

## **NATSPEC Worksection Abstracts**

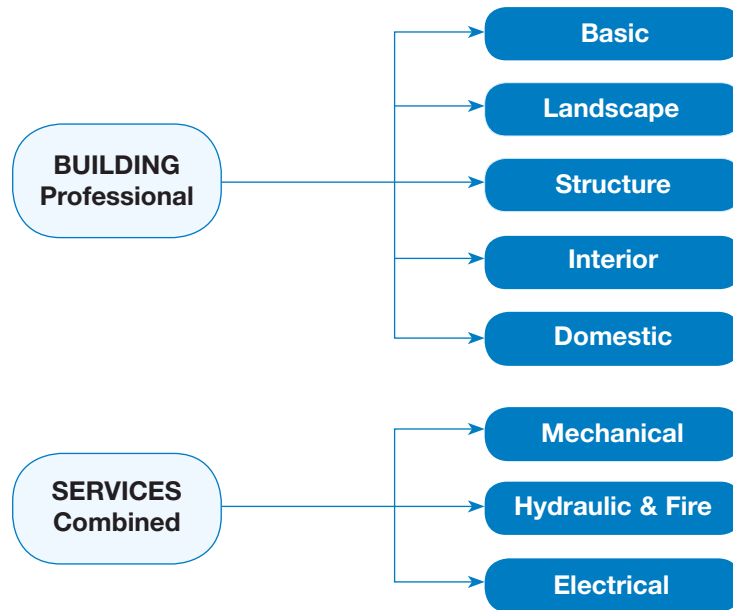
### OCTOBER 2023

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The NATSPEC Worksection Abstracts booklet includes the abstracts of all current NATSPEC worksections. Each abstract comprises a summary of the worksection's content and application to help you select the most appropriate worksections for your project specification.

# NATSPEC Package Definitions

Do you have the appropriate package? If the package appears inappropriate, check the *National Worksection Matrix* or give NATSPEC a call on 1300 797 142



PACKAGE	APPLICATION
<b>BUILDING Professional</b>	<p>The NATSPEC content is informed by the National Construction Code. NATsource lists all Standards and publications throughout the <i>Normal</i> style text in NATSPEC.</p> <p>For architects and building designers engaged on all building project types. BUILDING Professional is NATSPEC's definitive building specification containing over 160 generic NATSPEC worksections. It covers site, architectural, interiors and landscaping, and provides design and install worksections for mechanical, hydraulic, electrical and fire services. Demolition, tendering and contract preliminaries are also covered. In addition, BUILDING Professional includes the reduced content BUILDING Basic worksections, the BUILDING Domestic specification and access to the DOMESTIC online specification and custom schedules for use with the NATSPEC Class 2 Reference Specification. The reduced content BUILDING Basic worksections may be selected for the less complicated parts of specific projects.</p>
<b>BUILDING Basic</b>	For architects and building designers, this is a cut-down version of the BUILDING Professional package. It is aimed at simple building projects requiring less technical content on products, execution and scheduling. It contains over 90 generic NATSPEC worksections. Of these, approximately 30 have reduced content, compared to the equivalent worksection included in BUILDING Professional. In addition, BUILDING Basic includes custom schedules for use with the NATSPEC Class 2 Reference Specification.
<b>BUILDING Landscape</b>	For engineers and landscape architects engaged on site preparation works and all works external to the building and within the site boundary, together with design and installation work for mechanical, hydraulic and electrical services. 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 road reserves.
<b>BUILDING Structure</b>	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 buildings. It is not intended that the worksections should apply to civil engineering structures, such as bridges, dams and roads.
<b>BUILDING Interior</b>	For architects, building designers and interior designers engaged on comprehensive interior projects. It covers interior building and finishing work, together with design and installation work for mechanical, hydraulic, electrical and fire services. Demolition (interior), tendering and contract preliminaries are also covered.
<b>BUILDING Domestic</b>	For architects and building designers constructing, extending or renovating uncomplicated single dwellings. It covers site and architectural work, and design and installation work for mechanical, hydraulic and electrical services. A subscription to BUILDING Domestic includes access to the DOMESTIC online specification.
<b>SERVICES Combined</b>	For engineers and services consultants designing and documenting building services installations for small to large building projects. It contains all material in each of the SERVICES Mechanical, Hydraulic & Fire and Electrical specification packages. It includes the most commonly used building services and components, demolition, tendering and contract preliminaries.
<b>SERVICES Mechanical</b>	For engineers and mechanical services consultants designing and documenting mechanical services for small to large building projects. It includes the most commonly used mechanical services and components, demolition, tendering and contract preliminaries.
<b>SERVICES Hydraulic &amp; Fire</b>	For engineers, hydraulic services and fire services consultants designing and documenting hydraulic and fire services installations for small to large building projects. It includes the most commonly used hydraulic and fire services and components, demolition, tendering and contract preliminaries.
<b>SERVICES Electrical</b>	For engineers and electrical services consultants designing and documenting electrical services for small to large building projects. It includes the most commonly used electrical services and components, demolition, tendering and contract preliminaries.

## GETTING HELP

### INTRODUCTION

This TECHnote summarises the various ways that NATSPEC provides help to specification writers.

### NATSPEC Guidance

NATSPEC worksections include extensive *Guidance* text with suggestions on filling in prompts, alternatives, and background material. *Guidance* is in Microsoft Word hidden text format which can be turned on or off, and appears like this:

NATSPEC does not recommend the use of Scope of Works clauses. If you wish to include such a general description you may add it here, or in the corresponding location of selected worksections.

If you work with an office master, you may find it convenient to add your own guidance notes using NATSPEC's hidden text styles.

See NTN GEN 029 for more on design and specification *Guidance* text.

### NATSPEC *Optional* style text

Some worksections include *Optional style text in this font (blue with a grey background)* that covers items specified less frequently. It is also a Microsoft Word hidden text format which can be incorporated into *Normal* style text, where it is applicable to a project, by highlighting the text and changing the style and format.

### NATsource

*NATsource* lists in excess of 1200 documents cited in the specification packages. Use it to check document titles, currency, content and publishers. Access *NATsource* via SPECbuilder/Resources/Standards Info. Changes to cited standards are summarised in *SPECnotes*, a quarterly newsletter for subscribers.

### NATSPEC TECHnotes, TECHreports and AUS-SPEC TECHguides

TECHnotes provide guidance of a more general nature that either relates to several worksections, or does not fit into the normal worksection structure. TECHreports provide more detailed information on specification issues and TECHguides provide guidance on compiling contract documentation for local government projects.

All these documents continue to be developed and updated. The latest versions are available in the Technical Resources area of the NATSPEC website or via the Resources link in SPECbuilder.

### NATSPEC Website

See [www.natspec.com.au](http://www.natspec.com.au). NATSPEC's website has a range of material including:

- Details of NATSPEC specification packages, including abstracts of worksections.
- A link to SPECbuilder and Domestic Online.
- A link to NATSPEC Class 2 Reference Specification.
- Links to Product Partners' websites arranged by worksection.
- Information on publications relating to specification writing.
- Answers to frequently asked questions (FAQs) on specification writing, purchasing NATSPEC, getting started with NATSPEC and word processing.

### NATSPEC BIM Portal

The BIM Portal is home to the *NATSPEC National BIM Guide* and related documents. It also includes resources and tools to assist the implementation of BIM in the construction industry. To go to the BIM Portal, click on the *NATSPEC BIM* logo on the NATSPEC website.

### NATSPEC Training

NATSPEC provides training in specification writing-related subjects.

For details of monthly *Getting started with NATSPEC* webinars and annual training courses in venues around Australia see [www.natspec.com.au](http://www.natspec.com.au).

Videos of previous courses are also available on the website. Subscribers are notified of upcoming training courses.

### Relevant Publications



*Specifying Architecture - a guide to professional practice*

### NATSPEC assistance

NATSPEC does not provide a design or specification service but we can assist with specification writing techniques and dealing with problems using SPECbuilder and NATSPEC in Microsoft Word.

If you have problems finding what you want, feel free to contact us directly.

### CONTACT INFORMATION

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# NATIONAL CLASSIFICATION SYSTEM - OCTOBER 2023

Refer to the National Worksection Matrix for the worksections included in each NATSPEC/AUS-SPEC package: full, basic/rural cut-down version and branded worksections. See [www.natspec.com.au](http://www.natspec.com.au). [Square brackets] indicate that no generic worksection is available. A NATSPEC branded worksection may be available.

## 00 PLANNING AND DESIGN (AUS-SPEC)

- 001 General**
  - 0001 Design reference and checklist
  - 0010 Quality requirements for design
  - 0012 Waterfront development
  - 0013 Bushfire protection (Design)
- 002 Open space**
  - 0021 Site regrading
  - 0022 Control of erosion and sedimentation (Design)
- 004 Road reserve**
  - 0041 Geometric road design
  - 0042 Pavement design
  - 0043 Subsurface drainage (Design)
  - 0044 Pathways and cycleways (Design)
- 005 Road reserve - rural**
  - 0051 Geometric rural road design - sealed
  - 0052 Geometric rural road design - unsealed
  - 0053 Rural pavement design - sealed
  - 0054 Rural pavement design - unsealed
- 006 Bridges**
  - 0061 Bridges and related structures
- 007 Public utilities**
  - 0071 Water supply - reticulation (Design)
  - 0072 Water supply - pump stations (Design)
  - 0074 Stormwater drainage (Design)
  - 0076 Sewerage systems - reticulation (Design)
  - 0077 Sewerage systems - pump stations (Design)

## 01 GENERAL

- 011 Documentation**
- 012 Tendering**
  - 0120 Pre-tendering contract preparation (AUS-SPEC)
  - 0121 Tendering
  - 0122 Information for tenderers (AUS-SPEC)
  - 0123 Conditions of tendering (AUS-SPEC)
  - 0124 Tender submission documents (AUS-SPEC)
  - 0125 Standard contract checklists (AUS-SPEC)
  - 0126 Period supply and service checklists (AUS-SPEC)
- 013 Generic preliminaries**
  - 0131 Preliminaries (Generic)
  - 0133 Preliminaries (Interior and alterations)
  - 0134 General requirements (Supply) (AUS-SPEC)
  - 0135 General requirements (Services) (AUS-SPEC)
  - 0136 General requirements (Construction) (AUS-SPEC)
  - 0138 Multiple contracts
- 014 Contract preliminaries**
  - 0140 Preliminaries - ABIC BW-2018C
  - 0141 Preliminaries - ABIC MW-2018
  - 0142 Preliminaries - ABIC SW-2018
  - 0143 Preliminaries - AS 2124 (1992)
  - 0144 Preliminaries - AS 4000 (1997)
  - 0145 Preliminaries - AS 4905 (2002)
  - 0146 Preliminaries - AS 4902 (2000)
  - 0147 Conditions of contract (AUS-SPEC)
  - 0149 Preliminaries - NCW4 (2019)
- 015 Schedule of rates (AUS-SPEC)**
  - 0152 Schedule of rates (Construction)
  - 0153 Schedules - period supply and service
- 016 Quality assurance**
  - 0160 Quality
  - 0161 Quality management (Construction) (AUS-SPEC)
  - 0162 Quality (Supply) (AUS-SPEC)
  - 0163 Quality (Delivery) (AUS-SPEC)
  - 0164 Commissioning
  - 0167 Integrated management (AUS-SPEC)
- 017 General requirements**
  - 0171 General requirements

- 0172 Environmental management
- 0173 Environmental management (AUS-SPEC)
- 018 Common requirements**
  - 0181 Adhesives, sealants and fasteners
  - 0182 Fire-stopping
  - 0183 Metals and prefinishes
  - 0184 Termite management
  - 0185 Timber products, finishes and treatment
- 019 Sundry installations**
  - 0191 Sundry items
  - 0192 [Structural components]
  - 0193 Building access safety systems
  - 0194 [Door seals and window seals]
  - 0195 [Tactile indicators and stair edgings]
  - 0196 [Prefabricated fire stair systems]

## 02 SITE, URBAN AND OPEN SPACES

- 020 Demolition**
  - 0201 Demolition
  - 0202 Demolition (Interior and alterations)
- 022 Preparation and groundwork**
  - 0221 Site preparation
  - 0222 Earthwork
  - 0223 Service trenching
  - 0224 Stormwater - site
- 024 Landscape structures**
  - 0241 Landscape - walling and edging
  - 0242 Landscape - fences and barriers
  - 0243 Landscape - water features
- 025 Landscape cultivation**
  - 0250 Landscape - combined
  - 0251 Landscape - soils
  - 0252 Landscape - natural grass surfaces
  - 0253 Landscape - planting
  - 0254 Irrigation
  - 0255 Landscape - plant procurement
  - 0256 Landscape - establishment
  - 0257 Landscape - road reserve and street trees (AUS-SPEC)
- 0259 Landscape - maintenance
- 026 Landscape finishes**
  - 0261 Landscape - furniture and fixtures
  - 0262 External sports and playground surfacing
- 027 Pavements**
  - 0271 Pavement base and subbase
  - 0272 Asphalt
  - 0273 Sprayed bituminous surfacing
  - 0274 Concrete pavement
  - 0275 Paving - mortar and adhesive bed
  - 0276 Paving - sand bed
  - 0277 Pavement ancillaries
  - 0278 Granular surfaces
  - 0279 Paving - on pedestals
- 028 Pathways (AUS-SPEC)**
  - 0281 Fire access and fire trails
  - 0282 Pathways and cycleways (Construction)
- 029 Retaining walls (AUS-SPEC)**
  - 0292 Masonry walls
  - 0293 Crib retaining walls
  - 0294 Gabion walls and rock filled mattresses

