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GENERAL**GEN 001 Getting help (Oct 2018)**

Summarises the ways in which NATSPEC provides help to specification writers.

GEN 002 NATSPEC's use of standards (Oct 2015)

Discusses the use of Australian and other standards in specification writing.

GEN 003 Multiple contracts and 'work by others' (Oct 2008)

Suggests ways in which NATSPEC can be used for projects procured using multiple contracts, also called packaged contracts or multiple prime contracts.

GEN 004 Shop drawings and samples (Apr 2015)

Addresses the need for shop drawings and samples, their management and the documentation of requirements in a construction contract.

GEN 005 Specifications (Oct 2012)

Discusses the roles, forms and importance of specifications.

GEN 006 Product specifying and substitution (Oct 2015)

Reviews generic and proprietary specification and NATSPEC's procedure for substitution of specified products.

GEN 007 Making sure your specifications are up-to-date (Apr 2016)

Offers updating strategies relating to NATSPEC information.

GEN 008 Branded versus generic worksections (Oct 2008)

Defines both types of worksection and outlines their advantages.

GEN 009 Hold points and witness points (Apr 2019)

Defines hold points and witness points and explains their contractual implications in the context of both NATSPEC and AUS-SPEC worksections.

GEN 010 Mechanical commissioning strategies (Apr 2012)

Discusses alternative mechanical balancing and commissioning strategies which have a significant impact on the performance of mechanical services.

GEN 011 Specifying NCC requirements (Apr 2019)

Discusses specifying NCC compliance based on Deemed-to-Satisfy Provisions or by using a Performance (Alternative) Solution.

GEN 012 Door hardware scheduling (Apr 2011)

Outlines the two alternative approaches to specifying door hardware provided for in **SELECTIONS** in NATSPEC's *0455 Door hardware* worksection.

GEN 013 Specifying quality (Apr 2012)

Communicating the requirements for quality is the main technical function of the specification. This TECHnote outlines how NATSPEC is used to achieve quality in construction projects.

GEN 014 Submissions and testing (Oct 2018)

Addresses the specification of the various contractor's submissions and tests that may be required during the construction process.

GEN 015 Using the NATSPEC classification system to organise information (Apr 2016)

Discusses how the NATSPEC National classification system can be a useful means of organising construction information other than specification content.

GEN 016 Preliminaries and contract schedules (Oct 2018)**INTRODUCTION**

This is an index, with abstracts, of NATSPEC TECHnotes, TECHreports and TECHguides which are currently available.

TECHnotes are brief documents giving information on topics of interest to the design and construction industry.

TECHreports are in-depth reference documents on topics of interest to the design and construction industry.

TECHguides are in-depth reference documents on topics primarily for AUS-SPEC users.

CLASSIFICATION

Based on the classification system used for the Australian Institute of Architects (AIA) Environmental Design Guide, TECHnotes are grouped into three categories:

- General (GEN).
- Design (DES).
- Products (PRO).

AVAILABILITY

TECHnotes, TECHreports and TECHguides are available as follows:

- All TECHnotes, TECHreports and TECHguides are available at time of issue and can be downloaded from NATSPEC – Technical Resources:
- www.natspec.com.au/resources and provided on Subscriber CDs in the Acrobat documents section.
- Selected TECHnotes are distributed with SPECnotes.
- Selected TECHnotes are provided to the Australian Institute of Architects with a page of related questions and answers for their Continuing Education (CE) program.

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Aims to clarify items which are sometimes overlapping in the General conditions of contract and the specification's Preliminaries.

GEN 017 Using AUS-SPEC for asset management (Apr 2016)

Provides guidance on using the AUS-SPEC specification system for asset management.

GEN 018 Using AUS-SPEC for asset maintenance (Oct 2013)

Aims to describe the philosophy and components of the AUS-SPEC maintenance system for urban and open spaces, buildings and facilities, roadways, bridges and public utilities.

GEN 019 Using AUS-SPEC for contract documentation (Apr 2019)

Provides an overview on using AUS-SPEC for standard and period supply and service contract documentation for the life cycle management of assets.

