

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

NATSPEC

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NATSPEC STYLEguide is intended 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**.

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.

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, abbreviations should be defined 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:

Professional engineer: A person who is listed on the National Professional Engineers Register (NPER) in the relevant discipline at the relevant time.

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 **defined term** in NATSPEC.

a.c. Alternating current.

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

access cover

access door Larger than access panels.

access for maintenance A **defined term** in NATSPEC.

accessible A **defined term** in NATSPEC. 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 A **defined term** in NATSPEC.

according to Use conform to instead.

accreditation A **defined term** in AUS-SPEC.

accuracy A **defined term** in NATSPEC.

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

acknowledgement

acoustic insulation A **defined term** in NATSPEC.

acoustic material A **defined term** in NATSPEC.

acoustic underlay A **defined term** in NATSPEC.

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

acronyms See **abbreviations**.

acrylic - liquid applied (membrane) A **defined term** in NATSPEC.

ACT Australian Capital Territory. Generally all states except **NSW** and **ACT** are written in full.

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

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

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priority and is therefore addressed to the contractor who in effect becomes the subject of the verb.

activity centre A **defined term** in AUS-SPEC.

Activity contract requirement (ACR) (AUS-SPEC)

Activity specification (AUS-SPEC) A **defined term** in AUS-SPEC.

Acts (AUS-SPEC)

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

ACQ Alkaline Copper Quaternary.

adaptation

adequate Do not use if there is no verifiable value.

added filler A **defined term** in AUS-SPEC.

adhesion (paint) A **defined term** in NATSPEC.

adhesion agent A **defined term** in AUS-SPEC.

adhesive bedding

adhesives - cementitious (C) A **defined term** in NATSPEC.

adhesives - dispersion (D) A **defined term** in NATSPEC.

adhesives - reaction resin (R) A **defined term** in NATSPEC.

advanced plants (species) A **defined term** in AUS-SPEC.

after-hours

aggregate-filled textured latex coating A **defined term** in NATSPEC.

AGAM Austroads Guide to Asset Management.

AGBT Austroads Guide to Bridge Technology.

AGO Australian Greenhouse Office.

AGPD Austroads Guide to Project Delivery.

AGPT Austroads Guide to Pavement Technology.

AGRD Austroads Guide to Road Design.

AGRS Austroads Guide to Road Safety.

AGTM Austroads Guide to Traffic Management.

AHD Australian Height Datum.

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

airblast

airborne

airborne sound A **defined term** in NATSPEC.

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

air cooled

air entrainment

air flow

air grille A **defined term** in NATSPEC.

air handling plant A **defined term** in NATSPEC.

air handling unit (AHU) A **defined term** in NATSPEC.

airspace

airtightness

allowable working time A **defined term** in AUS-SPEC.

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

ambient temperature A **defined term** in AUS-SPEC.

ambient temperature A **defined term** in NATSPEC.

ambient water A **defined term** in NATSPEC.

AMCORD Australian Model Code for Residential Development.

ameliorant A **defined term** in AUS-SPEC.

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

amnioplastic

ampere (A) SI unit of electric current.

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

anchors Use fasteners instead.

anchor trench A **defined term** in NATSPEC.

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

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

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

annexure

anionic bitumen A **defined term** in AUS-SPEC.

anodise

anti-bleed

anti-burst reinforcement A **defined term** in NATSPEC.

anti-condensation

anti-corrosive

anti-drum, anti-drumming

antifreeze

antiglare

anti-graffiti

antimicrobial

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anti-ponding

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

anti-splash

anti-stalling

antistatic

anti-tampering

anti-windup

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

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

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

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

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

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

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

APP bitumen

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

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

approach sight distance A **defined term** in AUS-SPEC.

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

Approved: Approved, reviewed, directed, rejected, endorsed and similar expressions mean approved

(reviewed, directed, rejected, endorsed) in writing by the contract administrator.

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

AR&R Australian Rainfall and Runoff.

ARI Average recurrence interval(s).

arris Both noun and verb.

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

AS XXXX:Year Title.

For example:

AS 2047:2014 Windows and external glazed doors in buildings

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

AS XXXX Title

AS XXXX.Part:Year Part title.

For example:

AS 2201 Intruder alarm systems

AS 1172.3 2007 Detection devices for internal use

Australian Standard (Interim). Show as AS XXXX (Int) in *Open* text and show in **Referenced documents** as follows:

AS XXXX.Part (Int)–Year Title. For example:

AS 4847.2 (Int)–2008 Minimum Energy Performance Standards (MEPS) requirements

The parent standard is always included 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.

NASTPEC 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.

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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.

as per Use conform to instead.

asphalt A **defined term** in AUS-SPEC.

asphalt pavement A **defined term** in AUS-SPEC.

assessment

asset protection zone (APZ) / Defendable space A **defined term** in AUS-SPEC.

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 A **defined term** in NATSPEC.

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.

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Australian Government

Austroroads

authority (AUS-SPEC)

Authorities A **defined term** in AUS-SPEC.

authorities A **defined term** in NATSPEC.

authority/Authority (NATSPEC) 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 |
| 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. Automatic numbering has been added to styles Heading 2 and Heading 3. Numbering will adjust automatically if a heading is added or deleted in either of these styles Heading 1 and Heading 4 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 A **defined term** in AUS-SPEC.

average ambient temperature A **defined term** in NATSPEC.

average recurrence interval (ARI) A **defined term** in AUS-SPEC.

Average specific extinction area

B

backcheck

backfill

backflow

backflow prevention device A **defined term** in NATSPEC.

background Use substrate instead.

backlit

backmould [0453 Guidance text]

backmount frames

backnut

backplate

backup

BACnet Building Automation and Control Network.

bad ground A **defined term** in NATSPEC.

balanced construction A **defined term** in NATSPEC.

balustrade A **defined term** in NATSPEC. Use instead of **guardrail**.

ball joints

base A **defined term** in NATSPEC.

base (base course) A **defined term** in AUS-SPEC.

base coat A **defined term** in NATSPEC.

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.

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.

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

batch A **defined term** in NATSPEC

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- batter A **defined term** in AUS-SPEC.
- batter (bushfire perimeter tracks) A **defined term** in AUS-SPEC.
- BCA Use instead of **Building Code of Australia** to which it refers. The BCA includes the **National Construction Code** Series Volume One: Building Code of Australia Class 2 to Class 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 A **defined term** in NATSPEC.
- 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*.
- bicycle path (cycleway) A **defined term** in AUS-SPEC.
- 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 A **defined term** in AUS-SPEC.
- bioresistance
- bioretention
- bio-soluble
- birdmesh
- birdproofing
- bitumen A **defined term** in NATSPEC. Includes APP bitumen and SBS bitumen.
- bituminous cold mix A **defined term** in AUS-SPEC.
- BMS Building Management System.
- bleed water
- blockout
- boiling water A **defined term** in NATSPEC.
- bond breaker A **defined term** in NATSPEC.
- bond breaking
- bonding conductor A **defined term** in NATSPEC.
- bonding treatment A **defined term** in NATSPEC.
- booster A **defined term** in AUS-SPEC.
- borehole
- borrow area A **defined term** in AUS-SPEC.
- bound material A **defined term** in AUS-SPEC.
- bound granular material A **defined term** in AUS-SPEC.
- braille
- branch A **defined term** in NATSPEC.
- 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 A **defined term** in NATSPEC.
- breathable (vapour permeable) membrane A **defined term** in NATSPEC.
- 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 A **defined term** in NATSPEC.
- bulking A **defined term** in AUS-SPEC.
- bulleted lists See **lists** for preferred arrangement.
- bullnose, bullnosing
- busbar

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busduct

bushfire

Bushfire Attack Levels (BAL A **defined term** in AUS-SPEC.

bushfire prone area A **defined term** in AUS-SPEC.

butt joints (flooring and decking) A **defined term** in NATSPEC.

by means of Do not use. Use by instead.

by-product

C

cable support A **defined term** in NATSPEC.