## 03 STRUCTURE

- 030 Foundations**
  - 0301 Piling
  - 0305 [Foundation isolation systems]
- 031 Concrete - in situ**
  - 0310 Concrete - combined
  - 0311 Concrete formwork
  - 0312 Concrete reinforcement
  - 0313 Concrete post-tensioned
  - 0314 Concrete in situ
  - 0315 Concrete finishes
  - 0318 Shotcrete
  - 0319 Auxiliary concrete works (AUS-SPEC)
- 032 Concrete - systems**
  - 0321 Precast concrete
  - 0322 Tilt-up concrete
  - 0325 [Concrete protection]

## 033 Masonry

- 0331 Brick and block construction
- 0332 Stone masonry
- 0333 Stone repair
- 0334 Block construction
- 0335 Brick construction
- 034 Steel**
  - 0341 Structural steelwork
  - 0342 Light steel framing
  - 0343 Tensioned membrane structures
  - 0344 Steel - hot-dip galvanized coatings
  - 0345 Steel - protective paint coatings
  - 0346 Structural fire protection systems
- 036 Earth**
  - 0361 Monolithic stabilised rammed earth walls
  - 0362 Mud brick and pressed earth block walls
  - 0363 Straw bale walls
- 038 Timber**
  - 0381 Structural timber
  - 0382 Light timber framing
  - 0383 Decking, sheet and panel flooring
  - 0385 Cross-laminated timber (CLT)

## 04 ENCLOSURE

- 041 Tanking and damp-proofing**
  - 0411 Waterproofing - external and tanking
- 042 Roofing**
  - 0421 Roofing - combined
  - 0423 Roofing - profiled sheet metal
  - 0424 Roofing - seamed sheet metal
  - 0425 Roofing - shingles and shakes
  - 0426 Roofing - slate
  - 0427 Roofing - tiles
  - 0428 Roofing - insulated panel systems
  - 0429 Roofing - glazed
- 043 Cladding**
  - 0431 Cladding - combined
  - 0432 Curtain walls
  - 0433 Stone cladding
  - 0434 Cladding - flat sheets and panels
  - 0435 Cladding - planks and weatherboards
  - 0436 Cladding - profiled and seamed sheet metal
  - 0437 Cladding - insulated panel systems
  - 0438 [Cladding - cement board]
  - 0439 [Cladding - systems]
- 045 Doors and windows**
  - 0451 Windows and glazed doors
  - 0453 Doors and access panels
  - 0454 Overhead doors
  - 0455 Door hardware
  - 0456 Louvre windows
  - 0457 External screens
  - 0458 [Automatic doors]
- 046 Glass**
  - 0461 Glazing
  - 0462 Structural silicone glazing
  - 0463 Glass blockwork
  - 0466 Structural glass assemblies
  - 0467 Glass components
- 047 Insulation**
  - 0471 Thermal insulation and pliable membranes
  - 0472 Acoustic insulation
  - 0473 [Acoustic floor underlays]

## 05 INTERIOR

- 051 Linings**
  - 0511 Lining
- 052 Partitions**
  - 0520 Partitions - combined
  - 0521 Partitions - demountable
  - 0522 Partitions - framed and lined
  - 0523 Partitions - brick and block
  - 0524 Partitions - glazed
  - 0525 Cubicle systems
  - 0526 Terrazzo precast
  - 0527 Room dividers
  - 0528 [Partitions - composite systems]

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## 053 Ceilings

- 0531 Suspended ceilings - combined
- 0532 Suspended ceilings - flush lined
- 0533 Suspended ceilings - ceiling units

## 054 Access floors

- 0541 Access floors

## 055 Fixtures

- 0551 Joinery
- 0552 Metalwork - fabricated
- 0553 Stainless steel benching
- 0554 [Handrails, guardrails, balustrades and other barriers]

## 057 Furniture and furnishings

- 0571 Workstations
- 0572 Miscellaneous furniture
- 0573 Fire extinguishers and blankets
- 0574 Window coverings
- 0575 Tapestries

## 058 Signs and features

- 0581 Signage

## 06 FINISH

### 061 Trowelled and sprayed coatings

- 0611 Rendering and plastering
- 0612 Cementitious toppings
- 0613 Terrazzo in situ

### 062 Wet areas

- 0621 Waterproofing - wet areas

### 063 Tiling

- 0631 Ceramic tiling
- 0632 Stone and terrazzo tiling

### 064 Wall surfacing

- 0641 Applied wall finishes
- 0642 Wallcoverings

### 065 Floor surfacing

- 0651 Resilient finishes
- 0652 Carpets
- 0654 Multilayered board flooring
- 0655 Timber flooring
- 0656 Floor sanding and finishing
- 0657 Resin based seamless flooring

### 067 Painting

- 0671 Painting
- 0672 Textured and membrane coatings
- 0673 Powder coatings

## 07 MECHANICAL

### 070 Mechanical general

- 0700 Reference - Mechanical services
- 0701 Mechanical systems
- 0702 Mechanical design and install
- 0701 Water plant
- 0710 [Steam boilers]
- 0711 Chillers - combined
- 0712 Water heating boilers
- 0713 Cooling towers
- 0714 Mechanical pumps
- 0715 Mechanical services tanks, vessels and heat exchangers
- 0716 Chillers - centrifugal
- 0717 Chillers - water cooled screw
- 0718 Chillers - air cooled screw and scroll
- 0719 Chillers - absorption

### 072 Air plant

- 0721 Packaged air conditioning
- 0722 Room air conditioners
- 0723 Evaporative air coolers
- 0724 Air handling plant - combined
- 0725 Air handling plant - built up
- 0726 Air handling plant - minor
- 0727 Air handling plant - packaged

### 073 Air handling components

- 0731 Fans
- 0732 Air filters
- 0733 Air coils
- 0734 Humidifiers
- 0735 [Natural ventilation and smoke management]
- 0736 Space heating
- 0737 [Fireplaces]

### 074 Ductwork and components

- 0741 Ductwork

- 0744 Ductwork insulation

- 0745 Attenuators and acoustic louvres

- 0746 Air grilles

- 0747 Variable air volume terminals

- 0748 Chilled beams

## 075 Piping

- 0751 Mechanical piping

- 0752 Mechanical piping insulation

- 0753 Water treatment

- 0754 Liquid fuels

- 0755 Medical gas systems

- 0756 [Industrial gas systems]

- 0757 [Compressed air]

## 076 Refrigeration

- 0761 Refrigeration

- 0762 Cool rooms

## 077 Control

- 0771 Automatic controls

- 0772 Automatic controls - minor

- 0773 Building management systems

## 078 Mechanical electrical

- 0781 Mechanical electrical

- 0782 Mechanical electrical - minor

- 0784 Motors and starters

## 079 Mechanical commissioning and maintenance

- 0791 Mechanical commissioning
- 0792 Mechanical maintenance

## 08 HYDRAULIC

### 080 Hydraulic general

- 0800 Reference - Hydraulic services
- 0801 Hydraulic systems
- 0802 Hydraulic design and install

### 081 Hydraulic components

- 0811 Sanitary fixtures
- 0812 Tapware
- 0813 Water heaters
- 0814 Hydraulic pumps
- 0815 Drinking water dispensers
- 0816 Hydraulic services tanks

### 082 Hydraulic systems

- 0821 Stormwater - buildings
- 0822 Wastewater
- 0823 Cold and heated water
- 0824 Fuel gas
- 0825 Rainwater storage systems
- 0826 Greywater systems
- 0827 [Processed water]

### 088 Hydraulic electrical

- 0882 Hydraulic electrical - minor

## 089 Hydraulic commissioning and maintenance

- 0891 Hydraulic maintenance

## 09 ELECTRICAL

### 090 Electrical general

- 0900 Reference - Electrical services
- 0901 Electrical systems
- 0902 Electrical design and install

### 091 Electrical equipment

- 0911 Cable support and duct systems

### 092 Power systems

- 0921 Low voltage power systems

### 093 Power supply equipment

- 0931 Power generation - engine driven
- 0933 Power generation - photovoltaic
- 0937 Uninterruptible power supply

### 094 Power distribution equipment

- 0941 Switchboards - proprietary
- 0942 Switchboards - custom-built
- 0943 Switchboard components
- 0947 Power factor correction

### 095 Lighting systems

- 0951 Lighting

### 096 Communication systems

- 0961 Information and communications technology (ICT) systems
- 0962 Television distribution systems
- 0963 Sound systems

### 097 Safety systems

- 0971 Emergency evacuation lighting

- 0979 Lightning protection

## 098 Security systems

- 0981 Electronic security

## 099 Electrical commissioning and maintenance

- 0991 Electrical maintenance

## 10 FIRE

### 100 Fire general

- 1000 Reference - Fire services
- 1001 Fire services systems
- 1002 Fire services design and install

### 101 Fire components

- 1014 Fire services pumps

- 1016 Fire services tanks

### 103 Wet fire suppression systems

- 1030 Combined wet fire suppression systems
- 1031 Hydrants
- 1032 Hose reels
- 1033 Sprinklers

### 104 Dry fire suppression systems

- 1041 Gaseous fire suppression systems

### 105 Chemical fire suppression system

- 1051 Liquid chemical fire suppression systems

### 107 Fire safety systems

- 1072 Fire detection and alarms
- 1073 Emergency warning and intercommunication

### 108 Fire electrical

- 1082 Fire services electrical - minor

## 109 Fire commissioning and maintenance

- 1091 Fire services maintenance

## 11 CONSTRUCTION - ROAD RESERVE (AUS-SPEC)

### 110 General

- 1100 Construction reference and schedules
- 1101 Traffic management
- 1102 Control of erosion and sedimentation (Construction)

### 111 Formation preparation

- 1111 Clearing and grubbing
- 1112 Earthworks (Road reserve)
- 1113 Subgrade and formation stabilisation

### 112 Rainwater collection

- 1121 Open drains
- 1122 Kerbs and channels (gutters)

### 113 Rigid pavements

- 1130 Rural concrete base
- 1131 Roller compacted concrete subbase
- 1132 Lean mix concrete subbase
- 1133 Plain and reinforced concrete base
- 1134 Steel fibre reinforced concrete base
- 1135 Continuously reinforced concrete base
- 1136 Cold milling of asphalt and base course

### 114 Flexible pavements

- 1140 Wearing course, base and sub-base - unsealed
- 1141 Flexible pavement base and subbase
- 1142 Cold mix asphalt
- 1143 Sprayed bituminous surfacing
- 1144 Asphalt (Roadways)
- 1145 Segmental paving
- 1146 Microsurfacing
- 1147 Sprayed preservation surfacing

### 115 Road openings and restorations

- 1151 Road openings and restoration
- 1152 Road openings and restoration (Utilities)

### 116 Pavement stabilisation

- 1161 In situ pavement stabilisation using cementitious binders
- 1162 In situ pavement stabilisation using bituminous binders
- 1163 Ex situ (plant mix) pavement stabilisation
- 1164 In situ pavement stabilisation of unsealed roads

### 117 Pavement moisture control

- 1171 Subsurface drainage
- 1172 Subsoil and formation drains
- 1173 Pavement drains
- 1174 Drainage blankets



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## 119 Traffic facilities

- 1191 Pavement markings
- 1192 Signposting
- 1193 Guide posts
- 1194 Non-rigid road safety barrier systems
- 1195 Rigid concrete safety barrier systems
- 1196 Boundary fencing for road reserves
- 1197 Street and public lighting

## 13 CONSTRUCTION - PUBLIC UTILITIES (AUS-SPEC)

### 134 Water supply

- 1341 Water supply - reticulation (Construction)
- 1342 Water supply - pump stations (Construction)

### 135 Water cycle management

- 1351 Stormwater drainage (Construction)
- 1352 Pipe drainage
- 1353 Precast box culverts
- 1354 Drainage structures

### 136 Sewerage systems

- 1361 Sewerage systems - reticulation (Construction)
- 1362 Sewerage systems - pump stations (Construction)

### 139 Others

- 1391 Service conduits
- 1392 Trenchless conduit installation

## 14 MAINTENANCE AND OPERATIONS - URBAN AND OPEN SPACES (AUS-SPEC)

### 140 General

- 1401 General requirements - parks and open space (Maintenance)
- 1402 Maintenance schedules - parks and open space
- 1403 Parks and open space maintenance plan (PMP)
- 1404 Annexures to parks and open space maintenance plan (PMP)