GEN 020 Building commissioning (Oct 2018)

Provides information on the process of whole-building commissioning and the role of a Commissioning Authority on a project, discussing how NATSPEC can be used for whole-building commissioning.

GEN 021 Scope of works clauses (Apr 2017)

Discusses the benefits and risks of Scope of Works clauses and suggests approaches to writing an effective clause.

GEN 022 Using AUS-SPEC for asset delivery (Oct 2016)

Describes the benefits of using AUS-SPEC in providing a documentation system for the delivery of assets, to meet essential services required by the community.

GEN 023 Using AUS-SPEC for management of unsealed roads (Apr 2019)

Provides guidance on using the AUS-SPEC specification system for the design, construction and maintenance of unsealed roads.

GEN 024 Using NATSPEC Selections schedules (Apr 2015)

Summarises NATSPEC's use of schedules.

GEN 025 Sprayed preservation surfacing treatments (Oct 2017)

Assists road owners in determining the most appropriate sprayed preservation surfacing.

GEN 026 Otta seal – A different approach for road sealing (Oct 2018)

Aims to assist road owners to understand the feasibility of using Otta seal for low traffic volume unsealed gravel roads.

GEN 027 Maintenance of unsealed roads (Oct 2018)

Aims to assist local road authorities to maintain low volume unsealed gravel roads.

GEN 028 Specifying recycled materials for road works using AUS-SPEC (Oct 2019)

To assist local road authorities implement the use of recycled materials by including it in their policies, construction specifications and approval processes.

GEN 029 Design and specification guidance text in NATSPEC (Oct 2020)

Discusses how NATSPEC worksection Templates include guidance in the form of 'hidden' Guidance text to help specifiers select the most appropriate worksections and edit Template content to create a project specification.

ALPHABETICAL LISTING

Accessible housing – DES 037

Air, moisture and condensation – DES 004

Airborne sound insulation – DES 032

Atmospheric corrosivity categories for ferrous products – DES 010

Branded versus generic worksections – GEN 008

Building commissioning – GEN 020

Bushfire protection – DES 018

CCA (copper chrome arsenate) treated timber – PRO 001

Ceramic tile and adhesive selection – PRO 004

Design and specification guidance text – GEN 029

Door hardware scheduling – GEN 012

Duct leakage and leakage testing – DES 033

Environmental rating schemes for buildings – DES 014

Fire behaviour of building materials and assemblies – DES 020

Fire hazard properties of insulation materials – DES 003

Formaldehyde - indoor air quality – PRO 005

Getting help – GEN 001

Glass types used in buildings – PRO 006

Grass seeding and turfing – DES 028

Guide to adapting asset delivery documentation to building and facility maintenance – TG 404

Guide to adapting asset delivery documentation to parks and open spaces maintenance – TG 402

Guide to adapting asset delivery documentation to road reserve maintenance – TG 406

Guide to parks and open space maintenance system and documentation – TG 401

Guide to the building and facility maintenance management system and documentation – TG 403

Guidelines for compiling documentation for contracts – TG 101

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DESIGN**DES 001 Slip resistance performance (Apr 2018)**

Raises awareness of the design and documentation requirements for optimising slip resistance of pedestrian surface materials.

DES 002 Moisture content in timber floors (Apr 2013)

Addresses the ways in which the natural movement of timber floors can be accommodated.

DES 003 Fire hazard properties of insulation and pliable membranes (Apr 2018)

Addresses the fire hazard properties of insulation materials as dealt with in both the BCA and in NATSPEC.

DES 004 Air, moisture and condensation (Apr 2019)

Outlines the factors that affect the selection and detailing of vapour barriers in buildings.

DES 005 Preventing condensation on ducts and air handling plant (Apr 2019)

Addresses the use of insulation to prevent condensation on ducts and air handling plant.

DES 006 Specifying concrete (Oct 2018)

Outlines the factors affecting the performance of concrete and how to specify it.

DES 007 Static control floors (Apr 2017)

Discusses electrostatic charges and the basic types of static control floors.

DES 008 Preparation of concrete substrates (Apr 2015)

Discusses preparation of concrete substrates for secondary finishes.

