

# **NATSPEC** *STYLEguide*

NATSPEC *STYLEguide* is an alphabetical reference to the NATSPEC and AUS-SPEC style rules, including preferred spelling, grammar, punctuation, hyphenation, forms of expression, and method of citation and cross referencing.

Prepared by

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NATSPEC STYLEguide is to assist all users of NATSPEC to produce clear, concise documents with precise and consistent language, structure and terminology both within NATSPEC and between NATSPEC text and project specific material. This guide sets out NATSPEC's preferred forms of expression. While alternative forms of expression may be valid, NATSPEC has standardised some forms to achieve clarity.

Preferred spelling and terms are based, in order of preference, on accepted usage in the Australian building industry, HB 50-2004, *Glossary of Building Terms* (Leslie and Potter 2004), terms defined in Australian Standards and the *Macquarie Dictionary*. There will no doubt be many outside NATSPEC who will dispute the adopted expressions and forms. There are also those inside NATSPEC who disagree. However, for pragmatic reasons, where there is no reason to choose one form over another, NATSPEC will be consistent with past practice. This avoids the need for trivial changes.

## How to use the NATSPEC STYLEguide:

Entries that appear without an accompanying explanation indicate the preferred spelling, format and capitalisation only. It is suggested these spellings are included in your MS Word dictionary so Spellcheck does not flag them. For example:

### **in situ**

This indicates the preferred form is two words (rather than a single or hyphenated word) and all lower case. For example,

In reactive clay: In sites classified M, M-D, H1, H1-D, H2, H2-D, E or E-D to AS 2870, re-use excavated site material at a moisture content within  $\pm 1\%$  of that of the adjoining in situ clay.

Where an entry is not preferred by NATSPEC, the non-preferred term appears in normal text and the accompanying explanation states the preferred alternative word or expression in bold. The bold word is also listed alphabetically in the NATSPEC STYLEguide. For example,

**according to** Use **conform to** instead.

This indicates the bold **conform to** is preferred over **according to**. For example,

General: Make sure that the elapsed time between the wetting of the mix and the discharge of the mix at the site conforms to the **Elapsed delivery time table**.

A further explanation of an entry is given where necessary. Lengthy explanatory notes are shaded to make reading easier.

Detailed guides to citation, SI units and symbols, are listed alphabetically in the A-Z section.

See also *Defined Terms in NATSPEC*, a compilation of terms included in worksections under **INTERPRETATION, Definititons**.

## NATSPEC STYLEguide for AUS-SPEC:

The preferred form of some terms differs between NATSPEC and AUS-SPEC text. Where this occurs, *STYLEguide* includes both forms with a note on appropriate usage.

# A

**AADT** Annual Average Daily Traffic.

**AAPA** Australian Asphalt Pavement Association.

**ABCB** Australian Building Codes Board.

**abbreviations** Do not use full stops or apostrophes with abbreviations.

Abbreviations and acronyms must be defined. Once defined, both the abbreviation (or acronym) and full form may be used to suit the context. To improve readability, the use of abbreviations should be minimised and confined to common terms.

Unless it is a common abbreviation defined in the *General requirements* worksection, define abbreviations in the **INTERPRETATIONS** clause in the relevant worksection. An individual worksection might contain the following definition that applies only to that worksection, for example:

GPF: Gypsum plaster – finish.

In other cases, particularly when there is only one instance of a common abbreviation, text may read better if the abbreviation is defined after its first occurrence and thereafter the abbreviation used alone. For example:

In some states and territories, additional or alternative criteria may apply e.g. Registered Professional Engineer, Queensland (RPEQ)..

**abbreviations (acronyms and initialisms)**

Do not use full stops between letters if the abbreviation is an acronym or initialism. An exception to this principle is if the abbreviation is normally written with full stops such as in an Australian Standard. For example, d.c. (direct current).

Make initialisms and acronyms plural by adding an s (lowercase) to the end. Do not use an apostrophe. Acronyms are pronounced as a word e.g. ANZAC. Initialisms, e.g., ABC are abbreviations for which you say each letter.

**abbreviations (organisations)** Abbreviations are rendered in capitals with no full stops or commas. *STYLEguide* lists some abbreviations commonly used in NATSPEC. See *NATsource* for a complete list of organisations referred to by NATSPEC.

**ABGR** Australian Building Greenhouse Rating. Now known as NABERS Energy. Refer to the NATSPEC TECHreport, *Specifying ESD*.

**Aboriginal**

**above-ground**

**absolute level tolerance**

**a.c.** Alternating current.

**access chamber** Use instead of **personnel accessway** and **manhole**.

**access cover**

**access door** Larger than access panels.

**access for maintenance**

**accessible** This term is defined by the NCC and relates to people with disabilities.

**Accessible housing** Housing that includes features which enable use by people either with a disability or transitioning through their life stages. See NATSPEC TECHnote DES 037 *Accessible housing*.

**access hole** Use **access opening** instead.

**access opening** Use instead of **access hole**.

**access panel** Smaller than **access doors**.

**access pit**

**accessway**

**accordion doors**

**according to** Use **conform to** instead.

**accreditation**

**Accredited Testing Laboratory** Use instead of Registered testing laboratory.

**accuracy**

**AccuRate** Second generation of NatHERS software. Refer to the NATSPEC TECHreport, *Specifying ESD*.

**acknowledgement**

**acoustic insulation**

**acoustic material**

**acoustic underlay**

**Acrobat** A family of software by Adobe System which uses **PDF** format files.

**acronyms** See **abbreviations**.

**acrylic - liquid applied (membrane)**

**ACT** Australian Capital Territory. Generally, write all states except **NSW** and **ACT** in full.

**ACTHERS** Australian Capital Territory House Energy Rating Scheme. Refer to the NATSPEC TECHreport, *Specifying ESD*.

**ActivFire Register of Fire Protection Equipment** Not italics.

**active voice** Voice is a property of verbs. In an active voice, the person or thing that performs the action is the subject of the verb. In the preferred example, the contractor is the subject whereas in the non-preferred form the tiles are the subject:

Provide purpose-made border tiles..... not...  
Border tiles are to be purpose-made...

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The specification has a number of roles, apart from describing what the contractor is to provide, and will be read by a number of users. However, NATSPEC style assumes the contractual role to have the highest priority and the text is therefore addressed to the contractor who in effect becomes the subject of the verb.

### activity centre

**Activity contract requirement (ACR)**  
(AUS-SPEC)

**Activity specification** (AUS-SPEC)

**Acts** (AUS-SPEC)

**acts and regulations** (NATSPEC) Use lower case unless referring to a specific act or regulation in which case use the full title, including the jurisdiction, capitalised as published and in italics. For example, the Queensland Environmental Protection Act.

**ACQ** Alkaline Copper Quaternary.

### adaptation

**adequate** Do not use if there is no verifiable value.

### added filler

### adhesion (paint)

### adhesion agent

### adhesive bedding

### adhesives - cementitious (C)

### adhesives - dispersion (D)

### adhesives - reaction resin (R)

### advanced plants (species)

### after-hours

### aggregate-filled textured latex coating

**AGAM** Austroads Guide to Asset Management.

**AGBT** Austroads Guide to Bridge Technology.

**AGO** Australian Greenhouse Office.

**AGPD** Austroads Guide to Project Delivery.

**AGPT** Austroads Guide to Pavement Technology.

**AGRD** Austroads Guide to Road Design.

**AGRS** Austroads Guide to Road Safety.

**AGTM** Austroads Guide to Traffic Management.

**AHD** Australian Height Datum.

**AIA** Australian Institute of Architects (formerly the Royal Australian Institute of Architects).

### airblast

### airborne

### airborne sound

**air conditioning** Use instead of **airconditioning** and **air-conditioning**, except in the case of standards titles or organisation names in which there is some variation.

### air cooled

### air entrainment

### air flow

### air grille

### air handling plant

### air handling unit (AHU)

### airspace

### airtightness

### allowable working time

**alternating current** Use **a.c.** not A.C. or ac.

### ambient temperature

### ambient water

**AMCORD** Australian Model Code for Residential Development.

### ameliorant

**amend** Use **edit** instead when referring to making changes to a NATSPEC worksection.

### amnioplastic

**ampere (A)** SI unit of electric current.

**analog** (Electrical and electronic) Use instead of analogue.

**anchors** Use **fasteners** instead.

### anchor trench

**and** Use instead of an **ampersand (&)** unless & is part of a company name.

**and/or** If using this expression in a specification, make sure the direction to the contractor is unambiguous.

**and the like** Do not use. Provide a complete list instead.

### annexure

### anionic bitumen

### anodise

### anti-bleed

### anti-burst reinforcement

### anti-condensation

### anti-corrosive

### anti-drum, anti-drumming

### antifreeze

### antiglare

### anti-graffiti

### antimicrobial

### anti-ponding

**anti-skid, anti-slip** Use **slip-resistant** instead.

### anti-splash

### anti-stalling

### antistatic

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**anti-tampering****anti-windup**

**APAS** Australian Paint Approval Scheme. NATSPEC has removed all references to the Australian Paint Approval Scheme and aligned the statement of quality and the recommendations for paint systems to Australian Standards following the APAS decision to charge a licence fee for anyone using an APAS™ designation. Subscribers who continue to reference APAS should check their position with APAS™ as licence fees may be payable.

**apostrophes** Do not use apostrophes with abbreviations. Avoid shortened forms of expression. For example:

Some do not... not... Some don't. . . .

Place the apostrophe correctly to indicate possession. In plurals, the apostrophe comes after the plural form of the word. For example:

The apartment unit's mailbox = the mailbox of the apartment unit.

The apartment units' mailboxes = the mailboxes of the apartment units.

The children's toilets = the toilets belonging to the children.

**APP bitumen**

**Appendix/ Appendices** (AUS-SPEC) Bold when referencing AUS-SPEC appendices within the worksection.

**appendices/Appendices** (NATSPEC) Use appendices generally and Appendices only when referring to NCC Appendices or when following a standard. Not bold.

**approach sight distance**

**approved** As a generic technical specification, it is beyond the scope of NATSPEC to offer any management system to handle the approval process. Consequently, definitions and directions such as approved do not appear within the worksection text. Where appropriate, a prompt indicates an approval could be required. The extent of approval responsibilities should take into account the recommendations of the various professional bodies and should be covered in the agreement with the client. If an approval is required, before implementation, consider nominating a **Hold point** to eliminate ambiguity. If a definition of approved is required, the following *Optional* text is included in the *General requirements* worksectionl

Approved: Approved, reviewed, directed, rejected, endorsed and similar expressions mean approved (reviewed, directed, rejected, endorsed) in writing by the contract administrator.

**architect** Use **contract administrator** as the default. If the general conditions of contract use another term, consider amending all references in NATSPEC.

**AR&R** Australian Rainfall and Runoff.

**ARI** Average recurrence interval(s).

**arris** Both noun and verb.

**AS** Australian Standard. Show as AS XXXX (without title) in *Open* text and show in **REFERENCED DOCUMENTS** as follows:

AS XXXX: Year Title.

For example:

AS 2047 2014 Windows and external glazed doors in buildings

Where the standard is part of the series, show in **REFERENCED DOCUMENTS** as follows:

AS XXXX Title

AS XXXX.Part: Year Part title.

For example:

AS 2201 Intruder alarm systems

AS 2201.3 1991 Detection devices for internal use

Always include the parent standard above the child standard in **Referenced documents**.

Australian Standard Supplement. Show as AS XXXX Supp X in *Normal* style text and in Reference documents as follows:

AS XXXX. Supp X–Year Title. For example:

AS 3735 Supp 2001 Concrete structures retaining liquids - Commentary (Supplement to AS 3735-2001)

Note colon between number (or part) and year for AS standards issued from 2014. Earlier standards use a hyphen between number (or part) and year.

NATSPEC does not cite withdrawn standards.

See also **AS/NZS** and **citation** for guidance in citing Australian Standards in NATSPEC. See also **Referenced documents**.

**as built, as-built** Use when referring to GBCA Office As Built only. Generally, use **record drawings** (NATSPEC) and **work-as-executed** (AUS-SPEC) drawings instead.

**ASD** Approach sight distance.

**as fitted drawings** Use **record drawings** instead.

**as installed drawings** Use **record drawings** instead.

**as documented** Use to cover the possibility an item might be on the drawings or somewhere other than the specification. Use instead of as nominated, as specified, as shown, as designated e.g. Provide IT components and systems, as documented.

**AS/NZS** Australian/New Zealand Standard. Show as AS/NZS XXXX (without title) in *Normal* style text and show in **REFERENCED DOCUMENTS** as follows:

AS/NZS XXXX.Part: Year Title. For example:

AS/NZS 3500.3:2018 Plumbing and drainage – Stormwater drainage.

Note colon between number (or part) and year.

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In AS/NZS 3000:2018, the text is divided into two Parts. These are not parts of the standard and should be cited as follows:

AS/NZS 3000 Part 1 and AS/NZS 3000 Part 2  
not AS/NZS 3000.1 and 3000.2.

See also **citation** for guidance in citing Australian/New Zealand Standards in NATSPEC.

See also **Referenced documents**.

as per Use **conform to** instead.

### asphalt

### asphalt pavement

### assessment

### asset protection zone (APZ) / Defendable space

**ASTM** American Standard Test Method.

@ Use **at** instead, except in email addresses.

**Atmosphere** Non-preferred but convenient unit of pressure. Equal to 1012.25 kilopascals or roughly a megapascal.

**atmospheric corrosivity category** To AS 4312. The corrosivity categories included in the AS/NZS 2312 series for structural steelwork align with those of AS 4312. However, the AS/NZS 2312 series also nominates an additional corrosivity category of T (inland tropical), which was introduced to align with AS 4312-2008, but has been removed from the latest edition of AS 4312.

**ATS Australian Technical Specification** former name for **Watermark Technical Specifications (WMTS)**.

### attendance

**AUS-SPEC** National specification system for the life-cycle management of assets.

**AUS-SPEC Buildings** AUS-SPEC package which covers planning and design, tendering and contract preliminaries, maintenance and operation of buildings and their associated services. It also includes the NATSPEC Building BASIC package for simple building projects where brevity is a priority. It covers site, structural, architectural, interiors, landscaping and mechanical, hydraulic and electrical services design and installation work. This package is for Building, Asset, Property Services and Engineering Services Managers.

**AUS-SPEC Complete** AUS-SPEC package which covers planning and design, tendering, contract preliminaries, construction, maintenance and operations of open and urban spaces, buildings, roadworks, minor bridges for vehicle and pedestrian use, and public utilities. This package satisfies most Local Councils' needs and is used by design, maintenance and operational personnel.

**AUS-SPEC Contracts** AUS-SPEC package which covers tendering, contract preliminaries, quality checklists and quality requirements for the

supply of projects and services. This package is for Contract, Supply, Asset and Works Managers, Purchasing and Legal Officers.

### AUS-SPEC Maintenance (Non Parks)

AUS-SPEC package which covers tendering and contract preliminaries, maintenance and operations buildings, roadworks, minor bridges for vehicle and pedestrian use and public utilities. This package is for Engineering Services, Environmental Services, Asset and Maintenance Managers.

