

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. Initialism 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 BCA and relates to people with disabilities.

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...

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.

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activity centre	airspace
Activity contract requirement (ACR) (AUS-SPEC)	airtightness
Activity specification (AUS-SPEC)	allowable working time
Acts (AUS-SPEC)	alternating current Use a.c. not A.C. or ac.
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.	ambient temperature
ACQ Alkaline Copper Quaternary.	ambient temperature
adaptation	ambient water
adequate Do not use if there is no verifiable value.	AMCORD Australian Model Code for Residential Development.
added filler	ameliorant
adhesion (paint)	amend Use edit instead when referring to making changes to a NATSPEC worksection.
adhesion agent	amnioplastic
adhesive bedding	ampere (A) SI unit of electric current.
adhesives - cementitious (C)	analog (Electrical and electronic) Use instead of analogue .
adhesives - dispersion (D)	anchors Use fasteners instead.
adhesives - reaction resin (R)	anchor trench
advanced plants (species)	and Use instead of an ampersand (&) unless & is part of a company name.
after-hours	and/or If using this expression in a specification, make sure the direction to the contractor is unambiguous.
aggregate-filled textured latex coating	and the like Do not use. Provide a complete list instead.
AGAM Austroads Guide to Asset Management.	annexure
AGBT Austroads Guide to Bridge Technology.	anionic bitumen
AGO Australian Greenhouse Office.	anodise
AGPD Austroads Guide to Project Delivery.	anti-bleed
AGPT Austroads Guide to Pavement Technology.	anti-burst reinforcement
AGRD Austroads Guide to Road Design.	anti-condensation
AGRS Austroads Guide to Road Safety.	anti-corrosive
AGTM Austroads Guide to Traffic Management.	anti-drum, anti-drumming
AHD Australian Height Datum.	antifreeze
AIA Australian Institute of Architects (formerly the Royal Australian Institute of Architects).	antiglare
airblast	anti-graffiti
airborne	antimicrobial
airborne sound	anti-ponding
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.	anti-skid, anti-slip Use slip-resistant instead.
air cooled	anti-splash
air entrainment	anti-stalling
air flow	antistatic
air grille	anti-tampering
air handling plant	anti-windup
air handling unit (AHU)	APAS Australian Paint Approval Scheme. NATSPEC has removed all references to the Australian Paint Approval Scheme and aligned the statement of quality

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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 BCA 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 taken 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* worksection

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 1172.3 2007 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 open text and in Reference documents as follows:

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

AS 3735 Supp 1-2001 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 open text and show in **REFERENCED DOCUMENTS** as follows:

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

AS/NZS 3500.3:2003 Plumbing and drainage – Stormwater drainage.

Note colon between number (or part) and year.

In AS/NZS 3000:2007, 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.

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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/NZS 4312 or AS/NZS 2312.2 as appropriate .

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.

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

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Replace	With
KV.A	kV.A
KW.h	kW.h
m2	m ²
m3	m ³
mm2	mm ²
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

backmould [*0453 Guidance text*]

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 from the full worksection for use in simpler projects. These worksections are designated by a lower case b after the classification number e.g. *0171b General requirements*. 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 NTN DES 013.

batch

batter

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

Belville spring cup washer

benchmark

benchtop

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

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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

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 lower case p after the classification number e.g. *0279p PASCO 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

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

Bushfire Attack Levels (BAL)

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:

Forests NSW, or New South Wales has many state forests.

The Queensland Government is a state government.

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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.
 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 (AUS-SPEC)
 checklist (NATSPEC).
 check-out (ASHRAE)
 childproof
 chilled water
 CIAL Carpet Institute of Australia Limited.

citations (and references) A citation is a reference to an external document which, by citation, 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 BS EN ISO standards. Check BCA 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*.
- Australian Institute of Architects Environment Design Guide: If there is an AIA EDG relevant to the worksection, in introductory *Guidance* to the *Template* the following text may be included: Search www.environmentdesignguide.com.au, the Australian Institute of Architect's advisory

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subscription service for notes on (subject using AIA EDG keywords). List keywords in Instructions indent style for each topic cited.