DES 009 Limit state design (Apr 2011)

Introduces this method for designing and evaluating structures, and for unifying structural codes and standards.

DES 010 Atmospheric corrosivity categories for ferrous products (Apr 2020)

Recommends a method for specifying atmospheric corrosion protection systems or products by referring to standards and the Corrosion Mapping System.

DES 011 Rainwater harvesting (Oct 2016)

Suggests ways in which a NATSPEC based specification can be used to specify a rainwater harvesting system.

DES 012 Using NATSPEC to specify BMS, and automatic controls (Apr 2017)

Suggests ways to use NATSPEC worksections to specify Building Management Systems (BMS), building IT and automatic controls.

DES 013 NCC Energy efficiency protocol and software for housing (Apr 2019)

Discusses rating software and tools to demonstrate compliance with the NCC.

DES 014 Environmental rating schemes for buildings (Apr 2019)

Outlines the national voluntary energy efficiency schemes.

DES 015 NCC - BCA Volume One: Energy efficiency provisions (Apr 2019)

Outlines NCC energy efficiency provisions for Class 2-9 buildings.

Guidelines for Principals - sample documents – TG 104

Guidelines for Principals - period supply and service contracts – TG 103

Guidelines for Principals - standard contracts – TG 102

Guide to road reserve maintenance system and documentation – TG 405

Hold points and witness points – GEN 009

Impact sound insulation – DES 027

Improvement and stabilisation of unsealed roads – DES 035

Information classification systems and the Australian construction industry – TR 02

Limit state design – DES 009

Living walls and roofs – DES 026

Maintenance of unsealed roads – GEN 027

Making sure your specifications are up-to-date – GEN 007

Management of Council gravel pits in country areas – A case study – TR 08

Mechanical commissioning strategies – GEN 010

Mechanical design and install HVAC checklist – DES 025

Mechanical services pipe and vessel insulation – DES 023

Microbial control – DES 022

Mineral wool – PRO 002

Moisture content in timber floors – DES 002

Multiple contracts and 'work by others' – GEN 003

Native grass lawns – DES 029

NATSPEC for refurbishment, retrofitting and adaptive re-use – TR 04

NATSPEC's use of standards – GEN 002

Need for subsurface drainage on local roads – DES 036

NCC - BCA Volume One: Energy efficiency provisions – DES 015

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DES 016 NCC - BCA Volume Two: Energy efficiency provisions (Apr 2019)
Outlines BCA energy efficiency provisions for Class 1 and Class 10a buildings.

DES 017 Selection of sealants (Oct 2015)
Summarises sealant types and their use for different applications.

DES 018 Bushfire protection (Apr 2019)
Summarises the factors influencing bushfires and the planning, construction and maintenance requirements for bushfire protection.

DES 019 Pipe support spacing (Oct 2018)
Tabulates the pipe support spacings nominated by several Australian standards. It covers pipes of various materials and diameters, and carrying a range of liquids and gases.

DES 020 Fire behaviour of building materials and assemblies (Oct 2018)
Provides guidance on the BCA's classification of the fire behaviour of building materials and assemblies and where to specify in NATSPEC.

DES 021 Site electricity supply (Apr 2013)
Highlights design and construction issues for consideration and suggests suitable NATSPEC worksections for the documentation of electricity supplies.

DES 022 Microbial control (Apr 2014)
Discusses the requirement for microbial control in building services and how this is dealt with in NATSPEC.

DES 023 Mechanical services pipe and vessel insulation (Apr 2019)
Addresses the selection of appropriate levels of insulation for piping, vessels and heat exchangers with curved surfaces.

DES 024 Water sensitive urban design (WSUD) (Apr 2019)
Outlines the objectives and application of water sensitive urban design principles and suggests where they can be implemented in AUS-SPEC.

DES 025 Mechanical design and install HVAC checklist (Apr 2011)
Provides a checklist intended to assist the architect or building designer in the assessment of proposals for the design and installation of HVAC systems.