### 141 Horticultural

- 1411 Street landscaping
- 1412 Grass mowing in road reserves
- 1413 Tree and vegetation control in road reserves
- 1414 Weed control in road reserves
- 1415 Weed control
- 1416 Planting of annuals and trees
- 1417 Care of trees and shrubs
- 1418 Gardens
- 1419 Care of grass and turf
- 1420 Grass mowing
- 1421 Native bushland
- 1422 Dunal areas
- 1423 Pest control

### 143 Pathways

- 1431 Footpath paving repairs
- 1432 Gravel footpath repairs
- 1433 Footpath and kerb ramp repairs
- 1434 Fire access and fire trails repairs

### 144 Pavements

- 1441 Bituminous surfacing repairs
- 1442 Boat ramps

### 146 Enclosures

- 1461 Swimming enclosures
- 1462 Boundary fence repair

### 147 Equipment

- 1471 Barbecues
- 1472 Drinking fountains
- 1473 Barriers
- 1474 Lighting
- 1475 Playground equipment
- 1476 Park furniture
- 1477 Sport ground facilities
- 1478 Public art

### 148 Operation - open spaces

- 1481 Accident repairs (Recoverable)
- 1482 Accident repairs (Non-recoverable)

- 1483 Emergency call out

- 1484 Storm damage response

### 149 Operation - cleaning and waste management

- 1491 Open space litter collection
- 1492 Open space graffiti removal
- 1493 Beach cleaning

## 15 MAINTENANCE AND OPERATIONS - BUILDINGS (AUS-SPEC)

### 150 General

- 1500 NATSPEC Maintenance reference

- 1501 General requirements - building and facility (Maintenance)

- 1502 Maintenance schedules - building and facility

- 1503 Building and facility maintenance plan (BFMP)

- 1504 Annexures to building and facility maintenance plan (BFMP)

### 153 Structure

- 1530 External works
- 1531 Floors
- 1532 Walls
- 1533 Doorways and windows
- 1534 Ceilings
- 1535 Roofing

### 157 Services

- 1571 Mechanical systems - maintenance
- 1572 Hydraulic systems - maintenance
- 1573 Electrical systems - maintenance
- 1574 Fire systems - maintenance

### 158 Operation - buildings

- 1581 External building surveillance
- 1582 Accident repairs (Recoverable)
- 1583 Emergency call out
- 1584 Storm damage response
- 1585 External cleaning
- 1586 Internal cleaning
- 1587 Sanitary cleaning
- 1588 Window cleaning
- 1589 Cleaning - blinds and fire proofing of curtains

## 16 MAINTENANCE AND OPERATIONS - ROAD RESERVE (AUS-SPEC)

### 160 General

- 1601 General requirements - road reserve (Maintenance)
- 1602 Maintenance schedules - road reserve
- 1603 Road reserve maintenance plan (RMP)
- 1604 Annexures to road reserve maintenance plan (RMP)

### 161 Pavement

- 1611 Pavement sweeping
- 1612 Auxiliary work for reseals
- 1613 Repairs to bituminous surfacing
- 1614 Crack sealing
- 1615 Local shape correction
- 1616 Grading unsealed roads
- 1617 Resheeting unsealed roads
- 1618 Heavy patching
- 1619 Minor patching

- 1620 Pothole repair

- 1621 Concrete pavement repairs

- 1622 Concrete slab stabilisation

- 1623 Emergency pavement repairs

### 163 Shoulder

- 1631 Edge break repairs

- 1632 Grading unsealed shoulders

- 1633 Resheeting unsealed shoulders

- 1634 Local scour repairs

### 164 Roadside

- 1641 Kerb and channel (gutter) repairs

- 1642 Traffic islands

### 165 Pavement moisture control

- 1651 Clear road reserve subsoil drains

- 1652 Clear road reserve open drains

### 167 Traffic facilities

- 1671 Road reserve boundary fence repairs

- 1672 Road reserve fences and handrails

- 1673 Street seats and bus shelters

- 1674 Carriageway delineators

- 1675 Road reserve guard fence

- 1676 Road reserve signs

- 1677 Road reserve guide signs

### 168 Operation - road reserve

- 1681 Accident repairs (Recoverable)

- 1682 Road reserve emergency call out

- 1683 Storm damage response for road safety

- 1684 Traffic facilities - road traffic control

### 169 Operation - cleaning and waste management

- 1691 Road reserve litter collection

- 1692 Removal of graffiti visible from roads

## 17 MAINTENANCE AND OPERATIONS - BRIDGES (AUS-SPEC)

### 170 Structure

- 1701 Wharves and decks maintenance

## 18 MAINTENANCE AND OPERATIONS - PUBLIC UTILITIES (AUS-SPEC)

### 184 Water supply

- 1841 Water supply - irrigation systems

### 185 Water cycle management

- 1851 Clear open space drains
- 1852 Clear open space drainage culverts
- 1853 Clear road reserve culverts and pits
- 1854 Minor repair of lined drains in road reserves
- 1859 CCTV inspection of drainage conduits

## 20 CONVEYING

### 200 Conveying general

### 201 Conveying equipment

- 2011 Lifts design and install

- 2012 [Escalators and moving walkways]

### 202 Other conveying equipment

- 2021 [Pneumatic tube systems]

## CONTACT INFORMATION

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# NATIONAL WORKSECTION MATRIX OCTOBER 2023

- Full version
- Basic/Rural roads cut-down version
- s Shell/schedule
- D Domestic cut-down version

		Services										AUS-SPEC									
		Building										Roadworks and Open Spaces									
		Professional										Public Utilities									
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- Full version
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WORKGROUP / SUBGROUP / WORKSECTION / NUMBER

WORKGROUP / SUBGROUP / WORKSECTION / TITLES

Building

Services

PROFESSIONAL

BASIC

STRUCTURE

LANDSCAPE

INTERIOR

DOMESTIC

MECHANICAL

ELECTRICAL

URBAN AND FIRE

ROADWORKS AND OPEN SPACES

BUILDINGS

PUBLIC UTILITIES

MAINTENANCE

RURAL ROADS

AUS SPEC

## 04 ENCLOSURE

## 041 Tanking and damp-proofing

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[illegible]

- Full version
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[illegible]

	WORKGROUP/ SUBGROUP/ WORKSECTION NUMBER	WORKGROUP/ SUBGROUP/ WORKSECTION TITLES	PROFESSIONAL	BASIC	STRUCTURE	LANDSCAPE	INTERIOR	DOMESTIC	MECHANICAL AND FIRE	ELECTRICAL	URBAN AND OPEN SPACES	PUBLIC UTILITIES BUILDINGS CONTRACTS COMPLETE	RURAL ROADS MAINTENANCE	AUS-SPEC
<b>11 CONSTRUCTION - ROAD RESERVE (AUS-SPEC)</b>														
<b>110 General</b>														
1100r Construction reference														
1100s Construction schedules														
1101 Traffic management														
1102 Control of erosion and sedimentation (Construction)														
<b>111 Formation preparation</b>														
1111 Clearing and grubbing														
1112 Earthworks (Road reserve)														
1113 Subgrade and formation stabilisation														
<b>112 Rainwater collection</b>														
1121 Open drains														
1122 Kerbs and channels (gutters)														
<b>113 Rigid pavements</b>														
1130 Rural concrete base														
1131 Roller compacted concrete subbase														
1132 Lean mix concrete subbase														
1133 Plain and reinforced concrete base														
1134 Steel fibre reinforced concrete base														
1135 Continuously reinforced concrete base														
1136 Cold milling of asphalt and base course														
<b>114 Flexible pavements</b>														
1140 Wearing course, base and subbase - unsealed														
1141 Flexible pavement base and subbase														
1142 Cold mix asphalt														
1143 Sprayed bituminous surfacing														
1144 Asphalt (Roadways)														
1145 Segmental paving														
1146 Microsurfacing														
1147 Sprayed preservation surfacing														
<b>115 Road openings and restorations</b>														
1151 Road openings and restoration														
1152 Road openings and restoration (Utilities)														
<b>116 Pavement stabilisation</b>														
1161 In situ pavement stabilisation using cementitious binders														
1162 In situ pavement stabilisation using bituminous binders														
1163 Ex situ (plant mix) pavement stabilisation														
1164 In situ pavement stabilisation of unsealed roads														
<b>117 Pavement moisture control</b>														
1171 Subsurface drainage														
1172 Subsoil and formation drains														
1173 Pavement drains														
1174 Drainage blankets														
<b>119 Traffic facilities</b>														
1191 Pavement markings														
1192 Signposting														
1193 Guide posts														
1194 Non-rigid road safety barrier systems														
1195 Rigid concrete safety barrier systems														
1196 Boundary fencing for road reserves														
1197 Street and public lighting														

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- Full version
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[illegible]



<b>0121 Tendering</b>	This worksection <i>Template</i> reflects the principles of the main Australian codes of practice, including AS 4120 (1994), which is cited in a number of state government codes of practice. The worksection assumes head-contract tendering. It is applicable to non-contractual material and so does not form part of the contract documents. A tender pro-forma is attached to cover tender offers in the form of a lump sum.
<b>0131 Preliminaries</b>	This worksection <i>Template</i> is applicable to the site management requirements of the owner. The project specific version may include site security arrangements, occupancy constraints, adjoining properties constraints, owner's site office and other temporary facilities, project signage, requirements for progress photographs, authority requirements, survey requirements, owner-supplied items, separate contracts, some aspects of payment for the works and pest eradication.
<b>0133 Preliminaries (Interior and alterations)</b>	This worksection <i>Template</i> is applicable to the site management requirements of the owner for interior fitout projects. The project specific version may include site security arrangements, occupancy constraints, adjoining tenancies constraints, project signage, requirements for progress photographs, authority requirements, owner-supplied items, separate contracts, and some aspects of payment for the works.
<b>0138 Multiple contracts</b>	This worksection <i>Template</i> is applicable to projects to be let as several prime contract packages, also known as trade package contracts and separate contracts. It deals with the interfaces between the contracts and provides a framework for scheduling the boundaries of responsibility between the contractor and the principal or other contractors, on behalf of the principal.
<b>0140 Preliminaries - ABIC BW 2018 C</b>	This worksection <i>Template</i> is applicable to the ABIC BW 2018 C contract for small commercial projects or single trade activities where an architect administers the contract, applicable in all states and territories. It is relevant to the site management requirements of the owner. The project specific version may include site security arrangements, occupancy constraints, adjoining properties constraints, temporary facilities, project signage, authority requirements, survey requirements, owner-supplied items and pest eradication.
<b>0141 Preliminaries - ABIC MW-2018</b>	This worksection <i>Template</i> is applicable to the ABIC MW-2018 major works contract for non-housing work. It can be adapted for use with the various state and territory specific contracts for housing work. It is relevant to the site management requirements of the owner. The project specific version may include site security arrangements, occupancy constraints, adjoining properties constraints, owner's site office and other temporary facilities, project signage, requirements for progress photographs, authority requirements, survey requirements, owner-supplied items, separate contracts, some aspects of payment for the works and pest eradication.
<b>0142 Preliminaries - ABIC SW-2018</b>	This worksection <i>Template</i> is applicable to the ABIC SW-2018 simple works contract for non-housing work. It can be adapted for use with the various state and territory specific contracts for housing work. It is relevant to the site management requirements of the owner. The project specific version may include site security arrangements, occupancy constraints, adjoining properties constraints, owner's site office and other temporary facilities, project signage, provisional sums, requirements for progress photographs, authority requirements, survey requirements, owner-supplied items, separate contracts, some aspects of payment for the works and pest eradication.

<b>0143 Preliminaries - AS 2124</b>	This worksection <i>Template</i> is applicable to the AS 2124 (1992) building contract for major works. It is relevant to the site management requirements of the principal. The project specific version may include site security arrangements, occupancy constraints, adjoining properties constraints, principal's site office and other temporary facilities, project signage, provisional sums, requirements for progress photographs, authority requirements, survey requirements, principal-supplied items, separate contracts, some aspects of payment for the works and pest eradication.
<b>0144 Preliminaries - AS 4000</b>	This worksection <i>Template</i> is applicable to the AS 4000 (1997) building contract for major works. It is relevant to the site management requirements of the principal. The project specific version may include site security arrangements, occupancy constraints, adjoining properties constraints, principal's site office and other temporary facilities, project signage, provisional sums, requirements for progress photographs, authority requirements, survey requirements, principal-supplied items, separate contracts, some aspects of payment for the works and pest eradication.
<b>0145 Preliminaries - AS 4905 (2002)</b>	This worksection <i>Template</i> is applicable to the AS 4905 (2002) building contract for minor works. It is relevant to the site management requirements of the principal. The project specific version may include site security arrangements, occupancy constraints, adjoining properties constraints, principal's site office and other temporary facilities, project signage, provisional sums, requirements for progress photographs, authority requirements, survey requirements, principal-supplied items, separate contracts, some aspects of payment for the works and pest eradication.
<b>0146 Preliminaries - AS 4902 (2000)</b>	This worksection <i>Template</i> is applicable to the AS 4902 (2000) building contract for design and construct. It is relevant to the site management requirements of the principal. The project specific version may include site security arrangements, occupancy constraints, adjoining properties constraints, principal's site office and other temporary facilities, project signage, provisional sums, requirements for progress photographs, authority requirements, survey requirements, principal-supplied items, separate contracts, some aspects of payment for the works and pest eradication.
<b>0149 Preliminaries – NCW4 (2019)</b>	This worksection <i>Template</i> is applicable to the NCW4 contract for National Capital Works. It is relevant to the site management requirements of the principal. The project specific version may include site security arrangements, occupancy constraints, adjoining properties constraints, principal's site office and other temporary facilities, project signage, provisional sums, requirements for progress photographs, authority requirements, survey requirements, principal-supplied items, separate contracts, some aspects of payment for the works and pest eradication.
<b>0160 Quality</b>	This worksection <i>Template</i> applies to the selection and implementation of a project Quality Management System based on AS/NZS ISO 9001 (2016). It includes the submission of a Quality Plan from a contractor having an approved Quality Manual.
<b>0164 Commissioning</b>	This worksection <i>Template</i> is applicable to projects in which the principal engages a commissioning manager to undertake the roles and responsibilities in SA TS 5342 (2021) Appendix B. Commissioning requirements are documented generally in <i>0171 General requirements</i> and for individual elements and systems in their respective worksections. This worksection deals with interfaces between that work and the commissioning manager and assumes that that principal has designated the roles and responsibilities of the parties involved as recommended in SA TS 5342 (2021) Appendix B.