**AUS-SPEC Public utilities** AUS-SPEC Public utilities package is applicable to both metropolitan and regional Local Government Councils for use in the design, construction and maintenance of stormwater drainage and regional Local Government Councils only for use in the design and construction of water supply and sewerage systems. It covers planning and design, tendering and contract preliminaries, construction, maintenance and operations of public utilities (water supply, water cycle management, sewerage systems and cleaning and waste management). AUS-SPEC **Public utilities** depends on a Maintenance Management Plan (MMP) and Activity Contract Requirements (ACR) to organize and ensure quality maintenance for various activities. AUS-SPEC TECHguides provide guidelines and examples for preparation of specifications. This package is for Engineering Services, Environmental Services and Maintenance Managers.

### AUS-SPEC Roadworks and bridges

AUS-SPEC package which covers planning and design, tendering and contract preliminaries, construction, maintenance and operations of minor roadworks and minor bridges for vehicle and pedestrian use. This package is for Design and Development, Contracts, Asset, Maintenance Business Unit and Strategic Planning Managers.

**AUS-SPEC Urban and open spaces** AUS-SPEC package which covers planning and design, tendering and contract preliminaries, construction, maintenance and operations of urban and open spaces (landscaping, pathways and retaining walls). It also includes the NATSPEC BUILDING Site package for site preparation works and all works external to the building, but within the site boundary, together with mechanical, hydraulic and electrical services design and installation work. This package is for Environmental Services, Recreation and Maintenance Managers and Park Superintendents.

**AUS-SPEC styles** Some terms found in AUS-SPEC worksections differ from the preferred NATSPEC style. These are noted in the alphabetical *STYLEguide* entry.

### Australian Government

### Austrroads

**authority/Authority** Use capital for official references only.

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## autoclaved aerated concrete (AAC)

**autocorrect** Correct spelling, writing of SI units and some symbols can be made easier and free from errors in MS Word by use of the AutoCorrect feature (found in Tools \ AutoCorrect). To prevent MS Word turning characters that are not present in some fonts into symbols deselect the following items from both the **AutoFormat** as you type and **AutoFormat** tabs.

- "Straight quotes" with "smart quotes"
- Ordinals (1st) with superscript
- Fractions (1/2) with fraction character (½)

The following are some suggested entries to include in the AutoCorrect replacement table:

Replace	With
+ - or +/-	±
KPa	kPa
KV.A	kV.A
KW.h	kW.h
m2	m <sup>2</sup>
m3	m <sup>3</sup>
mm2	mm <sup>2</sup>
mpa	MPa
mu	μ

**automatic numbering (headings)** NATSPEC uses 4 levels of **heading** styles. Heading 2 and Heading 3 styles have automatic numbering and numbering will adjust automatically if a heading is added or deleted in either of these styles. Heading 1 and Heading 4 styles are not numbered. Numbers can be added to these headings in MS Word with *Customise Outline Numbered List* (under *Format\Style\Modify\Format\Numbering*).

**autumn** Seasons are lower case. See also **months** and **seasons**.

**average ambient temperature**

**average recurrence interval (ARI)**

**Average specific extinction area**

# B

**backcheck**

**backfill**

**backflow**

**backflow prevention device**

**background** Use **substrate** instead.

**backlit**

**backmount frames**

**backnut**

**backplate**

**backup**

**BACnet** Building Automation and Control Network.

**bad ground**

**balanced construction**

**balustrade**

**ball joints**

**base coat**

**base plate**

**BASIC worksections** NATSPEC worksections which have been cut down blackout from the full worksection for use in simpler projects. These worksections are designated by a lowercase b after the classification number e.g. *0331b Brick and block construction*. If clauses/subclauses have not been included in BASIC worksections, the following *Guidance* text is inserted:

**CLAUSE name or Subclause name**  
 This clause or subclause is not included in this BASIC version. The full worksection is part of the BUILDING Professional package.

If a subclause has been further cut-down, the following *Guidance* text is inserted:

**Subclause name**  
 This is a cut-down version of that found in the Full worksection. The full worksection is part of the BUILDING Professional package.

**BASIX** Building Sustainability Index. Refer to NATSPEC TECHreport 01 *Specifying ESD* and TECHnote DES 013.

**basket weave**

**batch**

**batter**

**BCA** National Construction Code (**NCC**) Series Volume One: Building Code of Australia Class 2 to 9

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Buildings and Volume Two: Building Code of Australia Class 1 and Class 10 Buildings.

NATSPEC refers to BCA clauses, specifications and tables either directly or indirectly when a standard cited is one adopted by reference by the BCA.

NATSPEC defines the term in **INTERPRETATIONS** in the *0171 General requirements* worksection.

See **citation** for guidance in citing BCA clauses, specifications and tables in NATSPEC.

See also **Referenced documents** and NTN GEN 011 *Specifying BCA requirements* for more information on how NATSPEC incorporates the BCA requirements in the worksection *Templates*.

**BCA terms** Use BCA capitalisation.

**BCA Volume 1** See **National Construction Code**.

**BCA Volume 2** See **National Construction Code**.

### bedding

**BEDP EDG** formerly Built Environment Design Professions Environment Design Guide. Use **AIA EDG** instead.

**before** Use instead of prior to.

### below-ground

### benchmark

### benchtop

**BERS** Building Energy Rating Scheme. Refer to NATSPEC TECHreport 01 *Specifying ESD*.

**biannual** Use twice a year instead.

### bicycle path (cycleway)

### bi-fold

**billion** AS ISO 1000 Appendix AA recommends that the term billion not be used as it can mean both  $10^9$  and  $10^{12}$ . Use  $10^9$  or  $10^{12}$  instead of billion.

**Bill of quantities** (AUS-SPEC)

**bill of quantities** (NATSPEC)

### binder

### bioresistance

### bioretention

### bio-soluble

### birdmesh

### birdproofing

**bitumen** Includes APP bitumen and SBS bitumen.

### bituminous cold mix

**BMS** Building Management System.

### bleed water

**blind rivet** Use instead of **pop rivet**

### blockout

### Bluetooth

### boiling water

### bond breaker

### bond breaking

### bonding conductor

### bonding treatment

### booster

### borehole

### borrow area

### bound material

### bound granular material

### braille

### branch

**branded worksection** A worksection produced in NATSPEC format in conjunction with a **Product Partner** which provides specifiers with an alternative to the generic worksection where a particular product has been selected at design stage.

These worksections are designated by a lowercase p after the classification number e.g. *0279p PASCO BUZON in paving – on pedestals*.

**BRANZ** A registered testing authority, in terms of BCA.

### breakdown

### breathability

### breathable (vapour permeable) membrane

### broad-leafed

**bruelling** Material surface failure caused by stress.

**BS** British Standard.

**builder** Use **contractor** as the default instead. If the general conditions of contract use another term, consider amending all references in NATSPEC.

### building and facility data sheets

**Building and Facility Maintenance Plan (BFMP)** (AUS-SPEC).

### Building IT, Building IT system

### building services

### building maintenance unit (BMU)

**built-in** Use instead of in built, in-built, inbuilt.

### built-up air handling plant

### bulking

**bulleted lists** See **lists** for preferred arrangement.

### bullnose, bullnosing

### busbar

### busduct

**Bushfire Attack Levels (BAL) BAL-XX e.g., BAL-19 for bushfire attack level 19**

### bushfire-prone area

### butt joints (flooring and decking)

**by means of** Do not use. Use **by** instead.

### by-product



# C

**cable support**

**CAD**

**Call out**

**calorifier**

**candela (cd)** SI base unit of luminous intensity.

**cannot**

**capability**

**CAPITAL letters** Use a capital letter to start sentences and list items. Do not use capitals for nouns unless they are proper nouns or to match the capitalisation in a referenced document such as the general conditions of contract. Use the same capitalisation for the names of organisations as used by the organisations. For example:

The Queensland Government is a state government.

Use a capital for the first word only of a document title. For example:

*Timber in context.*

**CAR** Corrective Action Request

**car park**

**car parking**

**car space/car spaces**

**carriageway**

**carriageway concrete pavements**

**cast-in** e.g. cast-in elements.

**cast-in-place**

**cast iron**

**catalogue**

**catchment**

**catchment area**

**Catchment Area Plans** (AUS-SPEC).

**CBR** California Bearing Ratio

**CCA** Copper Chrome Arsenate. A timber preservative treatment.

**ceiling-hung**

**ceiling unit**

**Celsius** See also **temperature**.

**cement matrix terrazzo**

**certification**

**Certification Report** (AUS-SPEC).

**chain of custody**

**chainwire** Referred to as chainlink in AS 2423.

**chalkboard**

**changeable letter systems**

**changeable plate systems**

**changeover**

**checker plate pattern** Use **floorplate** when referring to the specific metal plate

**checklist**

**check-out** (ASHRAE)

**childproof**

**chilled water**

**CIAL** Carpet Institute of Australia Limited.

**citations (and references)** A citation is a reference to an external document that is included in the contract documents by reference in the same way that Australian Standards are included in the NCC by reference. In NATSPEC and AUS-SPEC worksections, citations and references (documents referenced in *Guidance* text but not included in the contract documents) are listed in **REFERENCED DOCUMENTS** at the end of each worksection. **REFERENCED DOCUMENTS** are in *Guidance* text style and the specification writer may include the relevant standards from this list if required.

Within worksections, cite documents as follows:

- Standards: Where possible cite standards using keywords. For example: *Method: To AS 1234*. If the standard is cited within a paragraph, use 'conform to AS 1234' not 'conforming to AS 1234'. Do not include the title of the standard.
- If the standard is a guideline, use 'conform to the recommendations of AS 1234'.
- To cite a standard clause: Use AS 1234 clause 3.2 (no comma between standard and clause).
- (For NATSPEC PageSeeder production, in a list of various parts of the same standard, repeat the standard number before each part to assist with PageSeeder crosslinking).

See **AS** and **AS/NZS** for citation of Australian and Australian/New Zealand standards.

See **AS/NZS** for citation of AS/NZS 3000 which is divided into Parts which are not Parts of the standard.

In NATSPEC, AS/NZS ISO standards are preferred over ISO standards, which are preferred over EN standards. Check NCC citations for preference.

- National Construction Code:
  - a) To cite a BCA section (excluding a clause or part number): Use **BCA Section X**, not BCA X e.g. BCA Section J.
  - b) To cite a BCA clause: Use **BCA XY.Z**, not BCA clause XY.Z e.g. BCA E1.5. Do not include the clause name, which is

- provided in the **REFERENCED DOCUMENTS**.
- c) To cite a BCA table: Use **BCA Table XY.Z** e.g. BCA Table E1.5. Do not include the table name, which is provided in the **REFERENCED DOCUMENTS**.
- d) To cite a BCA specification: Use **BCA Spec XY.Z**, not BCA specification XY.Y e.g. BCA Spec A1.3. Do not include the specification title, which is provided in the **REFERENCED DOCUMENTS**.
- e) To cite a PCA section (excluding a clause or part number): As for BCA citations, Use **PCA Section X**, not PCA X e.g. PCA Section G.
- Books: Use author-date style (also known as the Harvard System or Harvard Style). For example, *Walker, Peter MB 1999, Chambers dictionary of science and technology, Chambers, London.*
  - Journals: Use author-date style. For example: Marchelier, PM & Hughes, RG 1997, *New problems with foodborne diseases*, Medical Journal of Australia, vol. 275, pp.771-5.
  - Acumen (formerly AIA Advisory notes): In introductory *Guidance* to a *Template* the following text may be included: Search [acumen.architecture.com.au](http://acumen.architecture.com.au) for notes on (subject using acumen keywords). List keywords in Instructions ident style each topic cited.
  - TECHguides: TG (prefix TECHguide) Classification Number (1= General, 4= Maintenance) and 2 digit identification number. For example: TG 101 *Guide to preparing technical specifications for contracts.*
  - TECHnotes: NATSPEC TECHnote XXX (Classification GEN, DES or PRO), 3 digit identification number and italicised title.  
If citing a TECHnote in *Guidance* text, do not include the title. Instead, give an indication of the reason for the citation. For example, see NATSPEC TECHnote DES 001 on slip resistance.
  - TECHreport: NATSPEC TECHreport TR XX, 2 digit identification number and italicised title.  
If citing a TECHreport in *Guidance* text, do not include the title. Instead, give an indication of the reason for the citation. For example, see NATSPEC TECHreport TR 01 on specifying ESD.
  - CodeMark Certificates of Conformity: Cite in branded worksections only. Include date of expiry in *Guidance* text. Only CodeMarks current at the publication of the Update may be included.
- See also **cross reference** for reference to other material contained within the specification. See also **Referenced documents**.

**circular stairs****cladding****clamp plate****class - air filter****Class** BCA Classes**classification system** See **National Classification System**.**clause** (NATSPEC and AUS-SPEC).**clay pavers****clay segmental pavers****clean water****clean-out****clearance authority****clearances****clear-cut****clear-felling****clearing****clear zone****closed circuit****closed out****close-fitting****close-out****closed system****CodeMark Certificate of Conformity** See citations**co-dominant****coating contractor****coating manufacturer****coating system****cofferdam** (AUS-SPEC).**cold-finished****cold-formed****coldmix****cold-rolled****cold room****cold weather****Colorbond®** Use MS character symbol i.e. do not use superscript. Do not include symbols in file name.**colourback glass****colourfast****colourfastness**

**comma** A comma should not be used before the words *and*, *but* and *or*. The exception to this principle occurs when one of the items in the list linked by commas itself contains *and* or a comma is needed for clarity. For example:

- Use: Provide bolts, nuts and washers.
- Use: Provide plastic, rubber or stainless steel.

## STYLEguide

- Use: Include delivery, inspection, and operating and maintenance instructions.

See also **quotation** for inverted commas.

**commencement** Use when referring to the start of the works, e.g., in Preliminaries. Elsewhere, use **start**.

### commissioning

**Common requirements** Worksections for items common to more than one technical worksection. For example: *Adhesives, sealants and fasteners, Fire-stopping, Metals and prefinishes, Termite management, and Timber finishes and treatment.*

**Commonwealth** (government) Use **Australian** instead e.g. the Australian Government. See also **federal**.

### compactibility index

### competent person

**completion** Use **practical completion** instead.

**completion date** Use **date of practical completion** instead or **date for practical completion** as applicable.

### completion tests

**[complete/delete]** Prompt in NATSPEC worksection to indicate project specific requirements or selections are to be included. Delete paragraph if not required. The **[complete/delete]** prompt, appearing in brown text in the *Template*, is a word style which the specifier can search for using the *Word Styles and Formatting* function.

**comply with** Use **conform to** instead.

**comply with the BCA** Do not use. It is the specifier's job to produce a BCA compliant specification. Establish if any Performance solutions are being pursued.

### compulsory intervention level

### compressed fibre cement sheets

### concept plan

### concrete class

### concrete class – normal

### concrete class – special

### concrete segmental pavers

### concrete segmental pavers

### condenser

**conditional sentences** Put the conditions or qualifications first in sentences. This is to make reading the specification faster – if the condition does not apply, the rest of the sentence can be skipped by the reader:

- Before tiling, [verb]. . .
- If there is a delay, [verb]. . .