DES 026 Living walls and roofs (Apr 2015)
Highlights design and construction issues and suggests suitable NATSPEC worksections for the documentation of living walls and roofs.

DES 027 Impact sound insulation (Apr 2016)
Addresses the use of impact sound insulation in floor systems.

DES 028 Grass seeding and turfing (Oct 2012)
Provides guidance on the selection of grass seed mixes and turf species for general landscaping.

DES 029 Native grass lawns (Apr 2013)
Discusses several of the native grass species suitable for lawn applications.

DES 030 Seismic design actions on non-structural components (Apr 2014)
Discusses the requirements of AS 1170.4 for seismic restraint to the non-structural components of a building.

DES 031 Specifying R-Values (Apr 2019)
Describes the various meanings of R-Value and the ways in which designers and specifiers can document compliance with statutory requirements.

NCC - BCA Volume Two: Energy efficiency provisions – DES 016
NCC Energy efficiency protocol and software for housing – DES 013
Otta seal – A different approach for road sealing – GEN 026
Pavement stabilisation for unsealed roads – DES 034
Pipe support spacing – DES 019
Preliminaries and contract schedules – GEN 016
Preparation of concrete substrates – DES 008
Preventing condensation on ducts and air handling plant – DES 005
Process and procedures for development and subdivision of land – TG 201
Procurement: Past and present – TR 06
Product specifying and substitution – GEN 006
Providing access for maintenance – TR 07
Rainwater harvesting – DES 011
Refrigerant – PRO 007
Scope of works clauses – GEN 021
Selection and design of Building IT systems – TR 05
Selection of sealants – DES 017
Seismic design actions on non-structural components – DES 030
Shop drawings and samples – GEN 004
Site electricity supply – DES 021
Slip resistance performance – DES 001
Specifications – GEN 005
Specifying concrete – DES 006
Specifying design and construct for mechanical services – TR 03
Specifying ESD – TR 01
Specifying NCC requirements – GEN 011
Specifying quality – GEN 013
Specifying recycled materials for roadworks using AUS-SPEC – GEN 028
Specifying R-Values – DES 031

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DES 032 Airborne sound insulation (Oct 2018)

Addresses the use of insulation to reduce the transmission of airborne sound between habitable rooms.

DES 033 Duct leakage and leakage testing (Oct 2014)

Discusses testing of duct systems to AS 4254.2 to reduce energy consumption and improve the quality of the service delivered.

DES 034 Pavement stabilisation for unsealed roads (Oct 2019)

Discusses factors affecting stabilisation of unsealed roads and provides basic procedure for binder selections.

DES 035 Improvement and stabilisation of unsealed roads (Oct 2019)

Describes how existing unsealed roads can be economically and effectively preserved.

DES 036 Need for subsurface drainage on local roads (Oct 2017)

Assists road owners in identifying the need for subsurface drainage on local roads.

DES 037 Accessible housing (Oct 2020)

Discusses accessible housing. This refers to housing that includes features which enable use by people either with a disability or transitioning through their life stages.

DES 038 Universal design: Introduction (Oct 2020)

Introduces universal design which is the design of buildings, products or environments to make them accessible and usable to all people of different ages and abilities over time, without the need for adaptation or specialised design.

DES 039 Universal design: Slip resistance (Oct 2020)

Discusses slip resistance as part of a universal design approach. It looks at available standards, universal design guidelines, the design process, and other considerations to reduce slip hazards in the environment.

DES 040 Universal design: Trip avoidance (Oct 2020)

Discusses trip avoidance as part of a universal design approach. It looks at available standards, universal design guidelines, the design process, and other considerations to reduce trip hazards in the environment.

DES 041 Using design and install services worksections (Oct 2020)

Describes the use of design and install worksections for mechanical, electrical, hydraulic and fire services, and their limitations. These worksections are intended for use by architects and other designers without input from specialist services consultants, with the services design completed by the contractor using NCC Deemed-to-Satisfy requirements.

PRODUCTS**PRO 001 CCA (copper chrome arsenate) treated timber (Oct 2015)**

Discusses the issues and alternatives to this form of timber treatment.