**0171 General requirements**

This worksection *Template* draws together content including administrative requirements applicable to new work, interiors, and alterations and additions, including landscaping and building services. As the content is relevant to all subcontractors every other NATSPEC worksection includes a cross reference to this worksection. It covers interpretation, referenced documents, performance, design by the contractor, contractor's submissions and inspections, products and materials, ancillary building work, testing and commissioning, completion, project records, and maintenance during the contract period.

**0171q DEPW (QLD) General requirements**

This worksection *Template* draws together content including administrative requirements applicable to new work, interiors, and alterations and additions, including landscaping and building services for DEPW (Qld). As the content is relevant to all subcontractors every other NATSPEC worksection includes a cross reference to this worksection. It covers interpretation, referenced documents, performance, design by the contractor, contractor's submissions and inspections, products and materials, ancillary building work, testing and commissioning, completion, project records, and maintenance during the contract period.

**0172 Environmental management**

This worksection *Template* is applicable to the environmental management of the construction site and includes environmental controls for erosion and sedimentation, flora and fauna, groundwater, indigenous and non-indigenous heritage, water quality, air quality, waste and weeds. It provides for documenting an environmental management plan, if required, and/or the requirements for environmental management either in contractor prepared control plans or the principal/consultant control measures.

**0172q DEPW (QLD) Environmental management**

This worksection *Template* is applicable to the DEPW (QLD) environmental management of the construction site and includes environmental controls for erosion and sedimentation, flora and fauna, groundwater, indigenous and non-indigenous heritage, water quality, air quality, waste and weeds. It provides for documenting an environmental management plan, if required, and/or the requirements for environmental management either in contractor prepared control plans or the principal/consultant control measures.

**0181 Adhesives, sealants and fasteners**

This worksection *Template* is applicable to the commonly used adhesives, sealants and fasteners and provides basic defaults for projects requiring adhesives, sealants and fasteners, as part of general construction. It is not applicable to the fire-stopping requirements of the NCC Deemed-to-Satisfy provisions of BCA (2022) C4D15 and BCA (2022) C4D16.

**0181p HILTI anchors**

**0182 Fire-stopping**

This worksection *Template* is applicable to the fire-stopping requirements of the NCC Deemed-to-Satisfy clauses BCA (2022) C4D15 and BCA (2022) C4D16, for service penetrations, cavities and construction/control joints in wall, floor and ceiling elements, that are required to have a fire-resistance level (FRL).

**0182p HILTI in fire-stopping**

**0183 Metals and prefinishes**

This worksection *Template* is applicable to common metals and metal alloys, and prefinishes.

**0184 Termite management**

This worksection *Template* is applicable to various physical and chemical termite management systems, which may be used alone or in combination. The various systems are located together in this worksection as their effectiveness relies on the integration of the chosen systems.

**0184p KORDON termite management**

**0184pTERMIMESH Termite management**

**0184pTERMSHIELD Termite management**

<b>0185 Timber products, finishes and treatment</b>	This worksection <i>Template</i> is applicable to the certification, sustainable sourcing, durability, fire-resistance, finishing and quality conformance of timber products. It includes preservative treatments to the AS/NZS 1604 series and alternative material conforming to NCC (2022) A5G3.
<b>0191 Sundry items</b>	This worksection <i>Template</i> is applicable to building components that may not obviously belong to a particular worksection or alternatively, could reasonably belong to a number of worksections. They are generally proprietary components and equipment made from a range of materials, and can be installed in a range of interior or exterior locations. Custom-made items are better located in the appropriate worksection, e.g. <i>0552 Metalwork - fabricated</i> for predominantly metal items, or items to be made by a metal fabricator.
<b>0192p ANCON structural components</b>	
<b>0193 Building access safety systems</b>	This worksection <i>Template</i> is applicable to the design, supply, installation and maintenance of building access safety systems comprising personal equipment for working at height and rope access systems. It includes anchors and accessories for rope access and ladders for roof safety systems.
<b>0194p RAVEN door seals and window seals</b>	
<b>0195p DTAC tactile indicators and stair edgings</b>	
<b>0201 Demolition</b>	This worksection <i>Template</i> is applicable to demolition of buildings, structures and services. It includes planning and execution of the work, protection and support of adjacent structures, and removal of demolished material.
<b>0202 Demolition (Interior and alterations)</b>	This worksection <i>Template</i> is applicable to the demolition and removal of internal building elements and services from within an existing building.
<b>0221 Site preparation</b>	This worksection <i>Template</i> is applicable to site preparation requirements including existing services, site clearing, stormwater and sediment control, tree removal/protection/transplanting/maintenance, and temporary landscape fencing.
<b>0222 Earthwork</b>	This worksection <i>Template</i> is applicable to topsoil removal, excavation, filling and compaction as required for building operations.
<b>0222q DEPW (QLD) Earthwork</b>	This worksection <i>Template</i> is applicable to topsoil removal, excavation, filling and compaction as required for building operations for DEPW (Qld).
<b>0223 Service trenching</b>	This worksection <i>Template</i> is applicable to trenching for underground services within a building site. It covers fill materials, existing services, existing surfaces, excavating, trench backfill and surface restoration.
<b>0224 Stormwater – site</b>	This worksection <i>Template</i> is applicable to stormwater drainage associated with pavements and other non-building projects. For internal stormwater piping for roof water and for simple external systems related to buildings, use <i>0821 Stormwater – buildings</i> .
<b>0241 Landscape – walling and edging</b>	This worksection <i>Template</i> is applicable to edging and retaining and free standing walls subject to height criteria conforming to local authority requirements.
<b>0242 Landscape – fences and barriers</b>	This worksection <i>Template</i> is applicable to fencing including tennis court fencing; sports ground fencing; cricket net enclosures; steel and timber picket and paling (plain paling, lap and cap) fencing; and swimming pool barriers, generally for domestic use, and chain link and welded mesh fencing for industrial, commercial and institutional use.
<b>0243 Landscape – water features</b>	This worksection <i>Template</i> is applicable to self-contained water features in open landscaped areas. Conform to local authority water depth requirements if applicable.



<b>0250 Landscape – combined</b>	This worksection <i>Template</i> is applicable to simple ‘soft’ landscaping. It has been prepared for and is suitable only for work of a scale or size that does not warrant the use of separate worksections for each aspect of landscaping work included. It combines relevant clauses from the following stand-alone landscape worksections: <i>0251 Landscape – soils</i> , <i>0252 Landscape – natural grass surfaces</i> , <i>0253 Landscape – planting</i> , <i>0254 Irrigation</i> , <i>0255 Landscape – plant procurement</i> and <i>0256 Landscape – establishment</i> .
<b>0251 Landscape – soils</b>	This worksection <i>Template</i> is applicable to soils for landscaping including, rock work, filling, topsoil and topsoil additives. Geotechnical site investigation and soil related earthworks are also covered.
<b>0252 Landscape – natural grass surfaces</b>	This worksection <i>Template</i> is applicable to grass seeding, hydroseeding and hydromulching, turfing, stolonising, temporary grassing and grass reinforcing.
<b>0252p LAWN SOLUTIONS in landscape – natural grass surfaces</b>	
<b>0253 Landscape – planting</b>	This worksection <i>Template</i> is applicable to landscape planting (softworks) including composts, fertilisers, binders, mulching, pest spraying, tree pruning and anchorage.
<b>0254 Irrigation</b>	This worksection <i>Template</i> is applicable to automatically controlled, fixed irrigation systems. It includes fixed sprinkler systems, micro-irrigation systems, drip irrigation systems, subsurface drip irrigation systems and valve boxes.
<b>0255 Landscape – plant procurement</b>	This worksection <i>Template</i> is applicable to the supply of plant material, including indoor plants, shrubs and trees. It allows for plant material to be supplied as a separate forward order contract or as part of the head contract.
<b>0256 Landscape – establishment</b>	This worksection <i>Template</i> is applicable to soft and hard landscape establishment and maintenance for the period between the date of practical completion and the end of the defects liability period under the head contract.
<b>0259 Landscape – maintenance</b>	This worksection <i>Template</i> is applicable to the ongoing maintenance of established landscape projects. It will require a separate unique contract. It may also be used following the defects liability period under a head contract.
<b>0261 Landscape – furniture and fixtures</b>	This worksection <i>Template</i> is applicable to proprietary items and custom-built items associated with landscape works, including proprietary shade structures.
<b>0262 External sports and playground surfacing</b>	This worksection <i>Template</i> is applicable to external sports and playground surfacing, including synthetic turf, polymeric rubber (cast in situ, prefabricated sheeting/tiles, granular material) and polymeric liquid coatings. It is also applicable to loose-fill material, including sand, wood-fibre, bark mulch and wood chips.
<b>0271 Pavement base and subbase</b>	This worksection <i>Template</i> is applicable to the supply, spreading, compaction and trimming of base and subbase courses of flexible pavements for access or car parking.
<b>0272 Asphalt</b>	This worksection <i>Template</i> is applicable to the supply and laying of asphalt surfacing for areas not forming public roadways.
<b>0273 Sprayed bituminous surfacing</b>	This worksection <i>Template</i> is applicable to bituminous sprayed surfacing, including sealing and resealing, of areas not forming public roadways.
<b>0274 Concrete pavement</b>	This worksection <i>Template</i> is applicable to the supply and placement of concrete for concrete pavements such as loading docks, car parks, landscape hard paving within site boundaries. It includes residential streets, paths and driveways associated with a building project.

<b>0275 Paving – mortar and adhesive bed</b>	This worksection <i>Template</i> is applicable to external paving on cement mortar or adhesive bedding on a concrete substrate using concrete, clay, natural stone and cast stone pavers, and stone setts. It is suitable for pedestrian traffic only.
<b>0276 Paving – sand bed</b>	This worksection <i>Template</i> is applicable to paving on sand bedding over unbound base and/or subbase layer/s using concrete and clay pavers. It is suitable for vehicular pavements, cycleways, footpaths and landscaped areas and unsuitable for public roads and streets.
<b>0277 Pavement ancillaries</b>	This worksection <i>Template</i> is applicable to the installation of channels, kerbs, linemarking and some types of vehicle barriers.
<b>0278 Granular surfaces</b>	This worksection <i>Template</i> is applicable to the construction of granular pathways, driveways and outdoor living areas, and includes subgrade trimming, base compaction, edge restraints and granular surfacing.
<b>0279 Paving - on pedestals</b>	This worksection <i>Template</i> is applicable to paving supported on pedestals on a concrete substrate using concrete, clay, natural stone and cast stone pavers. It is suitable for pedestrian traffic only.
<b>0301 Piling</b>	This worksection <i>Template</i> is applicable to piled footings for building structures and includes timber, concrete/grout and steel piling aligned with AS 2159 (2009).
<b>0305p GETZNER VIBRATION SOLUTIONS foundation isolation systems</b>	
<b>0310 Concrete – combined</b>	This worksection <i>Template</i> is applicable to the use of concrete for buildings and associated structures. It is suitable for work of a scale or size that does not need a separate worksection for each of the different parts of the concrete work. It combines relevant clauses from the following worksections: <i>0311 Concrete formwork</i> , <i>0312 Concrete reinforcement</i> , <i>0313 Concrete post-tensioned</i> , <i>0314 Concrete in situ</i> and <i>0315 Concrete finishes</i> . For large projects and for projects that include precast and tilt-up concrete, use separate worksections.
<b>0310p DINCEL in concrete – combined</b>	
<b>0311 Concrete formwork</b>	This worksection <i>Template</i> is applicable to supply, installation and removal of formwork for concrete work in buildings and associated structures. It includes formwork using profiled steel sheeting and plywood. This worksection is generally used in conjunction with other concrete worksections.
<b>0311p FIELDERS KingFlor® in concrete formwork</b>	
<b>0311p STRAMIT Condeck in concrete formwork</b>	
<b>0312 Concrete reinforcement</b>	This worksection <i>Template</i> is applicable to supply and installation of fibre and steel reinforcement in concrete for buildings and associated structures. It includes ties, supports and dowelling. This worksection is generally used in conjunction with other concrete worksections.
<b>0313 Concrete post-tensioned</b>	This worksection <i>Template</i> is applicable to bonded post-tensioning of concrete using strand, bar or wire. It includes concrete elements that are post-tensioned on site as part of the concrete construction process. Cable stays, external post-tensioning and ground anchors are excluded. It anticipates the possibility of contractor design.
<b>0314 Concrete in situ</b>	This worksection <i>Template</i> is applicable to concrete placement on site (in situ) for building and associated structures. It includes preparation of the base, concrete supply, placement, compaction, curing and jointing. This worksection is generally used in conjunction with other concrete worksections.
<b>0315 Concrete finishes</b>	This worksection <i>Template</i> is applicable to the production of formed and unformed concrete surface finishes in building and associated structures. It covers the common surface finishes. Project specific finishes may be added, if required.