CAD

Call out

calorifier

candela (cd) SI base unit of luminous intensity.

cannot

capability A **defined term** in NATSPEC.

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.

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 A **defined term** in AUS-SPEC.

carriageway concrete pavements A **defined term** in AUS-SPEC.

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

cast-in-place

catalogue

catchment A **defined term** in AUS-SPEC.

catchment area A **defined term** in AUS-SPEC. Catchment Area Plans (AUS-SPEC).

CBR California Bearing Ratio

CCA Copper Chrome Arsenate. A timber preservative treatment.

Celsius See also **temperature**.

cement matrix terrazzo A **defined term** in NATSPEC.

certification A **defined term** in AUS-SPEC.

Certification Report (AUS-SPEC).

chain of custody

chainwire Referred to as chainlink in AS 2423.

chalkboard

changeable letter systems A **defined term** in NATSPEC.

changeable plate systems A **defined term** in NATSPEC.

changeover

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

checklist (AUS-SPEC) A **defined term** in AUS-SPEC.

checklist (NATSPEC).

check-out (ASHRAE) A **defined term** in NATSPEC.

childproof

chilled water A **defined term** in NATSPEC.

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

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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: **AIA EDG Prefix XXXX**. Include space between prefix and number. For example, **AIA EDG PRO 56**. If citing an AIA EDG guide in *Guidance* text, do not include the title. Instead, give an indication of the reason for the citation. For example, Refer to AIA EDG DES 13, AIA EDG DES 14 and AIA EDG DES 27 for water efficient design.
- 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). Use single keywords separated by commas for 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 A **defined term** in NATSPEC.
cladding A **defined term** in NATSPEC.
clamp plate A **defined term** in NATSPEC.
class - air filter A **defined term** in NATSPEC.
classification system See **National Classification System**.
clause (NATSPEC and AUS-SPEC).
clay pavers A **defined term** in AUS-SPEC.
clay segmental pavers A **defined term** in NATSPEC.
clean water A **defined term** in AUS-SPEC.
clean-out
clearance authority A **defined term** in NATSPEC.
clearances A **defined term** in NATSPEC.
clear-cut
clear-felling
clearing A **defined term** in AUS-SPEC.
clear zone A **defined term** in AUS-SPEC.
closed out
close-out
closed system A **defined term** in NATSPEC.
co-dominant
coating contractor A **defined term** in NATSPEC.
coating manufacturer A **defined term** in NATSPEC.
coating system A **defined term** in NATSPEC.
cold-finished
cold-formed
coldmix
cold-rolled
cold room A **defined term** in NATSPEC.

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cold weather A **defined term** in NATSPEC.

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*. 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 A **defined term** in AUS-SPEC.

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 A **defined term** in AUS-SPEC.

competent person A **defined term** in AUS-SPEC.

completion Use practical completion instead.

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

completion tests A **defined term** in NATSPEC.

[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 alternative solutions to the BCA are to be pursued.

compulsory intervention level A **defined term** in AUS-SPEC.

compressed fibre cement sheets A **defined term** in NATSPEC.

concept plan A **defined term** in AUS-SPEC.

concrete class A **defined term** in AUS-SPEC.

concrete class – normal A **defined term** in NATSPEC.

concrete class – special A **defined term** in NATSPEC.

concrete segmental pavers A **defined term** in AUS-SPEC.

concrete segmental pavers A **defined term** in NATSPEC.

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:

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

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

connecting strap A **defined term** in NATSPEC.

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

construction joint See **joints**, a **defined term** in NATSPEC.

Consultant (AUS-SPEC)

consultant (NATSPEC)

contamination of land A **defined term** in NATSPEC.

continuously-supported flooring

contract (AUS-SPEC and NATSPEC).

contract administrator (NATSPEC and AUS-SPEC) A **defined term** in NATSPEC.

Contract documents (AUS-SPEC)

contract documents (NATSPEC)

contraction joint See **joints**, a **defined term** in NATSPEC.

contractor A **defined term** in NATSPEC and AUS-SPEC.

contractor's quality inspector (AUS-SPEC)

contractor's quality plan (AUS-SPEC)

contracts manager (AUS-SPEC)

controlgear

control joints See **joint**, a **defined term** in NATSPEC.

control system (lighting) A **defined term** in NATSPEC.

cool room A **defined term** in NATSPEC.

coordinate

core hole

corrective action A **defined term** in AUS-SPEC.

corrective action request (CAR) A **defined term** in AUS-SPEC.

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

cotton-backed

Council A **defined term** in AUS-SPEC.

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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 A **defined term** in AUS-SPEC.

cross drains A **defined term** in AUS-SPEC.

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 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: As for subclauses, use the table name in bold with the initial capital for the first word only. There is no need to cross reference a table if it is in the same clause as it is effectively a related subclause.
- 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 to make a citation referring to keyword level.

See also **citation** for reference to other material not contained within the specification.

cross-section

crossfall A **defined term** in AUS-SPEC.

crossfall drainage A **defined term** in AUS-SPEC.

cubicle A **defined term** in NATSPEC.

culvert A **defined term** in AUS-SPEC.

curb Use kerb instead.

curtain – continuous A **defined term** in NATSPEC.

curtain – slatted (shutter) A **defined term** in NATSPEC.

cushion head box A **defined term** in NATSPEC.

custom-built Use instead of purpose built.

custom-built assemblies A **defined term** in NATSPEC.

custom-built luminaires A **defined term** in NATSPEC.

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 A **defined term** in AUS-SPEC.

cycleway A **defined term** in AUS-SPEC.

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 A **defined term** in AUS-SPEC.

Daywork rates A **defined term** in AUS-SPEC.

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.

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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 A **defined term** in NATSPEC.

decontamination

decking A **defined term** in NATSPEC.

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

default A **defined term** in NATSPEC.

default terms A **defined term** in AUS-SPEC.

defect A **defined term** in AUS-SPEC.

defects liability period

defect notice A **defined term** in AUS-SPEC.

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 A **defined term** in AUS-SPEC.

demolition A **defined term** in NATSPEC.

density ratio (soil) A **defined term** in NATSPEC.

designated bushfire prone area A **defined term** in NATSPEC.

Design and Construct

Design CBR (AUS-SPEC)

design life A **defined term** in NATSPEC.

design parameters A **defined term** in NATSPEC.

design review A **defined term** in NATSPEC.

designer A **defined term** in NATSPEC.

designer A **defined term** in AUS-SPEC.

de-stress

destructive inspection (of trees) A **defined term** in NATSPEC.

detailed on the drawings Use as documented instead.

dethatching

developer

development assessment A **defined term** in AUS-SPEC.

dewater

diameter Use the word instead of abbreviation or symbol.

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

diffuser A **defined term** in NATSPEC.

digital files Use instead of electronic or soft copy.

dilapidation record A **defined term** in NATSPEC.