PRO 002 Mineral wool (Oct 2019)

Discusses the manufacture, properties and safety issues related to the use of mineral wool.

PRO 003 Warranties for steel protective paint coatings (Oct 2015)

Discusses the requirements for and availability of warranties for steel protective coatings.

Sprayed preservation surfacing treatments – GEN 025

Static control floors – DES 007

Submissions and testing – GEN 014

Universal design:

Introduction – DES 038

Universal design: Slip resistance – DES 039

Universal design: Trip avoidance – DES 040

Using AUS-SPEC for asset delivery – GEN 022

Using AUS-SPEC for asset maintenance – GEN 018

Using AUS-SPEC for asset management – GEN 017

Using AUS-SPEC for contract documentation – GEN 019

Using AUS-SPEC for management of unsealed roads – GEN 023

Using design and install services worksections – DES 041

Using NATSPEC Selections schedules – GEN 024

Using NATSPEC to specify BMS, and automatic controls – DES 012

Using the NATSPEC classification system to organise information – GEN 015

Warranties for steel protective paint coatings – PRO 003

Water sensitive urban design (WSUD) – DES 024

INDEX**PRO 004 Ceramic tile and adhesive selection (Oct 2014)**

Provides guidance to specifiers on the selection of ceramic tiling and adhesives used for fixing the tiles.

PRO 005 Formaldehyde - indoor air quality (Oct 2018)

Discusses the effects and control of formaldehyde emissions within a building and how NATSPEC can be used to meet the mandatory requirements for formaldehyde emissions.

PRO 006 Glass types used in buildings (Oct 2016)

Provides guidance on the types of glass used in buildings, their properties and the manufacturing processes involved.

TECHREPORTS**TR 01 Specifying ESD (Apr 2020)**

Outlines how a NATSPEC-based specification can be used to give effect to ESD principles and opportunities in the building context.

TR 02 Information classification systems and the Australian construction industry (Feb 2020)

Provides an overview of the use of classification systems for organising construction information for various purposes.

TR 03 Specifying design and construct for mechanical services (Apr 2020)

Outlines how NATSPEC may be used to prepare Design and Construct mechanical specifications.

TR 04 NATSPEC for refurbishment, retrofitting and adaptive re-use (Apr 2020)

Outlines how a NATSPEC based specification may be used for refurbishment and adaptive re-use projects.

TR 05 Selection and design of Building IT systems (Apr 2020)

Provides guidance on how the component parts can be configured and how a satisfactory overall IT installation can be achieved using NATSPEC worksections.

TR 06 Procurement: Past and present (Oct 2014)

Outlines the major procurement systems used in the construction industry today, and how procurement has evolved from past methods.

TR 07 Providing access for maintenance (Apr 2020)

Outlines the basic principles of providing access for maintenance, current requirements in Australian legislation and standards, and good practice.

TR 08 Management of Council gravel pits in country areas – A case study (Oct 2018)

Outlines how Councils who operate licensed gravel pits can better comply with their duty of care and be compliant with State Government legal frameworks.

TECHGUIDES**TG 101 Guidelines for compiling documentation for contracts (Oct 2019)**

This TECHguide describes the procedures for developing and compiling documentation using the AUS-SPEC system for contracts.

TG 102 Guidelines for Principals - standard contracts (Oct 2019)

This TECHguide describes the procedures for the production and management of comprehensive documentation for standard contracts. It addresses the contracting process, compilation of contract documents and tender process.

INDEX**TG 103 Guidelines for Principals - period supply and service contracts (Oct 2019)**

This TECHguide describes the documentation procedures for period supply and service contracts for the supply of materials and services required for local government. Read this TECHguide in conjunction with TG 101 *Guidelines for compiling documentation for contracts* and TG 102 *Guidelines for Principals – Standard contracts*.

TG 104 Guidelines for Principals – sample documents (Oct 2019)

This TECHguide includes three sample documents to demonstrate tendering and contract documentation for different types of projects using the AUS-SPEC Local Government specification system. The sample documents included are for supply, delivery and placement of sprayed bituminous surfacing, construction of roads, and external surveillance services.

