

New Zealand Strategic Goods List (NZSGL) 2024

EXPLANATORY STATEMENT OF AMENDMENTS

The NZSGL

The NZSGL 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 New Zealand is a participating state.¹ The NZSGL includes equipment, assemblies and components, associated test, inspection and production equipment, materials, chemicals, software, and technology.

The NZSGL 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, being goods, software or technology that are designed or adapted for military purposes, including their parts and accessories; and
 - Non-Military Lethal Goods, being 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.

¹ New Zealand is a member of the Wassenaar Arrangement, the Missile Technology Control Regime, the Australia Group and the Nuclear Suppliers Group.

The amendments

The New Zealand Strategic Goods List (NZSGL) November 2024 replaces the *New Zealand Strategic Goods List - November 2021*, with amendments to the previous list so that it aligns with the changes that have been made to the international control lists of the non-proliferation and export control regimes of which New Zealand is a member.

The NZSGL November 2024 contains 278 updates to the NZSGL November 2021. Most of these amendments (231) are clarifications and editorial changes that do not involve a change in the scope of existing controls. The other 47 amendments can be categorised as either new controls, deletions of previously existing controls, or modifications to existing controls. Of the 47 amendments, 13 are changes that remove or reduce the requirement to obtain an approval prior to export, and 19 of the updates are either new controls or changes to existing controls that result in an expanded scope. The remaining 15 amendments are modifications assessed as neither expanding nor reducing the scope of control, i.e. scope neutral.

The amendments do not substantially alter the nature or overall purpose of the NZSGL.

The amendments that result in effective changes to the NZSGL are discussed below. Minor editorial and clarification changes where the scope of the control has not changed are not discussed here.

Documents incorporated by reference

Several controls in the NZSGL November 2024 refer to internationally recognised testing methods, regulations, and standards to define control parameters. These incorporated documents are managed by various international organisations and their use is derived from the control lists of the multilateral non-proliferation and export control regimes.

International Organization for Standardization (ISO): ISO Standards are available for purchase through the ISO website at www.iso.org. The following standards are incorporated:

- ISO 841:2001
- ISO 230-2:2014
- ISO 3977-2:1997
- ISO 230/1 1986
- ISO 10360-2
- ISO/IEC 7498-1
- ISO 841:2001
- ISO 230-2:2014
- ISO R-565

American Society for Testing and Materials (ASTM) International: This is an international standards organisation, with standards available for purchase at www.astm.org. The following standards are incorporated:

- ASTM B330
- ASTM G-31
- ASTM E-139
- ASTM E-606
- ASTM D 7028-07
- ASTM E 2160-04
- ASTM E-11

Institute of Electrical and Electronics Engineers (IEEE): This is a professional association that has a standards function. IEEE Standards are available for purchase at <https://www.ieee.org/standards/index.html>. The following standards are incorporated:

- IEEE STD 528-2001
- IEEE STD 952-1997 / IEEE STD 1293-1998

European Telecommunications Standards Institute (ETSI): this is a European Standards Organization. They are the recognized regional standards body dealing with telecommunications, broadcasting and other electronic communications networks and services. The standards can be accessed free of charge at [Download ETSI ICT Standards for free](#). The following standards are incorporated:

- ETSI TS 101 331
- ETSI TS 101 671

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National Institute of Justice (NIJ): The United States Standards and Testing Program is sponsored by the Office of Science and Technology of the National Institute of Justice (NIJ), Office of Justice Programs, U.S. Department of Justice. The program establishes and maintains performance standards in accordance with the National Technology Transfer and Advancement Act of 1995 to test and evaluate law enforcement technologies that may be used by Federal, State, and local law enforcement agencies.

The standards can be accessed free of charge at <https://nij.ojp.gov/library>. The following standards are incorporated:

- NIJ 0108.01, September 1985
- NIJ 0106.06, July 2008

International Telecommunications Union (ITU): This is a specialised agency of the United Nations. The ITU Radio Regulations include internationally recognised allocations for the use of different bands of the radio frequency spectrum. The ITU Radio Regulations are available free-of charge on the ITU website at <https://www.itu.int/pub/R-REG-RR>.

World Health Organisation (WHO) Laboratory Biosafety Manual, 3rd edition, Geneva, 2004:

This document is published by the WHO and provides guidance on biosafety techniques for use in laboratories at all levels. It is available free-of-charge at http://www.who.int/csr/resources/publications/biosafety/WHO_CDS_CSR_LYO_2004_1/en/

Interpretation

CAS Numbers: interpretation updated to include reference to isotopically-labelled forms or all possible stereoisomers to be within the scope of control.

Impact: this update does not change the current national interpretation used by Export Controls. Export Controls currently control all isotopically-labelled forms or all possible stereoisomers of listed chemicals based on their utility. This change is expected to improve adherence and the enforcement of the control. This change is not expected to increase regulatory burden on industry, or on government agency resources.