**conform to** Use instead of **comply with, in accordance with, as per**.

### connecting strap

**constituent** Use instead of component to describe part of a mix.

**Consultant** (AUS-SPEC)

**consultant** (NATSPEC)

### consumable

### continuously-supported flooring

**contract** (AUS-SPEC and NATSPEC).

**contract administrator** (NATSPEC and AUS-SPEC)

**Contract documents** (AUS-SPEC)

**contract documents** (NATSPEC)

### contractor

**contractor's quality inspector** (AUS-SPEC)

**contractor's quality plan** (AUS-SPEC)

**contracts manager** (AUS-SPEC)

### control system

### controlgear

### cool room

### coordinate

### core hole

### corrective action

### corrective action request (CAR)

**corrosion-resistant** Use instead of **corrosion-proof, non-corrosive** or **non-corroding**.

### cotton-backed

**Council** (AUS-SPEC)

**council(s)** (NATSPEC) Use lower case unless matching the capitalisation in a referenced document such as the general conditions of contract. Use the same capitalisation for the names of organisations as used by the organisations. For example:

The local council spoke with the Green Building Council of Australia.

### counterflow

### critical radiant flux

### cross bank

### cross drains

### cross flow

### crossarm

**cross reference** A reference to other text contained within the specification. See **citation** for reference to external documents. Cross reference as follows:

- NATSPEC and AUS-SPEC: Other worksections: Use the classification number and worksection name in italics with the initial capital for the first word of worksection name only. Include the reason for the cross reference where possible. For example, see *0802 Hydraulic design and install* for rainwater tanks.

## STYLEguide

- Clauses in the same worksection: Use the clause name in **BOLD** all capitals. For example:  
Requirement: Conform to **SUBSTRATE PREPARATION**.
  - Subclauses in the same worksection: Use the clause name in **Bold** with initial capital for the first word only. For example:  
Requirement: Conform to **Substrate preparation**.
  - Tables in the *Template* text: Do not cross reference a table if it is in the same clause as it is effectively a related subclause. If required, as for subclauses, use the table name in bold with the initial capital for the first word only.
  - Clauses in another worksection (NATSPEC): Cross reference by combining the two methods above. For example, Conform to **CLAUSE NAME** in *Classification No. Worksection name*. For example:  
Requirement: Conform to **FLOOD TEST** in *0621 Waterproofing - wet areas*.
  - If cross referencing both a clause and subclause, use the clause name in all capitals followed by the subclause name in bold with initial capital for the first word only. For example, Conform to **CLAUSE NAME, Subclause name**. For example:  
Requirement: Conform to **SUBMISSIONS, Substitution** in *0171 General requirements*.
  - It is usually unnecessary cross reference referring to keyword level.
- See also **citation** for reference to other material not contained within the specification.

**cross-section****crossfall****crossfall drainage****cubicle****culvert**

**curb** Use **kerb** instead.

**cushion head box**

**custom-built** Use instead of purpose built.

**custom-built assemblies****custom-built luminaires**

**custom-made** Use instead of custom-built or purpose made for a product or assembly designed and created for a particular project.

**cutback**

**cut-down** e.g. a BASIC NATSPEC worksection

**cutout** e.g. type of switch

**cut-out** e.g. an opening in joinery

**cutter oil****cycleway**

## D

**d** Day.

**damp-proof**

**data** (plural)

**data sheets**

**date for practical completion** Use if applicable.

**date of practical completion** Use if applicable.

**date of worksection** See footer

**daylight****daywork**

**Daywork rates** (AUS-SPEC)

**dB** Decibel. Use in relation to sound and some electrical measurements. The bel, which is 10 dB, is not used.

**dB(A)** Preferred abbreviation of decibel weighted to the A scale.

**d.c.** Direct current. Use instead of **direct current**.

**DCP** Development Control Plan.

**DDC** Direct Digital Control.

**decimal places** The number of digits to the right of the decimal place. For example 0.000 002 has 6 decimal places. See also **significant figures**, **rounding numbers**.

**decimal point** The decimal point is represented by a period on the line, not a comma. Include a leading zero in values between minus 1 and plus 1.

Use: 0.2

See also **zeros** for guidance on trailing zeros.

**decorative overlaid wood panels****decontamination****decking**

**Deemed-to-Satisfy** This is a defined term in the NCC. Use when directly quoting the NCC.

**default/ default terms****defect/defects liability period****defect notice**

**defined terms** Words or phrases given special or limited meaning in NATSPEC worksections. If possible, use terms that are in common use in the building industry. If this is not possible, the common use is ambiguous or the terms are derived from a standard, use the **INTERPRETATIONS, Definitions** clause in the GENERAL subsection to define the term. Always use the **defined term** in the defined manner. For example:

## STYLEguide

- **provide** is defined as supply and install. Do not use **provide** to mean submit or supply. Do not use supply and install or synonyms, such as furnish or supply and fix.

See NATSPEC Paper, *Defined terms in NATSPEC* for an alphabetical listing of the **defined terms** and their meanings as given in the worksections.

Branded worksections may have defined terms which do not appear in the generic worksection.

**degrees** See **temperature** for °C meaning and **Symbols** for plane angle meaning.

**descriptive specification** The specification of an item by describing in detail the materials, workmanship, installation and sometimes construction procedures. For example:

Fabrics: Piping: 3 mm diameter beads with core.

See also **proprietary** specification for comparison.

**de-index****delineator****demolition****density ratio (soil)****desiccant****designated bushfire prone area****Design and Construct****Design CBR** (AUS-SPEC)**design life****design parameters****design review****designer****designer****de-stress****destructive inspection (of trees)**

**detailed on the drawings** Use **as documented** instead.

**dethatching****developer****development assessment****dewater**

**diameter** Use the word instead of abbreviation or symbol.

**dieback** Refers to a condition of plants starting at the outer leaf tips and causing gradual yellowing, loss of leaves and lifelessness.

**diffuser**

**digital files** Use instead of electronic or soft copy.

**dilapidation record**

**DIN** German Institute for Standardization (Deutsches Institut fuer Normung).

**DIN EN** European standard that has been published unchanged in Germany. NATSPEC does not cite the EN standard of a particular country (except in branded worksections. Use **EN** instead.

**DIN rail** Use instead of Din rail or DIN type rail.

**direct current** Use **d.c.** not D.C., dc.

**direct (or proprietary) specification** The specification of an item by reference to a proprietary trade name.

**disassemble****disconnectable****discrepancy****dismantle****dispatch**

**DN** Nominal pipe size e.g., DN 25.

**document**

**documentation conventions** The NATSPEC 0171 *General requirement* worksection defines the following NATSPEC style:

- Imperative mood and streamlined language: The words shall or shall be are implied where a colon is used following a keyword or within a sentence or sentence fragment.  
(Shall or shall be are not used in NATSPEC worksections.)
- Subject of sentences and phrases: Specification requirements are to be performed by the contractor, unless stated otherwise.  
For example,  
Requirement: Provide x, y, and z, as documented means the contractor shall supply and install x,y, and z, as documented in the general conditions of contract, special conditions of contract, drawings, schedules and/or the specification.

**documented****Domestic/BUILDING Domestic/Domestic**

**Online** See NATSPEC for a description of specification packages available by subscription.

**don't** Avoid shortened forms. Use **do not** instead. Minimise the use of negatives by stating what is acceptable rather than the unacceptable.

**door-by-door****door frame****door jamb****doorset****doorway**

**.dotm file** An attached MS Word Style template document holding style information about that document for example, fonts, margins, headers and footers. Refer to NATSPEC worksection *Template* for NATSPEC style (Natspec.dotm).

**double detail joint**

## STYLEguide

**draft** Use when referring to a preliminary document.

**double/double seal**

**double glazed**

**double glazing**

**double-hung**

**drainage control measures**

**drainage structures**

**drainage types**

**draft** Use instead of **draught** when referring to the movement of air or gas.

**drawband**

**drawing(s)** Use instead of **Drawing(s)** for both AUS-SPEC and NATSPEC.

**dripline**

**dry process fibreboard**

**dual drainage**

**dual water supply**

**dustproof**

## E

**early age strength**

**earth windrow**

**earthwork(s)**

**earthing boss**

**east**

**economic life**

**ecosystem**

**EDG** Abbreviation for Environment Design Guide provided by AIA (formerly produced by Built Environment Design Professions). See **citation**.

**edge bonding**

**edge drains**

**edge line**

**edge strip**

**edition** Use to distinguish between documents published at different times, such as the April and October editions of NATSPEC. See also **version**.

**EEGO** Energy Efficiency in Government Operations Policy.

**EIFS** Exterior insulation and finish system

**effective pipe length**

**eg** Use **for example** or **e.g.**, instead. Use **for example** generally and **e.g.** for sentence fragments in *Guidance* only. In SELECTIONS, Schedules *Guidance*, capitalise the following word, For example,

Finishing treatment: e.g. Wood float, Sponge, Ornamental.

**elastomer**

**elastopressive**

**electrical kilowatts** See **kilowatts**.

**electricity distributor** Use instead of **local network service, provider, network operator** and **supply authority**. Use utility service provider for services including telecommunications and electricity.

**electronic copy** Use instead of soft copy or digital copy

**electromagnetic capability (EMC)**

**email**

**embedded generator**

**embedded material**

**emergency access way**

**emitter**

**enable** Use **allow** instead

**End Area Method** (AUS-SPEC)

## STYLEguide

**end-matched joints (flooring and decking)**

**energy consumption**

**energy efficiency**

**energy load**

**engineer** Use **professional engineer**, a defined term in NATSPEC, instead.

**engineered floor panel (flooring)**

**engineering design**

**ensure** Use **make sure**, or **for** if applicable to the context.

**entrapped insulated safety glass assembly**

**entrapped laminated glass assembly**

**environment**

**environmental audits**

**environmental impact assessment (EIA)**

**Environmental Management Plan** (AUS-SPEC)

**environmental management plan (EMP)**

**environmental officer**

**EPA** Environmental Protection Authority or Environmental Protection Agency depending on the state legislation.

**equal to/ or equal** Do not use these terms as they may be an invitation to the contractor to substitute without notification. Specify the quality and performance required instead. Refer to NATSPEC TECHnote Product specifying and substitution for NATSPEC's procedure for substitution of specified products.

**equilibrium moisture content (EMC)**

**erosion**

**erosion and sediment control**

**erosion classes in relation to soil types**

**erosion control measures**

**error**

**essential electric power**

**ESA** Equivalent Standard Axles.

**ESD** Ecologically Sustainable Development. Refer to NATSPEC TECHreport *Specifying ESD*.

**ESD** Entering Sight Distance (AUS-SPEC).

**et al** Do not use Latin expressions. Use **and others**.

**etc** Do not use. Provide a full list instead.

**Exact values** Express exact values for as many digits as required to give the complete value. For example:

- Use: 1 kW.h = 3.6 MJ exactly.
- Use: 1 standard atmosphere = 101.325 kPa exactly.

See also **inexact values**.

**EXECUTION** Subsection of each NATSPEC worksection. See also **worksection** for outline of worksection structure.

**extended design domain (EDD)**

**Extreme Stress Seal (XSS)**

**evaporative air cooler**

**evaporative efficiency**

**exfiltration**

**expansion joint** See **joints**,

**external inspection (of trees)**

**extra-low voltage**

# F

**facade****faceplate****facework****fascia, fascias** (plural)**fail-safe****fail-secure**

**fasteners** Use instead of **anchors**, **fixings** for the holding down and securing connector(s) used for fixing. (Note that AS 1657 uses fixings as a noun.)

**fault current limiters**

**FBS-1 (fibre-biosoluble)** Australian insulation industry certification scheme for mineral wool

**feature****Federal government** (AUS-SPEC)

**federal (government)** Requires a capital only if it forms part of an official title, for example, a federal government initiative, the Federal Court of Australia. Use **Australian Government** in preference.

**FFZ** Fuel free zone.

**fibre batts****fibre cement****fibre cement sheet linings****fibreglass****field working period****fill****filling****finish coat (plastering)****finish sanding****finishing treatment (plastering)****fire break****fire doorset****firefighting**

**fire hazard properties** See **NCC Schedule 3 for definition.**

**fire-rated** Use **fire-resisting** instead.

**fire-resistance level (FRL)** From AS 1530.4 and NCC Schedule 5.

**fire resistant** Use **fire-resisting** instead. (The exception is AS 1905.1 which uses fire-resistant. AS/NZS 1668.1 also uses fire-resistant in addition to fire-resisting).

**fire-resisting** Use instead of fire rated when not referring to a specific FRL.

**fire shutters****fire-stop****fire-stopping****fire trail(s)** (AUS-SPEC)**fire wall****fitout****fitted flooring**

**fixing** A verb meaning the act of holding and securing an object in place.

**fixings** Use **fasteners** instead. Fixing should be used as a verb to avoid confusion. (Note that AS 1657 uses fixings as a noun.)

**flaking****Flammability Index****flatness****flexible guide post****flexible pavement****flexible pavements****floating flooring****floor board**

**flow path** e.g. overland flow path

**flow rate****fly ash****floor covering****floor waste****flush bolt****flush door****flush door panels****flush lined****flush mounted****flushplate****flux oil**

**footer** Provide date of current *Update* (Month Year e.g. ©NATSPEC (Apr 17) in the footer of both the PDF and Word file. For TECHnotes provide the original date of publication followed by the date of any amendment (Month Year – Amdt Month Year e.g. Apr 10 – Amdt Oct 11). For TECHreports, if amended only, provide the date of the current *Update*.

**footpath (pathway)**

**formaldehyde emission class** For AS 1859 series and AS 1860 series use E1 and E0. For AS/NZS 2269 series and AS 2270 series use E<sub>1</sub> and E<sub>0</sub>.

**formation drain** (AUS-SPEC).

**formwork**



**/ forward slash (solidus)** Use without spaces when showing alternatives, e.g., round front/flat back, in some shortened forms and in mathematical expressions e.g., xxx/yyy.

**foundation drains**

**foundation level**

**FPZ** Fire Protection Zones.

**fractions** Express fractional values in decimal terms. For example:

Use: 0.5. . . not. . . ½ or 1/2.

See **MS Word AutoCorrect** for instructions on how to prevent Word from creating unwanted fractions.

**FRC** Fibre reinforced cement. Do not use **fibro**.

**free-to-air**

**freespan**

**freezer room**

**FRL** Fire-resistance level.

**FRZ** Fuel Reduced Zone.

**full scale**

**full size**

**full stops** The following rules, while not necessarily generally acceptable punctuation, are intended to produce consistency across all worksections:

- End all sentences and paragraphs with a full stop, even if they consist of a single word in a list.
- Do not use full stops at the end of headings.
- Do not use full stops where the item in a list ends in a numeral. (This avoids implied accuracy or in some cases, ambiguity caused by the appearance of two decimal points).

**functional performance test**

**fuse link**

**fuse holder**

# G

**galvanize**

**gas-fired**

**GBCA** Green Building Council of Australia. Refer to NATSPEC TECHreport *Specifying ESD*.

**GENERAL** Subsection of each NATSPEC worksection. See also **worksection** for outline of worksection structure.

**General conditions of contract** (AUS-SPEC). Only italicise if referring to the 0147 *Conditions of contract* worksection.