<b>0318 Shotcrete</b>	This worksection <i>Template</i> is applicable to pre-mixed (wet) concrete that is applied pneumatically and compacted dynamically under high velocity. It should be used in situations where formed in situ concrete is not appropriate. This worksection is not applicable to dry mix shotcrete, or mechanically applied shotcrete used for tunnelling and mining ground support applications.
<b>0321 Precast concrete</b>	This worksection <i>Template</i> is applicable to precast concrete elements cast in a manufacturing plant or factory, distant from the final installation location and under quality control. Precast elements include reinforced and prestressed floors, walls, beams and columns. It includes connections, fixings and lifting accessories. The casting, transport, installation and erection procedures in this worksection are aligned with AS 3850.2 (2015). The worksection permits contractor design and is endorsed by the National Precast Concrete Association Australia (NPCAA - <a href="http://www.nationalprecast.com.au">www.nationalprecast.com.au</a> ).
<b>0322 Tilt-up concrete</b>	This worksection <i>Template</i> is applicable to tilt-up (or tilt-slab) concrete vertical wall panels cast in a horizontal position at or near its final location. It involves installation by rotation about one edge until vertical. The panels are stabilised by bracing or temporary propping members. This worksection is aligned with AS 3850.1 (2015) and AS 3850.2 (2015). The worksection permits contractor design.
<b>0331 Brick and block construction</b>	This worksection <i>Template</i> is applicable to internal and external, load bearing and non-load bearing brick and block construction in buildings and associated structures using brick and block masonry units manufactured from clay, calcium silicate, concrete or autoclaved aerated concrete (AAC). It includes details on mortar, reinforcement, wall ties and other accessories, lintels, damp-proof courses and flashings.
<b>0332 Stone masonry</b>	This worksection <i>Template</i> is applicable to natural stone masonry units used in buildings and associated structures. It includes mortar/grout, lintels, wall ties, damp-proof courses and flashings and stone foundations. There is no Australian standard for the stone masonry product. However, the design and construction of masonry structures is covered in AS 3700 (2018).
<b>0333 Stone repair</b>	This worksection <i>Template</i> is applicable to the cleaning, repair and restoration of existing stone masonry, including stone removal and replacement work. It includes requirements for natural and synthetic stones, mortars, fixings and repointing.
<b>0334 Block construction</b>	This worksection <i>Template</i> is applicable to internal and external, load bearing and non-load bearing block construction in buildings and associated structures using block masonry units manufactured from concrete or autoclaved aerated concrete (AAC). It includes details on mortar, reinforcement, wall ties and other accessories, lintels, damp-proof courses and flashings. This worksection is endorsed by the Concrete Masonry Association of Australia (CMAA). See <a href="http://www.cmaa.com.au">www.cmaa.com.au</a> .
<b>0335 Brick construction</b>	This worksection <i>Template</i> is applicable to internal and external, load bearing and non-load bearing brick construction in buildings and associated structures using brick masonry units manufactured from clay, calcium silicate and concrete. It includes details on mortar, wall ties and other accessories, lintels, face and cavity work, damp-proof courses and flashings.
<b>0341 Structural steelwork</b>	This worksection <i>Template</i> is applicable to general structural steel framing in buildings, and associated structures. It includes cold-formed purlins and girts used in conjunction with structural steelwork. It covers welding, bolting, surface preparation and treatment of structural steelwork, and architecturally exposed structural steelwork (AESS).
<b>0341p FIELDERS SlimFlor in structural steelwork</b>	
<b>0341p GALVSPAN® steel purlins and girts in structural steelwork</b>	

	<b>0341p LYSAGHT purlins and girts in structural steelwork</b>
	<b>0341p STRAMIT purlins and girts in structural steelwork</b>
<b>0342 Light steel framing</b>	This worksection <i>Template</i> is applicable to framing for structures generally comprising cold-formed metallic-coated or aluminium/zinc-coated steel sections where particular project specific requirements need to be met. It covers residential and low-rise floor, wall, roofing and truss framing.
	<b>0342p TRUECORE® steel light steel framing</b>
<b>0343 Tensioned membrane structures</b>	This worksection <i>Template</i> is applicable to suspended tensioned membrane structures, including shade or waterproof membrane structures. It covers supporting structures, tension members, anchorages and foundations, both attached to other structures and stand-alone elements. The worksection is not intended to apply to proprietary structures and systems, which are covered by the manufacturers' details, specification and certification. It is not applicable to tensioned membrane structures for Class 1 residential dwellings.
<b>0344 Steel – hot-dip galvanized coatings</b>	This worksection <i>Template</i> is applicable to post-fabrication galvanizing of fabricated structural steelwork or steel products identified as being at risk of atmospheric corrosion. The worksection derives from the model specification for hot-dip galvanizing in GAA AN16 (2021) by the Galvanizers Association of Australia (GAA) <a href="http://www.gaa.com.au">www.gaa.com.au</a> . This worksection is endorsed by the Galvanizers Association of Australia.
<b>0345 Steel – protective paint coatings</b>	This worksection <i>Template</i> is applicable to protective paint coating systems for the protection of steel products and structural steelwork against interior and exterior atmospheric corrosion. It addresses surface preparation, preparation assessment and coating application for new and maintenance work.
	<b>0345p DULUX steel protective paint coatings</b>
<b>0346 Structural fire protection systems</b>	This worksection <i>Template</i> is applicable to fire protection systems for structural building elements where an FRL is required. They can be specified prescriptively or by performance. It includes sprayed coatings, board systems and intumescent paint. The worksection is based on the FRLs deemed to be achieved by certain building elements in NCC (2022) Spec 1.
<b>0361 Monolithic stabilised rammed earth walls</b>	This worksection <i>Template</i> is applicable to monolithic stabilised earth walls using a blend of 4 to 10% cement with selected low clay soils containing well graded sand and aggregates. This worksection relies on NZS 4297 (2020), NZS 4298 (2020), NZS 4299 (2020) and the recommendations of SA HB 195 (2002).
<b>0362 Mud brick and pressed earth block walls</b>	This worksection <i>Template</i> applies to walls of load bearing and non-load bearing, dried earth bricks/blocks (adobe, both stabilised and unstabilised and includes pressed earth blocks (e.g. CINVA-Ram). It does not address lightly-burnt blocks, cob or LEM (light earth method). Monolithic stabilised rammed earth walls are covered in NATSPEC 0361 <i>Monolithic stabilised rammed earth walls</i> .
<b>0363 Straw bale walls</b>	This worksection <i>Template</i> is applicable to non-load bearing single storey straw bale construction in a timber frame, up to 3.6 m in height for walls with reinforced plaster finish. Walls using unreinforced plaster, without intermediate supports are limited to a height of 2.7m. Load bearing straw bale construction is sometimes used for single storey buildings and requires structural engineering design. Non-load bearing, two storey framed construction requires specialist detailing for additional protection from the effects of external moisture. There is also a hybrid system of lightweight frame and partial load-bearing straw. There is no Australian standard for straw bale construction.



<b>0381 Structural timber</b>	This worksection <i>Template</i> is applicable to timber building and civil engineering structures or elements for generally commercial, industrial, marine and similar purposes. It includes major beams and columns in residential buildings, timber portal frames and trusses, timber decks, walkways and jetties, pole structures, timber bridges and timber masts, pylons, towers, and similar structures. For timber framing to the AS 1684 series, use <i>0382 Light timber framing</i> . For cross-laminated timber (CLT) use <i>0385 Cross-laminated timber (CLT)</i> .
<b>0382 Light timber framing</b>	This worksection <i>Template</i> is built around the AS 1684 series, as appropriate. It is applicable to light timber framing, bracing and timber trusses in Class 1 and Class 10 buildings as defined by the NCC.
<b>0383 Decking, sheet and panel flooring</b>	This worksection <i>Template</i> is applicable to external timber, composite or compressed fibre cement decking, and to internal sheet flooring of plywood, particleboard or compressed fibre cement as either platform floors, fitted floors or sprung floor. It is also applicable to autoclaved aerated concrete (AAC) panel flooring. It assumes the provision of a supporting structure.
<b>0385 Cross-laminated timber (CLT)</b>	This worksection <i>Template</i> is applicable to cross-laminated timber (CLT) panels. It refers to the use of CLT panels for commercial, industrial and residential purposes and it includes CLT wall, floor, stair and roof panels, ancillary components, fixings and accessories.
<b>0411 Waterproofing – external and tanking</b>	This worksection <i>Template</i> is applicable to tanking and external waterproof membrane applications to roofing, balconies, concrete slabs over below ground spaces, planter boxes and tanking generally. It relies on AS 4654.1 (2012) and AS 4654.2 (2012). It does not include concrete admixtures, penetrating sealers or decorative coatings.
	<b>0411p FOSROC waterproofing – external and tanking</b>
	<b>0411p SOPREMA waterproofing – external and tanking</b>
<b>0421 Roofing – combined</b>	This worksection <i>Template</i> is applicable to the provision of roof coverings of profiled sheet metal, tiles, shingle, shake, slate, glass, plastic sheets and roof plumbing. It also covers skylights, roof hatches, roof windows, roof ventilators and roof access.
<b>0423 Roofing – profiled sheet metal</b>	This worksection <i>Template</i> is applicable to the provision of roof coverings of profiled sheet metal and roof plumbing. It also covers skylights, roof hatches, roof windows, roof ventilators and roof plant access.
	<b>0423p COLORBOND® steel and ZINCALUME® steel in roofing</b>
	<b>0423p FIELDERS roofing – profiled sheet metal</b>
	<b>0423p LYSAGHT roofing – profiled sheet metal</b>
	<b>0423p STRAMIT roofing – profiled sheet metal</b>
<b>0424 Roofing – seamed sheet metal</b>	This worksection <i>Template</i> is applicable to the provision of roof coverings of seamed sheet metal and roof plumbing. It also covers skylights, roof hatches, roof windows, roof ventilators and roof access.
	<b>0424p FIELDERS roofing – specialised sheet metal</b>
<b>0425 Roofing – shingles and shakes</b>	This worksection <i>Template</i> is applicable to the provision of roof coverings of timber shingles and shakes and roof plumbing. It also covers skylights, roof hatches, roof windows, roof ventilators and roof plant access.
<b>0426 Roofing – slate</b>	This worksection <i>Template</i> is applicable to the provision of slate roof coverings and roof plumbing. It also covers skylights, roof hatches, roof windows, roof ventilators and roof plant access.
<b>0427 Roofing – tiles</b>	This worksection <i>Template</i> is applicable to the provision of roof coverings of cement, terracotta or pressed sheet metal roofing tiles and roof plumbing. It also covers skylights, roof hatches, roof windows, roof ventilators and roof plant access.