Nuclear technology note (NTN): reference to “basic scientific research” replaced with reference to “fundamental research”.

Impact: references to “basic scientific research” throughout the NZSGL have been replaced by the term “fundamental research”. This change ensures that regulatory controls on research in the NZSGL are applied with minimal impact.

General technology note (GTN): reference to “basic scientific research” replaced with reference to “fundamental research”.

Impact: references to “basic scientific research” throughout the NZSGL have been replaced by the term “fundamental research”. This change ensures that regulatory controls on research in the NZSGL are applied with minimal impact.

Clinical trials note: inserts a new de-control note for clinical trials, where the therapeutic goods are subject to, or proposed to be subject to, an exemption or approval under a specified legislative framework.

Impact: this proposal reduces the controls that apply to certain therapeutic products already regulated under other relevant legislative frameworks to avoid unnecessary duplication.

Definitions

“Technology”: ‘Algorithms’ has been added to Note 2 examples of ‘technical data’.

Impact: the manner in which the term ‘technical data’ is currently expressed in the NZSGL 2021 was interpreted by Export Controls as a non-exhaustive list, and therefore the addition of the term “algorithm” has no practical implications to the control scope.

Basic scientific research”: the definition for this term is omitted.

Impact: references to this term throughout the NZSGL have been replaced by the term “fundamental research”. This change ensures that regulatory controls on research in the NZSGL are applied with minimal impact.

“Fundamental research”: inserts a new definition for the term “fundamental research”, which means basic or applied research conducted in circumstances where the results of the research:

- (a) are intended for public disclosure, or would ordinarily be published or shared broadly; and
- (b) are not subject to any restrictions on disclosure (however imposed) for purposes connected with the security or defence of New Zealand or any foreign country.

Impact: this definition, which replaces that of “basic scientific research”, clarifies the types of

research that are not subject to certain controls within the NZSGL. This change ensures that regulatory controls on research in the NZSGL are applied with minimal impact.

The meaning of the terms 'basic research' and 'applied research' are intended to be taken from the Organisation for Economic Co-operation and Development (OECD) Frascati Manual 2015: Guidelines for Collecting and Reporting Data on Research and Experimental Development, which is the internationally recognised methodology for collecting and using research and development statistics. In that manual, 'basic research' means experimental or theoretical work undertaken primarily to acquire new knowledge of the underlying foundation of phenomena and observable facts, without any particular application or use in view. Similarly, 'applied research' means original investigation undertaken in order to acquire new knowledge. Applied research is directed primarily towards a specific, practical aim or objective.

The definition of 'fundamental research' requires that the research is not subject to any restrictions on disclosure for purposes connected with the security or defence of New Zealand or any foreign country. Research will typically be considered to have restrictions on its disclosure for purposes connected with the security or defence of New Zealand or a foreign country where there is an arrangement in place limiting its disclosure for security or defence reasons. An arrangement would be any written agreement, contract, arrangement, understanding or undertaking (both publicly available and confidential as between the parties), entered into by a New Zealand party or an individual authorised to consent to the arrangement, irrespective of whether that commitment is ongoing or legally binding.

Examples of these types of arrangements may include commercial contracts, strategic partnerships, joint initiatives, and memoranda of understanding. Oral arrangements, such as oral contracts, are not intended to constitute an arrangement that would establish restrictions on the disclosure of research for purposes connected with the security or defence of New Zealand or any foreign country.

Examples of research that would be considered to constitute fundamental research would be basic and applied research in science and engineering conducted in New Zealand where the resulting information is ordinarily published and shared broadly within the scientific community. It would also be research that is captured by the public domain exclusion (e.g. readily available in libraries open to the public or at university libraries, published patents and open conferences, tradeshows or exhibitions). Fundamental research also includes education and teaching (e.g. instruction in catalogue courses and associated teaching laboratories of academic institutions).

An example of what would not be considered fundamental research would be university-based research where there is a written arrangement in place with the New Zealand Defence Force that restricts the publication of the research due to its connection with matters that concern the security or defence of New Zealand.

Another example that would not be considered fundamental research is if a university had a written collaborative research agreement in place with a foreign country, and that research agreement places certain restrictions on the use or disclosure of the research due to the connection between the researcher's work and the security or defence of that foreign country.

A further example of what would not be considered fundamental research is if a company releases its proprietary technology, which has implications for the security or defence of New Zealand, to a university for the purpose of conducting research. As part of sharing the technology with the university, the company and the university enter into a written contract, which stipulates that the technology cannot be released to the public and requires that the university must agree to a non-disclosure agreement.