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

DIN EN European standard that has been published unchanged in Germany.

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.

dirty water A **defined term** in AUS-SPEC.

disassemble

disconnectable

discrepancy A **defined term** in NATSPEC.

dismantle A **defined term** in NATSPEC.

dispatch

disposition (Construction) A **defined term** in AUS-SPEC.

disposition (Maintenance) A **defined term** in AUS-SPEC.

DN Nominal pipe size eg DN 25.

document A **defined term** in AUS-SPEC.

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

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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 A **defined term** in AUS-SPEC.

documented A **defined term** in NATSPEC.

DOMESTIC 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 A **defined term** in NATSPEC.

door jamb

doorset A **defined term** in NATSPEC.

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* in NATSPEC style (Natspec.dotm).

double detail joint A **defined term** in NATSPEC.

draft Use when referring to a preliminary document.

double/double seal A **defined term** in AUS-SPEC.

double-glazed

double glazing

drainage blanket A **defined term** in AUS-SPEC.

drainage control measures A **defined term** in AUS-SPEC.

drainage structures A **defined term** in AUS-SPEC.

drainage types A **defined term** in AUS-SPEC.

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 A **defined term** in NATSPEC.

dual drainage A **defined term** in AUS-SPEC.

dual water supply A **defined term** in AUS-SPEC.

dustproof

E

early age strength A **defined term** in AUS-SPEC.

early age strength A **defined term** in NATSPEC.

earth windrow A **defined term** in AUS-SPEC.

earthwork(s)

earthing boss A **defined term** in NATSPEC.

east

economic life A **defined term** in NATSPEC.

ecosystem

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

edge bonding A **defined term** in NATSPEC.

edge drains A **defined term** in AUS-SPEC.

edge line

edge strip

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

EEOGO Energy Efficiency in Government Operations Policy.

effective pipe length A **defined term** in AUS-SPEC.

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 A **defined term** in NATSPEC.

elastopressive

electrical kilowatts See **kilowatts**.

electricity distributor A **defined term** in NATSPEC and AUS-SPEC. 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 A **defined term** in NATSPEC.

embedded material A **defined term** in NATSPEC.

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emergency access way A **defined term** in AUS-SPEC.

emitter A **defined term** in NATSPEC.

enable Use allow instead

End Area Method (AUS-SPEC)

end-matched joints (flooring and decking) A **defined term** in NATSPEC.

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 A **defined term** in NATSPEC.

entrapped laminated glass assembly A **defined term** in NATSPEC.

environment A **defined term** in NATSPEC.

environmental audits A **defined term** in NATSPEC.

environmental impact assessment (EIA) A **defined term** in NATSPEC.

Environmental Management Plan (AUS-SPEC)

environmental management plan (EMP) A **defined term** in NATSPEC.

environmental officer A **defined term** in AUS-SPEC.

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) A **defined term** in NATSPEC.

erosion A **defined term** in AUS-SPEC.

erosion and sediment control A **defined term** in AUS-SPEC.

erosion classes in relation to soil types A **defined term** in AUS-SPEC.

erosion control measures A **defined term** in AUS-SPEC.

error A **defined term** in NATSPEC.

essential electric power A **defined term** in NATSPEC.

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) A **defined term** in AUS-SPEC.

Extreme Stress Seal (XSS) A **defined term** in AUS-SPEC.

evaporative air cooler A **defined term** in NATSPEC.

evaporative efficiency A **defined term** in NATSPEC.

exfiltration

expansion joint See **joints**, a **defined term** in NATSPEC.

external inspection (of trees) A **defined term** in NATSPEC.

extra-low voltage A **defined term** in NATSPEC.

F

façade

faceplate

facework A **defined term** in NATSPEC.

fail-safe

fail-secure

fasteners Use instead of **anchors**, **fixings** for the holding down and securing connector(s) used for fixing.

fault current limiters A **defined term** in NATSPEC.

FBS-1 (fibre-biosoluble) mineral wool A **defined term** in NATSPEC.

feature A **defined term** in NATSPEC.

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- Federal government (AUS-SPEC)
- federal (government) Requires a capital only if it forms part of an official title, for example, a federal government initiative, the Federal Court of Australia. Use Australian Government in preference.
- FFZ Fuel free zone.
- fibre batts A **defined term** in NATSPEC.
- fibre cement
- fibre cement sheet linings A defined term in NATSPEC.
- fibreglass A **defined term** in NATSPEC.
- field working period A **defined term** in AUS-SPEC.
- filling A **defined term** in NATSPEC.
- finish coat (plastering) A **defined term** in NATSPEC.
- finish sanding A **defined term** in NATSPEC.
- finishing treatment (plastering) A **defined term** in NATSPEC.
- fire break A **defined term** in AUS-SPEC.
- fire doorset A **defined term** in NATSPEC.
- firefighting
- fire hazard properties See BCA A2.4 for terminology.
- fire-rated** Use fire-resisting instead.
- fire-resistance level (FRL) From AS 2481.1 and NCC.
- 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).
- fire-resisting Use instead of fire rated when not referring to a specific FRL.
- fire shutters A **defined term** in NATSPEC.
- fire-stop
- fire-stopping
- fire trail(s) (AUS-SPEC)
- fire wall
- fitout
- fitted flooring
- fixing A verb meaning the act of holding and securing an object in place.
- fixings** Use fasteners instead. Fixing should be used as a verb to avoid confusion.
- flaking A **defined term** in NATSPEC.
- Flammability Index
- flatness A **defined term** in NATSPEC.
- flexible guide post A **defined term** in AUS-SPEC.
- flexible pavement A **defined term** in AUS-SPEC.
- flexible pavements A **defined term** in NATSPEC.
- floating flooring
- flow path e.g. overland flow path
- fly ash
- floor covering
- floor waste
- flush bolt
- flush door A **defined term** in NATSPEC.
- flush door panels A **defined term** in NATSPEC.
- flush lined
- flush mounted
- flushplate
- flux oil A **defined term** in AUS-SPEC.
- footer Provide date of current *Update* (Month Year e.g. Apr yy) 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).
- footpath (pathway) A **defined term** in AUS-SPEC.
- formwork A **defined term** in NATSPEC.
- forward slash No space e.g., round front/flat back.
- / forward slash (solidus) Use without spaces when showing alternatives, in some shortened forms and in mathematical expressions e.g xxx/yyyy.
- foundation drains A **defined term** in AUS-SPEC.
- FPZ Fire Protection Zones.
- fractions Express fractional values in decimal terms. For example:
Use: 0.5. . . not. . . ½ or 1/2.
- See **MS Word AutoCorrect** for instructions on how to prevent Word from creating unwanted fractions.
- FRC Fibre reinforced cement. Do not use **fibro**.
- free-to-air
- freespan
- freezer room A **defined term** in NATSPEC.
- FRL Fire Resistance Level.
- FRZ Fuel Reduced Zone.
- full scale
- full stops The following rules, while not necessarily good punctuation, are intended to produce consistency across all worksections:
- End all sentences and paragraphs with a full stop, even if they consist of a single word in a list.
 - Do not use full stops at the end of headings.
 - Do not use full stops where the item in a list ends in a numeral. (This avoids implied accuracy or in

some cases, ambiguity caused by the appearance of two decimal points).

functional performance test A **defined term** in NATSPEC.