- Acumen (formerly AIA Advisory notes): In introductory *Guidance* to a *Template* the following text may be included: Search acumen.architecture.com.au for notes on (subject using acumen keywords). List keywords in Instructions indent 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.

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

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-out

closed system

co-dominant

coating contractor

coating manufacturer

coating system

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

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.
- 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

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compressed fibre cement sheets

concept plan

concrete class

concrete class – normal

concrete class – special

concrete segmental pavers

concrete segmental pavers

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)

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)

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.
- 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 *0261 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

STYLEguide

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:

- **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)
 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

STYLEguide

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)

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 eg 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

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

draft Use when referring to a preliminary document.

double/double seal

double glazed

double glazing

double-hung

drainage control measures

drainage types

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

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

dripline

dry processed 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

STYLEguide

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.

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 authority for services other than electricity.

electromagnetic capability (EMC)

email

embedded generator

embedded material

emergency access way

emitter

enable Use allow instead

End Area Method (AUS-SPEC)

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

façade

faceplate

facework

fascia, fascias (plural)

fail-safe

STYLEguide

fail-secure	flaking
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.)	Flammability Index
fault current limiters	flatness
FBS-1 (fibre-biosoluble) mineral wool	flexible guide post
feature	flexible pavement
Federal government (AUS-SPEC)	flexible pavements
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.	floating flooring
FFZ Fuel free zone.	flow path e.g. overland flow path
fibre batts	flow rate
fibre cement	fly ash
fibre cement sheet linings	floor covering
fibreglass	floor waste
field working period	flush bolt
filling	flush door
finish coat (plastering)	flush door panels
finish sanding	flush lined
finishing treatment (plastering)	flush mounted
fire break	flushplate
fire doorset	flux oil
firefighting	footer Provide date of current <i>Update</i> (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 <i>Update</i> .
fire hazard properties See BCA A2.4 for terminology.	footpath (pathway)
fire-rated Use fire-resisting instead.	formwork
fire-resistance level (FRL) From AS 2481.1 and NCC.	/ 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.
fire resistant Use fire-resisting instead. (The exception s AS 1905.1 which uses fire-resistant. AS/NZS 1668.1 also uses fire-resistant in addition to fire-resisting).	foundation drains
fire-resisting Use instead of fire rated when not referring to a specific FRL.	FPZ Fire Protection Zones.
fire shutters	fractions Express fractional values in decimal terms. For example: Use: 0.5. . . not. . . ½ or 1/2.
fire-stop	See MS Word AutoCorrect for instructions on how to prevent Word from creating unwanted fractions.
fire-stopping	FRC Fibre reinforced cement. Do not use fibro .
fire trail(s) (AUS-SPEC)	free-to-air
fire wall	freespan
fitout	freezer room
fitted flooring	FRL Fire-resistance level.
fixing A verb meaning the act of holding and securing an object in place.	FRZ Fuel Reduced Zone.
fixings Use fasteners instead. Fixing should be used as a verb to avoid confusion. (Note that AS 1657 uses fixings as a noun.)	full scale
	full size
	full stops The following rules, while not necessarily generally acceptable punctuation, are intended to

STYLEguide

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 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

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 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.

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 m² 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 .dot 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

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 removed from final document.

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, eg 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:

STYLEguide

- Use Monday to Wednesday ... not... Monday - Wednesday.

I

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°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

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 sections

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(R), kW(E), kW(E)/kW(R)**.

kL Kilolitre, actually a cubic metre (m³). **kL** is often used for volumes of water but concrete and most other materials are measured in **m³**.

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(E)/kW(R) 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.

L

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.

STYLEguide

- 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 μ symbol (the Greek letter mu standing for micro or 10^{-6}) is present in most fonts. Use the μ in NATSPEC's Normal style (Arial) not Symbol or some other font.