**general purpose socket outlets** Use instead of general purpose outlet (GPO).

**0171 General requirements** Worksection covering administrative topics common to all the technical worksections, such as interpretation, inspection, tests, samples, submissions and completion. It also references the Common requirement worksections. Each technical worksection cross references it.

**geotechnical site investigation**

**geotextile**

**geotextile reinforced seal (GRS)**

**GITA** Geotechnical inspection and testing authority.

**give notice**

**glass wool** A form of mineral wool

**glass fibre** See also **fibreglass**.

**gloss**

**gloss unit**

**glued laminated timber**

**going**

**government** The federal government is a broad descriptive term for the Commonwealth or Australian Government and does not need to be capitalised.

**GPO** Use **socket outlet** or **general purpose socket outlet** instead.

**GPT gross pollutant trap**

**grab rail**

**grade** If used in a sentence and referring to a specific quality e.g.

1.6 mm galvanized grade G2 steel with Z275 coating.

**gradient** Use x(V):y(H)

**granolithic topping**

## STYLEguide

**greater than** To avoid confusion in paragraphs, where possible use **minimum**, **more than or not less than** in preference to the symbols > or ≥. For example:

Material: Metallic-coated steel, minimum 1 mm thick.

Construction: Provide extruded aluminium cove moulding not less than 25 mm radius, as a flashing moulding between the external wall skin and the external floor.

In short phrases/paragraphs use the symbol. For example:

Substrates, drains and sumps: > 1.5%.

Root inspection: If inspection is by the removal of soil test, such as investigative inspection, sample as follows:

- For > 100 samples: Inspect 1%.
- For < 100 samples: Inspect 1 sample.

In tables, symbols may be more appropriate. See also **Symbols**.

**green concrete**  
**green concrete**

**Green Star** Rating system developed by the Green Building Council of Australia (**GBCA**).

**greenhouse gas/emission** Use lower case.

**grille**

**Group number** A BCA term.

**groundwork, groundworks**

**GRP** Glass reinforced plastic. Use for resin bonded glass fibre products.

**GST** Goods and Services Tax.

**GTA** Geotechnical testing authority.

**guardrail**

**Guidance** Text included in the worksection *Template* to assist or prompt the specification writer regarding content. It appears as boxed, green text unless hidden. *Guidance* can be displayed, hidden and/or permanently deleted using the NATSPEC toolbar or the hidden text Hide and Delete functions of your word processing system. Delete Hidden text before issuing the final document.

Avoid *Guidance* styles Indent 2 and 3.

For *Guidance* text which is provided as sample text for inclusion in a customised specification see **Optional text**.

**guide post**

**gypsum plaster**

# H

**ha** Hectare. Equals an area of 10 000 m<sup>2</sup> or a square of 100 m sides.

**halogen-free**

**handbook**

**handworked** [0433]

**hangar** A building for housing aircraft.

**hanger** For hanging pipes, ducts.

**hardboard**

**hard copy** Use instead of **paper copy**. (see also **electronic copy**).

**hard space** Prevents a bad turn in text such as the spread of numerals and associated units over two lines. Use Control+Shift+Space. Do not use in documents which will be imported into PageSeeder.

**hardware**

**HDPE** High density polyethylene (also known as PE-HD)

**hatch** Use **access panel** instead.

**Headings** NATSPEC templates have an attached .docx file which holds information about headings. There are 4 main headings:

- Heading 1 – **WORKSECTION TITLE**.
- Heading 2 – Subsection title: **GENERAL, PRODUCTS, EXECUTION and SELECTIONS**.
- Heading 3 – **CLAUSE TITLE**.
- Heading 4 – **Subclause title**.

See also **word processing styles in NATSPEC templates** for notes on style differentiation of the headings and automatic numbering for guidance on numbering headings.

**head rail**

**header unit**

**heat-treated**

**heated water**

**heatsink**

**heavy duty**

**hertz (Hz)** SI derived unit for frequency.

**hessian**

**HF welding**

**Hidden text** Refers to **Guidance** text in NATSPEC templates which can be hidden using the NATSPEC toolbar and then be deleted from final document. Refer NATSPEC TECHnote GEN 029 *Design and specification Guidance text in NATSPEC*.

## STYLEguide

Do not use Normal Indent 2 and Normal Indent 3 in Optional and Guidance text as MS Word is unstable in this style.

**high level interface**

**high pressure decorative laminates (HPDL)**

**high stress seal or reseal (HSS)**

**high voltage**

**high-build low profile latex coating**

**HMR** High Moisture Resistant.

**HOLD POINT(s)/ Hold Point(s) (HP)**(AUS-SPEC): A defined position in the manufacture/construction stages of the contract beyond which work shall not proceed without mandatory verification and acceptance by the superintendent. Use **HOLD POINT** in text and **Hold Point** for table headings and *Guidance* text.

**Hold point(s)** (NATSPEC) A mandatory verification point beyond which a work process cannot proceed without authorisation by the contract administrator. NATSPEC provides *Guidance* where it may be appropriate to include a **Hold point**. For example,

**Hold points**, if required, should be inserted here. If the quality system relies on second part supervision or is subject to third party certification audit then provide the appropriate lists or **Hold points**.

Refer NATSPEC TECHnote GEN 009 *Hold points and witness points*.

**horizontal alignment**

**hot-dip galvanized**

**hot-dipped** e.g. hot-dipped sheet metal.

**hot-rolled**

**hot weather**

**hour (h)** Non SI unit of time.

**house signage**

**hydrochlorofluorocarbons (HCFCs)**

**hydroseeding**

**hydromulch**

**hyperlink** A NATSPEC text style: blue, underlined. As a rule, NATSPEC includes *Normal* text hyperlinks/web addresses in branded worksections only. In generic worksections, web addresses are included in *Guidance* text for information only. More details on organisations can be found in *NATsource*. AUS-SPEC does include *Normal* text hyperlinks.

**hyphen** Use as few hyphens as possible. Many adjective compounds consist of noun plus adjective; adjective plus adjective; or adverb plus adjective. Those in the first two categories are always written with a hyphen, e.g., self-tapping and metallic-coated. Number-word combination nouns should be hyphenated. For example:

- Use 3-phase not three-phase or 3 phase.

- Use 25-year life not 25 year life or twenty-five-year life.

If the number-word combination originates in a standard or similar, follow the practice in the original document. For example:

- Use IP44 not IP-44 or IP 44. (AS 60529-2004).

Do not use a hyphen to indicate a range of values. For example:

- Use Monday to Wednesday ... not... Monday - Wednesday.
- Use 5 to 10 mm ... not ... 5 – 10 mm (not 5 mm to 10 mm).



**IEC** International Electrotechnical Commission.

**IFD** Intensity Frequency Duration.

**If x is ...** Use instead of **where x is....** See **conditional sentences** for preferred sentence structure.

**illuminated signs**

**imperative mood** Use the imperative mood, indicating a command or direction, for clarity and brevity. Mood is a feature of verbs to indicate the manner in which they are used. For example:

- Conform to AS 1234... not ... Conforming to AS 1234 or shall to conform to AS 1234 ...

**in built, in-built, inbuilt** Use **built-in** instead.

**impact sound**

**import cost**

**imported topsoil**

**inadequate foundation material**

**incandescent lamp**

**incoming busbars**

**individual rung ladder**

**Inexact values** Express to a level of accuracy appropriate to the accuracy of the measurement. For example:

- $24^{\circ}\text{C} \pm 0.5^{\circ}\text{C}$  where  $0.5^{\circ}\text{C}$  expresses the uncertainty of the value.
- If the original information was 55.2 m it would be misleading to re-write it as 55 200 mm – this implies a greater accuracy than the original measurement.

See also **exact values**.

**in-field**

**infill**

**Informative** Text in Australian standards or other referenced documents which is for information only, i.e. not Normative.

**infra-red**

**ingress protection**

**in-ground**

**in-house**

**in situ**

**in the drawings** Use **as documented** instead. Documented, as documented and similar terms mean contained in the contract documents.

**inspection and test plans (ITP)**

**instead of** Use instead of in lieu of.

**instruction**

**integrated management manual**

**integrated management system**

**interlayer**

**intermittently-supported flooring**

**elastopressive**

**international**

**internet**

**intra-pavement drains**

**investigation inspection (of trees)**

**IP** International protection rating. IPXY. No spaces between letters and numerals. For example, IPX6.

**IPWEA** Institute of Public Works Engineering Australia.

**I section**

**ISO** International Standards Organisation.

**issue** Use to distinguish between drawings and documents such as programs and schedules created at different times. See also **edition** and **version**.

**IT** Information technology.

**italics** Used when cross referencing another worksection within NATSPEC.

**ITP** Inspection and test plan.

**its** The possessive form of it. For example,

Metal prefinishes restoration: If the damaged surface can be satisfactorily restored to its original condition, submit proposals.

**it's** Do not use shortened forms. Use **it is** instead.

**J****joinery door****joints****joule (J)** SI derived unit for energy, work, quantity of heat.**jump formwork****K****kelvin (K)** SI base unit for thermodynamic temperature**kerb****kerb and channel (gutter)****keyed alike (locks)****keyed to differ (locks)****keyword, keyphrase** Words or phrases that alert readers to the content of the paragraph. They are effectively a fifth level heading although MS Word does not recognise this. Every paragraph must start with a keyword followed by a colon. Capitalise the first word following the colon (except where the colon is followed by a number). For example:

Keyword: Xxxxx.

Standard: To AS/NZS 1664.1 or  
AS/NZS 1664.2.

If there is no obvious keyword, the default is General. Consider using the following words instead: Requirement, Description, Standard, Performance, Testing, Restrictions, Documentation, Notice, Operation, Method, Location, Position or Labelling. Product-related keywords for consideration include: Product, Type, Quality, Grade, Material, Profile, Section, Thickness, Gauge, Colour, Finish, Fixing and Accessories.

**kickplate****kilogram (kg)** SI base unit for mass.**kilowatt** The electrical terms kVA, kVAR and the kW are all aspects of electrical power but are not identical and must not be confused with one another. See **kVA, kWh, kVAR, kW<sub>R</sub>, kW<sub>E</sub>, kW<sub>E</sub>/kW<sub>R</sub>**.**kL** Kilolitre, actually a cubic metre (m<sup>3</sup>). **kL** is often used for volumes of water but concrete and most other materials are measured in **m<sup>3</sup>**.**kVA** Kilovolt-ampere is energy generated.**kVAR** Reactive kilovolt-ampere.**kW(E)** Kilowatts of electrical energy input use the (E) only to differentiate between mechanical and electrical power.**kW<sub>E</sub>/kW<sub>R</sub>** Measure of efficiency and is significant in rating cooling equipment.**kWh** Kilowatt hour is energy that consumers use as useful energy.**kW(R)** Kilowatts of refrigeration effect.

**labelling****ladder****ladder cage****laitance**

**lamp** Light generating component which is fitted to the **luminaire**.

**land use****landform****landing****large culvert unit**

**Large numbers** To increase readability and decrease the risk of error, numbers with more than 4 digits should be broken up into groups of 3 separated by a non-breaking space. Do not use commas for this purpose.

- Use: 2000 not 2,000.
- Use: 20 000 not 20000 or 20,000.
- Use: 0.000 15 not 0.00015

This rule will sometimes be varied in tables to maintain consistent spacing with other large numbers.

**latchset****latex extensible wall coating (or membrane coating)**

**Latin words** Avoid Latin expressions and use the English equivalent instead. If latin words are used (for example as the name of a tree species), italicise the words.

**lay****layflat****laying patterns**

**LCA** Life Cycle Assessment.

**LCADesign** Life Cycle Assessment computer application.

**leaf/leaves** Use when referring to masonry skins and the opening panel(s) of a doorset. When referring to doors, if possible, construct text to refer to each leaf rather than using the term leaves.

**legibility distance**

*Legionella*

**length** The convention in the building industry is to express measurements in millimetres rather than fractional metres. Numerical values less than 10 metres should be expressed as whole millimetres with no decimal point, not in metres. Use Control+Shift+Space to create a hard to keep numeral and units together.

- Use: 1200 mm. . . not 1.2 m.

The use of small length dimensions in the building industry is normally limited to thicknesses. Express these as fractional millimetres.

- Standard sheet metal thicknesses include: 0.6 mm, 0.8 mm, 1.0 mm, 1.2 mm and 1.6 mm.

For very small lengths follow the convention for small numbers above and use an appropriate decimal multiple. Do not use obsolete units like microns. Note that the  $\mu$  symbol (the Greek letter mu standing for micro or  $10^{-6}$ ) is present in most fonts. Use the  $\mu$  in NATSPEC's Normal style (Arial) not Symbol or some other font.

- Use: 75  $\mu$ m. . . not 0.075 mm or 75 microns.

**LEP** Local Environmental Plan.

**less than** To avoid confusion in text, where possible, use words in preference to  $<$  and  $\leq$ .

is  $>$  x Use **is more than** x.

is  $<$  x Use **is less than** x.

is  $\leq$  x Use **not more than** x.

is  $\geq$  x Use **not less than** x.

at  $\leq$  x Use **or less**.

at  $\geq$  x Use **or more**.

In tables and short phrases, symbols may be more appropriate. See also **Symbols**.

- Thickness:  $<$  3 mm.

General: Provide pumps selected so that their respective documented maximum flow rate is less than 80% of the maximum flow for the pump shown in the manufacturer's catalogue.

**letter of acceptance****levelling (topping function)****levelness****levels of gloss finish****leverset****life cycle**

**liftwell** Includes shaft and pit.

**light-emitting diode (LED)**

**lighting** Refers to a complete system including luminaires, lamps, switches and controls.

**lightweight**

**like** Use **such as** instead.

**line of influence** Use **zone of influence** instead.

**linemarking**

## STYLEguide

### link mains

#### lippage

**Lists** Precede bulleted lists with ... **as follows:** or similar expressions. Provide an initial capital and full stop for each item in the list. Use lists in preference to extended sentences which are cumbersome to format, edit and interpret. For example:

Present lists as follows:

- First list item.
- Second list item.
- Third list item.

**litre (L)** AS ISO 1000 permits both **I** and **L** as the abbreviation for litre. The custom in the Australian building industry is to use upper-case **L** for litre to avoid confusion of lower case **I** with the numeral **1** in fonts such as Times New Roman.

Use: 25 L not 25I or 25 I.

See also **kilolitre**.

### load bearing

#### local area network (LAN)

**Local Authority** (AUS-SPEC).

**local authority** (NATSPEC).

**Local Council** (AUS-SPEC).

**local council** (NATSPEC).

#### local environmental plan (LEP)

**Local Government** (AUS-SPEC).

**local government** (NATSPEC).

**local government authority**

#### logbook

**login** Into SPECbuilder Live for example.

#### longitudinal linemarking

#### long-term

#### looped mains

#### long-term

**LOSPs** Light Organic Solvent Preservatives used as an alternative to CCA for treatment of timber.

#### lost formwork

**lot** (allotment)

**lot** (measurement)

#### louvred door

**louvres – continuous**

**louvres – horizontal**

**louvres – vertical**

#### low density soil

#### low level interface

**low voltage** Several standards use low-voltage as the preferred spelling. NATSPEC follows AS 3000 clause 1.4.98.

**LS** Lump sum.

**lumen (lm)** SI derived unit for luminous flux.

**luminaire** Refers to the complete assembly to distribute, filter or transform light including lampholder, reflector, diffuser, means of connection to the supply circuit wiring.

