weights and Measures in 1960. At its 26th meeting of 13th to 16th November 2018, the General Conference adopted new definitions of the seven SI base units mentioned above. (Paragraph 7.3 below explains more about the new definitions.)

6.4 In UK law, SI base units are defined in Schedule 1 to the Units of Measurement Regulations 1986 (SI 1986/1082) ("the 1986 Regulations"), which contains definitions of all seven SI base units; and in Schedule 1 to the Weights and Measures Act 1985, which contains definitions of the metre, the kilogram and the ampere (Parts 1, 5 and 7, respectively of that Schedule).

6.5 The Commission Directive is partly implemented by the Weights and Measures Act 1985 (Amendment) and Units of Measurement Regulations 1986 (Amendment) Regulations 2019 (SI 2019/1211) ("the 2019 Regulations") made under section 2(2) of the European Communities Act 1972. The 2019 Regulations updated the seven SI base units and the definition for "Celsius" in Schedule 1 to the Units of Measurement Regulations 1986 as well as the definition of the ampere (and purely as a consequence, the watt) in the Weights and Measures Act 1985.

6.6 Article 2 of this draft Order, to be made using powers in the Weights and Measures Act 1985, completes the implementation of the Commission Directive by amending Schedule 1 to that Act, to update the definition of the metre and the kilogram as set out in the Annex to the Commission Directive.

6.7 Both the 2019 Regulations and this draft Order are provided to come into force on 13th June 2020 to ensure complete implementation, on time, of the Commission Directive, and to avoid inconsistency in the statute book as between the 1986 Regulations and the Weights and Measures Act 1985.

7. Policy background

What is being done and why?

7.1 The International Bureau of Weights and Measures is an international organisation established by the Metre Convention (signed in 1875), through which member countries act together on matters related to measurement science and measurement standards. As at 13th January 2020, the International Bureau of Weights and Measures, had sixty-two Member States (including the UK) and forty Associate States and Economies. The International Bureau of Weights and Measures plays a key role in securing international agreement on units of measurement. One of its key objectives is "[t]o be the coordinator of the world-wide measurement system, ensuring it gives comparable and internationally accepted measurement results."

7.2 The current world-wide measurement system coordinated by the International Bureau of Weights and Measures is known as the International System of Units ("SI"), nomenclature established by the 11th meeting of the General Conference on Weights and Measures in 1960 to describe the metric system of metrology arising out of the Metre Convention. Until recently, the SI was defined in terms of seven SI base units. The seven SI base units were chosen for historical reasons, and were, by convention, regarded as dimensionally independent. These are: the metre, the kilogram, the second, the ampere, the kelvin, the mole, and the candela.

7.3 At the 26th meeting of the General Conference of Weights and Measures, comprising delegates of States Parties to the Metre Convention and observers from associate states, agreement was reached to revise the SI so that it is based on the fundamental constants of physics and other constants of nature. The seven SI base units were accordingly redefined so as to be derived from those constants. The revised definitions reflect the aim of the International Bureau of Weights and Measures to ensure the SI is uniform and accessible worldwide for the purposes of international trade, high technology manufacturing, human health and safety, protection of the environment, global climate studies and the basic science underpinning these. The new definitions ensure the SI base units are accurate, and stable in the long term for all parties worldwide. It was deemed the definitions came into effect under the Convention on 20th May 2019, which is known as World Metrology Day.

7.4 The draft Order, together with the 2019 Regulations, are provided to come into force on 13th June 2020, to ensure that the UK keeps pace with European Union and world developments in metrology and meets its obligations under the EU law as applied under the Withdrawal Agreement.

8. European Union (Withdrawal) Act/Withdrawal of the United Kingdom from the European Union

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

9. Consolidation

9.1 There are no plans at this time to consolidate the legislation amended by this Order.

10. Consultation outcome

10.1 Under section 86 of the Weights and Measures Act 1985 statutory consultation was required in relation to this Order. On 13th August 2019, the Office of Product Safety and Standards wrote to appropriate UK organisations and bodies setting out the proposed legislative changes and providing those organisations and bodies with the opportunity to comment or provide views. Consultees included the National Physical Laboratory, the British Standards Institute, the UK Accreditation Service, the Royal Society, the Royal Academy of Engineering, the Institute of Physics, and the Institute of Measurement and Control. No issues have arisen out of that exercise.

10.2 The Office of Product Safety and Standards (an Office within BEIS) has also written to the Devolved Administrations in Wales and Scotland, and Northern Ireland to set out the approach the UK government is taking with respect to the implementation of Commission Directive 2019/1258.

11. Guidance

11.1 BEIS officials have engaged with metrology stakeholders to explain how the new definitions in this Statutory Instrument are being implemented in UK legislation. The UK's National Physical Laboratory, a public corporation owned by the Department for Business, Energy and Industrial Strategy and which is the UK's National Metrology Institute, has changed its reference materials and information to its stakeholders and the public on its website on the changes.

12. Impact

12.1 Although this Order changes the definitions for the SI base units, the metre and the kilogram, this has not changed the value of the units of measurement themselves. For example, under the old or new definitions, a kilogram will still have the same mass and a metre will still be the same length. Business neither needs to familiarise itself with the new definitions nor change any measuring or weighing equipment. As a result, there is no, or no significant, impact on business, charities or voluntary bodies.

12.2 There is no, or no significant, impact on the public sector.

12.3 An Impact Assessment has not been prepared for this instrument because as it does not impact business or consumers.

13. Regulating small business

13.1 The legislation does not apply to activities that are undertaken by small businesses. The amended definitions have no particular application to small businesses and for the reasons set out in paragraph 12.1, there are no anticipated regulatory impacts on small businesses.

14. Monitoring & review

14.1 The Department for Business, Energy and Industrial Strategy does not intend to monitor these Regulations. Since no, or no significant, impact on business is expected and since changes to the definitions of units of measurement are occasional and agreed at the international level rather than domestically, including a review clause in these Regulations would be inappropriate.

15. Contact

15.1 Maggie Slinger at the Department for Business, Energy and Industrial Strategy, email: Maggie.slinger@beis.gov.uk with any queries regarding the instrument.

15.2 Sarah Smith, Deputy Director for the Policy and Briefing Unit, at the Department for Business, Energy and Industrial Strategy can confirm that this Explanatory Memorandum meets the required standard.

15.3 Paul Scully, Minister for Small Business, Consumers and Corporate Responsibility at the Department for Business, Energy and Industrial Strategy can confirm that this Explanatory Memorandum meets the required standard.