

## EXPLANATORY STATEMENT

### Issued by the Authority of the Minister for Defence

#### *Customs Act 1901 Defence and Strategic Goods List Amendment Instrument 2016*

The *Defence and Strategic Goods List Amendment Instrument 2016* updates the Defence and Strategic Goods List (DSGL) which is the document formulated and published under paragraph 112(2A)(aa) of the *Customs Act 1901* by the Minister for Defence.

The DSGL is a legislative instrument for the purposes of the *Legislation Act 2003*, and will commence operation the day after registration.

### Overview and purpose

In many ways, the DSGL is the centrepiece of Australia's export control system. The purpose of the DSGL is to list the military and dual-use goods and technologies that are subject to export control regulation in Australia.

The DSGL is used by exporters and suppliers to identify which goods and technology are prohibited from being exported, supplied, published, or brokered without a permit first being obtained.

Defence Export Controls (DEC) is responsible for administering Australia's export controls and regulates the following:

- the export of military and dual-use goods and software;
- the supply and publication of DSGL Technology; and
- the brokering of goods and technology

that are listed in the DSGL.

DEC grants authorisations to export, supply, publish and broker in the form of permits, licences and approvals. DEC's mission is to ensure Australia exports responsibly and detailed information on its roles and functions is available on the DEC website: [www.defence.gov.au/deco/](http://www.defence.gov.au/deco/)

The DSGL is updated from time to time to ensure that it remains current.

The last amendment to the DSGL was made in April 2015.

### Construct of the DSGL

The DSGL is comprised of listed goods, software and technology that are derived from the control lists developed by the multilateral non-proliferation and export control regimes of which Australia is a member.<sup>1</sup> It includes equipment, assemblies

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<sup>1</sup> Australia is a member of the Wassenaar Arrangement, the Missile Technology Control Regime, the Australia Group and the Nuclear Suppliers Group.

and components, associated test, inspection and production equipment, materials, chemicals, software and technology. It is divided into two Parts.

Part 1 covers military and related goods – those goods, software and technologies designed or adapted for use by the armed forces or goods that are inherently lethal. These goods include:

- Military Goods, that is, those goods, software or technology that are designed or adapted for military purposes including parts and accessories thereof; and
- Non-Military Lethal Goods, that is, equipment that is inherently lethal, incapacitating or destructive such as non-military firearms, non-military ammunition and commercial explosives and initiators.

Part 2 covers those goods that have a dual use. Dual-use goods comprise equipment, software and technologies developed to meet commercial needs but which may be used either as military components or for the development or production of military systems or weapons of mass destruction.

Part 2 is further subdivided into 10 categories:

- Category 0 – Nuclear Materials;
- Category 1 – Materials, Chemicals, Micro-organisms and Toxins;
- Category 2 – Materials Processing;
- Category 3 – Electronics;
- Category 4 – Computers;
- Category 5 – Telecommunications and Information Security;
- Category 6 – Sensors and Lasers;
- Category 7 – Navigation and Avionics;
- Category 8 – Marine; and
- Category 9 – Aerospace and Propulsion.

### **The amendments**

This amending legislative instrument contains 54 amendments to the DSGL.<sup>2</sup> The majority of these amendments can be categorised as either new controls, deletions of previously existing controls, or modifications to existing controls.

Of these 54 amendments, 36 are changes which remove the requirement to obtain an approval prior to export, 14 of the amendments are either new controls or changes to existing controls that result in an expanded scope. The remaining 4 amendments are clarifications that do not involve a scope change.

DEC has assessed that overall, the amendments will have a limited impact on Australian exporters and researchers.

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<sup>2</sup> This number does not include minor editorial or typographical changes

## **Analysis of the changes in the *Defence and Strategic Goods List Amendment Instrument 2015***

The amendments do not substantially alter the nature or overall purpose of the DSGL. The amendments that result in effective changes to the DSGL are discussed below. Minor editorial changes where the scope of the control has not changed are not discussed here.

### **Munitions List**

ML1: Decontrol for “deactivated firearms”

The decontrol of firearms that maintain the appearance of a firearm and have all major parts either destroyed, permanently incapacitated or permanently immobilised such that they are incapable of being returned to original firing condition.