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 A **defined term** in AUS-SPEC.

geotechnical site investigation A **defined term** in NATSPEC.

geotex

geotextile A **defined term** in NATSPEC.

geotextile reinforced seal (GRS A **defined term** in AUS-SPEC.

GITA Geotechnical inspection and testing authority.

give notice A **defined term** in NATSPEC and AUS-SPEC.

glass fibre See also **fibreglass**.

gloss A **defined term** in NATSPEC.

gloss unit A **defined term** in NATSPEC.

glossary of terms (for door hardware) A **defined term** in NATSPEC.

glued laminated timber

going A **defined term** in NATSPEC.

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 A **defined term** in AUS-SPEC. Use x(V):y(H)

granolithic topping A **defined term** in NATSPEC.

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 and organic waste A **defined term** in NATSPEC.

green concrete A **defined term** in AUS-SPEC.

green concrete A **defined term** in NATSPEC.

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

greenhouse gas/emission Use lower case.

grille A **defined term** in NATSPEC.

group number A BCA term.

groups of timbers A **defined term** in NATSPEC.

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**.

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guide post A **defined term** in AUS-SPEC.
gypsum plaster A **defined term** in NATSPEC.

H

ha Hectare. Equals an area of 10 000 m² or a square of 100 m sides.

halogen-free

handbook A **defined term** in AUS-SPEC.

handworked [0433]

hangar A building for housing aircraft.

hanger For hanging pipes, ducts.

hardboard

hard copy Use instead of **paper 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 A **defined term** in NATSPEC.

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

heated water A **defined term** in AUS-SPEC.

heated water A **defined term** in NATSPEC.

heatsink

heavy duty

hertz (Hz) SI derived unit for frequency.

hessian

HF welding A **defined term** in NATSPEC.

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 A **defined term** in NATSPEC.

high pressure decorative laminates (HPDL) A **defined term** in NATSPEC.

high stress seal or reseal (HSS) A **defined term** in AUS-SPEC.

high voltage A **defined term** in NATSPEC.

high-build low profile latex coating A **defined term** in NATSPEC.

HMR High Moisture Resistant.

HOLD POINT(s)/ Hold Point(s) (HP)(AUS-SPEC): A **defined term** in 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 A **defined term** in AUS-SPEC.

hot-dip galvanized A **defined term** in AUS-SPEC.

hot-dip galvanized A **defined term** in NATSPEC.

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

hot-rolled

hot weather A **defined term** in NATSPEC.

hour (h) Non SI unit of time.

house signage A **defined term** in NATSPEC.

hydroseeding

hydromulch

hyperlink A NATSPEC text style: blue, underlined. As a rule, NATSPEC includes open 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 open-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.

STYLEguide

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

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

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

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

I

IEC International Electrotechnical Commission.

IFD Intensity Frequency Duration.

if required A **defined term** in NATSPEC.

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

illuminated signs A **defined term** in NATSPEC.

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 A **defined term** in NATSPEC.

import cost A **defined term** in NATSPEC.

imported topsoil A **defined term** in NATSPEC.

inadequate foundation material A **defined term** in AUS-SPEC.

incandescent lamp A **defined term** in NATSPEC.

incoming busbars A **defined term** in NATSPEC.

individual rung ladder A **defined term** in NATSPEC.

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

- 24°C ± 0.5°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

infra-red

in-ground

in-house

in situ

in the drawings Use as documented.

inspection A **defined term** in AUS-SPEC.

inspection and test A **defined term** in AUS-SPEC.

inspection and test plans (ITP) A **defined term** in NATSPEC.

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

instruction A **defined term** in AUS-SPEC.

integrated management manual A **defined term** in AUS-SPEC.

integrated management system A **defined term** in AUS-SPEC.

interlayer

intermittently-supported flooring

elastopressive

international

internet

intra-pavement drains A **defined term** in AUS-SPEC.

investigation inspection (of trees) A **defined term** in NATSPEC.

IP International protection rating. IPXY. No spaces between letters and numerals. A **defined term** in NATSPEC. 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 A **defined term** in NATSPEC.

joints A **defined term** in AUS-SPEC.

joints A **defined term** in NATSPEC.

joule (J) SI derived unit for energy, work, quantity of heat.

jump formwork

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

knobset

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.

K

kelvin (K) SI base unit for thermodynamic temperature

kerb

kerb and channel (gutter) A **defined term** in AUS-SPEC.

keyed alike (locks) A **defined term** in NATSPEC.

keyed to differ (locks) A **defined term** in NATSPEC.

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. For example: Keyword: clause.

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. Note that the first word following the colon is capitalized (except where the colon is followed by a number).

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)**.

L

labelling

ladder A **defined term** in NATSPEC.

ladder cage A **defined term** in NATSPEC.

lamp Light generating component which is fitted to the luminaire.

land use

landform A **defined term** in AUS-SPEC.

landing A **defined term** in NATSPEC.

large culvert unit A **defined term** in AUS-SPEC.

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.

large trees A **defined term** in NATSPEC.

latchset

latex extensible wall coating (or membrane coating) A **defined term** in NATSPEC.

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 A **defined term** in NATSPEC.

STYLEguide

layflat

laying patterns A **defined term** in AUS-SPEC.
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 A **defined term** in AUS-SPEC.

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 space which will keep numeral and units together.

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

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

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

For very small lengths follow the convention for small numbers above and use an appropriate decimal multiple. Do not use obsolete units like microns. Note that the 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 A **defined term** in NATSPEC.

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 A **defined term** in AUS-SPEC.

lippage A **defined term** in AUS-SPEC.

lippage A **defined term** in NATSPEC.

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

load bearing construction (straw bale) A **defined term** in NATSPEC.

local area network (LAN) A **defined term** in NATSPEC.

Local Authority (AUS-SPEC).

local authority (NATSPEC).

Local Council (AUS-SPEC).

local council (NATSPEC).

local environmental plan (LEP) A **defined term** in AUS-SPEC.

Local Government (AUS-SPEC).

local government (NATSPEC).

local government authority A **defined term** in NATSPEC.

login Into SPECbuilder Live for example.

longitudinal linemarking A **defined term** in AUS-SPEC.

looped mains A **defined term** in AUS-SPEC.

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

lost formwork

STYLEguide

lot A **defined term** in NATSPEC.

lot (allotment) A **defined term** in AUS-SPEC.

lot (measurement) A **defined term** in AUS-SPEC.

louvred door A **defined term** in NATSPEC.

louvres – continuous A **defined term** in NATSPEC.

louvres – horizontal A **defined term** in NATSPEC.

louvres – vertical A **defined term** in NATSPEC.

low density soil A **defined term** in NATSPEC.

low level interface A **defined term** in NATSPEC.

low voltage A **defined term** in NATSPEC. 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 A **defined term** in NATSPEC.

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) A **defined term** in AUS-SPEC.

major system A **defined term** in AUS-SPEC.

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 and supplier's

recommendations A **defined term** in AUS-SPEC.

manufacturer's and supplier's

recommendations A **defined term** in NATSPEC.

marketplace

markup

materials A **defined term** in AUS-SPEC.

material R-Value A **defined term** in NATSPEC.

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

MATV A **defined term** in NATSPEC.

maximum allowable operating pressure A **defined term** in AUS-SPEC.