<b>0428 Roofing – insulated panel systems</b>	<p>This worksection <i>Template</i> is applicable to insulated panel roofing systems comprising manufactured structural panels with prefinished metal faces-bonded to each side of an insulating core of expanded polystyrene (EPS), polyisocyanurate (PIR) or mineral (MRF), and roof plumbing. It also covers skylights, roof hatches, roof windows, roof ventilators and roof access.</p> <p><b>0428p ASKIN® VOLCORE performance panel roofing</b></p> <p><b>0428p ASKIN® XFLAM roofing system</b></p> <p><b>0428p DELTA PANELS insulated roofing systems</b></p> <p><b>0428p KINGSPAN INSULATED PANELS roofing systems</b></p>
<b>0429 Roofing – glazed</b>	<p>This worksection <i>Template</i> is applicable to glass and plastic sheet roofing and roof plumbing. It also covers roof access hatches, roof ventilators and roof access.</p> <p>It is not applicable to the supporting structure and framing. It is not intended to apply to proprietary structures and systems, which are covered by the manufacturers details, specification and certification.</p> <p><b>0429p DANPALON roofing – glazed</b></p> <p><b>0429p PALRAM roofing – glazed</b></p>
<b>0431 Cladding – combined</b>	<p>This worksection <i>Template</i> is applicable to lightweight external wall cladding for work of a scale or size which does not warrant the use of separate worksections for each selected cladding type. It combines relevant clauses from <i>0434 Cladding – flat sheets and panels</i>, <i>0435 Cladding – planks and weatherboards</i>, <i>0436 Cladding – profiled and seamed sheet metal</i> and <i>0437 Cladding – insulated panel systems</i>.</p> <p><b>0431p STRAMIT in cladding – combined</b></p>
<b>0432 Curtain walls</b>	<p>This worksection <i>Template</i> is applicable to windows and window-and-spandrel assemblies custom-designed to form part, or the whole, of a building facade. It contains detailed performance and testing requirements and has extensive quality control provisions. Contractor design is expected.</p>
<b>0433 Stone cladding</b>	<p>This worksection <i>Template</i> is applicable to mechanically fixed natural stone or cast stone cladding panels in external or internal applications.</p>
<b>0434 Cladding – flat sheets and panels</b>	<p>This worksection <i>Template</i> is applicable to lightweight external wall cladding and facing of autoclaved aerated concrete (AAC) panels, composite panels, compressed fibre cement (CFC) sheets, proprietary exterior insulation and finish systems (EIFS), fibre cement (FC) sheets, plastic or plywood flat sheets and terracotta cladding systems.</p> <p><b>0434p DANPALON translucent facade cladding</b></p> <p><b>0434p PALRAM translucent facade cladding</b></p>
<b>0435 Cladding – planks and weatherboards</b>	<p>This worksection <i>Template</i> is applicable to lightweight external wall cladding including hardboard and fibre cement planks, and aluminium and timber weatherboards.</p>
<b>0436 Cladding – profiled and seamed sheet metal</b>	<p>This worksection <i>Template</i> is applicable to lightweight external wall cladding of profiled and seamed sheet metal products.</p> <p><b>0436p COLORBOND® steel and ZINCALUME® steel in cladding</b></p> <p><b>0436p FIELDERS cladding – profiled sheet metal</b></p> <p><b>0436p LYSAGHT cladding – profiled sheet metal</b></p>
<b>0437 Cladding – insulated panel systems</b>	<p>This worksection <i>Template</i> is applicable to lightweight external wall cladding and facade systems comprising prefinished composite panels with metal skins factory-bonded to an insulating core of expanded polystyrene (EPS), polyisocyanurate (PIR) or mineral fibre (MRF).</p> <p><b>0437p ASKIN® VOLCORE performance panel cladding</b></p> <p><b>0437p ASKIN® XFLAM performance panel cladding</b></p> <p><b>0437p DELTA PANELS insulated cladding systems</b></p> <p><b>0437p FIELDERS wall cladding - specialised panels</b></p>

<b>0451 Windows and glazed doors</b>	<p><b>0437p KINGSPAN INSULATED PANELS cladding systems</b></p> <p>This worksection <i>Template</i> is applicable to windows and glazed doors consisting of proprietary lines (or suites) of manufactured products, supplied as complete systems, fabricated and assembled to the standard designs of specialist firms in documented materials such as aluminium, steel, timber and plastics. It includes glazing, hardware and associated integral blinds, louvres, and grilles as well as installation accessories such as fasteners, flashings, sealants and seals, caulking and weatherstripping, necessary for the satisfactory functioning of the whole system.</p>
	<p><b>0451p ALSPEC aluminium windows and doors</b></p>
	<p><b>0451p AWS aluminium windows and doors</b></p>
	<p><b>0451p CAPRAL ALUMINIUM windows and doors</b></p>
<b>0453 Doors and access panels</b>	<p>This worksection <i>Template</i> is applicable to conventional door frames of metal and timber with flush panel and joinery doors of timber and various timber and plastic products. This worksection only covers some key generic requirements as the range of available products, performance requirements and design choices is so wide.</p>
	<p><b>0453p CS Cavity Sliders in doors and access panels</b></p>
	<p><b>0453p RONDO in doors and access panels</b></p>
<b>0454 Overhead doors</b>	<p>This worksection <i>Template</i> is applicable to sectional and rigid (tilting) overhead doors, and rolling curtain and shutter doors (including fire-resistant roller shutters) for residential, commercial and industrial applications. Manual and motorised operation are covered.</p>
	<p><b>0454p EZI-ROLL overhead doors</b></p>
	<p><b>0454p GRIFCO in overhead doors</b></p>
<b>0455 Door hardware</b>	<p>This worksection <i>Template</i> is applicable to hardware items such as hinges, keys, locks, latches, furniture and door controllers including automated devices and provides two alternative types of schedules for specifying these items – selection schedules and door-by-door schedules.</p>
	<p><b>0455p ASSA ABLOY door hardware</b></p>
<b>0456 Louvre windows</b>	<p>This worksection <i>Template</i> is applicable to louvre windows consisting of proprietary products, supplied as complete systems fabricated and assembled by specialist firms to their standard designs. It also includes ventilating louvre assemblies. Components include glass, metal, timber or plastic louvre blades, screens, security options and hardware, as well as installation accessories such as fasteners, flashings, sealants, joint sealing and weatherstripping, necessary for the satisfactory functioning of the whole system.</p>
	<p><b>0456p BREEZWAY louvre windows</b></p>
	<p><b>0456p CAPRAL VENTUS louvre windows</b></p>
	<p><b>0456p SAFETYLINE JALOUSIE louvre windows</b></p>
<b>0457 External screens</b>	<p>This worksection <i>Template</i> is applicable to external screens consisting of proprietary lines (or suites) of manufactured products, supplied as complete systems fabricated and assembled by specialist firms to their standard designs. It includes sunscreens, trafficable sunscreens, external louvres and blinds, shutters, awnings and pergolas fixed to building facades or openings to control sunlight and/or to provide privacy, to screen plant and equipment, or to provide an architectural feature. It applies to fixed, adjustable, operable and automatically controlled types.</p>

<b>0461 Glazing</b>	This worksection <i>Template</i> is applicable to glazing in framed openings to windows, doors and curtain walls based on AS 1288 (2021).
<b>0462 Structural silicone glazing</b>	<p>This worksection <i>Template</i> is applicable to the installation of glazing systems, including:</p> <ul style="list-style-type: none"> <li>• Glass assemblies in which the glass is adhered to the framing system with a structural sealant.</li> <li>• Framed, unframed and partly framed glass assemblies including faceted glazing and fin supported glazing.</li> <li>• Contractor design is expected.</li> </ul>
<b>0463 Glass blockwork</b>	This worksection <i>Template</i> is applicable to glass blockwork systems comprising hollow glass blocks in vertical, non load-bearing aluminium frames with reinforcement, and mortar or silicone joints. Fire-resistant systems are included.
<b>0466 Structural glass assemblies</b>	<p>This worksection <i>Template</i> is applicable to the design, supply and installation of structural glass assemblies including:</p> <ul style="list-style-type: none"> <li>• Glazed awnings and canopies.</li> <li>• Unframed and partly framed glass assemblies including faceted glazing, fin-supported glazing, patch plate jointed, unframed toughened glass assemblies suspended glazing, and point fixed glazing incorporating spider type glass fittings.</li> <li>• Suspended frameless glass assemblies with wind stiffening systems.</li> <li>• Contractor design is expected.</li> </ul>
<b>0467 Glass components</b>	This worksection <i>Template</i> is applicable to glass products such as shower screens, barriers, mirrors and sundry glass fixtures and fittings.
<b>0471 Thermal insulation and pliable membranes</b>	<p>This worksection <i>Template</i> is applicable to thermal insulation and pliable membranes for floors, walls, ceilings and roofs. It generally relies on AS 3999 (2015), AS 4200.1 (2017), AS 4200.2 (2017) and AS/NZS 4859.1 (2018). A pliable building membrane may be installed to act as a sarking membrane, vapour barrier, thermal insulation or any combination of the three. This worksection does not cover insulation for building services (e.g. for ductwork) or acoustic insulation.</p> <p><b>0471p AMETALIN in thermal insulation and pliable membranes</b></p> <p><b>0471p KINGSPAN in thermal insulation and pliable membranes</b></p>
<b>0472 Acoustic insulation</b>	<p>This worksection <i>Template</i> is applicable to acoustic insulation for floors, walls and ceilings against the transmission of airborne and impact generated sound. It includes bulk, board and flexible insulation and plenum baffles and other flanking sound insulation. This worksection does not cover acoustic insulation for building services (e.g. ductwork) or thermal insulation.</p> <p><b>0473p DCTech acoustic floor underlays</b></p> <p><b>0473p DRIBOND CONSTRUCTION CHEMICALS acoustic floor underlays</b></p> <p><b>0473p GETZNER VIBRATION SOLUTIONS acoustic floor mats</b></p> <p><b>0473p REGUPOL acoustic floor underlays</b></p>
<b>0511 Lining</b>	This worksection <i>Template</i> is applicable to the installation of internal lining systems permanently fixed to walls and ceilings. It deals with internal dry linings of timber boards, gypsum plasterboard and cellulose fibre reinforced cement.

<b>0520 Partitions - combined</b>	<p>This worksection <i>Template</i> is applicable to the following internal partitions:</p> <ul style="list-style-type: none"> <li>• Proprietary demountable partition systems.</li> <li>• Framed and lined partitions consisting of lightweight steel or timber framing and plasterboard or fibre cement lining; and with autoclaved aerated concrete (AAC) panels.</li> </ul> <p>Internal non-load bearing framed and frameless glass partitions and glazed doors.</p>
<b>0521 Partitions – demountable</b>	This worksection <i>Template</i> is applicable to proprietary demountable partition systems.
<b>0522 Partitions – framed and lined</b>	This worksection <i>Template</i> is applicable to internal framed and lined partitions consisting of lightweight steel or timber framing and plasterboard or fibre cement lining; and with autoclaved aerated concrete (AAC) panels.
<b>0522p RONDO in partitions – framed and lined</b>	
<b>0523 Partitions – brick and block</b>	This worksection <i>Template</i> is applicable to internal non-load bearing brick and block construction of a simple nature associated with interior fitout works.
<b>0524 Partitions – glazed</b>	This worksection <i>Template</i> is applicable to internal non-load bearing framed and frameless glass partitions, and glazed doors.
<b>0524p CSR HIMMEL in partitions – glazed</b>	
<b>0525 Cubicle systems</b>	This worksection <i>Template</i> is applicable to partitioned cubicles for toilets and showers. The material can be adapted for changing areas and various decontamination cubicles such as air showers.
<b>0526 Terrazzo precast</b>	This worksection <i>Template</i> is applicable to precast units and assemblies including toilet and shower cubicle partitions, stair units, joinery units, door thresholds and window sills.
<b>0527 Room dividers</b>	This worksection <i>Template</i> is applicable to operable walls, folding doors and accordion doors.
<b>0531 Suspended ceilings – combined</b>	This worksection <i>Template</i> is applicable to internal ceilings and external soffits comprising sheet linings or proprietary ceiling units supported by a suspension system fixed to a supporting structure.
<b>0531p RONDO in suspended ceilings – combined</b>	
<b>0532 Suspended ceilings – flush lined</b>	This worksection <i>Template</i> is applicable to internal ceilings and external soffits comprising sheet lining supported by a suspension systems fixed to a supporting structure.
<b>0533 Suspended ceilings – ceiling units</b>	This worksection <i>Template</i> is applicable to internal ceilings and external soffits comprising proprietary ceiling units supported by a suspension system fixed to a supporting structure.
<b>0541 Access floors</b>	This worksection <i>Template</i> is applicable to pedestal access floor systems.
<b>0551 Joinery</b>	This worksection <i>Template</i> is applicable to the shop fabrication and site installation of custom made joinery fixtures and trim to walls and openings. It deals with all types of joinery including domestic, laboratory and healthcare joinery fixtures.
<b>0552 Metalwork - fabricated</b>	This worksection <i>Template</i> is applicable to what is generally known as custom built architectural metalwork such as stairs, ladders, walkways, balustrades, handrails, screens, grilles, guards, bollards, furniture, and decorative items.
<b>0553 Stainless steel benching</b>	This worksection <i>Template</i> is applicable to stainless steel benches and associated fitments usually for commercial applications such as kitchens, laboratories and hospitals.
<b>0554p MODDEX steel handrails, guardrails, balustrades and other barriers</b>	
<b>0571 Workstations</b>	This worksection <i>Template</i> is applicable to the supply and installation of office workstations.