**Lump Sum** (AUS-SPEC).

**lump sum** (NATSPEC).

**lux (lx)** SI derived unit for illuminance.

# M

## main circuit supply busbars

**Maintenance Activity specification** (AUS-SPEC).

**Maintenance Defect Register (MDR)** (AUS-SPEC).

## maintenance diary

## maintenance history

**Maintenance Management Plan (MMP)** (AUS-SPEC).

## Maintenance Management System (MMS)

## major system

**make sure** Use instead of ensure.

## make-up

**mandrel** Use instead of mandril.

**manhole** (AUS-SPEC)

**manhole** Use **access chamber** instead in NATSPEC.

**manhour** Use **work hour** instead.

## man-made

**manufacturer's recommendations** Use to include both manufacturers' and suppliers' recommendations. Use instead of **manufacturer's published recommendations**.

## marketplace

## markup

## masonry

## master antenna television (MATV)

## materials

## material R-Value

**material safety data sheets (MSDS)** Use **Safety Data Sheet (SDS)** instead.

## maximum allowable operating pressure

## medical breathing air

**medium density fibreboard (MDF)** Also known as dry process fibreboard.

## MELT

## membrane

## membrane liner

## membrane plate

## membranes (waterproof)

## metal faced board

**metallic-coated** Use metallic-coated unless it is specifically zinc that is required and other alloys are not acceptable. For zinc, use **hot-dip galvanized**, not metallic coated.

## metasediment

**Method Statement (procedures, technical procedures, process descriptions, specific procedures)** (AUS-SPEC).

**metre (m)** SI base unit for **length**. See **length** for guidance on when to use metres or millimetres.

**metric units** Express quantities in SI metric units. Do not use Imperial units like feet and pounds, older centimetre-gram-second system (CGS) units or exotic units like Sydharbs. If necessary, convert to appropriate SI units. See also **SI units** and **length** for guidance on when to use particular units of measurement.

## microclimate

## microcrack

**micron** Use  $\mu\text{m}$  instead.

## Microsoft Word or MS Word

## microsprays

## microsurfacing

## midway

## mild flooring

**millilitre (mL)** Volume. See **symbols** for guidance on use of millilitres.

**millimetres (mm)** Length. See **length** for guidance on use of metres or millimetres.

**mineral wool** (including glasswool and rockwool)

## minimise

## minimum gap sight distance

## minor road

## minor system

**minute (m)** time.

**minute (plane angle)** See **symbols**.

## misshape, misshaped, misshaping

## mobile shelving

## mock-up

## modified material

## moisture content

**mole (mol)** SI base unit for amount of substance.

**Monday to Friday** Do not use a hyphen to indicate a range of values.

## monel

**monobloc** [AS/NZS 3813].

**Months and seasons** Begin names of months with a capital: **January, February, March... December**. Season names are lower case.



**more than** see **Less than**.

**mortar bedding**

**mortarless**

**mortice**

**mosaic parquetry panels**

**MPa** megapascal

**mould**

**MS word auto correct** See **auto correct**.

**multi-component**

**must** Do not use. See also **imperative mood**.

**multicore cables**

**multipurpose**

**multispray shower**

**multizone**

**muntin**

# N

**NABERS** National Australian Built Environment Rating System. NABERS measures the overall operational environmental performance of an existing building. Refer to NATSPEC TECHreport 01 *Specifying ESD*.

**nameplate**

**NAMS.AU** National Asset Management Strategy Committee

**nanotechnology**

**N/A** not applicable. Use instead of **NA**, **na** and **n/a** and only in non-*Template* documents. Do not use in a specification.

**NATA** National Association of Testing Authorities, Australia.

**NatHERS** Nationwide House Energy Rating Scheme or nationwide energy rating software. The software is named AccuRate to avoid ambiguity.

**National Classification System** NATSPEC worksections are classified and sequenced in a logical order corresponding to common work sequences in the Australian construction industry. The classification system provides locations for specification material provided by the civil and structural engineer, the architect and landscape architect, the interior designer and the mechanical, hydraulic and electrical engineers. The system has evolved in conjunction with the New Zealand Masterspec system. A modified version of the 1989 NATSPEC Classification system developed by Bryce Mortlock (the father of NATSPEC) was reintroduced in 2005. See also **worksection numbering**.

**National Construction Code (NCC)** National Construction Code series includes BCA Volume 1 and Volume 2, the Building Code of Australia and Volume 3, the PCA (Plumbing Code of Australia). See **INTERPRETATIONS** in the *General requirements* worksection for definitions.

**AUS-SPEC Construction reference**

**AUS-SPEC Design reference**

**NATSPEC Maintenance reference** is a reference specification that defines the minimum level of acceptable materials and workmanship for the maintenance works for all classes of buildings. It also covers corrective and preventative maintenance works for mechanical, hydraulic, electrical and fire services and lifts.

**NATSPEC reference – Electrical services**

**NATSPEC reference – Fire services**

**NATSPEC reference – Hydraulic services**

**NATSPEC reference – Mechanical services**

## STYLEguide

**NATsource** A listing of all standards and documents incorporated by reference in NATSPEC and AUS-SPEC worksections. It does not include documents that are only in the *Guidance* text. Each entry includes, if available, the abstract describing the standard or document provided by its publisher. The list includes Australian, British, American, ISO, IEC and other international standards and documents current at the date NATsource was published. Use italics if referring to the title.

**NATSPEC** see back page for corporate information. NATSPEC packages currently available:

**BUILDING Basic** This is a cut-down version of the BUILDING Professional package for architects and building designers. It is aimed at simple building projects requiring less technical material on products, their execution and scheduling. It contains approximately 90 worksections selected from the BUILDING Professional package. Of these, 40 have reduced content compared to BUILDING Professional relating to inspections, sampling, testing and shop drawing submissions.

**BUILDING Interior** For architects, building designers and interior designers engaged on comprehensive interior projects. It covers interior building and finishing work together with mechanical, hydraulic and electrical services design and installation work. Demolition (interior), tendering and contract preliminaries are also covered.

**BUILDING Professional** For architects and building designers engaged on all building project types. BUILDING Professional is NATSPEC's definitive building specification containing some 150 worksections. It covers site, architectural, interiors, and landscaping and provides design and install worksections for mechanical, hydraulic and electrical services. Demolition, tendering and contract preliminaries are also covered. In addition, BUILDING Professional includes the reduced content BUILDING Basic worksections and the NATSPEC digital DOMESTIC specification. These worksections may be selected for the uncomplicated parts of specific projects.

**BUILDING Landscape** For engineers and landscape architects engaged on site preparation works and all works external to the building but within the site boundary together with mechanical, hydraulic and electrical services design and installation work. Demolition, tendering and contract preliminaries are also covered. It is not applicable to works outside the site boundary such as vehicular crossings and works within local or state government roads.

**BUILDING Structure** For engineers engaged on structural work intended for occupation. It covers materials for components that are necessary for the adequate strength and appropriate serviceability behaviour of the buildings. It is not intended that the worksections should apply without significant augmentation to civil engineering structures such as bridges, dams and roads.

**BUILDING Domestic/Domestic Online** For architects and building designers constructing, extending or renovating uncomplicated single detached dwellings. It covers site, structural and architectural work and mechanical, hydraulic and electrical services design and installation work.

**SERVICES Combined** For engineers and consultants specifying the services for projects of all complexities. It includes all the material from the SERVICES Mechanical, Hydraulic and Electrical specification packages.

**SERVICES Electrical** For engineers and consultants specifying the electrical services for projects of all complexities. It includes most commonly used electrical services and components. Demolition, tendering and contract preliminaries are also covered.

**SERVICES Hydraulic and Fire** For engineers and consultants specifying the hydraulic services and fire systems for projects of all complexities. It includes most commonly used hydraulic services and components. Demolition, tendering and contract preliminaries are also covered.

**SERVICES Mechanical** For engineers and consultants specifying the mechanical services for projects of all complexities. It includes most commonly used mechanical services and components. Demolition, tendering and contract preliminaries are also covered.

Other NATSPEC specification products include:

**Simple DOMESTIC** NATSPEC reference specification for owner-builders constructing, extending or renovating their uncomplicated buildings covered by Class 1a and Class 10 of the Building Code of Australia. Simple DOMESTIC is a quality statement covering site, structural and architectural work and mechanical, hydraulic and electrical services design and installation work.

**Simple Office Fitout** This reference specification is a quality statement supplementing the drawings prepared by the contractor and has been designed to be a condition of contract between the client and the contractor. It has been prepared for a small tenancy fitout in an existing building that is complete with finishes, services and facilities.

**NCC** See National Construction Code.

**NCR** Non-conformance report.

**necessary** Use to indicate something essential for the specified outcome.

**net** Use instead of **nett**.

**net continuous rated output (or prime rating)**

**net short-time rated output (or stand-by rating)**

**Network Utility Operator**

**newton (N)** SI derived unit for force.

**NNC** Notice of non-conformance.

## STYLEguide

**No.** Abbreviation for number

**nogging** Use instead of **noggin**.

**NOHSC** Use **Safe Work Australia** instead (formerly the National Occupational Health and Safety Commission).

**non accessible**

**non-air conditioned**

**non-aggregate textured latex coating**

**non-cellular**

**non-combustible**

**non-composite**

**non-conformance**

**non-conformance report (NCR)**

**non-corrosive, non-corroding** Use **corrosion-resistant** instead. **Non-corrosive** is the 'agent' description.

**non defrost**

**non-demountable**

**non fire-resisting**

**non-load bearing**

**non-load bearing construction (straw bale)**

**non-maintained**

**non-metallic**

**non-potable**

**non-pressure**

**non recoverable**

**non-rigid road safety barrier system**

**non-slip** Use **slip-resistant** instead.

**non-standard**

**non-staining**

**non-toxic**

**non-trafficable**

**non type-tested**

**nor** Use **or** instead.

**North**

**Normative** Text in Australian standards or other referenced documents that is mandatory, i.e. not Informative.

**normal design domain (NDD)**

**Normal style text** Black paragraph text which is not Hidden *Guidance* text.

**nominal size (DN)**

**nominated mix**

**nosing**

**not-for-profit**

**notice**

**NOTICES and LABELS** Show the required text of notices and labels as ALL CAPITALS without italics or quotation marks. Short notices may be included within text. If the notices have multiple lines or require mixed upper and lower case characters write as separate paragraphs. Begin the text for notice or label on a new line as follows:

Use: Provide the following label next to the machine:

CAUTION! THIS MACHINE HAS NO BRAIN.  
PROVIDE YOUR OWN.

**Notice of non-conformance (NNC)**

**NSW** New South Wales. Except in **REFERENCED DOCUMENTS**, all states and territories, except NSW and ACT, are written in full.

**NT** use **Northern Territory** instead. All states and territories, except NSW and ACT, are written in full.

**number formats** See **decimal point, fractions, zeros, small numbers, large numbers, billion, exact values** and **inexact values**.

**Numbers in text** Use numerals in worksections as they are easier to read. Separate all numerals and their associated units with a hard space to prevent numeral and units separating at a line break. For example:

- Use: 3 mm. . . not . . .three mm or 3mm.
- Use: 2 days. . . not . . .two days.
- Use: 2 coats. . . not . . .two coats.

In documents such as reports containing few numerical values:

- Spell out the numbers if less than 3. For example: two green bottles not 2 green bottles.
- Use numerals if 3 or greater. For example: 10 not ten, 22 not twenty-two, 40 000 not forty thousand.

When a sentence begins with a number greater than 10, spell it out, using a hyphen between number words. For example: Ninety-nine luftballons . . .

Use a hyphen for compound adjectives involving numbers, whether cardinal or ordinal and whether expressed in words or figures. For example:

- 50-year.
- second-floor.

See also **ordinals** and **ratios**.

**NZS** New Zealand Standard. See also **citation** for guidance in citing standards in NATSPEC.

# O

## O-ring

## obtain

**offcut** Use instead of **off-cut** or **off cut**.

**Office edited worksection** A NATSPEC worksection *Template* which has been pre-edited by the specifier for a specific project type. See *SPECbuilder Live Guide* for more information on naming, saving and compiling Office edited worksections.

## one-way

## offcuts

## off-line

## offset

## off-site

## ongoing

## onsell

**OH&S** Use **Work Health and Safety (WHS)** instead. See also **Safe Work Australia**.

Ω or **ohm** SI derived unit for electrical resistance. Use instead of ohms.

## onboard

## on-line

## on-site

## on to

## opacifier

## opacity

## open system

## operable walls

**Optional style text** In worksections, *Guidance* text in blue font with a grey background covers items specified less frequently. It can be changed from *Optional* style to *Normal* style for incorporation into the specification where it is applicable to a project.

Coil grilles: Provide corrosion protected grilles to prevent birds and foreign matter entering the coils.

Depending on location and condenser configuration, the entry of foreign matter may be a problem. For such situations, consider changing the *Optional* style text to *Normal* style.

Do not use Normal Indent 2 and Normal Indent 3 in *Optional* and *Guidance* text as MS Word is unstable in this style.

**ordinal numbers** For example: first and fifth. They should be spelt out, not written as a number-letter abbreviation.

- Use: first, second not 1st, 2nd.

## organic soil

## organic waste

## organise

**organisation** Use instead of **organization**.

## outgoing

## out-of-date

**out of hours** Use **after-hours** instead.

## outer separator

## output

## overall

## overcurrent

## overflashing

## oversizing

## overspray

**owner** Use **principal** as the default. If the general conditions of contract use another term, consider amending all references in NATSPEC.

# P

**p.p.** [Latin per procurationem] When signing on behalf of someone else, place **p.p.** before your own name, rather than the name of the other person who has not signed.

**packaged air handling unit**

**packaged air conditioning**

**PageSeeder** XML based document management system used by NATSPEC.

**paint or coating system**

**panel drain**

**paper copy** Use **hard copy** instead.

**PAR** Preventative action request.

**Park Facility Data Sheets** (AUS-SPEC).

**Park Maintenance Management Plan** (AUS-SPEC).

**parquet**

**partial inspection (of trees)**

**Part** (Australian standards)

**particleboard**

**particulars** Use **details** instead.

**partition - fully demountable**

**partition - glazed**

**partition - semi demountable**

**pascal (Pa)** SI derived unit for pressure and stress.

**passive voice** Do not use. See **active voice**.

**patch plate glass panel fixings**

**pathway**

**pavers**

**pavement/pavements**

**pavement marking**

**Pay items** (AUS-SPEC)

**PCA Volume 3** See National Construction Code.

**PCA** Principal certifying authority (AUS-SPEC).

**PDF** Portable document format.

**PEC** Pigment emulsified creosote.

**people** Use instead of **persons**.

**per** Avoid if possible e.g. use a year or each year instead of per year.

**%** percent. See also **symbols**

**perform** Use instead of **carry out, undertake, execute**.

**performance audit (process audit, technical procedure audit, methods audit)**  
**Performance Requirement(s)** (AUS-SPEC).