TG 201 Process and procedures for development and subdivision of land (Oct 2018)

This TECHguide is applicable to the design requirements and planning approval process for development and subdivision of land within a Council area.

TG 401 Guide to parks and open space maintenance system and documentation (Oct 2019)

This TECHguide sets out the procedure for the compilation of documentation for the maintenance of parks and open spaces, including recreation areas. It addresses the philosophy behind the creation and development of the AUS-SPEC maintenance system based on quality, competitive principles and programmed maintenance. It reflects the execution of competitive maintenance contracts, either by a Principal's own business units or private contractors.

TG 402 Guide to adapting asset delivery documentation to parks and recreation areas maintenance (Oct 2019)

This TECHguide sets out a checklist of contractual issues to consider and address within the Council's adopted General conditions of contract. Read in conjunction with TG 401 *Guide to parks and open space maintenance system and documentation*.

TG 403 Guide to the building and facility maintenance management system and documentation (Oct 2019)

This TECHguide sets out the procedure for the compilation of documentation for the maintenance of buildings and facilities. It addresses the philosophy behind the creation and development of the AUS-SPEC maintenance system based on quality, competitive principles and programmed maintenance. It reflects the execution of competitive maintenance contracts, either by a Principal's own business units or private contractors.

TG 404 Guide to adapting asset delivery documentation to building and facility maintenance (Oct 2019)

This TECHguide sets out a checklist of contractual issues to consider and address within the Council's adopted General conditions of contract. Read in conjunction with TG 403 *Guide to the building and facility maintenance system and documentation*.

TG 405 Guide to road reserve maintenance system and documentation (Oct 2019)

This TECHguide sets out the procedure for the compilation of documentation for the maintenance of road reserves. It addresses the philosophy behind the creation and development of the AUS-SPEC maintenance system based on quality, competitive pricing and programmed maintenance. It reflects the execution by competitive maintenance contracts, either by a Principal's own business units or private contractors.

TG 406 Guide to adapting asset delivery documentation to road reserve maintenance (Oct 2019)

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This TECHguide provides a supplementary set of issues as a checklist to enable each Council to consider their individual issues, in light of the provisions within the Council's adopted General Conditions of contract. Read in conjunction with TG 405 *Guide to road reserve maintenance system and documentation*.

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BIM DOCUMENTS**NATSPEC Project BIM Brief Template (Mar 2016)**

A Project BIM Brief documents the specific requirements of a project. It can be developed using the *NATSPEC Project BIM Brief Template*. In addition to identifying the project and members of the project team, it provides places to specify what BIM is to be used for on the project. It is also used to record what standards from the *NATSPEC BIM Reference Schedule* will apply. This arrangement allows the necessary flexibility for selecting references to suit the particulars of the project.

NATSPEC National BIM Guide (Sep 2011 – Reconfirmed Mar 2016)

The Guide's core document is a reference document that defines roles and responsibilities, collaboration procedures, approved software, modelling requirements, digital deliverables and documentation standards. It documents a range of possible uses for BIM on projects.

NATSPEC BIM Reference Schedule (Sep 2011)

A list of documents and standards provided for consideration as references that can be cited in the *National BIM Guide*. The specific documents chosen to be applicable to a project are recorded in the Project BIM Brief.

BIM Management Plan Templates (Mar 2016)

The Templates are editable Word files that can be used to create a BIM Management Plan (BMP) aligned with the *NATSPEC National BIM Guide*.

NATSPEC BIM Paper 001: BIM and LOD (Nov 2013)

This BIM Paper provides an introduction to the concept of Level of Development (LOD) and its value in the management of the Building Information Modelling (BIM) process.

It includes recommendations about implementing LOD on projects and guidance on developing and interpreting LOD Tables.

NATSPEC BIM Paper 002: Getting Started with BIM (Jun 2014)

This BIM Paper is for those who have been seriously considering implementing BIM within their organisation and are now asking 'What do we do next'? It covers the preparation and planning required by architectural or engineering personnel who want to make implementation happen. It provides generic guidance on the topic and discusses some of the decisions to be made and issues which need to be considered.