Part 1 Munitions List

ML4.a: “Sub munitions therefor” added to the control for “Bombs, torpedoes, grenades, smoke canisters, rockets, mines, missiles, depth charges, demolition-charges, demolition-devices, demolition-kits, "pyrotechnic" devices, cartridges”.

Impact: clarifies scope of existing ML4 control. Although this additional language may be considered an expansion, note that specially designed components were already captured by the previous control text, and therefore the addition does not increase regulation in the New Zealand context.

ML4.b Note 1.a: deletion of “capable of producing 1,000 kg or more per day of gas in liquid form” from the note detailing the controlling parameter.

Impact: control now captures all mobile gas liquefying equipment, not just the systems capable of producing 1,000 kg or more per day of gas in liquid form.

ML11.b: sub-entry amended to specify functions of controlled jamming equipment.

Impact: the impact of this proposal was assessed as very low as most equipment would have been captured by the current national interpretation of the existing control text.

Part 2 - Dual-use List

Category 1 – Materials, Chemicals, Microorganisms and Toxins

1C351.d.13: removes Cholera toxin from the control list.

Impact: exports will no longer require a permit for the export of Cholera toxin.

1C351.d.20-23: adds four toxins to the control list: Brevetoxins, Gonyautoxins, Nodularins and Palytoxin.

Impact: industries that export these toxins will now be required to apply for permits. Export Controls have assessed that the overall impact is low.

1C353: viral translated products added to the genetic elements and genetically modified organisms control list.

Impact: this proposal expands the control of genetic elements and genetically modified organisms to include translated products. Due to the current national interpretation of the existing control text, Export Controls would have assessed viral translated products as controlled.

Category 2 – Materials Processing

2B209.b: expands the diameter range of rotor-forming mandrels designed to form cylindrical rotors of internal diameter from 75mm - 400mm to 75mm - 650mm.

Impact: expands the scope to also apply to mandrels and dies for making bellows between 400mm and 650mm diameter. The total diameter range of the control would be 75-650mm.

2D352: the addition of software for the operation of nucleic acid synthesisers and assemblers.

Impact: permits will be required for the export or supply of software meeting the control threshold.

2E003.b.2: control has been deleted.

Impact: permits for the export or supply of technical data consisting of process methods or parameters regarding superplastic forming, diffusion bonding, direct-acting hydraulic pressing, or hot isostatic deformation of certain alloy systems will no longer be required.

Category 3 – Electronics

3A901: new control on Complementary Metal Oxide Semiconductor integrated circuits.

Impact: industries that export these items will now be required to apply for permits. Export Controls assessed that the overall impact is low.

3B901: new control on equipment designed for dry etching.

Impact: control is assessed to have minimal impact on New Zealand stakeholders.

3B902: new control on Scanning Electron Microscope equipment designed for imaging semiconductor devices of integrated circuits.

Impact: control is assessed to have minimal impact on New Zealand stakeholders.

3C001, 3C005, and 3E003: addition of Gallium Oxide (Ga₂O₃) and diamond to existing controls for substrate materials (3C001 and 3C005), and to technology control text (3E003) for the development or production of Gallium Oxide (Ga₂O₃) and diamond substrates for electronic components.

Impact: control is assessed to have minimal impact on New Zealand stakeholders.

3D006: new control on highly specialised software for Electronic Computer Aided Design (ECAD), which is used to design complex integrated circuits and advanced electronic systems.

Impact: control is assessed to have minimal impact on New Zealand stakeholders.

3D901: new control on software for the use of equipment designed for dry etching

Impact: control is assessed to have minimal impact on New Zealand stakeholders.

3D902: new control on software designed to extract circuit layout data, perform layer-to-layer alignment from scanning electron microscope images, and generate multi-layer circuit data or circuit netlist.

Impact: control is assessed to have minimal impact on New Zealand stakeholders.

3E901: new control on technology using “Gate-All-Around-Effect Transistor” structures.

Impact: control is assessed to have minimal impact on New Zealand stakeholders.

Category 4 – Computers

4A003.b: adjusted Peak Performance parameter changed from 29 to 70.0 Weighted TeraFLOPS for digital computers.

Impact: reduction in scope by increasing the controlling parameter.

4A901: new control on quantum computers

Impact: while Export Controls assesses that a quantum computer with the parameters detailed in this control does not yet exist, industry producing computers which do reach these thresholds in future will need to apply for permits. Research and development prior to reaching these thresholds should not be affected.

4D001.b.1: software specially designed or modified for the development or production of digital computers. The Adjusted Peak Performance parameter changed from 15 to 24 Weighted TeraFLOPS.

Impact: reduction in scope by increasing the controlling parameter.

4D901: new control on software for the development or production of qubit devices or circuits, or quantum control and measurement devices, for quantum computers.