**performance specification** States the desired end result and the criteria by which the result will be judged for its acceptability.

**perimeter road**

**perimeter track**

**permanent marks**

**persons** Use **people** instead.

**personnel access way** Use **access chamber** instead.

**phase** Use 3-phase not three-phase or 3 phase.

**pitline hinge**

**pipe** Use **pipe** if installed throughout the building. Use **tube** if in a heat exchanger, chiller or similar.

**pipe surround**

**pipng** Use instead of **pipework**

**plan transition**

**plane angle** See **symbols**.

**planning**

**plant establishment period**

**plant room**

**plaster**

**plastering**

**plastering system**

**platform flooring**

**plenum box**

**pliable building membrane**

**plies** Plural for ply, as in plywood.

**plug-in**

**point fixed glazing**

**PMP** Park maintenance plan

**pollution incident**

**polyester insulation**

**polyethylene** Use instead of **polythene**.

**polymer modified binder**

**polysulfide**

**polyurethane**

**pop rivet** Use **blind rivet** instead

**portable operator's terminal**

**Portland** (cement) Use **general purpose** cement instead.

## STYLEguide

**post-assembly****post-consumer****post-tension****post-tensioning****potable** Use drinking water instead.**powder coat/powder coated/powder coating****pozzolan****Practical Completion** (AUS-SPEC).**practical completion** With regard to the context, use the **date for practical completion** or the **date of practical completion** instead.**pre-assembly****precast** Also used as a verb in NATSPEC.**precast box culvert****precharge****precast concrete****pre-clean****precoated****pre-commissioning****pre-completion tests****pre-construction****pre-consumer****pre-cut****pre-design****predrill****prefabricated, prefabrication****prefinish****preform****preformed shower base****preglazed****pre-install****Preliminaries** Cover project-specific overheads that do not constitute work that could be allocated to a particular worksection. NATSPEC provides generic *Preliminaries* and several customised worksections.**pre-mixed****prepaint****pre-painted****preseal****prequalified****preselection****preservative-treated****preservative-treatment****preset****pressure-reducing****prestart****prestress****pretreated****pre-treatment****preventative action request (PAR)****pre-weathered****prewetting****primary treatment SQID****prime, primer, primer, prime coat****primerbinder****primerseal****principal****principal's representative** (AUS-SPEC).**prior to** Use **before** instead.**process audit****product audit (conformance audit, service audit)****product data sheet** Use instead of **technical data sheet****Product Partner** A building product manufacturer with an agreement with NATSPEC to include a purpose edited worksection in NATSPEC.See also **branded worksection**.**PRODUCTS** Subsection of each NATSPEC worksection. See also **worksection** for outline of worksection structure.**production assessment (concrete)****production tests** See **tests**,**professional engineer** A defined term in NATSPEC (in some states and territories, additional or alternative criteria may apply e.g. Registered Professional Engineer, Queensland (RPEQ)). Use instead of qualified engineer, structural engineer etc. Include the engineering discipline only if relevant to the context.**proforma****program****progressive tests** See **tests**,**project assessment (concrete)****project management plan****prompt** [complete/delete] Brown *Template* text indicating where the specification writer is required to either insert information specific to the project or delete a clause as inappropriate.

# STYLEguide

**proofing symbols** Standard symbols used at NATSPEC for editing and proofing:

Action	Symbol	Example
Insert space	Caret and hash	Space <sup>#</sup> missing ^
Insert text	Caret and insert 'text'	Text to inserted <sup>be</sup> ^
Delete space	Curves above and below space to be omitted	Sub contract
Delete text	Cross out	Cross-out text to delete
Make ALL CAPS	Double underline	<u><u>Text to be made all caps</u></u>
Make lower case	Cross out and amend	Text to be LOWER case <sup>lower</sup>
Make <i>italics</i>	Underline	<u>Text to be made italicised</u>
Make <b>bold</b>	Wavy underline	<u>This text is to be bold</u>
Insert punctuation	Circle required punctuation mark	Full stop missing □
Delete paragraph	Z crossing out	<del>Cross out paragraph to be deleted</del>
New paragraph	Insert bracket	Insert [new paragraph
Correct spelling	Strike out and correct	spelling Replace bad spelling
Transpose words	Insert trs	words these
Characters to remain	Dashed or dotted underline with 'STET'	This text is not marked for deletion <u>STET</u>

**property access**

**proprietary**

**proprietary assemblies**

**proprietary luminaires**

**proprietary names**

**proprietary specification** Specification by naming manufacturer, supplier, installer, trade name, brand name, catalogue or reference number. Identification of a proprietary item does not necessarily imply exclusive preference for the item so identified, but indicates the necessary properties of the item.

**pro-rata**

**protected species**

**protective underlay and overlay**

**prototype**

**provide**

Provide means supply and install and includes development of the design beyond that documented. The use of provide can vary within a worksection.

GENERAL subsection: Provide is used at the beginning of each worksection under **RESPONSIBILITIES** and applies to the entire worksection, so its use in the remainder of the worksection can be redundant. For example:

**RESPONSIBILITIES**

**General**

Requirement: Provide x, y, and z, as documented.

PRODUCTS subsection: Provide is not necessary in this subsection, as the requirement to supply and install has already been stated in GENERAL, **RESPONSIBILITIES**. For example:

**Doors**

Requirement: Lockable doors with a circuit card holder.

EXECUTION subsection: Paragraphs in this subsection generally include complete sentences where a verb describes what is required of the contractor, e.g. cut, lay etc. The word is selected to describe the execution of the work as accurately as possible. For example:

**Curing compounds**

Application: Apply without visible breaks or pinholes which remain unbroken for the required curing period after application.

Where a material or product is ancillary or incidental and not documented in PRODUCTS, the use of provide in an EXECUTION clause indicates the requirement to supply and install. For example:

**Bolt holes**

Bolt hole filling: Provide material with durability and colour matching the concrete.

See **documentation conventions** on streamlined language.

**public roads**

**pugmill**

**pumpset**

**purpose-made** Use instead of **purpose-built** for a product or assembly, designed and fabricated for a particular purpose which may be mass produced and used for a number of different projects.

**push-button**

**PVC membrane**

**PVC-M**

**PVC-O**

**PVC-U** Use instead of UPVC and PVCu.

## Q

**QLD.** Use **Queensland** instead. All states and territories, except NSW and ACT, are written in full.

**QUICKstart** A brief guide to the installation and use of NATSPEC and AUS-SPEC packages and SPECbuilder (compilation software). It is reissued at each update.

**qualified surveyor**

**quality assurance**

**quality assurance**

**quality assurance representative**

**quality check lists**

**quality control**

**quality design check lists**

**quality management representative**

**Quality Management System (QMS)**

**Quality Manual** (AUS-SPEC).

**quality package**

**Quality plan** (AUS-SPEC).

**quality register**

**quality system** (text in NATSPEC).

**Quality system** (heading in NATSPEC).

**Quality management system**

**Quality management system requirements (or system requirement, quality management requirement)**

**quotation marks** Use 'single quotation marks' not "double quotation marks". Quotation marks should be used only when directly quoting something or someone.

'This is a quotation'.

Do not use quotation marks to identify special words. The following is an incorrect use of quotation marks in NATSPEC style:

Thicker toppings need to be treated as independent slabs and may be merely 'separated' by a membrane or 'floating' on a resilient layer of some kind.

## R

**R-Value** A defined term in the BCA.

**radii** Plural of radius.

**rainhead**

**rainwater**

**ramp**

**ranges of values** To avoid ambiguity, where a range is to be expressed, include the word **to** between the terms. For example:

- Use: Monday to Friday not Monday - Friday.
- Use: 4 to 20 mA not 4 - 20 mA.

**rated currents**

**rated short-circuit currents**

**ratios** Express ratios of mixtures as in the following example:

Mix proportions (cement:lime:sand) by weight:  
1:1:6.

No space before or after colon in the ratio.

**reaction time**

**readily accessible** It relates to placement of equipment rather than access for people with disabilities.

**ready-made**

**ready-mixed concrete**

**rebalance**

**recirculate**

**recommission**

**reconstruct**

**reconstruction**

**record drawings** Use instead of work **as-executed, as-fitted or as-installed** drawings.

**recording level**

**records**

**recover**

**recyclable**

**redefine**

**redevelopment site**



**redressing**

**referenced documents** All standards, NCC references and documents referred to within a worksection are listed at the end of the worksection in *Guidance* text under the heading **Referenced documents**. The specification writer may include the relevant standards from this list if requires. They are grouped under the following headings:

"The following documents are incorporated into this worksection by reference."

Means documents that appear in *Normal* style text (the main body of the worksection, not *Guidance* text) are listed here.

"The following documents are mentioned only in the *Guidance* text:"

Means documents that appear only in *Guidance* text, but not in *Normal* style text, are listed here.

References are cited in the following order under each heading:

1. Australian or Australian/New Zealand standards in numerical order.
2. Standards Australia handbooks in numerical order.
3. Non-Australian or Australian/New Zealand standards including NATSPEC documents and NCC references in alphabetical order, and in turn, numerical order.
4. BCA Volume 2 citations, in numerical order (ignoring Figures and Tables).
5. BCA Volume 1 citations, in alpha-numerical order (ignoring 'Tables' and 'Spec').

In **REFERENCED DOCUMENTS**, use NATSPEC XXX (Classification GEN, DES or PRO), 3 digit identification number, date (original publication date, not amendment date which is shown on the document) and non-italicised title. For example, NATSPEC DES 001 2009 Slip resistance.

If listing a BCA clause, Section, Table or Spec In Referenced documents, BCA citations of the above referenced documents, use BCA XY.Z Title e.g. BCA F4.5 Health and amenity - Light and ventilation – Ventilation of rooms.

See TECHnote NTN GEN 002 *NATSPEC's use of standards* for more on standards referenced in NATSPEC.

See also NTN GEN 011 *Specifying NCC requirements* for more information on how NATSPEC incorporates the BCA requirements in the worksection *Templates*.

**reference specification** Method of specification which incorporates an identifiable document by reference to it. These may be Australian Standards or manufacturer's technical manuals or other NATSPEC documents such as NATSPEC Maintenance or Service references. Use instead of **reference text**.

**reflective insulation****register****Registered Surveyor****Registered Testing Authority** (AUS-SPEC)

**registered testing authority** (NATSPEC) use **Accredited Testing Laboratory** instead.

**regrade**

**regulations** See acts and regulations.

**reinstall****relative compaction****relative level tolerance****render, rendering**

**REP** Regional Environmental Plans.

**required****reseal****residual binder****resilient floor coverings classification****resin based seamless floor finish****resolution****response time**

**RESPONSIBILITIES** An introductory clause which defines the contractors broad responsibilities in each worksection. This might include some or all of the following:

- Outcome statement.
- Performance statement defining.
- Scope/extent statement.
- Design role statement.

Scope/Extent statements are not a Scope of Works. NATSPEC has a policy of avoiding this term because of its potential for disputes.

**re-order****resawn****re-shore****re-stake****retest****retrofit****retro reflective****re-trowel**

**re-use** A complex word consisting of a prefix and a short monosyllabic word is hyphenated so it is not read as a single syllable.

**re-usable****reverse-cycle****rigid guide post****rigid road safety barrier system****rise****riser**

**rivet nut** Use instead of **threaded nut**

**r.m.s.** Root mean square - an electrical term.

**road authority****road network**

**road reserve**

**Road Reserve Maintenance Plan (RMP)**(AUS-SPEC).

**roadbase****roadmarking****rock****rock wool****roll formed**

**rooflight** Use **skylight** instead. Use **skylight (rooflight)** in reference to bushfire zones.

**roof water****room dividers****room fan coil unit (FCU)****rootball**

**rotational speed** The preferred SI unit is r/s (revolutions per second) but common industry usage is r/min. Do not use rpm (obsolete).

**roundabout**

**rounding numbers** Rounding interval is the smallest possible difference between two rounded values in the same series. A rounding interval of 0.01 means values are rounded to the nearest unit in the second decimal place. Rounding to two significant figures:

- 7.3499 rounds to 7.3
- 7.3501 rounds to 7.4
- 7.4499 rounds to 7.4

AS 2706 differs from common practice (for example, spreadsheets) when dealing with values ending in 5. It recommends that if the value is exactly midway between two alternative prospective rounded numbers round to the even round value even if this means rounding down.

- 7.35 rounds to 7.4
- 7.3500 rounds to 7.4
- 7.45 rounds to 7.4 (a spreadsheet would round to 7.5)
- +0.25 rounds to +0.2 (a spreadsheet would round to +0.3)

Rounding to three significant figures:

- 523.46 rounds to 523
- 523.54 rounds to 524

**routine maintenance****rung ladder****runoff****rural land****rural residential land**

**R-Value** m<sup>2</sup>.K/W Units used by NCC.

**S**

**SA** Except in a BCA citation, use **South Australia** instead. All states and territories, except NSW and ACT, are written in full.

**Safe Intersection Sight Distance (SISD)**

**safety data sheet (SDS)** Use instead of **material safety data sheet**.

**Safe Work Australia** Formerly **NOHSC** (National Occupational Health and Safety Commission).

**Safe Work Method Statement (SWMS)** Use in first occurrence in a worksection and then SWMS. Use instead of Safety Work Method Statement, Work Method Statement, Proposed Work Method Statement, etc.

**sail track**

**same** Do not use as a pronoun, as in for example, Builder shall replace **same**. See **active voice**.

**sample, samples****sanitary ware****sanding****sarking membrane****sash/sashless****sawcut****SBS bitumen**

**SCA** Switchgear Control Assembly.

**schedule** An empty **table** which needs to be edited/completed by the specifier or deleted.

Schedules are similar to subclauses and must be located after a new heading (heading 4), e.g. **Fan schedule**, not a keyword/paragraph.

NATSPEC uses a one cell/one value format for the following reasons:

- The difficulty of editing schedules with merged cells in MS Word, for many people.
- Ready import/export of the scheduled data by digital applications such as database and BIM software.

See also **table**.

**schedule of Daywork rates** (AUS-SPEC)**Schedule of rates** (AUS-SPEC)**screen****seal****sealer****sealing**

**seamless membranes**

**second (s)** time.

**secondary treatment SQID**

**sediment**

**sediment control measures**

**selected backfill**

**select fill**

**selected material zone** A defined term in AUS-SPEC

**SELECTIONS** Subsection of each NATSPEC worksection if required. See also **worksection** for outline of worksection structure.