### **Category 0 – Nuclear Materials, Facilities and Equipment**

None.

### **Category 1 – Materials, Chemicals, Micro-organisms and Toxins**

1C002.c.2: New control for certain metal alloy powders, and alloys made from those powders, which are made in a controlled atmosphere via a plasma atomisation process.

*Impact: Will introduce the requirement for approval to be obtained before exporting these items.*

1C008.b: Decontrol of thermoplastic liquid crystal copolymers.

*Impact: Will remove the requirement for an approval.*

1C111.a.6: New control for 1,2-Dimethylaminoethylazide (DMAZ). (CAS 86147-04-8)

*Impact: Will introduce the requirement for approval to be obtained before exporting these items.*

1C350.66: New control for Diethylamine (CAS 109-89-7).

*Impact: Will introduce the requirement for approval to be obtained before exporting these items.*

1C351.a.40-42: New controls for the pathogens: Reconstructed 1918 influenza virus, Severe acute respiratory syndrome-related coronavirus (SARS-related coronavirus) and Suid herpesvirus 1.

*Impact: Will introduce the requirement for approval to be obtained before exporting these items.*

1E002.c.1.c.3: Decontrol of design and production technology for certain ceramic powders comprising platelets, whiskers or chopped fibres.

*Impact: Will reduce the requirement for an approval.*

1E002.d: Decontrol of aromatic polyamide fibre production technology.

*Impact: Will reduce the requirement for an approval.*

1E101: Decontrol of technology for the use of fibre and composite production equipment; and decontrol of technology for the use of materials designed for absorbing electromagnetic waves.

*Impact: Will reduce the requirement for an approval.*

1E201: Decontrol of technology for the use of:

- composite structures and laminates;
- certain metal alloys, metal alloy powders and certain fibrous and filamentary materials

*Impact: Will reduce the requirement for an approval.*

1E202 and 1E201: Decontrol of development and production and use technology for equipment designed to initiate charges and devices containing energetic materials.

*Impact: Will reduce the requirement for an approval.*

## **Category 2 – Materials Processing**

2B001.a-c: Updating of the controls for certain machine tools for turning, milling and grinding- the parameter ‘positioning accuracy’ has been replaced with ‘unidirectional repeatability’, with equivalent values. In addition some grinding machines with five or more axes have been decontrolled.

*Impact: Will reduce the requirement for an approval.*

2B352.e: Expansion of the controls on certain high-capacity freeze drying equipment. Those that undertake sterilisation with gas or a vapour are now controlled.

*Impact: Will introduce the requirement for approval to be obtained before exporting these items.*

2B352.f.2: Updating and minor reduction in scope of the controls for biocontainment chambers, isolators and biological safety cabinets.

*Impact: Will reduce the requirement for an approval.*

2B352.g: Minor expansion in the scope of the controls for aerosol challenge testing equipment. Certain nose-only exposure apparatus and closed animal restraint tubes designed for use with such apparatus are now controlled.

*Impact: Will introduce the requirement for approval to be obtained before exporting these items.*

2E101 and 2E201: Decontrol of technology for the use of:

- hot isostatic presses
- dimensional inspection and measuring systems
- certain robots
- certain machine tool assemblies and units: linear and rotary position feedback units, compound rotary tables and tilting spindles

*Impact: Will reduce the requirement for an approval.*

### **Category 3 – Electronics**

3A001.a.5.b.2: Effective decontrol of digital-to-analogue converters with a resolution of 12 bit or more having an adjusted update rate of 1250 (or less) MSPS (million samples per second).

*Impact: Will reduce the requirement for an approval.*

3A001.a.7: Effective decontrol of field programmable gate arrays (FPGAs) with either a maximum number of single-ended digital input/outputs less than or equal to 700, or an aggregate one-way peak serial transceiver data rate less than 500 Gb/s.

*Impact: Will reduce the requirement for an approval.*

3A001.b.7: Updating and effective decontrol of certain converters and harmonic mixers that are designed to extend the frequency range of signal analysers, signal generators, network analysers and microwave test receivers.

*Impact: Will reduce the requirement for an approval.*

3A001.b.10: Effective decontrol of certain microwave oscillators and oscillator assemblies. Those that operate only above 10kHz are no longer controlled.