- Use: 75 μm . . . 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

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 **l** 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 **l** with the numeral **1** in fonts such as Times New Roman.

Use: 25 L not 25l or 25 l.

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

login Into SPECbuilder Live for example.

longitudinal linemarking

looped mains

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
- 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 μm 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

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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

munтин

N

NABERS National Australian Built Environment Rating System. NABERS measures the overall operational environmental performance of an existing building. Refer to NATSPEC TECHreport *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 Volumes 1 and 2, the Building Code of Australia and Volume 3, the

Plumbing Code of Australia (PCA). See **INTERPRETATIONS** in the *General requirements* worksection for definitions.

NATSPEC Maintenance reference

NATSPEC reference - Electrical services

NATSPEC reference - Hydraulic services

NATSPEC reference - Mechanical services

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

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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 For engineers and consultants specifying the hydraulic services 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.

NATSPEC Services Reference is a reference specification which includes the full services worksection text excluding prompts, guidance and selections. It is not a stand-alone document and is to be used in conjunction with the Schedules worksections. It is for use with a project specification written for a specific project.

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.

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

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

normal design domain (NDD)

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

nominal size (DN)

nominated mix

nosing

not-for-profit

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-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.

Wor ohm SI derived unit for electrical resistance. Use instead of ohms.

onboard

on-line

on-site

on to

opacifier

opacity

operable walls

Optional 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.

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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 procuracionem] 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 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. Use instead of (%) in tables

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.

pintle 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

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platform flooring	preglazed
plenum box	pre-install
pliable building membrane	Preliminaries Cover project-specific overheads that do not constitute work that could be allocated to a particular worksection. NATSPEC provides generic <i>Preliminaries</i> and several customised worksections.
plies Plural for ply, as in plywood.	pre-mixed
plug-in	prepaint
point fixed glazing	pre-painted
PMP Park maintenance plan	preseal
pollution incident	prequalified
polyester insulation	preselection
polyethylene Use instead of polythene .	preservative-treated
polymer modified binder	preservative-treatment
polysulfide	preset
polyurethane	pressure-reducing
portable operator's terminal	prestart
Portland (cement) Use general purpose cement instead.	prestress
post-assembly	pretreated
post-consumer	pre-treatment
post-tension	preventative action request (PAR)
post-tensioning	pre-weathered
powder coat/powder coated/powder coating	prewetting
pozzolan	primary treatment SQID
Practical Completion (AUS-SPEC).	prime, primer, primer, prime coat
practical completion With regard to the context, use the date for practical completion or the date of practical completion instead.	primerbinder
pre-assembly	primerseal
precast Also used as a verb in NATSPEC.	principal
precast box culvert	principal's representative (AUS-SPEC).
precharge	prior to Use before instead.
precast concrete	process audit
pre-clean	product audit (conformance audit, service audit)
precoated	Product Partner A building product manufacturer with an agreement with NATSPEC to include a purpose edited worksection in NATSPEC. See also branded worksection .
pre-commissioning	PRODUCTS Subsection of each NATSPEC worksection. See also worksection for outline of worksection structure.
pre-completion tests	production assessment (concrete)
pre-construction	production tests See tests ,
pre-consumer	professional engineer A defined term in NATSPEC (in some states and territories, additional o 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.
pre-cut	
pre-design	
predrill	
prefabricated, prefabrication	
prefinish	
perform	
performed shower base	

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

Action	Symbol	Example
Insert space	Caret and hash	Spacemissing # ^
Insert text	Caret and insert 'text'	Text to inserted be ^
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	Text to be made all caps
Make lower case	Cross out and amend	Text to be LOWER case lower
Make <i>italics</i>	Underline	Text to be made italicised
Make bold	Wavy underline	This text is to be bold
Insert punctuation	Circle required punctuation mark	Full stop missing □
Delete paragraph	Z crossing out	Cross out paragraph to be deleted
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 STET

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

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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.