MDF Medium Density Fibre board

medical breathing air A **defined term** in NATSPEC.

medium density fibreboard (MDF)

MELT A **defined term** in AUS-SPEC.

membrane A **defined term** in NATSPEC.

membrane liner A **defined term** in NATSPEC.

membrane plate A **defined term** in NATSPEC.

membranes (waterproof) A **defined term** in NATSPEC.

metal faced board A **defined term** in NATSPEC.

metallic-coated A **defined term** in NATSPEC.

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

metasediment

Method Statement (AUS-SPEC).

method statement (procedures, technical procedures, process descriptions, specific procedures) A **defined term** in 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, pounds and hours, 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 A **defined term** in AUS-SPEC.

microcrack

micron μm .

Microsoft Word or **MS Word**

STYLEguide

microsprays

microsurfacing A **defined term** in AUS-SPEC.

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) A **defined term** in AUS-SPEC.

mineral wool (including glasswool and rockwool) A **defined term** in NATSPEC.

minimise

minimum gap sight distance A **defined term** in AUS-SPEC.

minor road A **defined term** in AUS-SPEC.

minor system A **defined term** in AUS-SPEC.

minute (m) time.

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

misshape, misshaped, misshaping

mobile shelving A **defined term** in NATSPEC.

mock-up

modified material A **defined term** in AUS-SPEC.

moisture content A **defined term** in NATSPEC.

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

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

monel

monobloc [AS/NZS 3813].

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

more than see **Less than**.

mortar bedding

mortarless

mortice

mosaic parquetry panels

MPa megapascal

mould

MSDS Material Safety Data Sheets.

MS word auto correct See auto correct.

multi-component

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

multicore cables

multipurpose

multizone

muntin

N

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

nameplate

NAMS.AU National Asset Management Strategy Committee

nanometre Equivalent to one billionth of a metre. Generally used for measuring wavelengths of electromagnetic radiation.

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.

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 code (Pre-cast concrete) A **defined term** in AUS-SPEC.

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 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 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.

natural soil A **defined term** in NATSPEC.

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) A **defined term** in NATSPEC.

net short-time rated output (or stand-by rating) A **defined term** in NATSPEC.

STYLEguide

Network Utility Operator A **defined term** in NATSPEC.

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 A **defined term** in NATSPEC.

non-cellular

non-combustible

non-composite

non-conformance

non-conformance A **defined term** in AUS-SPEC.

non-conformance report (NCR) A **defined term** in AUS-SPEC.

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) A **defined term** in NATSPEC.

non-maintained

non-metallic

non-potable

non-pressure

non recoverable

non-rigid road safety barrier system A **defined term** in AUS-SPEC.

non-slip Use slip-resistant instead.

non-standard

non-staining

non-toxic

non-trafficable

non type-tested

nor Use or instead.

North

Normative

normal design domain (NDD) A **defined term** in AUS-SPEC.

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

nominal size (DN) A **defined term** in AUS-SPEC.

nominated mix A **defined term** in AUS-SPEC.

nosing A **defined term** in NATSPEC.

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) A **defined term** in AUS-SPEC.

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

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

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

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

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

In documents such as reports containing few numerical values:

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

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

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

- 50-year.
- second-floor.

See also ordinals and ratios.

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

O

O-ring

obtain A **defined term** in AUS-SPEC.

obtain A **defined term** in NATSPEC.

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 *QUICKstart* 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.

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

onboard

on-line

on-site

on to

opacifier

opacity A **defined term** in NATSPEC.

open drains A **defined term** in AUS-SPEC.

open system A **defined term** in NATSPEC.

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.

Avoid using Normal Indent 2 and Normal Indent 3 in *Optional* and *Guidance* text.

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.

ordinary blockwork A **defined term** in NATSPEC.

ordinary brickwork and blockwork A **defined term** in NATSPEC.

organic soil A **defined term** in NATSPEC.

organic waste A **defined term** in NATSPEC.

organise

organisation

other markings A **defined term** in AUS-SPEC.

outgoing

out-of-date

out of hours Use after-hours instead.

outer separator A **defined term** in AUS-SPEC.

output

overall

overcurrent

overflashing

oversizing

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 ones own name, rather than the name of the other person who has not signed.

packaged air handling unit A **defined term** in NATSPEC.

packaged airconditioning A **defined term** in NATSPEC.

PageSeeder XML based document management system used by NATSPEC.

paint or coating system A **defined term** in NATSPEC.

panel drain A **defined term** in AUS-SPEC.

paper copy Use hard copy instead.

PAR Preventative action request.

Park Facility Data Sheets (AUS-SPEC).

STYLEguide

- Park Maintenance Management Plan (AUS-SPEC).
- parquet A **defined term** in NATSPEC.
- partial inspection (of trees) A **defined term** in NATSPEC.
- Part (Australian standards)
- particleboard A **defined term** in NATSPEC.
- particulars** Use details instead.
- partition - fully demountable A **defined term** in NATSPEC.
- partition - glazed A **defined term** in NATSPEC.
- partition - semi demountable A **defined term** in NATSPEC.
- pascal (Pa) SI derived unit for pressure and stress.
- passive voice** Do not use. See active voice.
- patch plate glass panel fixings A **defined term** in NATSPEC.
- pathway A **defined term** in AUS-SPEC.
- pavers A **defined term** in NATSPEC.
- pavement A **defined term** in AUS-SPEC.
- pavement marking A **defined term** in AUS-SPEC.
- pavements A **defined term** in AUS-SPEC.
- 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) A **defined term** in AUS-SPEC.
- 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 A **defined term** in AUS-SPEC.
- perimeter track A **defined term** in AUS-SPEC.
- permanent marks
- permanent marks A **defined term** in AUS-SPEC.
- persons** Use people instead.
- personnel access way** Use access chamber instead.
- phase Use 3-phase not three-phase or 3 phase.
- pinle hinge
- pipe A **defined term** in NATSPEC. Use **pipe** if installed throughout the building. Use **tube** if in a heat exchanger, chiller or similar.
- pipe surround A **defined term** in NATSPEC.
- pipng Use instead of **pipework**
- plan transition A **defined term** in AUS-SPEC.
- plane angle See **symbols**.
- planning A **defined term** in AUS-SPEC.
- plant establishment period A **defined term** in NATSPEC.
- plant room
- plaster A **defined term** in NATSPEC.
- plastering A **defined term** in NATSPEC..
- plastering system A **defined term** in NATSPEC.
- platform flooring A **defined term** in NATSPEC.
- plenum box A **defined term** in NATSPEC.
- pliable building membrane A **defined term** in NATSPEC.
- plies Plural for ply, as in plywood.
- plug-in
- plywood types A **defined term** in NATSPEC.
- point fixed glazing A **defined term** in NATSPEC.
- PMP Park maintenance plan
- pollution incident A **defined term** in NATSPEC.
- polyester insulation A **defined term** in NATSPEC.
- polyethylene Use instead of **polythene**.
- polymer modified binder A **defined term** in AUS-SPEC.
- polysulfide
- polyurethane – liquid applied A **defined term** in NATSPEC.
- portable operator's terminal A **defined term** in NATSPEC.
- Portland** (cement) Use general purpose cement instead.
- post-assembly
- post-consumer
- post-tension
- post-tensioning
- powder coat
- powder coated
- powder coating A **defined term** in NATSPEC.
- pozzolan A **defined term** in AUS-SPEC.
- Practical Completion (AUS-SPEC).
- practical completion A **defined term** in NATSPEC. With regard to the context, use the date