*Impact: Will reduce the requirement for an approval.*

3A001.b.11.f and .g: Effective decontrol of some frequency synthesised electronic assemblies operating at frequencies between 75 - 90GHz. Those that have a frequency switching time less than 1 ms for frequency changes less than 2.2GHz are no longer controlled.

*Impact: Will reduce the requirement for an approval.*

3A002.d: Updating of the controls for signal generators, resulting in some effective decontrols. These decontrols are a function of both the frequency range and frequency switching times.

*Impact: Will reduce the requirement for an approval.*

3A002.e: Updating of the controls for network analysers, resulting in some effective decontrols, primarily some that operate in the 43.5 - 75GHz frequency range.

*Impact: Will reduce the requirement for an approval.*

3B001.f: Updating and lowering the scope of the controls for semiconductor lithography equipment. Those using a light source with a wavelength higher than 193nm, and those not capable of producing a pattern with a minimum resolvable feature size of 45nm or less, are no longer controlled.

*Impact: Will reduce the requirement for an approval.*

3E101 and 3E201: Decontrol of technology for the use of certain electronic items, including radiation-hardened electronics and those that operate at large temperature extremes. Specifically these decontrols apply to items listed in 3A001.a.1 and .2, 3A001.e.2 and .3, and 3A001.g.

*Impact: Will reduce the requirement for an approval.*

#### **Category 4 – Computers**

4D001.b.1 and 4E001.b.1: Updating and lowering the scope of the controls for software and technology for the development and production of digital computers. Development and production software and technology is now only controlled for digital computers having an adjusted peak performance above 1.0 Weighted TeraFLOPS.

*Impact: Will reduce the requirement for an approval.*

4D002: Decontrol of all software specially designed or modified to *support* Category 4 technology.

*Impact: Will remove the requirement for an approval.*

#### **Category 5 – Telecommunications and Information Security**

5D001.b: Decontrol of software designed or modified to support all Category 5 Part 1 technology except that to support missile telemetry and telecontrol equipment.

*Impact: Will reduce the requirement for an approval.*

5E001.c.1: Effective decontrol of technology for the development and production of telecommunications equipment with a total digital transfer rate of 560 Gbit/s or less.

*Impact: Will reduce the requirement for an approval.*

5A002.a.2: The control for equipment designed or modified to perform cryptanalytic functions now has some explanatory notes:

- ‘Cryptanalytic functions’ are stated as functions designed to defeat cryptographic mechanisms in order to derive confidential variables or sensitive data, including clear text, passwords or cryptographic keys.
- Systems or equipment designed or modified to perform cryptanalytic functions by means of reverse engineering are stated as being captured by 5A002.a.2.

*Impact: None - clarification only.*

5A002 Note l: Decontrol of routers switches and relays where the information security functionality is limited to the task of operations, administration or maintenance (OAM) implementing only published or commercial cryptographic standards.

*Impact: Will remove the requirement for an approval.*

5A002 Note m: Decontrol of general purpose computing equipment and servers where the information security functionality meets all of the following:

- uses only published or commercial cryptographic standards, and
- is either a CPU or integral to an operating system that is not otherwise controlled, or is limited to OAM of the equipment

*Impact: Will remove the requirement for an approval.*

5D002.c: For software having the characteristics or performing or simulating the functions of controlled encryption equipment, or software used to certify controlled software, there is now a decontrol note that exempts from control software limited to the tasks of OAM, implementing only published or commercial cryptographic standards.

*Impact: Will reduce the requirement for an approval.*

5D002.d and 5E002.b: A clarification on the controls for software and technology that enable an otherwise not controlled item to achieve the controlled performance levels. This enabling is clarified as being via “cryptographic activation”.

*Impact: None- clarification only.*

## Category 6 – Sensors and Lasers

6A001.a.1.a.2.a: Clarification of the control 3D sonar systems- when determining the sounding rate, the maximum in either direction is to be used. This parameter also now has the correct units (m/s).

*Impact: None - clarification only.*

6A001.a.1.a.3: Clarification of the control for marine side scan sonar and synthetic aperture sonar system. The control now explicitly states that specially designed transmitting and receiving acoustic arrays are also captured.