<b>0572 Miscellaneous furniture</b>	This worksection <i>Template</i> is applicable to the supply and installation of loose furniture and fixed items that can be retrofitted.
<b>0573 Fire extinguishers and blankets</b>	This worksection <i>Template</i> is applicable to portable fire extinguishers and fire blankets.
<b>0574 Window coverings</b>	This worksection <i>Template</i> is applicable to window coverings for interior use, comprising curtains, blinds and shutters manual and power operated.
<b>0575 Tapestries</b>	This worksection <i>Template</i> is applicable to wall-hung tapestries woven using the Gobelin method (a traditional weft faced technique). It was developed in conjunction with the Australian Tapestry Workshop (ATW, formerly the Victorian Tapestry Workshop) <a href="http://austapestry.com.au">austapestry.com.au</a> . There is no standard specifically for tapestries.
<b>0581 Signage</b>	This worksection <i>Template</i> is applicable to house signage, display signs, tactile wayfinding signs and statutory signs. Signage for services usually provided by services subcontractors can be dealt with in the appropriate technical worksection and coordinated with this worksection.
<b>0611 Rendering and plastering</b>	This worksection <i>Template</i> is applicable to traditional wet plastering and rendering, though proprietary and special systems may feature in the project specifications and drawings. It includes ornamental plaster, work on lath, and on panelling of various materials. There is no relevant standard in Australia.
<b>0612 Cementitious toppings</b>	This worksection <i>Template</i> is applicable to cement-based toppings on concrete floors, ramps and steps. There is no applicable standard in Australia.
<b>0613 Terrazzo in situ</b>	This worksection <i>Template</i> is applicable to in situ cement matrix terrazzo flooring. There is no relevant standard.
<b>0621 Waterproofing – wet areas</b>	This worksection <i>Template</i> is applicable to liquid applied and single sheet membrane waterproof membrane applications to wet areas. It is written with reference to AS 3740 (2021) and AS/NZS 4858 (2004).
	<b>0621p DRIBOND CONSTRUCTION CHEMICALS waterproofing – wet areas</b>
	<b>0621p FOSROC waterproofing – wet areas</b>
<b>0631 Ceramic tiling</b>	This worksection <i>Template</i> is applicable to floor and wall ceramic tiling. Tiles may be specified by manufacturer's brand name or by generic type, and essential characteristics such as size, colour, surface, edge type. Bedding, grouting, fixing and jointing requirements should also be specified.
	<b>0631p DRIBOND CONSTRUCTION CHEMICALS in ceramic tiling</b>
<b>0632 Stone and terrazzo tiling</b>	This worksection <i>Template</i> is applicable to stone tiling, industrial cast stone tiling, terrazzo tiling (cementitious and resinous) and manufactured cementitious tiling on various substrates. This worksection is based on the AS 3958 series, however, for stone and cast stone wall tiling additional information can be found in BS 5385-1 (2018). For heavy stone wall tiling consider using worksection <i>0433 Stone cladding</i> .
<b>0641 Applied wall finishes</b>	This worksection <i>Template</i> is applicable to interior decorative wall finishes consisting of timber, laminate, glass, fabric panels or other proprietary panels fixed using wet methods (adhesive/mortar fixed) or dry methods (framed/mechanical systems). It also includes decorative acoustic wall panels.
<b>0642 Wallcoverings</b>	This worksection <i>Template</i> is applicable to decorative interior wallcoverings and their installation including wallpapers, vinyl, textile, woven glass fibre and flexible timber wallcoverings.
<b>0651 Resilient finishes</b>	This worksection <i>Template</i> is applicable to resilient sheet, tile and plank finishes with associated underlay including cork tiles, corklinoleum, linoleum, rubber, polyvinyl chloride (PVC) and static control flooring. It also includes synthetic sporting surfaces (not in the basic version).
	<b>0651p FORBO in resilient finishes</b>

<b>0651p REGUPOL in resilient finishes</b>	
<b>0652 Carpets</b>	This worksection <i>Template</i> is applicable to textile floor coverings (carpets) including carpet rolls, sheets and tiles with underlays, grippers and adhesives for commercial and residential applications.
<b>0652p FLOTEX carpets</b>	
<b>0654 Multilayered board flooring</b>	This worksection <i>Template</i> is applicable to floating and adhesive fixed multilayered board flooring systems. It includes engineered, laminate, bamboo and hybrid flooring. It assumes the provision of a supporting subfloor or structure.
<b>0655 Timber flooring</b>	This worksection <i>Template</i> is applicable to intermittently and continuously supported solid timber strip flooring, adhesive fixed timber block parquet and mosaic parquet flooring products and associated subfloors. It assumes the provision of a supporting structure. There is no reference standard.
<b>0656 Floor sanding and finishing</b>	This worksection <i>Template</i> is applicable to basic floor sanding of timber substrates for other finishes, basic floor sanding as the first stage preparation for clear coating systems, finish sanding for clear coating systems and the selection and application of clear coating systems.
<b>0657 Resin based seamless flooring</b>	This worksection <i>Template</i> is applicable to resin based flooring including epoxy, polyurethane and methacrylate resins. It also includes in situ resinous terrazzo flooring.
<b>0657p FOSROC resin based seamless flooring</b>	
<b>0671 Painting</b>	This worksection <i>Template</i> is applicable to the in situ application of coating systems, including opaque paint and clear finishes to exterior and interior building elements. The primary referenced standard is AS/NZS 2311 (2017), a guide to products and procedures for the painting of buildings for domestic, commercial and industrial use.
<b>0671p DULUX painting</b>	
<b>0671p HAYMES paint</b>	
<b>0671p RESENE painting</b>	
<b>0671p TAUBMANS painting</b>	
<b>0671p WATTYL painting</b>	
<b>0672 Textured and membrane coatings</b>	This worksection <i>Template</i> is applicable to the in situ application of latex extensible (membrane) coating and textured surface coating systems to buildings and interior elements. The primary referenced standard is AS/NZS 2311 (2017), a guide to products and procedures for the painting of buildings for domestic, commercial and industrial use.
<b>0673 Powder coatings</b>	This worksection <i>Template</i> is applicable to the off-site application of thermoset powder coating systems for architectural applications, and to exterior and interior buildings elements. The primary referenced standards are AS 3715 (2002), AAMA 2603 (2022), AAMA 2604 (2022) and AAMA 2605 (2022) for aluminium and aluminium alloy substrates and AS 4506 (2005) for metal substrates, other than aluminium.
<b>0701 Mechanical systems</b>	This worksection <i>Template</i> covers mechanical services systems, performance requirements and standards. It includes a summary of the systems, design parameters relating to the mechanical systems and details common to more than one mechanical worksection.
<b>0702 Mechanical design and install</b>	This worksection <i>Template</i> is applicable to simple mechanical installations that are to be designed and installed by the contractor.
<b>0711 Chillers – combined</b>	This worksection <i>Template</i> is applicable to factory assembled proprietary electric motor driven reciprocating, centrifugal, screw and scroll chiller sets including air cooled and water cooled, conventional and heat recovery types.

<b>0712 Water heating boilers</b>	This worksection <i>Template</i> is applicable to gas-fired boilers that heat water to a temperature less than its normal atmospheric boiling temperature. Water heating boilers are used in space heating systems, indirect heated drinking water and similar applications.
<b>0713 Cooling towers</b>	This worksection <i>Template</i> is applicable to cooling towers normally used in commercial buildings. It is not intended for large specialised towers for heavy industrial plant. Closed circuit fluid coolers, hybrid coolers and evaporative condensers are included in this worksection and fall within the meaning of cooling tower as defined in AS/NZS 3666.1 (2011).
<b>0713p EVAPCO cooling towers</b>	
<b>0714 Mechanical pumps</b>	This worksection <i>Template</i> is applicable to end-suction centrifugal, inline circulating and submersible pumps.
<b>0715 Mechanical services tanks, vessels and heat exchangers</b>	This worksection <i>Template</i> is applicable to pressurised vessels and non-pressurised tanks and water to water plate heat exchangers. It includes head tanks (open and closed), water storage tanks for chilled and heating water, calorifiers and ice tanks.
<b>0716 Chillers – centrifugal</b>	This worksection <i>Template</i> is applicable to factory assembled proprietary electric motor driven water cooled centrifugal chiller sets.
<b>0717 Chillers – water cooled screw</b>	This worksection <i>Template</i> is applicable to factory assembled proprietary electric motor driven water cooled chiller sets with screw compressors.
<b>0718 Chillers – air cooled screw and scroll</b>	This worksection <i>Template</i> is applicable to factory assembled proprietary electric motor driven air cooled chiller sets with screw or scroll compressors.
<b>0719 Chillers – absorption</b>	This worksection <i>Template</i> is applicable to factory assembled proprietary single stage and two stage, water cooled, lithium bromide absorption chillers. This worksection is oriented to absorption chillers as part of systems that typically use relatively low temperature hot water as a heat source.
<b>0721 Packaged air conditioning</b>	This worksection <i>Template</i> is applicable to one piece and split, direct expansion (DX) packaged air conditioning plant with nominal cooling capacities greater than 8 kW <sub>r</sub> . It includes air cooled and water cooled types, and variable refrigerant flow (VRF) systems. It also includes DX and chilled water close control packaged plant.
<b>0722 Room air conditioners</b>	This worksection <i>Template</i> is applicable to one piece and split direct expansion (DX), air cooled room air conditioning plant providing cooling only or with reverse cycle heating and with nominal cooling capacities less than 8 kW <sub>r</sub> .
<b>0723 Evaporative air coolers</b>	This worksection <i>Template</i> is applicable to proprietary, non-refrigerated evaporative air coolers intended for ducted and free discharge applications.
<b>0724 Air handling plant – combined</b>	This worksection <i>Template</i> is applicable to all types of air handling plant from small room fan coil units to large built-up air handlers. It deals with proprietary air handling plant, site erected air handling units and site erected plenums associated with proprietary air handling plant. It also includes air to air heat exchangers and desiccant dehumidifiers.
<b>0725 Air handling plant – built-up</b>	This worksection <i>Template</i> is applicable to site erected air handling units and site erected plenums.
<b>0726 Air handling plant – minor</b>	This worksection <i>Template</i> is applicable to small room fan coil units.
<b>0727 Air handling plant – packaged</b>	This worksection <i>Template</i> is applicable to proprietary factory assembled air handling plant and includes site erected plenums associated with these.

<b>0731 Fans</b>	This worksection <i>Template</i> is applicable to centrifugal, axial flow, mixed flow and propeller fans, roof mounted fans and window/wall mounted fans of the type commonly used in air conditioning and ventilation systems. It also includes impulse type car park ventilation fans and non-powered roof cowls.
<b>0732 Air filters</b>	This worksection <i>Template</i> is applicable to air filters commonly used in mechanical systems. It includes dry media dust filters (including HEPA and electrostatic), grease filters and gas phase absorbers (e.g. activated carbon).
<b>0733 Air coils</b>	This worksection <i>Template</i> is applicable to coils used in heating and cooling systems and includes water, steam and refrigerant coils.
<b>0734 Humidifiers</b>	This worksection <i>Template</i> is applicable to proprietary self-generating electric humidifiers that operate at atmospheric pressure. It may also be applied to humidifiers in packaged computer room air conditioning units. It does not apply to humidifiers that use steam from a boiler as defined in AS 1228 (2016).
<b>0736 Space heating</b>	This worksection <i>Template</i> is applicable to space heating equipment including direct and indirect gas-fired duct heaters, electric and hot water floor heating, electric and hot water skirting convectors, electric unit heaters, fan assisted convectors, gas-fired radiant tube heaters, hot water panel radiators and infra-red panel heaters.
<b>0737p ESCEA fireplaces</b>	
<b>0741 Ductwork</b>	This worksection <i>Template</i> is applicable to sheet metal ductwork and exhaust hoods fabricated from galvanized steel, stainless steel and aluminium. It also covers flexible ducts and rigid ductwork fabricated from composite panels and PVC-U. It includes ductwork ancillaries such as dampers and fabricated kitchen and other exhaust hoods. The reference standards are AS 4254.1 (2021) (flexible duct) and AS 4254.2 (2012) (rigid duct).
<b>0744 Ductwork insulation</b>	This worksection <i>Template</i> is applicable to acoustic and thermal insulation and sheathing of ductwork. Insulating materials include glass wool, rock wool, polyester fibre, polyolefin foam and elastomeric foam. Facing materials include aluminium foil laminate and sheet metal. The worksection references AS 4254.1 (2021) and AS 4254.2 (2012).
<b>0745 Attenuators and acoustic louvres</b>	This worksection <i>Template</i> is applicable to duct mounted sound attenuators, wall mounted acoustic louvres and cross-talk attenuators.
<b>0746 Air grilles</b>	This worksection <i>Template</i> is applicable to fixed and adjustable air grilles, used in air conditioning and ventilation systems. The term air grille is used generically and includes diffusers, registers and weatherproof (exterior) louvres. The reference standard is AS 4254.2 (2012).
<b>0747 Variable air volume terminals</b>	This worksection <i>Template</i> is applicable to variable air volume (VAV) terminals (also called VAV boxes). It covers series and parallel fan assisted types and non-fan, pressure independent terminals and terminals with electric or hot water heating. Induction units are also included.
<b>0748 Chilled beams</b>	This worksection <i>Template</i> is applicable to chilled beam terminals. It covers active and passive type terminals.