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for practical completion or the date of practical completion instead.

pre-assembly

precast Also used as a verb in NATSPEC.

precast box culvert A **defined term** in AUS-SPEC.

precharge

precast concrete A **defined term** in NATSPEC.

pre-clean

precoated

pre-commissioning A **defined term** in AUS-SPEC.

pre-completion tests

pre-construction

pre-consumer

pre-cut

pre-design

predrill

prefabricated/prefabrication

prefinish

preform

performed shower base A **defined term** in NATSPEC.

preglazed

pre-install

Preliminaries Cover project-specific overheads that do not constitute work that could be allocated to a particular worksection. NATSPEC provides generic *Preliminaries* and several customised worksections.

pre-mixed

prepaint

pre-painted

preseal

prequalified

preselection

preservative-treated

preservative-treatment

preset

pressure-reducing

prestart

prestress

pretreated

pre-treatment

preventative action request (PAR) A **defined term** in AUS-SPEC.

pre-weathered

prewetting

primary treatment SQID A **defined term** in AUS-SPEC.

prime A **defined term** in AUS-SPEC.

primer A **defined term** in AUS-SPEC.

primer, prime coat A **defined term** in NATSPEC.

primerbinder A **defined term** in AUS-SPEC.

primerseal A **defined term** in AUS-SPEC.

principal A **defined term** in NATSPEC and AUS-SPEC.

principal's representative (AUS-SPEC).

prior to Use before instead.

process audit A **defined term** in AUS-SPEC.

product audit (conformance audit, service audit) A **defined term** in AUS-SPEC.

Product Partner A building product manufacturer with an agreement with NATSPEC to include a purpose edited worksection in NATSPEC.

See also **branded worksection**.

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

production assessment (concrete) A **defined term** in NATSPEC.

production tests See **tests**, a **defined term** in NATSPEC.

professional engineer A **defined term** in AUS-SPEC.

professional engineer A **defined term** in NATSPEC (in some states and territories, additional or alternative criteria may apply e.g. Registered Professional Engineer, Queensland (RPEQ)). Use instead of qualified engineer, structural engineer etc. Include the engineering discipline only if relevant to the context.

proforma

program

progressive tests See **tests**, a **defined term** in NATSPEC.

project assessment (concrete) A **defined term** in NATSPEC.

project management plan A **defined term** in AUS-SPEC.

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 ^ |

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| Action | Symbol | Example |
|----------------------|--|---|
| Delete space | Curves above and below space to be omitted | Sub contract |
| Delete text | Cross out | Cross out text to delete |
| Make ALL CAPS | Double underline | <u><u>Text to be made all caps</u></u> |
| Make lower case | Cross out and amend | Text to be LOWER case lower |
| Make <i>italics</i> | Underline | <u>Text to be made italicised</u> |
| Make bold | Wavy underline | <u>This text is to be bold</u> |
| 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 A **defined term** in AUS-SPEC.

proprietary A **defined term** in AUS-SPEC.

proprietary A **defined term** in NATSPEC.

proprietary assemblies A **defined term** in NATSPEC.

proprietary luminaires A **defined term** in NATSPEC.

proprietary names A **defined term** in AUS-SPEC.

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 A defined term in AUS-SPEC.

protective underlay and overlay A **defined term** in NATSPEC.

prototype A **defined term** in NATSPEC.

provide A **defined term** in AUS-SPEC.

provide A **defined term** in NATSPEC.

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 A **defined term** in AUS-SPEC.

pugmill

pumpset

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

push-button

PVC membrane A **defined term** in NATSPEC.

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) reissued at each update.

qualified surveyor A **defined term** in AUS-SPEC.

quality assurance

quality assurance A **defined term** in AUS-SPEC.

quality assurance representative A **defined term** in AUS-SPEC.

quality check lists A **defined term** in AUS-SPEC.

quality control A **defined term** in AUS-SPEC.

quality design check lists A **defined term** in AUS-SPEC.

quality management representative A **defined term** in AUS-SPEC.

Quality Management System (QMS)

Quality Manual (AUS-SPEC).

quality package A **defined term** in NATSPEC.

Quality plan (AUS-SPEC).

quality register A **defined term** in AUS-SPEC.

quality system (text in NATSPEC).

Quality system (heading in NATSPEC).

Quality management system A **defined term** in AUS-SPEC.

Quality management system requirements (or system requirement, quality management requirement) A **defined term** in AUS-SPEC.

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 A **defined term** in AUS-SPEC.

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 A **defined term** in NATSPEC.

rated short-circuit currents A **defined term** in NATSPEC.

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 A **defined term** in AUS-SPEC.

readily accessible This is a **defined term** in NATSPEC. 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 A **defined term** in NATSPEC. Use instead of work **as-executed, as-fitted or as-installed** drawings.

recording level A **defined term** in AUS-SPEC.

records A **defined term** in AUS-SPEC.

recover A **defined term** in NATSPEC.

recyclable

redefine

redevelopment site A **defined term** in AUS-SPEC.

redressing A **defined term** in NATSPEC.

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.

reference specification Use instead of **reference text**.

reflective insulation A **defined term** in NATSPEC.

register A **defined term** in NATSPEC.

Registered Surveyor A **defined term** in AUS-SPEC.

Registered Testing Authority A **defined term** in AUS-SPEC.

registered testing authority A **defined term** in NATSPEC.

regrade

regulations See **acts and regulations**.

reinstall

relative compaction A **defined term** in NATSPEC.

relative level tolerance A **defined term** in NATSPEC.

render, rendering A **defined term** in NATSPEC.

REP Regional Environmental Plans.

required A **defined term** in AUS-SPEC.

required A **defined term** in NATSPEC.

reseal A **defined term** in AUS-SPEC.

residual binder A **defined term** in AUS-SPEC.

resilient floor coverings classification A **defined term** in NATSPEC.

resin based seamless floor finish A **defined term** in NATSPEC.

resolution A **defined term** in NATSPEC.

response time A **defined term** in AUS-SPEC.

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 A **defined term** in AUS-SPEC.

rigid road safety barrier system A **defined term** in AUS-SPEC.

rise A **defined term** in NATSPEC.

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

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road authority A **defined term** in AUS-SPEC.
road network A **defined term** in AUS-SPEC.
road reserve A **defined term** in AUS-SPEC.
Road Reserve Maintenance Plan (RMP)(AUS-SPEC).
roadbase
roadmarking
rock A **defined term** in AUS-SPEC.
rock A **defined term** in NATSPEC.
rock wool
roller grilles A **defined term** in NATSPEC.
rollformed/rollformer
rooflight Use skylight instead. Use skylight (rooflight) in reference to bushfire zones.
roof water
room dividers A **defined term** in NATSPEC.
room fan coil unit (FCU) A **defined term** in NATSPEC.
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 A **defined term** in AUS-SPEC.
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 A **defined term** in NATSPEC.
runoff
rural land A **defined term** in AUS-SPEC.

rural residential land A **defined term** in AUS-SPEC.
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) A **defined term** in AUS-SPEC.
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 A **defined term** in NATSPEC.
same Do not use as a pronoun, as in for example, Builder shall replace **same**. See **active voice**.
sample A **defined term** in NATSPEC.
samples A **defined term** in NATSPEC.
sanitary ware
sanding A **defined term** in NATSPEC.
sarking membrane A **defined term** in NATSPEC.
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)