RAIA Use AIA now Australian Institute of Architects (formerly Royal Australian Institute of Architects).

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

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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:"

Documents that appear in open text (the main body of the worksection, not *Guidance* text) are listed here.

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

Documents that appear only in *Guidance* text, but not in open 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 BCA references and BEDP and NATSPEC documents 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 BCA 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

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

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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

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.

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

selected 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.

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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

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' (10⁻⁹ 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

STYLEguide

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	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	W (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/m³. Fabric and sheet material weight g/m² 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⁻¹** 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-1.K-1 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 10²⁴ down to 10⁻²⁴. 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 ¹²	tera	T
10 ⁹	giga	G
10 ⁶	mega	M
10 ³	kilo	k
10 ¹	deca	da
10 ⁻¹	deci	d
10 ⁻²	centi	c
10 ⁻³	milli	m
10 ⁻⁶	micro	μ
10 ⁻⁹	nano	n
10 ⁻¹²	pico	p

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).

side friction factor (f)

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

STYLEguide

size

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 sheets

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

space factor

SPECbuilder A web browser-based specification compilation software program that enables subscribers to create new specifications using NATSPEC and office-edited worksections. SPECbuilder has two versions - Live and offline. SPECbuilder Live is accessed online via an internet browser and SPECbuilder offline is available on CD and run or installed on your computer for use locally.

SPECbuilder Live The online version of NATSPEC specification compilation software. This browser-based version of SPECbuilder allows draft specifications to be compiled from NATSPEC master files which are located online. It is compatible with all versions of Windows, Macintosh and Linux operating systems. The file formats are Word 07 or XML which can be used with MS Office or OpenOffice.

SPECbuilder Main Menu

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 \ 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)

spreadsheet

spring (season).

Spread-of-Flame Index

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

stabilise

STYLEguide

- stabilising agent
- staining
- stainless steel type XXX 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
- 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
- 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 ³	5 m ³
degree (temperature).	°	5°
degree (plane angle).	°	90°
dollars	\$	\$5.00
greater than or equal to	≥	≥ 50 m
hectares	ha	5 ha
inches (for screen size only)	"	50 "
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 _L	
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	W	75 W
pressure - megapascal	MPa	5 Mpa
pressure - kilopascal	kPa	50 kPa
percent (use symbol)	%	25%
plus or minus	±	± 5 m
plus	+	+ 5
second (time)	s	
second (plane angle)	"	5° 22' 22"
shrinkage strain	ε	500 x 10 ⁻⁶ ε (500 με)
square metre (superscript)	m ²	5 m ²
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.

STYLEguide

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.

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 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**. The footer date indicates the date of the last (minor) amendment. A **TECHnote** will be reissued if it is significantly revised and the footer will reflect the date of reissue.

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/(m²K).

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

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,

STYLEguide

to limit or restrict the set of things you are talking about.

thermal resistance Use $m^2.K/W$

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: $>$ $<$ \leq \geq . 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.

STYLEguide

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.

unopened

un-painted

un-reinforced

unscreeded

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 Authority For services other than electricity, including gas and telecommunications.

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.

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

Water Agency (AUS-SPEC)

water age

water-based

waterborne

watercooled

water dispenser systems

STYLEguide

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
 weephole
 website Do not include https:// in address.
 weed
 weir
 well-being
 well-developed
 well-rotted
 well-rounded
 WERS Window energy rating scheme.
 west
 wet area
 wet processed 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.
- **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.

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- **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)

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

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 National 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.

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 of Finance (Federal)
// Department of Finance (WA)
// Department of Finance, Services and Innovation (NSW)
// Department of Housing and Public Works (QLD)
// Department of Infrastructure, Planning and Logistics (NT)
// Department of Planning, Transport and Infrastructure (SA)
// Department of Treasury and Finance (TAS)
// Department of Treasury and Finance (VIC)
// Engineers Australia
// Master Builders Australia
// Standards Australia

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