*Impact: None - clarification only.*

6A001.a.1.c: Updating and lowering the scope of control for acoustic projectors operating below 10 kHz.

*Impact: Will reduce the requirement for an approval.*

6A003.a.3: Updating and lowering the scope of control for electronic streak cameras- only those with a temporal resolution better than 50 ns are now controlled.

*Impact: Will reduce the requirement for an approval.*

6A003.b.4.b: Decontrol of thermal cameras configured for use only in civilian passenger vehicles with a gross weight less than 4.5 tonnes, which are solely to assist the driver in the safe operation of the vehicle. Thermal cameras configured for use only in passenger and vehicle ferries with a length of 65 m or greater are also decontrolled.

*Impact: Will reduce the requirement for an approval.*

6A004: Updating and effectively lowering of the scope of control for deformable mirrors, mirrors designed for beam steering mirror stages and steering, tracking, stabilisation and resonator alignment equipment. The controls now better focus on items with utility in military adaptive optics systems.

*Impact: Will reduce the requirement for an approval.*

6A005.e.3: New controls for certain fibre laser components: multimode to multimode fused tapered fibre combiners, single-mode to multimode fused tapered fibre combiners and multi-layer dielectric gratings.

*Impact: Will introduce the requirement for approval to be obtained before exporting these items.*



6C005: New control for certain rare-earth-metal doped double-clad optical fibres for use in fibre lasers operating at either 975-1150 nm, or above 1530 nm.

*Impact: Will introduce the requirement for approval to be obtained before exporting these items.*

6D003.d: New control for software specially designed to maintain the alignment and phasing of segmented mirror systems, that consist of mirror segments having a diameter or major axis length equal to or larger than 1 m.

*Impact: Will introduce the requirement for approval to be obtained before exporting these items.*

6E101 and 6E201: Effective decontrol of technology for the use of:

- thermal sensors, image intensifier tubes, monospectral imaging sensors, multispectral imaging sensors
- cameras containing the all of the above sensors
- gravity meters and gravity gradiometers
- radar systems
- certain high-powered lasers (those captured in 6A005.a.2., 6A005.b.2., 6A005.b.3., 6A005.b.4., 6A005.b.6., 6A005.c.2., 6A005.d.3.c., 6A005.d.4.c)

*Impact: Will reduce the requirement for an approval.*

### **Category 7 – Navigation and Avionics**

7E004.d.7 and .8: New control for technology for deriving the functional requirements of certain high performance fly-by-wire systems.

*Impact: Will introduce the requirement for approval to be obtained before exporting these items.*

7E101: Effective decontrol of technology for the use of:

- accelerometers
- gyroscopes
- inertial navigation systems
- star trackers
- global navigation satellite systems
- airborne altimeters
- production, test, calibration or alignment equipment for the above items
- equipment specially designed to characterise mirrors for ring laser gyroscopes

*Impact: Will reduce the requirement for an approval.*

## Category 8 – Marine

8A001 and 8A002: Decontrol of:

- surface-effect vehicles
- hydrofoil vessels
- small waterplane area vessels
- skirts, seals and fingers for the above vessels
- lift fans, fully submerged subcavitating or supercavitating hydrofoils, active control systems and propellers for the above vessels

*Impact: Will remove the requirement for an approval. However technology for the development of these vessels is now controlled in 8E002.*

8E002: New controls for development and production technology for:

- surface-effect vehicles (fully skirted) with a maximum, fully loaded design speed above 30 knots in a significant wave height of 1.25 m or more, a cushion pressure exceed 2830 Pa and a light-ship-to-full-load displacement ratio of less than 0.70.
- surface-effect vehicles with a maximum fully loaded design speed exceeding 40 knots in a significant wave height of 3.25 m or more
- Hydrofoil vessels with active systems for automatically controlling foil systems, with a maximum design speed, fully loaded, of 40 knots or more in a significant wave height of 3.25 m or more
- Small waterplane area vessels with either a full load displacement exceeding 500 tonnes with a maximum design speed, fully loaded, exceeding 35 knots in a significant wave height of 3.25 m or more, or a full load displacement exceeding 1,500 tonnes with a maximum design speed, fully loaded, exceeding 25 knots in a significant wave height of 4 m or more

*Impact: Will introduce the requirement for approval to be obtained before exporting these items.*

## Category 9 – Aerospace and Propulsion

9A004 and 9D005: New control for spacecraft/satellite systems for command and telemetry handling, payload data handling and attitude and orbit control, certain payloads and ground-based telemetry and telecommand equipment and simulators, and software specially designed or modified for the operation of these items.