**self-** Use a hyphen with all “self-“ compounds, whether they are adjectives or nouns.

**self-adhesive**

**self-braced**

**self-cleaning**

**self-closing**

**self-contained**

**self-compacting** From AS 1012.3.5

**self-correcting**

**self-destroying**

**self-draining**

**self-drilling**

**self-expanding**

**self-finished**

**self-furring**

**self-indicating**

**self-levelling**

**self-locking**

**self-monitoring**

**self-powered**

**self-priming**

**self-propelled**

**self-sealing**

**self-smoothing**

**self-supported**

**self-supporting**

**self-tapping**

**semi-flexible guide post**

**semi-gloss**

**SEPP** State environmental planning policy.

**septicity**

**setback**

**service**

**Service and Installation Rules**

**service life** Use **design life** instead.

**SERVICES Packages** See **NATSPEC** for an outline of the various Services packages.

**service pressure**

**Services Reference and Schedules.** See **NATSPEC**.

**service road**

**set-out** (noun)

**set out** (verb)

**set-down**

**sewage** The matter flowing in the pipes.

**sewerage** The reticulation system.

**shade fabric**

**shade structure**

**shadowline**

**shall** Do not use. Use **active voice**.

**sheen**

**sheet metal**

**shell worksection** An outline of a full worksection not included in BUILDING Basic. It is provided with the BUILDING Basic package so that, if the specification writer wishes to add specific requirements or the specialist consultant's specification, this shell acts as a prompt. Alternatively, the worksection is available in full as part of the BUILDING Professional package and as a single worksection. These worksections are designated by a lower case 's' after the classification number e.g. *0812s Sanitary fixtures*.

**short-circuit**

**shotcrete**

**should** Do not use. See **active voice** and **imperative mood**.

**shoulder**

**shoulder width**

**shower tray**

# STYLEguide

**SI** Le Système International d'Unités (the international system of units). It is a system of measurement which replaced the metre-kilogram-second system (MKS) which followed the centimetre-gram-second system (CGS). It has the three base units of MKS plus the ampere, mole, candela and Kelvin.

**Full names of SI units:** When written in full the names of all units start with a **lower case** letter regardless of whether or not it is derived from a person's name. The sole exception is Celsius. For example: newton hertz, pascal, joule, volt but Celsius.

**Abbreviation of SI units:** When written as an abbreviation, the names of units derived from the name of a person start with a capital letter. For example: N, Hz, Pa, J, V.

Units not based on a person's name do not use a capital letter except for litre. For example: m, kg, s etc. and L.

It is very important not to confuse upper and lower-case as SI depends on the distinction for its meaning. For example, nm means 'nano metre' (10<sup>-9</sup> metre) whereas Nm means 'newton metre', a totally different unit.

**AS ISO 1000 Table 1 – SI base units**

Base quantity	SI base unit	
	Name	Symbol
length	metre	m
mass	kilogram	kg
time	second	s
electric current	ampere	A
thermodynamic temperature	kelvin	K
amount of substance	mole	mol
luminous intensity	candela	cd

**AS ISO 1000 Table 2 – SI derived units with special names, including supplementary units. (only units common to the building industry are shown)**

Derived quantity	SI derived unit	
	Special name	Symbol
frequency	hertz	Hz
Force	newton	N
Pressure, stress	pascal	Pa
energy, work, quantity of heat	joule	J
power, radiant flux	watt	W
electric potential, potential difference, tension, electromotive force	volt	V
electric resistance	ohm	Ω (Use Normal font, omega symbol, or spell out ohm)
Celsius temperature	degree Celsius	°C (Must have the degree sign to avoid confusion with coulomb)
luminous flux	lumen	lm
illuminance	lux	Lx

**Compound units:** Compound units are created from the base and derived units. As with the names of units it is important to get the order and capitalisation correct.

**density** kg/m<sup>3</sup>. Fabric and sheet material weight g/m<sup>2</sup> not gsm.

**Multiplied units:** Units multiplied together should be separated by a full stop or a space. Given the complications involved with the use of a space, NATSPEC should not use this form and restrict usage of the full stop.

- Use **N.m** not Nm or mN

Divided units: Units that represent division are written using a power or solidus (/).

- Use **m/s** or **m s<sup>-1</sup>** not m per s or meters/sec.

**Units with multiple divisors:** When the division involves multiple units the divisor should include parentheses. The use of negative superscripts would also be permissible but harder to type and they are more likely to get lost. For example the units for thermal conductivity (used with insulation) should be written as:

- Use **W/(m.K)** not W/m/K or W/mK or W/m.K
- The following would also be correct, but not preferred because of the superscripts: W.m<sup>-1</sup>.K<sup>-1</sup> and W/(m.°C).

**Multiples and sub multiples of SI units:**

There are 20 defined SI prefixes to indicate multiples of the base unit running from 10<sup>24</sup> down to 10<sup>-24</sup>. The preferred ones of use in the building industry are multiples of 1000. The following table from AS ISO 1000 lists the most common ones. Preferred prefixes are in **bold**.

AS ISO 1000 Table 4 – SI prefixes

Factor	Prefix	
	Name	Symbol
10 <sup>12</sup>	<b>tera</b>	<b>T</b>
10 <sup>9</sup>	<b>giga</b>	<b>G</b>
10 <sup>6</sup>	<b>mega</b>	<b>M</b>
10 <sup>3</sup>	<b>kilo</b>	<b>k</b>
10 <sup>1</sup>	deca	da
10 <sup>-1</sup>	deci	d
10 <sup>-2</sup>	centi	c
10 <sup>-3</sup>	<b>milli</b>	<b>m</b>
10 <sup>-6</sup>	<b>micro</b>	<b>μ</b>
10 <sup>-9</sup>	<b>nano</b>	<b>n</b>
10 <sup>-12</sup>	<b>pico</b>	<b>p</b>

**Preferred multiples:** The practice in the building and engineering industries is to use multiples of a thousand. (i.e. μ, m, k, M, G, etc.).

- Use 10 mm not 1 cm.

Use 101 325 kPa not 1013.25 hPa (hectopascals are used in weather reports as they replace the older term millibars).

## STYLEguide

**side friction factor (f)****side-hung**

**significant figures** The number of figures counting to the right from the leftmost non-zero figure. For example, the following each have 3 significant figures: 0.000 345, 345 000 and 3.45. Values should be expressed in terms of an appropriate number of significant figures, not a fixed number of decimal places.

- Example 1: If three lengths of a material are measured as 6.02, 5.99 and 6.01 m, use 6.01 m for the average length not 6.00666666667 m.
- Example 2: In a journey of 921 km 100 L of fuel is used. For the fuel consumption use 10.9 L/100 km not 10.85776 L/100 km because the three figure answer is consistent with the data.

Values should be expressed in units appropriate to the level of accuracy.

Use 241 MPa not 241 000 kPa as the latter suggests a misleading accuracy. See also decimal places.

**sight distance****sign-off****sill-less**

**silicone** Used in sealants, adhesives, lubricants, etc. Not to be confused with the chemical element silicon.

**Simple DOMESTIC** See NATSPEC for a brief description of the various NATSPEC packages available.

**Simple Office Fitout** See NATSPEC for a brief description of the various NATSPEC packages available.

**single/double seal****single-pack****single phase**

**SISD** Safe intersection sight distance.

**site rock****site tests****site topsoil**

**size (w x l x h)** (width x length x height) See also NATSPEC BIM

**size index (for trees or shrubs)****skylight****slab**

**slab on ground** Use instead of slab-on-ground (As used in AS 2870)

**slab dimensions****slab, odd-shaped****slab, mismatched slabs****slimline****slipform****slip sheet****slip resistance**

**slip-resistant** Use instead of non-slip, non-skid, etc.

**small culvert unit**

**small numbers** If possible use a whole number with a suitable decimal multiple for numbers between minus 1 and plus 1. Avoiding a decimal point also avoids the risk of it getting lost. Use 25 kPa not 0.025 Mpa.

**SMATV - L Band****SMATV - QAM**

**Smoke-Developed Index** A BCA defined term.

**smoke development rate****smoke-doorset****smoke growth rate index**

**socket outlet** Use instead of GPO.

**softboard (insulation board)****soil blend****soldier course****solid core door****sound insulation****sound reduction Index (R<sub>w</sub>)****space factor**

**SPECbuilder** A browser-based specification compilation program that allows draft specifications to be compiled from NATSPEC master files which are located online. This draft specification is then downloaded and edited locally. It is compatible with all versions of Windows, Macintosh and Linux operating systems. The file format is Word DOCX which can be used with MS Office.

**special care locations****special processes**

**specialise** Note Australian Standards use specialise. For example, AS/NZS 4792:2006 *Hot-dip galvanized (zinc) coatings on ferrous hollow sections, applied by a continuous or a specialized process.*

**specified** Use **documented** instead.

**specifier****specimen**

**SPECnotes** Newsletter produced quarterly for NATSPEC subscribers to explain and describe NATSPEC content, revisions and proposals as well as administrative and subscription matters. It includes reviews of new Australian building standards and code updates as well as providing key building industry information.

**speed (85th percentile)**

**spelling** To be consistent, the same spelling must be used throughout NATSPEC worksections. The language to be used in MS Word documents is English (Australia) set through the menu: Tools \

## STYLEguide

Language \ Set Language. If in doubt, spelling should be determined from the following in descending order of preference:

- Spelling given in this document.
- Accepted usage in the building industry in Australia. For example the Macquarie Dictionary accepts both galvanise and galvanize as equal variants (denoted by the = sign in the dictionary) but the Galvanizers Association of Australia and several manufacturers use the -ize spelling in their names. NATSPEC has followed the manufacturers and adopted the -ize spelling. In all other cases NATSPEC uses -ise.
- HB 50-2004 Glossary of Building Terms (Leslie and Potter 2004).
- Terms defined in an Australian Standards for the respective item.
- If there is no consistency in the Industry or Australian Standards, refer to
- The Macquarie Dictionary but bear in mind that it is a general purpose not a specialist building industry dictionary.
- Other Australian dictionaries such as Collins (Collins Australian dictionary 2003).
- Oxford English Dictionary (OED 2003) and Chambers Dictionary of Science and Technology (Walker 1999).

### **spider fitting assembly**

### **splashback**

### **sponge (plaster finishing treatment)**

### **sprayed to contour**

### **spreadsheet**

### **spring** (season).

### **Spread-of-Flame Index**

**SSL** Scientific Services Laboratory. Now named CSIRO Materials Science and Engineering

### **stabilise**

### **stabilising agent**

### **staining**

**stainless steel Type 316 (304)** Use instead of stainless steel grade XXX.

### **stairway**

**stakeholder** NATSPEC stakeholders comprise professional associations and government property groups. See back cover for a list of stakeholders.

### **stand-alone**

**standards and references** See NATsource for suggested references appropriate to offices dealing with typical projects covered by the respective NATSPEC packages. See also **Referenced documents, AS, NZS and citations.**

**stand-by** Use instead of **stand by, standby.**

**star** e.g. 5 star(s). Preferred expression follows the BCA.

### **start response time**

**start-up** A defined term in NATSPEC (adopted in ASHRAE).

**state/State** (government). Use capitals for official or abbreviated but not for generic or plural references. For example, The South Australian Government initiated the project ... The state government will meet regularly to review progress.

### **State fire authority**

**State government** (AUS-SPEC).

**State Road Authority** (AUS-SPEC).

### **states and territories**

### **statutory authority**

### **statutory signage**

### **step-by-step**

### **step ladder**

### **stepping**

### **stile**

### **stone cladding**

### **Stopping Sight Distance**

### **stormwater management plan**

**straightedge** A tool. Use instead of straight edge (a description).

**straight edge** A description. Use instead of straightedge (a tool).

### **strain alleviating membrane (SAM)**

### **strain alleviating membrane interlayer (SAMI)**

### **straw**

### **straw bale**

### **stretcher unit**

### **strikeup**

### **strip**

### **structural sealant**

### **structural silicone glazing**

### **structure borne sound**

### **subcooling**

### **sub-annexure**

### **subbase (subbase course)**

### **sub-branch**

### **sub-catchment**

**subcircuit** Use instead of **sub circuit, sub-circuit.**

### **subclause**

**Subconsultant** (AUS-SPEC)

**subconsultant** (NATSPEC)

**subcontract, subcontractor**

**sub-distribution board**

## STYLEguide

**subdivision****subfloor****subframe****subgrade**

**subgroup** A smaller group of NATSPEC worksections within a workgroup e.g. concrete, partitions.

**submain****sub-pavement drains****subsection****subsill****subsoil drains****substrate****substructure****subsurface****subsystem**

**sulfur, sulfide, sulfate** Use instead of sulphur, sulphide, sulphate.

**summer** (season).

**superelevation**

**Superintendent** (AUS-SPEC)

**superintendent** (NATSPEC) Use **contract**

**administrator** unless this is inconsistent with the contract being used.

**supersede****supply**

**supply** Supply, furnish and similar expressions mean supply only.

**Supply Authority** (AUS-SPEC)

**surge****surveillance****survey mark****surveyor****suspended frameless glass assembly****switchroom****Symbols**

Name	Symbol	Example
ampere (electric current)	A	5 A
cubic metre (superscript)	m <sup>3</sup>	5 m <sup>3</sup>
Degrees celcius (temperature).	°	5°C
degree (plane angle).	°	90°
dollars	\$	\$5.00
greater than or equal to	≥	≥ 50 m
hectares	ha	5 ha
inches (for screen size only)	"	50 "

Name	Symbol	Example
kelvin	K	5 K
kilogram (mass)	kg	500 kg
kilonewton	kN	
less than	<	< 50 mm
Linear metre	Lin. m	5 Lin.m
Litre (volume)	L	5 L
Maximum load current through the protected line	I <sub>L</sub>	
metre (length)	m	5 m
micro	μ	50 μ
micron	μm	550 μm
Millilitre (volume)	mL	500 mL
millimetre (length)	mm	500 mm
minute (plane angle)	'	5° 22'
minus	-	- 5
more than	>	> 50 m
nanometre	nm	5 nm
no more than	≤	≤ 50 mm
ohm	Ω	75 Ω
pressure - megapascal	MPa	5 Mpa
pressure - kilopascal	kPa	50 kPa
percent (use symbol)	%	25%
plus or minus	±	± 5 m
plus	+	+ 5
R-Value	m <sup>2</sup> .K/W	2.5
second (time)	s	
second (plane angle)	"	5° 22' 22"
shrinkage strain	ε	500 x 10 <sup>-6</sup> ε (500 με)
square metre (superscript)	m <sup>2</sup>	5 m <sup>2</sup>
text deleted from the current update PDF.	***	

The symbols for greater than or less than may be used in short phrases following a keyword and tables unless there is ambiguity. Do not use within a complete sentence.

**&** Do not use.

Use diameter instead of the symbol/abbreviation.

Examples indicate a hard-space (Shift+Ctrl+spacebar) between number and unit symbol and do not include a trailing period (as these are symbols not abbreviations).

**system audit****systems, subsystems, equipment and components**

# T

**table** In NATSPEC, a table contains completed information that does not normally change between projects, unlike a **schedule** which is completed with each project specification.

The tabulated form of **Schedules** and **Tables** makes it easier to reference information, particularly for groups of items of a similar type, with similar properties.

Tables and schedules in NATSPEC specifications look similar but, have different roles and respond differently to editing in *Domestic Online*.

Schedules have blank cells for entering project specific information.

Tables are complete with information that is typically not project specific and not meant to be edited.

Schedules in the Domestic Online Preview can be edited, allowing project-specific information to be entered.

Tables in the Domestic Online Preview cannot be edited – attempting to do so will prompt an error message “The following error occurred: Access forbidden”.

Domestic Online users with an Annual Subscription can edit both tables and schedules after download if they choose. Files downloaded under a Single Project Subscription are non-editable.