Impact: while Export Controls assesses that a quantum computer with the parameters detailed in this control does not yet exist, industry producing computers which do reach these thresholds in future will need to apply for permits. Research and development prior to reaching these thresholds should not be affected, though such software and related devices may be expected to be developed first ahead of the computer itself.

4E001.a: Scope-neutral amendment to broader Category 4 technology.

Impact: this consequential change is to ensure that New Zealand is consistent with other international export control frameworks when introducing the 4A900 series of controls. This change ensures that “use” technology relating to quantum computers, their controlled components, and software is not controlled inadvertently.

4E001.b.1: technology for the development or production of digital computers. The Adjusted Peak Performance parameter changed from 15 to 24 Weighted TeraFLOPS.

Impact: reduction in scope by increasing the controlling parameter.

4E901: new control on technology for the development or production of components and software related to quantum computers.

Impact: while Export Controls assesses that a quantum computer with the parameters detailed in this control does not yet exist, industry producing computers which do reach these thresholds in future will need to apply for permits. Technology relating to the development or production of certain quantum computing components, related devices, and software will now require a permit.

Category 6 – Sensors and Lasers

6A005.b.3.a.2: average output power parameter changed from 50 to 80 W for non-tunable pulsed lasers with output wavelength exceeding 510 nm but not exceeding 540 nm.

Impact: reduction in scope by increasing the controlling parameter.

6A005.d.1.a.1: wavelength parameter changed from 1510 to 1570 nm, and power parameter changed from 1.5 to 2.0 W for single-transverse mode semiconductor lasers.

Impact: reduction in scope by increasing the controlling parameters.

6A005.d.1.a.2: wavelength parameter changed from 1510 to 1570 nm.

Impact: reduction in scope by increasing the controlling parameter.

6A005.d.1.b.1: Power parameter changed from 15 to 25 W for multiple-transverse mode semiconductor lasers.

Impact: reduction in scope by increasing the controlling parameter.

Category 8 – Marine

8A002.o.2 and 8A002.o.4: the control for Permanent Magnet, including Rim-Driven, propulsion motors was removed from 8A002.o.2.c and rewritten as a new control under 8A002.o.4.

Impact: no impact as the overall scope of control has not changed.

Category 9 – Aerospace and Propulsion

9A001.b: the removal of aero gas turbine engines designed to power an aircraft to cruise at Mach 1 or higher, for more than 30 min.

Impact: exports will no longer require a permit for the export of these aero gas turbine engines.

9A003: addition of 9E003.k to the list of technologies used in the design of assemblies or components for gas turbine propulsion systems.

Impact: by including 9E003.k as an enabling technology in 9A003, these critical assemblies and components will remain controlled until the engines are released from 9A001 by Note 1. Note 1 decontrols aero gas turbine engines based on various criteria around civil certification.

9E001: Removal of the technology control to complement to removal of 9A001.b.

Impact: nil. The addition of 9E003.k off-sets any scope reduction caused by this amendment.

9E002: Removal of the technology control to complement to removal of 9A001.b.

Impact: nil. The addition of 9E003.k off-sets any scope reduction caused by this amendment.

9E003.a.2.e: Addition of the technology required for the development or production of pressure gain combustion (gas turbine engine components).

Impact: 9A001 was amended to decontrol civilian aero gas turbine engines. This decontrol was necessary to support engines and aircraft in commercial service. While the goods were decontrolled, it was considered necessary to publish additional controls regarding the technology to develop these engine types, thus additional controls for combustors was added.

9E003.k: Addition of the technology required for the development of any of the components or systems, specially designed for aero gas turbine engines that enable aircraft to cruise at Mach 1 or greater for more than 30 minutes.

Impact: by including 9E003.k as an enabling technology, these critical assemblies and components will remain controlled until the engines are released from 9A001 by Note 1.

9E101 and 9E102: Addition of 9A112.a (unmanned aerial vehicles capable of a range of 300 km) to the list of control codes. 9E101 and 9E102 control the export/supply of technology used in the development, production, or use of controlled goods/software.

Impact: a permit will be required for the export/supply of technology used in the development, production, or use of unmanned aerial vehicles capable of a range of 300 km. Note that this MTCR control is not new. It was only recently identified to have been omitted from the NZSGL.

Sensitive List

SL 4D001: Removal of Software specially designed for the development or production of equipment specified by 4A of this List or for the development or production of digital computers having an Adjusted Peak Performance (APP) exceeding 16 Weighted TeraFLOPS (WT).

Impact: nil.

SL 4E001: Removal of Technology according to the General Technology Note for the development or production of any of the following equipment or software: a. Equipment specified by 4A of this List; b. Digital computers having an Adjusted Peak Performance (APP) exceeding 16 Weighted TeraFLOPS (WT); or c. Software specified by 4D of this List.

Impact: nil.