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- screen A **defined term** in NATSPEC.
- seal A **defined term** in AUS-SPEC.
- sealer A **defined term** in NATSPEC.
- sealing A **defined term** in NATSPEC.
- seamless membranes A **defined term** in NATSPEC.
- second (s) time.
- secondary treatment SQID A **defined term** in AUS-SPEC.
- section A **defined term** in AUS-SPEC.
- Section
- sediment A **defined term** in AUS-SPEC.
- sediment control measures A **defined term** in AUS-SPEC.
- selected backfill A **defined term** in AUS-SPEC.
- selected fill A **defined term** in AUS-SPEC.
- selected material zone A **defined term** in AUS-SPEC
- SELECTIONS Subsection of each NATSPEC worksection if required. See also **worksection** for outline of worksection structure.
- self- Use a hyphen with all "self-" compounds, whether they are adjectives or nouns.
- self-adhesive
- self-braced
- self-cleaning
- self-closing
- self-contained
- self-compacting From AS 1012.3.5
- self-correcting
- self-destroying
- self-draining
- self-drilling
- self-expanding
- self-finished
- self-furring
- self-indicating
- self-levelling
- self-locking
- self-monitoring
- self-powered
- self-propelled
- self-sealing
- self-smoothing
- self-supported
- self-supporting
- self-tapping
- semi-flexible guide post A **defined term** in AUS-SPEC.
- semi-gloss
- SEPP State environmental planning policy.
- septicity A **defined term** in AUS-SPEC.
- setback A **defined term** in AUS-SPEC.
- service A **defined term** in NATSPEC.
- Service and Installation Rules
- service life** Use design life instead.
- SERVICES Packages See NATSPEC for an outline of the various Services packages.
- service pressure A **defined term** in AUS-SPEC.
- Services Reference and Schedules. See **NATSPEC**.
- service road A **defined term** in AUS-SPEC.
- set-out (noun)
- set out (verb)
- set-down
- sewage The matter flowing in the pipes.
- sewerage The reticulation system.
- shadecloth A **defined term** in NATSPEC.
- shade structure A **defined term** in NATSPEC.
- shadowline
- shall** Do not use. Use active voice.
- sheen A **defined term** in NATSPEC.
- 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. 0272s *Asphaltic concrete*.
- short-circuit
- shotcrete A **defined term** in NATSPEC.
- should** Do not use. See active voice and imperative mood.
- shoulder A **defined term** in AUS-SPEC.
- shoulder width A **defined term** in AUS-SPEC.
- shower tray A **defined term** in NATSPEC.
- 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.

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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 |
| thermodynamic temperature | kelvin | K |
| amount of substance | mole | mol |
| luminous intensity | candela | cd |

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

| Derived quantity | SI derived unit | |
|--|-----------------|--|
| | Special name | Symbol |
| frequency | hertz | Hz |
| Force | newton | N |
| Pressure, stress | pascal | Pa |
| energy, work, quantity of heat | joule | J |
| power, radiant flux | watt | W |
| electric potential, potential difference, tension, electromotive force | volt | V |
| electric resistance | ohm | 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) **A defined term in AUS-SPEC.**

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.

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

sight distance A **defined term** in AUS-SPEC.

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 A **defined term** in AUS-SPEC.

single-pack

SISD Safe intersection sight distance.

site rock A **defined term** in NATSPEC.

site tests A **defined term** in NATSPEC.

site topsoil A **defined term** in NATSPEC.

size A **defined term** in AUS-SPEC.

size index (for trees or shrubs) A **defined term** in NATSPEC.

skylight

slab A **defined term** in AUS-SPEC.

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

slab dimensions A **defined term** in AUS-SPEC.

slab, odd-shaped A **defined term** in AUS-SPEC.

slab, mismatched slabs A **defined term** in AUS-SPEC.

slimline

slipform

slip sheets A **defined term** in NATSPEC.

slip resistance

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

small culvert unit A **defined term** in AUS-SPEC.

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.

small trees or shrubs A **defined term** in NATSPEC.

SMATV – L Band A **defined term** in NATSPEC.

SMATV - QAM A **defined term** in NATSPEC.

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) A **defined term** in NATSPEC.

soil blend A **defined term** in NATSPEC.

soldier course A **defined term** in NATSPEC.

solid core door

sound insulation A **defined term** in NATSPEC.

space factor A **defined term** in AUS-SPEC.

SPECbuilder Specification compilation software program that enables subscribers to create new specifications using NATSPEC and office-edited worksections.

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 Pro The offline version of NATSPEC specification compilation software. It is delivered via CD-ROM and is installed on the user's computer. It is compatible with Windows versions up to XP and Microsoft Word versions up to 2003.

SPECbuilder Main Menu

special care locations A **defined term** in NATSPEC.

special processes A **defined term** in AUS-SPEC.

specialise Note Australian Standards use specialize. 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 A **defined term** in NATSPEC.

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) A **defined term** in AUS-SPEC.

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

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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 A **defined term** in NATSPEC.

splashback

sponge (plaster finishing treatment) A **defined term** in NATSPEC.

sprayed A **defined term** in AUS-SPEC.

sprayed (plaster finishing treatment) A **defined term** in NATSPEC.

spreadsheet

spring (season).

Spread-of-Flame Index

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

stabilise

stabilising agent A **defined term** in AUS-SPEC.

staining A **defined term** in NATSPEC.

stainless steel type XXX Use instead of stainless steel grade XXX.

stairway A **defined term** in NATSPEC.

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.**

standard trade common names A **defined term** in NATSPEC.

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

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

start response time A **defined term** in NATSPEC.

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 A **defined term** in AUS-SPEC.

State government (AUS-SPEC).

State Road Authority (AUS-SPEC).

states and territories

statutory authority A **defined term** in NATSPEC.

statutory signage A **defined term** in NATSPEC.

step-by-step

step ladder A **defined term** in NATSPEC.

stepping A **defined term** in NATSPEC.

stile A **defined term** in NATSPEC.

stone cladding A **defined term** in NATSPEC.

Stopping Sight Distance A **defined term** in AUS-SPEC.

stormwater management plan A **defined term** in AUS-SPEC.

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

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

strain alleviating membrane (SAM) A **defined term** in AUS-SPEC.

strain alleviating membrane interlayer (SAMI) A **defined term** in AUS-SPEC.

straw A **defined term** in NATSPEC.

straw bale A **defined term** in NATSPEC.

strikeup

strip A **defined term** in NATSPEC.

structural sealant A **defined term** in NATSPEC.

structural silicone glazing A **defined term** in NATSPEC.

structure borne sound A **defined term** in NATSPEC.

subcooling

sub-annexure

subbase A **defined term** in NATSPEC.

subbase (subbase course) A **defined term** in AUS-SPEC.

sub-branch A **defined term** in NATSPEC.

sub-catchment A **defined term** in AUS-SPEC.

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

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subclause

Subconsultant (AUS-SPEC)

subconsultant (NATSPEC)

subcontract

subcontract A **defined term** in AUS-SPEC.

subcontractor A **defined term** in NATSPEC.

sub-distribution board

subdivision

subfloor A **defined term** in NATSPEC.

subframe

subgrade A **defined term** in AUS-SPEC.

subgrade A **defined term** in NATSPEC.

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

submain

sub-pavement drains A **defined term** in AUS-SPEC.

subsection

subsill

subsoil drains A **defined term** in AUS-SPEC.

substrate A **defined term** in NATSPEC.

substructure

subsurface

subsystem

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

summer (season).

superelevation A **defined term** in AUS-SPEC.

