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DRAFT STATUTORY INSTRUMENTS

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**2020 No.**

**The Enterprise Act 2002 (Share of Supply) (Amendment) Order 2020**

**Relevant enterprises**

- 3.—(1) Section 23A(1) is amended as follows.  
(2) For section 23A, substitute—

**“23A Relevant enterprises**

- (1) In section 23 “relevant enterprise” means an enterprise falling within subsection (2) or (3).
- (2) An enterprise falls within this subsection if its activities consist in or include—
- (a) developing or producing restricted goods;
  - (b) holding information (including but not limited to information comprised in software and documents such as blueprints, manuals, diagrams and designs) that—
    - (i) is capable of use in connection with the development or production of restricted goods; and
    - (ii) is responsible for achieving or exceeding the performance levels, characteristics or functions of the restricted goods that are specified in the relevant export control legislation;
  - (c) owning, creating or supplying intellectual property relating to the functional capability of—
    - (i) computer processing units;
    - (ii) the instruction set architecture for such units;
    - (iii) computer code that provides low level control for such units;
  - (d) designing, maintaining or providing support for the secure provisioning or management of—
    - (i) roots of trust of computer processing units;
    - (ii) computer code that provides low level control for such units;
  - (e) research into—
    - (i) quantum computing or simulation;
    - (ii) quantum imaging, sensing, timing or navigation;
    - (iii) quantum communications; or
    - (iv) quantum resistant cryptography;
  - (f) developing or producing anything designed for use in—
    - (i) quantum computing or simulation;

- (ii) quantum imaging, sensing, timing or navigation;
    - (iii) quantum communications; or
    - (iv) quantum resistant cryptography;
  - (g) supplying services employing—
    - (i) quantum computing or simulation;
    - (ii) quantum imaging, sensing, timing or navigation;
    - (iii) quantum communications; or
    - (iv) quantum resistant cryptography.
- (3) An enterprise falls within this subsection if its activities consist in or include—
- (a) developing or producing—
    - (i) advanced materials; or
    - (ii) any product where cryptographic authentication is its primary function;
  - (b) owning, creating or supplying intellectual property relating to the functional capability of advanced materials;
  - (c) research into—
    - (i) artificial intelligence;
    - (ii) cryptographic authentication; or
    - (iii) advanced materials;
  - (d) developing or producing anything designed for use in artificial intelligence;
  - (e) supplying services employing—
    - (i) artificial intelligence; or
    - (ii) cryptographic authentication;
  - (f) developing or producing anything designed as an enabler;
  - (g) providing know-how about or the use of enablers.
- (4) In this section—
- “advanced materials” means—
- (a) any materials that are capable of modifying (including in real time) the appearance, detectability, traceability or identification of any object to a human or to sensors within the range  $1.5 \times 10^{13}$  Hz up to and including ultraviolet;
  - (b) any alloys that are formed by chemical or electrochemical reduction of feedstocks in the solid state;
  - (c) any manufacturing processes that are involved in the solid state formation of alloys in or into crude or semi-fabricated forms, or powders for additive manufacturing, where “additive manufacturing” means a process of joining materials to make parts from three-dimensional model data; or
  - (d) any metamaterials that do not include—
    - (i) fibre-reinforced plastics in structural components, products or coatings with completely random dispersion of pigment or other filler; or
    - (ii) any packaged device components that are designed for civil application;
- “artificial intelligence” means technology enabling the programming or training of a device or software to use or process external data (independent of any further input or

programming) to carry out or undertake (with a view to achieving complex, specific tasks)—

- (a) automated data analysis or automated decision making; or
- (b) analogous processing and use of data or information;

“cryptographic authentication” means the method of verifying—

- (a) the identity of a person, user, process or device; or
- (b) the origin or content of a message, data or information, by means of electronic communication, where the method of verification has been encrypted or subject to other analogous application, to protect the authenticity, confidentiality and integrity of the matters set out in paragraphs (a) and (b);

“enabler” means any material or process which is not an advanced material but is used in the manufacture of an advanced material;