## table drain

**TAS** Use **Tasmania**. All states and territories, except NSW and ACT, are written in full.

**TECHguide** AUS-SPEC guidance notes providing roadmaps and examples of compiling the documentation required for local government projects. They include information on contracts, technical specifications and tender submission requirements. They should be read before to commencing a project. They are included in the reference documents section of SPECbuilder Pro/Live in PDF format and can be printed as required. Numbering and classification of TECHguides is based on AUS-SPEC classification. See **citation** for correct citation of TECHguides.

**technical data sheet** Use **product data sheet** instead.

**technical specification** (AUS-SPEC).

**TECHnote** A one or two page note prepared by NATSPEC providing professional knowledge to the subscriber on current issues in the building industry and the related provisions made by NATSPEC. TECHnotes contain guidance of a general nature that either relates to several worksections or does not fit into a generic worksection. Numbering and

classification of TECHnotes is based on the classification system used for the AIA Environment Design Guide. TECHnotes are grouped into three categories: GEN (General and miscellaneous), DES (Design and strategy) and PRO (Products and materials). See **citation** for correct citation of TECHnotes.

**TECHreport** An in-depth report prepared by NATSPEC to give general information on specification writing, and technical information that relates to more than one worksection e.g. *Specifying ESD*.

## tee-off

### tee-off busbars

**temperature** Use °C (degrees Celsius). The °C must have the degree symbol to avoid confusion with **C** meaning coulomb, the unit of electrical charge.

The preferred unit for temperature interval (i.e. the difference between two temperatures) is the **kelvin (K)**. Kelvins are never written with a degree symbol. For example:

- The difference in temperature between the internal temperature of a refrigerator at 4°C and the outside room temperature at 24°C is 20 K.
- Rate of heat transfer depends on temperature difference so units of heat transfer per unit area are W/(m<sup>2</sup>K).

**Template** NATSPEC worksections are *Templates* provided in the form of MS Word documents for editing by the specifier to include project specific information.

**tender, Tenderer** (AUS-SPEC).

**tender, tenderer** (NATSPEC).

**the tender** is a pre-contract document. Items covered in NATSPEC’s worksection include:

- Site description.
- List of tender documents.
- Contact details.
- Tender information. For example: tender period, procedures.
- Tender requirements.
- Tender form.

AUS-SPEC worksections also include Schedule of Rates.

Tendering is a separate self-contained transaction which terminates with the awarding of a contract. The technical worksections make no reference to tendering.

**tender documents** (AUS-SPEC and NATSPEC).

**tensioned membrane**

**tensioned membrane structure**

**terminal (mechanical services)**

**termination bar**

**terracotta**

**terrazzo**



## STYLEguide

**terrazzo tiles – cementitious**

**territory/Territory** (government) Use a capital for official or abbreviated specific titles but not for generic or plural references. In some contexts the Territory refers to a semi-official term for the Northern Territory and would have a capital letter.

**tertiary treatment SQID****tests - completion****tests - pre-completion**

**text, number** in See **numbers** in text.

**that or which?** Use of which (surrounded by commas) adds non-restrictive information. Use that, to limit or restrict the set of things you are talking about.

**thermal resistance** Use **m<sup>2</sup>.K/W**

**thermoset powder coat****thimble****third-party certification****thrie-beam****throughout****thrown (plaster finishing treatment)****tiles****tiles – cementitious****tiles - dry-pressed****tiles – extruded****tiles - industrial cast****tiles - natural stone****tiles - terrazzo – cementitious****tiles - terrazzo – resin****tilt-up****tilt-up units****timber-framed**

**time** See **minute, hour and day**.

**time frame****time of concentration****tolerance**

**tolerances** Tolerances are maximum values or limits – do not use these symbols: > < ≤ ≥. For example

Flatness: Maximum deviations from a 3 m straightedge laid in any direction on a plane surface:

Class A: 4 mm from a 2 m straightedge.

Carpet tolerances: Conform to the following:

Edge dimensions ± 2 mm.

**tonne (t)** mass.

**top dressing****topping****topping function****topping method****topsoil****top-up****torch-on****total air quantity****total system SHGC****total system U-Value****touch up****traceability****trenchstops****trademark****traffic lane****traffic lane width****transfer main****transition beam****transverse lines****treatment train**

**trim** Use instead of **trims**.

**true-to-species****trunk drains****two-pack**

**two-part specification** A project specific specification comprised of a separate, unedited NATSPEC Reference document and NATSPEC Schedules which have been customised by the specification writer to suit the particular project.

**two-stage****two-way**

**tube** Use tube if in a heat exchanger, chiller or similar. Use pipe if running through the building.

**tubes or plant cells****turnbuckle****Type****type A mats****type B mats****type - air filter****type tests****type-tested**

# U

**ultraviolet**

**ultrasonic**

**unbound material**

**undercoat**

**undercut**

**underflashing**

**underfloor**

**underground**

**underlay**

**underlayer**

**underslab**

**understructure** Refers to access floors.

**undervoltage**

**uninterruptible power supply (UPS)**

**units** See **SI** units.

**unless otherwise specified** Do not use. An alternative example is:

Entrance doors and side lights: Toughened glass.

Other locations: Clear float glass.

**Universal design** The design of buildings, products or environments to make them accessible and usable to all people of different ages and abilities over time, without the need for adaptation or specialised design. See NATSPEC TECHnote DES 038 *Universal design – Introduction*.

**unopened**

**un-painted**

**un-pasted**

**un-reinforced**

**unscreeeded**

**un-sprinklered**

**unsuitable material**

**un-switch**

**Update** April *Update* and October *Update*.

**upstand**

**up-to-date**

**urban residential land**

**useful life**

**use** The verb **use** in NATSPEC (and those related to it such as 'using') generally applies primarily to the use of tools, consumables, persons and methods.

It does not apply to products unless 'provide' would be incidental or clumsy. The following are preferred verb structures:

- Construct . . . from [product].
- Cure . . . using [consumable].
- Eliminate . . . by [of] [product].
- Flush . . . using [consumable such as water, air].
- Provide [product].
- Seal . . . with [product].
- Support . . . by [product].
- Test . . . using [person].
- Test . . . using [tool].

**UPVC** Use **PVC-U** instead.

**up-slope**

**Utility service provider** For services other than electricity, including gas.

## V

**validation****values** see **ranges of values****vandal-proof****vapour permeable (breathable) membrane****Variation to the Works** (AUS-SPEC).**variable room identification systems****variable refrigerant flow (VRF) system****VAV box****verb** Start the sentence with a verb. Use the **active voice** and the **imperative mood**:

Use: Lay tiles... not ... Tiles shall be laid...

Use verbs in preference to constructions based on nouns. For example:

- Explain ... not... Provide an explanation...
- Submit ... not... Make a submission...

See also **use** for preferred verb structures using the active voice and imperative mood.**verge (rural)****verge (urban)****verification****verticutting****version** Use to distinguish between documents published in different formats. For example, the basic version of the *Windows and glazed doors* worksection is cut down from the full version.**vertical alignment****VIC.** Use **Victoria**. All states and territories, except NSW and ACT, are written in full.**volt (V)** SI derived unit for electric potential, potential difference, tension, electromotive force.**V-joint**

## W

**w-beam****WA** Use **Western Australia**. Generally all states and territories, except NSW and ACT, are written in full.**waffle raft slab****walkway****wall covering****wall-hung****washout****Water Agency** (AUS-SPEC)**water age****water-based****waterborne****watercooled****water dispenser systems****water resistant (WR)****water sensitive urban design (WSUD)****waterproof (WP)****waterproofing systems****water soluble****water stop angle****watt (W)** SI derived unit for power and radiant flux.**wearing course (wearing surface)****weather – cold****weather – hot****weathering****weather proof, weather proofing****weatherseal****weatherstrip/weatherstripping****weathertight****web link****web page****weepole****website** Do not include https:// in address.**weed****weir****well-being****well-developed****well-rotted**

## STYLEguide

### well-rounded

**WERS** Window energy rating scheme.

### west

### wet area

### wet process fibreboard (hardboard)

**where x is ... use If x is....** 'Where' indicates a location and 'if' indicates a condition. See

**conditional sentences** for preferred sentence structure.

### whole-of-life

### wide area network (WAN)

### wickets

**will** Do not use. 'The contract administrator may...'

### winter

### withdrawable

### WITNESS POINT(S)/ Witness Points(s)

(AUS-SPEC only) A nominated position in the manufacture/construction stages of the Contract where the option of attendance may be exercised by the Superintendent, after notification of the requirement. Use **WITNESS POINT** in text and **Witness Point** for table headings and in *Guidance* text.

NATSPEC *Templates* use **INSPECTIONS, Notice** in lieu of Witness points.

Refer NATSPEC TECHnote GEN 009 *Hold points and witness points*.

**WLL** Working load limit.

### WMTS Watermark Technical Specification (formerly ATS)

### wood-based

### woodchip

### woodchipping

### wood float

### woodgrain

### wood stain

### word processing

#### Word processing styles in NATSPEC

**templates** Worksection *Templates* are structured into a hierarchy of subsections, clauses, subclauses, paragraphs, prompts, tables and schedules with *Guidance* on editing provided in **Hidden text**. Each of these elements is differentiated as follows:

- **Heading 1 (worksection heading):** all uppercase, no full stop at the end, boxed.
- **Heading 2 (subsection heading):** All uppercase, no full stop at the end. Underlined.
- **Heading 3 (clause heading):** all uppercase, no full stop at the end.
- **Heading 4 (subclause heading):** Generally first letter only capitalized, no full stop at end.

- **Normal style:** used for most text.
- **Normal indent style:** used for list items within a clause.
- **Normal indent 2 style:** used for sub-lists within lists.
- **Optional style:** used for less common requirements. To be changed to Normal style for inclusion in a specification
- **Instructions style:** provides guidance to the specification writer and not to be included in final document.
- **Instructions indent:** Used as list item within an instruction.
- **Header style:** all uppercase and italicized.
- **Footer style:** name and date italicised.
- **Keyword:** First letter capitalized and followed by a colon.
- **Table title style:** for heading in tables.
- **Table text style:** for most text in tables.
- **Table indent style:** for indented items in tables.
- **Table indent 2 style:** for second level indented items in tables.

See also **automatic numbering** for numbering of Headings.

**Line and page breaks:** Do not use double line returns between paragraphs, spacing is provided automatically within the respective styles. The only exception to this rule is that a blank line is required after a table.

- **Tabs:** Use standard tabs in the respective style where possible. Avoid adding new tabs as they may be lost in style changes.
- **Spaces:** Do not use spaces between text to space out or double spaces between sentences.

Table formatting:

- **Width:** 12 cm – full width between margins.
- **Row:** Height: at least 15 pts.
- **Indent from left:** 0.
- **Justification:** Left Allow row to break: No.
- **Columns width:** To suit table but preferably equal.
- **Space between columns:** 0.
- **Borders:** Continuous lines, 0.75pt above and below rows only.
- **Headings:** Repeat at top of table if table split across pages.

**work-as-executed (WAE)** (AUS-SPEC) Use instead of **work as executed** or **work as fitted**.

**Work Health Safety (WHS)** Use instead of **OH&S**

**work hour** Use instead of manhour.

### work instruction

**Work Order (WO)** (AUS-SPEC)

## STYLEguide

**workgroup** Major group in NATSPEC classification hierarchy e.g. General, Site, Structure, Enclosure, Interior, Finish, Mechanical, Hydraulic, Electrical.

**Works, the Works** (AUS-SPEC)

**worksection** Each worksection *Template* is divided into GENERAL, PRODUCTS, EXECUTION AND SELECTIONS, where such divisions are relevant:

**GENERAL** clauses set out material applying to the worksection as a whole including: cross referencing, standards, definitions, submission and inspection requirements, tolerances, samples and testing.

**PRODUCTS** describe the basic materials, components and fabricated items to be brought to site.

**EXECUTION** sets out the performance criteria to prepare the substrate, assemble materials to produce an installation and complete the works.

**SELECTIONS** contains schedules that refer to the selection of proprietary products or to generic products by their properties. These schedules may be made within the text, in schedules within the worksections or provided separately. With simple projects, all selections may be on the drawings.

**worksection names** Use a dash to indicate that a worksection is part of a worksection series. For example *Roofing – slate, Roofing – tiles*. Use parentheses to indicate that a worksection belongs to a specific workgroup or worksection package. For example, *General requirements (Mechanical), Masonry walls* (AUS-SPEC). See also **cross reference** for guidance on referencing other worksections in the specification.

**worksection numbering** NATSPEC worksections are numbered in conformance with the National Classification System. Each worksection has a 4 digit number. Branded worksections will have the same number as the associated generic worksection. Office edited and generated worksections can be incorporated into the National Classification System by assigning an appropriate number.

**workstation**

**WSAA** Water Services Association of Australia.

**Work Variations (WV)** (AUS-SPEC)

# X

**XML** eXtensible Markup Language. A markup language is a set of annotations, or 'tags', placed in a digital text file that instruct a computer application how that text should be structured, laid out and formatted. XML is a markup language that is widely used, supported and flexible, allowing users to define their own tags and document schema.

# Y

# Z

**zeros** Generally trailing zeros should be omitted from fractional units (see also **significant figures** in relation to implied accuracy). Where the value is part of an actual or implied series in which some of the items are expressed in a greater number of significant digits use a consistent number of significant digits.

- Use: 0.2 . . . not 0.20
- For series use: 0.25, 0.50, 0.75, 1.00  
.....not...0.25, 0.5, 0.75, 1

**zinc see metallic-coated**

**zincanneal**

**zone of influence**

**zones**

# Corporate Information

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NATSPEC is the trading name of Construction Information Systems Limited, ABN 20 117 574 606.

NATSPEC, founded in 1975, is a national not-for-profit organisation that is owned by the design, build, construct and property industry through professional associations and government property groups. It is impartial and is not involved in advocacy or policy development.

NATSPEC's major service is the comprehensive national specification system endorsed by the government and professional bodies. NATSPEC, The National Building Specification, is for all building structures with specialist packages for architects, interior designers, landscape architects, structural engineers, service engineers and domestic owners. AUS-SPEC is the Local Government specification for the life-cycle management of assets. Packages include Urban and open spaces, Roadworks and bridges Public utilities and Maintenance. NATSPEC is also responsible for the Natinal BIM Guide and its associated documents. NATSPEC is also the publisher of the National BIM Guide and associated documents.

NATSPEC's objective is to improve the construction quality and productivity of the built environment through leadership of information.

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## STAKEHOLDERS

// Air Conditioning and Mechanical Contractors' Association of Australia  
// Australian Elevator Association  
// Australian Institute of Architects  
// Australian Institute of Building  
// Australian Institute of Building Surveyors  
// Australian Institute of Quantity Surveyors  
// Chief Minister, Treasury and Economic Development Directorate (ACT)  
// Construction Industry Engineering Services Group  
// Consult Australia  
// Department for Infrastructure and Transport (SA)  
// Department of Energy and Public Works (QLD)  
// Department of Finance (Federal)  
// Department of Finance (WA)  
// Department of Infrastructure, Planning and Logistics (NT)  
// Department of Treasury and Finance (TAS)  
// Department of Treasury and Finance (VIC)  
// Engineers Australia  
// Master Builders Australia  
// Public Works Advisory (NSW)  
// Standards Australia

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