Superintendent (AUS-SPEC) A **defined term** in AUS-SPEC.

superintendent (NATSPEC) Use contract administrator unless this is inconsistent with the contract being used.

supersede

supply A **defined term** in AUS-SPEC.

supply Supply, furnish and similar expressions mean **supply only**. A **defined term** in NATSPEC.

Supply Authority (AUS-SPEC)

surge A **defined term** in AUS-SPEC.

surveillance A **defined term** in AUS-SPEC.

survey mark A **defined term** in NATSPEC.

surveyor

suspended frameless glass assembly A **defined term** in NATSPEC.

switchroom

Symbols

| Name | Symbol | Example |
|---|----------------|--------------------------------------|
| ampere (electric current) | A | 5 A |
| cubic metre (superscript) | x^3 | 5 m ³ |
| degree (temperature). | ° | 5° |
| degree (plane angle). | ° | 90° |
| 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.

Examples indicate a hard-space (Shift+Ctrl+spacebar) between number and unit

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symbol and do not include a trailing period (as these are symbols not abbreviations).

system audit A **defined term** in AUS-SPEC.
systems, subsystems, equipment and components A **defined term** in NATSPEC.

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 A **defined term** in AUS-SPEC.

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 A **defined term** in NATSPEC.

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 A **defined term** in NATSPEC.

tensioned membrane structure A **defined term** in NATSPEC.

terminal (mechanical services) A **defined term** in NATSPEC.

termination bar A **defined term** in NATSPEC.

terracotta

terrazzo A **defined term** in NATSPEC.

terrazzo tiles – cementitious A defined term in NATSPEC.

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 A **defined term** in AUS-SPEC.

tests - completion A **defined term** in NATSPEC.

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tests - pre-completion A **defined term** in NATSPEC.

testing authority A **defined term** in NATSPEC.

tests A **defined term** in AUS-SPEC.

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

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

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

thermoset powder coat A **defined term** in NATSPEC.

thimble A **defined term** in NATSPEC.

third-party certification

thrie-beam A **defined term** in AUS-SPEC.

throughout

thrown (plaster finishing treatment) A **defined term** in NATSPEC.

tiles A **defined term** in NATSPEC.

tiles – cementitious A **defined term** in NATSPEC.

tiles - dry-pressed A **defined term** in NATSPEC.

tiles – extruded A **defined term** in NATSPEC.

tiles - industrial cast A **defined term** in NATSPEC.

tiles - natural stone A **defined term** in NATSPEC.

tiles - terrazzo – cementitious A **defined term** in NATSPEC.

tiles - terrazzo – resin A **defined term** in NATSPEC.

tilt-up

tilt-up units A **defined term** in NATSPEC.

timber-framed

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

time frame

time of concentration A **defined term** in AUS-SPEC.

tolerance A **defined term** in AUS-SPEC.

tolerance A **defined term** in NATSPEC.

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 \pm 2 mm.

tonne (t) mass.

top dressing A **defined term** in NATSPEC.

topping A **defined term** in NATSPEC.

topping function A **defined term** in NATSPEC.

topping method A **defined term** in NATSPEC.

topsoil A **defined term** in AUS-SPEC.

top-up

total air quantity A **defined term** in NATSPEC.

total system SHGC A **defined term** in NATSPEC.

total system U-Value A **defined term** in NATSPEC.

touch up

traceability A **defined term** in AUS-SPEC.

trenchstops

trademark

traffic lane A **defined term** in AUS-SPEC.

traffic lane width A **defined term** in AUS-SPEC.

transfer main A **defined term** in AUS-SPEC.

transition beam A **defined term** in AUS-SPEC.

transverse lines A **defined term** in AUS-SPEC.

treatment train A **defined term** in AUS-SPEC.

trim Use instead of **trims**.

true-to-species

trunk drains A **defined term** in AUS-SPEC.

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 A **defined term** in NATSPEC.

turnbuckle A **defined term** in NATSPEC.

Type

type A mats A **defined term** in AUS-SPEC.

type B mats A **defined term** in AUS-SPEC.

type - air filter A **defined term** in NATSPEC.

type tests

type-tested

U

ultraviolet

ultrasonic

unbound material A **defined term** in AUS-SPEC.

undercoat A **defined term** in NATSPEC.

undercut

underflashing

underfloor

underground

underlay A **defined term** in NATSPEC.

underlayer

underslab

understructure Refers to access floors.

undervoltage

uninterruptible power supply (UPS) A **defined term** in NATSPEC.

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 A **defined term** in AUS-SPEC.

un-switch

Update April *Update* and October *Update*.

upstand

up-to-date

urban residential land A **defined term** in AUS-SPEC.

useful life A **defined term** in NATSPEC.

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.

utility authority A **defined term** in AUS-SPEC.

V

validation A **defined term** in AUS-SPEC.

values see ranges of values

vandal-proof

vapour permeable (breathable) membrane A **defined term** in NATSPEC.

Variation to the Works (AUS-SPEC).

variable room identification systems A **defined term** in NATSPEC.

variable refrigerant flow (VRF) system A **defined term** in NATSPEC.

VAV box A **defined term** in NATSPEC.

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) A **defined term** in AUS-SPEC.

verge (urban) A **defined term** in AUS-SPEC.

verification A **defined term** in AUS-SPEC.

verification A **defined term** in NATSPEC.

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.

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vertical alignment A **defined term** in AUS-SPEC.

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 A **defined term** in AUS-SPEC.

WA Use Western Australia. Generally all states and territories, except NSW and ACT, are written in full.

waffle raft slab A **defined term** in NATSPEC.

walkway A **defined term** in NATSPEC.

wallpapering

Water Agency (AUS-SPEC)

water age A **defined term** in AUS-SPEC.

water agency A **defined term** in AUS-SPEC.

water-based

waterborne

watercooled

water dispenser systems

water resistant (WR) A **defined term** in NATSPEC.

water sensitive urban design (WSUD) A **defined term** in AUS-SPEC.

waterproof (WP) A **defined term** in NATSPEC.

waterproofing systems A **defined term** in NATSPEC.

watt (W) SI derived unit for power and radiant flux.

wearing course (wearing surface) A **defined term** in AUS-SPEC.

weather A **defined term** in AUS-SPEC.

weather – cold A **defined term** in NATSPEC.

weather – hot A **defined term** in NATSPEC.

weathering

weather proof, weather proofing

weatherseal

weatherstrip/weatherstripping

weathertight

web link

web page

weepole

website Do not include https:// in address.

weed A **defined term** in NATSPEC.

weir A **defined term** in NATSPEC.

well-being

well-developed

well-rotted

well-rounded

WERS Window energy rating scheme.

west

wet area A **defined term** in NATSPEC.

wet processed fibreboard (hardboard) A **defined term** in NATSPEC.

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) A **defined term** in NATSPEC.

wickets A **defined term** in NATSPEC.

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*.

witness point A **defined term** in AUS-SPEC.

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

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Guidance notes 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.

- **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 A **defined term** in AUS-SPEC.

Work Order (WO) (AUS-SPEC) A **defined term** in 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 A **defined term** in NATSPEC.

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 A **defined term** in NATSPEC.

zones A **defined term** in AUS-SPEC.

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
// Australia Council of Built Environment Design Professions
// 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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