“feedstock” means a metal, polymer, ceramic or other material used to supply the manufacturing process used to produce an advanced material;

“intellectual property” means—

- (a) any patent, trade mark, registered design, copyright or design right,
- (b) any right under the law of a country or territory outside the United Kingdom corresponding to, or similar to, a right within paragraph (a); or
- (c) any information or technique not protected by a right within paragraph (a) or (b) but having industrial, commercial or other economic value;

“metamaterial” means a composite material in which the constituents are designed and spatially arranged through a rational design-led approach to change the manner in which electromagnetic, acoustic or vibrational energy interacts with the material, in order to achieve a property or performance that is not possible naturally and includes a metasurface and for this purpose “composite material” means a solid material formed from two or more constituents and “constituent” includes a region containing a vacuum, gas or liquid;

“metasurface” means a two-dimensional form of metamaterial which includes one or more layers of material that are intentionally patterned or textured (irrespective of whether they are periodic or not) through a rational design-led approach;

“quantum communications” means—

- (a) the transmission of information, utilising the properties of quantum mechanics, in particular superposition or entanglement, and
- (b) includes the establishment of cryptographic keys and the generation of true random numbers using a quantum physical process;

“quantum computing or simulation” means the study, simulation or realisation of systems that utilise certain properties of quantum mechanics, in particular superposition or entanglement, to process information, run algorithms or perform operations on data;

“quantum imaging” means utilising certain properties of quantum mechanics, in particular superposition or entanglement, to create images of objects with a resolution or other imaging criteria that is beyond what is possible in non-quantum optics;

“quantum navigation” means utilising certain properties of quantum mechanics, including measurements of suspensions of atoms or ions, to establish the location or movement of objects with a resolution or sensitivity that is beyond what is possible in non-quantum devices or systems;

“quantum resistant cryptography” means methods of securing information or data being transmitted or stored, including by non-quantum means, with a view to resisting attack by a quantum computer;

“quantum sensing” means utilising certain properties of quantum mechanics, including measurements of suspensions of atoms or ions, to determine a property or rate of change in the property of an object, or the effect of an object on a measurable quantity, with a resolution or sensitivity that is beyond what is possible in non-quantum devices or systems;

“quantum timing” means utilising certain properties of quantum mechanics, including measurements of suspensions of atoms or ions, to provide a timing signal with a resolution or sensitivity that is beyond what is possible in non-quantum devices or systems;

“relevant export control legislation” means—

- (a) Schedules 2 and 3 to the Export Control Order 2008<sup>(2)</sup>;
- (b) the Schedule to the Export of Radioactive Sources (Control) Order 2006;<sup>(3)</sup>
- (c) Annex I to Council Regulation (EC) No 428/2009<sup>(4)</sup>;

“restricted goods” means goods, software or information the export or transfer of which is controlled by virtue of their being specified in the relevant export control legislation but excluding any goods, software or information which are controlled only to the extent that they are prohibited from being exported or transferred to one country only;

“roots of trust” means—

- (a) hardware, firmware, or software components that are inherently trusted to perform critical security functions, and
- (b) includes cryptographic key material bound to a device that can identify the device or verify a digital signature to authenticate a remote entity.”

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(2) S.I. 2008/3231; Schedule 2 was substituted by S.I. 2017/85 and subsequently amended by S.I. 2017/697, S.I. 2018/165, S.I. 2018/939 and S.I. 2019/989 and Schedule 3 was substituted by S.I. 2010/2007 and subsequently amended by S.I. 2012/1910, S.I. 2014/1069, S.I. 2015/940, S.I. 2017/85, S.I. 2018/939, S.I. 2019/137 and S.I. 2019/1159.

(3) S.I. 2006/1846.

(4) OJ No L 134.5.2009, p.1, as amended by Commission Delegated Regulation (EU) 2017/2268 (OJ No L 334, 15.12.2017, p.1), Commission Delegated Regulation (EU) 2018/1922 (OJ No L 319, 14.12.2018, p.1) and Commission Delegated Regulation (EU) 2019/2199 (OJ No L 338, 30.12.2019, p.1).