*Impact: Will introduce the requirement for approval to be obtained before exporting these items.*

9A012: Lowering the scope of control for UAVs. The controls now only apply to UAVs that have an endurance of 1 hour or more, or those that have an endurance of 30 minutes or more but can have stable take-off and flight in wind gust of 25 knots or more. In addition, remote-controlling equipment and autopilots are now decontrolled.

*Impact: Will reduce the requirement for an approval.*

9B001 and 9D004.c: New control for directional-solidification or single-crystal additive manufacturing equipment (3D-printing equipment) and specially designed control software.

*Impact: Will introduce the requirement for approval to be obtained before exporting these items.*

9E003.a.3.c: Decrease in the scope of the controls for development or production technology for gas turbine engine components made from composite materials. This control now only applies to stators, vanes, blades, tip seals, rotating blisks, rotating blisks and splitter ducts.

*Impact: Will reduce the requirement for an approval.*

9E003.a.4: Effective decontrol of development or production technology for certain uncooled turbine components. The controls now only apply to technology for blades, vanes and tip shrouds, and only if they are designed to operate at a gas path temperature of 1100 degrees Celsius or more.

*Impact: Will reduce the requirement for an approval.*

9E003.j: New control for development technology for wing-folding systems for fixed-wing aircraft powered by gas turbine engines.

*Impact: Will introduce the requirement for approval to be obtained before exporting these items.*

## **Consultation**

DEC has assessed that overall the amendments will have a limited impact to on Australian exporters and researchers.

DEC has undertaken consultation with other member States of the export control regimes over the past two years to arrive at proposed amendments to the various control lists, through direct participation in regime technical meetings.

DEC's domestic consultation process began at the point in time that proposals for change were submitted to the regimes. This consultation covered both Australia-initiated proposals and proposals by other regime members ('foreign proposals'). DEC's regulatory stakeholder consultation process involved consultation both within government and with industry and academia. DEC maintains a register of interested parties who can be consulted on proposals that impact their interests. DEC also used its own data, data from the Australian Border Force, data from the Australian Research Council, and advice from other Government agencies, to identify potentially impacted exporters and researchers.

DEC identified a number of stakeholders potentially affected by proposals and sought their advice as to how the proposal would impact their business or research.

DEC considered stakeholder responses when formulating Australia's position on each of the regime proposals by using it to strike an appropriate balance between national and global security and the impact on Australian industry and researchers.

## **Regulatory Impact Statement**

The *Defence and Strategic Goods List Amendment Instrument 2016* has been assessed as not requiring a Regulatory Impact Statement as the regulatory impact of the amendment is considered to be only of a minor nature (Office of Best Practice Regulation Reference No. 20011).

## **Statement of Compatibility with Human Rights**

*Prepared in accordance with Part 3 of the Human Rights (Parliamentary Scrutiny) Act 2011*

### **Defence and Strategic Goods List Amendment Instrument 2016**

This Legislative Instrument is compatible with the human rights and freedoms recognised or declared in the international instruments listed in section 3 of the *Human Rights (Parliamentary Scrutiny) Act 2011*.

#### **Overview of the Legislative Instrument**

This Legislative Instrument amends the Defence and Strategic Goods List (DSGL).

The amending instrument updates the DSGL so that it aligns with the changes that have been made to the international control lists for the non-proliferation and export control regimes to which Australia is a member.

The amendment to the DSGL ensures that Australia's regulatory framework for export controls is reflective of international best practice and continues to support the responsible export and supply of defence and dual-use goods and technologies.

The Legislative Instrument does not introduce any amendments that substantially alter the nature or purpose of the DSGL in any way.

#### **Human rights implications**

This Legislative Instrument does not engage any of the applicable rights or freedoms.

#### **Conclusion**

This Legislative Instrument is compatible with human rights as it does not raise any human rights issues.

**Senator the Hon Marise Payne, Minister for Defence**