<b>0751 Mechanical piping</b>	<p>This worksection <i>Template</i> is applicable to piping, valves, fittings and accessories commonly used for mechanical systems including chilled, condenser and heating water, steam, condensate, and liquid fuels. It covers piping in a variety of materials including steel, copper and plastic, and includes valves, fittings, supports, and accessories. The worksection also covers strainers and isolating, non-return, throttling, level control, pressure relief, air relief, and pressure-reducing valves. It does not include thermostatic, solenoid, motorised modulating, or refrigerant valves.</p> <p>This worksection relies on the mandatory standard, AS 4041 (2006). Additional information relevant to building services piping may be found in ASME B31.9 (2020). AS 4041 (2006) clause 1.6 permits ASME B31.9 (2020) to be used as an alternative standard.</p>
<b>0752 Mechanical piping insulation</b>	<p>This worksection <i>Template</i> is applicable to the insulation and sheathing of piping, tanks, vessels and flues. It covers a variety of materials including bio-soluble glass wool and rock wool, polyester, polyolefin, polystyrene foam and elastomeric foam.</p>
<b>0753 Water treatment</b>	<p>This worksection <i>Template</i> is applicable to water treatment for open and closed water systems and is intended for use in conjunction with AS/NZS 3666.1 (2011). Cathodic protection for condenser water systems by impressed current and sacrificial anodes are also included.</p>
<b>0754 Liquid fuels</b>	<p>This worksection <i>Template</i> is applicable to fuel oil systems and includes storage tanks, pumps, piping, valves and accessories. The reference standard is AS 1940 (2017).</p>
<b>0755 Medical gas systems</b>	<p>This worksection <i>Template</i> covers non-flammable medical gas systems including medical air, medical suction, oxygen, nitrous oxide, surgical tool gas and carbon dioxide. The reference standard is AS 2896 (2021). There are many instances where AS 2896 (2021) includes recommendations that are not Normative (e.g. expressed as should rather than shall), this worksection includes text to mandate these instances.</p>
<b>0761 Refrigeration</b>	<p>This worksection <i>Template</i> is applicable to built-up refrigeration systems. It is intended for use in conjunction with AS/NZS ISO 817 (2016), AS/NZS 5149.1 (2016), AS/NZS 5149.2 (2016), AS/NZS 5149.3 (2016) and AS/NZS 5149.4 (2016). It covers refrigeration equipment and components including piping, accessories, evaporators, condensers and compressors.</p>
<b>0762 Cool rooms</b>	<p>This worksection <i>Template</i> is applicable to refrigerated cool rooms with a room operating temperature below 5°C, including those operating below freezing. It is intended for small to medium walk-in cool rooms up to 20 m<sup>2</sup> floor area and includes the construction of the room and its associated refrigeration system and controls.</p>
	<b>0762p ASKIN® XFLAM performance panels in cool rooms</b>
	<b>0762p DELTA PANELS in cool rooms</b>
	<b>0762p KINGSPAN INSULATED PANELS in cool rooms</b>
<b>0771 Automatic controls</b>	<p>This worksection <i>Template</i> is applicable to large automatic control systems for mechanical services and includes hardware, software and cabling material. If used in conjunction with <i>0773 Building management systems</i> and related worksections, it can provide a complete building management system (BMS) for building management, monitoring and control.</p>
<b>0772 Automatic controls - minor</b>	<p>This worksection <i>Template</i> is applicable to small stand-alone (e.g. not part of a building management system) automatic control systems for mechanical services. Typical applications are packaged unit air conditioning installations, simple ventilations systems and fan coil unit extensions to existing chilled and heating water systems.</p>



<b>0773 Building management systems</b>	This worksection <i>Template</i> is applicable to Building Management Systems (BMS), which provide the facility to monitor, control and manage building services systems that may include mechanical services, power systems, lighting, fire detection and alarms, electronic security, hydraulic services, lifts and medical gas services. BMS operates through a system of discrete stand-alone controllers that are networked together using a common, open, communications protocol.
<b>0781 Mechanical electrical</b>	This worksection <i>Template</i> is applicable to electrical work associated with medium to large mechanical projects where the specification and selections will be prepared by a mechanical engineer.
<b>0782 Mechanical electrical - minor</b>	This worksection <i>Template</i> is applicable to the electrical work associated with minor mechanical projects using packaged plant and smaller ventilation systems. It is a simplified design and install type specification without selection schedules.
<b>0784 Motors and starters</b>	This worksection <i>Template</i> is applicable to alternating current electric motors, their starters and associated motor protection equipment. It includes a range of starter types including direct-on-line, star delta, semiconductor and variable speed drives.
<b>0791 Mechanical commissioning</b>	This worksection <i>Template</i> is applicable to testing, balancing and commissioning of mechanical services including control systems.
<b>0792 Mechanical maintenance</b>	This worksection <i>Template</i> is applicable to periodic preventative and statutory maintenance, and emergency repairs of mechanical services systems during the maintenance period including plant, distribution systems, automatic controls and mechanical electrical installations. It can also be used to document requirements for maintenance contracts for existing buildings. It relies on there being an operation and maintenance manual for the building.
<b>0801 Hydraulic systems</b>	This worksection <i>Template</i> covers hydraulic services systems, performance requirements and standards. It includes a summary of the systems, design parameters relating to the hydraulic systems and details common to more than one hydraulic worksection.
<b>0802 Hydraulic design and install</b>	This worksection <i>Template</i> is applicable to simple hydraulic service installations that are to be designed and installed by the contractor.
<b>0811 Sanitary fixtures</b>	This worksection <i>Template</i> is applicable to the selection and installation of sanitary fixtures.
<b>0812 Tapware</b>	This worksection <i>Template</i> is applicable to taps and tapware and includes related fittings such as towel rails and grab rails.
<b>0813 Water heaters</b>	This worksection <i>Template</i> is applicable to instantaneous and storage type water heaters and covers electric, gas, solar (with gas or electric boost) and heat pump types. The reference standards are the AS/NZS 3500 series, which are cited in the PCA (2022).
<b>0814 Hydraulic pumps</b>	This worksection <i>Template</i> is applicable to pumps used in hot and cold water services and stormwater. The pumps in this worksection are all close-coupled type (i.e. they have no pump bearings). For direct-coupled pumps refer to <i>0714 Mechanical pumps</i> .
<b>0815 Drinking water dispensers</b>	This worksection <i>Template</i> is applicable to boiling, chilled and filtered water dispenser systems and drinking fountains.
<b>0816 Hydraulic services tanks</b>	This worksection <i>Template</i> is applicable to tanks used in hydraulic services. It covers non-pressurised rigid polyethylene, bladder, metallic-coated steel and concrete tanks for above ground and underground installation.
<b>0821 Stormwater – buildings</b>	This worksection <i>Template</i> is applicable to stormwater systems related to buildings including internal stormwater piping for roof water and simple external systems. For stormwater drainage associated with pavements and other non-building projects normally designed by a civil engineer, use <i>0224 Stormwater – site</i> .

<b>0822 Wastewater</b>	This worksection <i>Template</i> is applicable to sanitary plumbing (above ground) and sanitary drainage (below ground) for a range of applications including laboratories. On-site treatment is limited to septic tanks.
<b>0823 Cold and heated water</b>	This worksection <i>Template</i> is applicable to cold and heated (hot and warm) drinking water services including water for human consumption, food preparation, utensil washing and oral hygiene. It is also applicable in certain circumstances to non-drinking water services.
<b>0824 Fuel gas</b>	This worksection <i>Template</i> is applicable to installations for natural gas and other fuel gases such as liquid petroleum gas (LPG), tempered liquid petroleum gas (TLP) and simulated natural gas (SNG). The worksection does not cover installation and selection of appliances. The reference standard for this worksection is AS/NZS 5601.1 (2022). Liquefied natural gas (LNG) facilities are outside the scope of this worksection.
<b>0825 Rainwater storage systems</b>	This worksection <i>Template</i> is applicable to rainwater storage systems and ancillaries.
<b>0826 Greywater systems</b>	This worksection <i>Template</i> is applicable to systems and ancillaries for greywater (water from hand basins, showers, washing machines and the like not containing human excrement). The worksection covers both untreated (greywater diversion systems) and treated greywater systems.
<b>0882 Hydraulic electrical - minor</b>	This worksection <i>Template</i> is applicable to the electrical work associated with minor hydraulic projects. It is a simplified design and install type specification without selection schedules.
<b>0891 Hydraulic maintenance</b>	This worksection <i>Template</i> is applicable to periodic and statutory maintenance and emergency repairs of hydraulic plant and reticulation systems during the defects liability period. It can also be used to document requirements for maintenance contracts for existing buildings. It relies on there being an operation and maintenance manual for the building.
<b>0901 Electrical systems</b>	This worksection <i>Template</i> covers electrical services systems, performance requirements and standards. It includes a summary of the systems, design parameters relating to the electrical systems and details, common to more than one electrical worksection.
<b>0902 Electrical design and install</b>	This worksection <i>Template</i> is applicable to simple electrical service installations that are to be designed and installed by the contractor.
<b>0911 Cable support and duct systems</b>	This worksection <i>Template</i> is applicable to cable support and duct systems that are common to a number of worksections such as <i>0921 Low voltage power systems</i> and <i>0961 Information and communications technology (ICT) systems</i> . These include metallic and non-metallic conduits, cable trays and ladders. This worksection includes systems for use both within buildings and externally.
<b>0921 Low voltage power systems</b>	This worksection <i>Template</i> is applicable to the provision of low voltage power systems, associated low voltage power cables and conductors, and connected outlets and accessories.
<b>0931 Power generation – engine driven</b>	This worksection <i>Template</i> is applicable to the provision of proprietary packaged generating sets powered by reciprocating diesel or gas engines, and includes controls and ancillary equipment. They may be self-contained, enclosed external units, or installed singly or in groups inside a building.
<b>0933 Power generation – photovoltaic</b>	This worksection <i>Template</i> is applicable to the provision of photovoltaic generating systems incorporating storage batteries, inverter, protection, controls and ancillary equipment. It may be used for grid connected or stand-alone systems.
<b>0937 Uninterruptible power supply</b>	This worksection <i>Template</i> is applicable to battery driven, static uninterruptible power supplies (UPSs) designed to provide an instantaneous, short-term 50 Hz power supply in the event of interruption to the normal power supply. It is not intended for direct grid connection.

<b>0941 Switchboards – proprietary</b>	This worksection <i>Template</i> is applicable to proprietary, off-the-shelf low voltage distribution switchboards using standard proprietary components and relies on AS/NZS 3000 (2018) and the AS/NZS 61439 series. It should be used in conjunction with <i>0943 Switchboard components</i> .
<b>0942 Switchboards – custom-built</b>	This worksection <i>Template</i> is applicable to custom-built, low voltage switchboards. It should be used in conjunction with <i>0943 Switchboard components</i> . This worksection provides a brief specification for the design, manufacture, installation and testing of low voltage custom-built switchboards. It relies on AS/NZS 3000 (2018) and the AS/NZS 61439 series, as well as individual standards related to various components.
<b>0943 Switchboard components</b>	This worksection <i>Template</i> is applicable to protective and control devices and for the selection of switchboard components.
<b>0947 Power factor correction</b>	This worksection <i>Template</i> is applicable to microprocessor controlled power factor correction equipment.
<b>0951 Lighting</b>	This worksection <i>Template</i> is applicable to the components of the lighting system and includes proprietary (and refurbished proprietary) luminaires, lighting control systems and wiring requirements.
<b>0961 Information and communications technology (ICT) systems</b>	This worksection <i>Template</i> is applicable to the provision of a telecommunications cabling network and IT components in commercial (non-industrial) buildings and relies on the technical standards AS/CA S008 (2020) and AS/CA S009 (2020). This worksection supplements these standards and provides a general specification for a complete telecommunications block cabling and facility wiring system, including connection frames.
<b>0962 Television distribution systems</b>	This worksection <i>Template</i> is applicable to the provision of RF digital television and sound system distribution systems and relies on AS/NZS 1367 (2016). It is also applicable to in-house analog television signals. The worksection is intended to supplement this standard and provide a general specification for commercial quality systems that would be installed in residential and commercial buildings. This includes the reception of broadcast band FM radio signals, digital free-to-air television, and cable and satellite television broadcasts.
<b>0963 Sound systems</b>	This worksection <i>Template</i> is applicable to systems used for medium quality sound reinforcement for public address across campuses and sites and in simple halls and lecture theatres. It also includes the Deemed-to-Satisfy provisions to comply with the NCC requirements for systems for people with hearing impairment.
<b>0971 Emergency evacuation lighting</b>	This worksection <i>Template</i> is applicable to the provision of emergency evacuation lighting and exit signs in buildings. It relies on the AS/NZS 2293 series. It is expected that the emergency lighting system has been designed and luminaires selected that meet the project requirements for lighting performance and electrical characteristics.
<b>0979 Lightning protection</b>	This worksection <i>Template</i> is applicable to the provision of lightning protection systems to achieve a tolerable level of risk for buildings. It includes protection of the structure, earthing systems and surge protection systems. It relies on AS 1768 (2021) and assumes a system is required, following an assessment of risk or regardless of any risk assessment, when there is a directive to eliminate avoidable risk by installing a lightning protection system.

<b>0981 Electronic security</b>	This worksection <i>Template</i> is applicable to the provision of access control and security alarm systems in buildings. It relies generally on the AS 2201 series, and includes local alarm systems, centrally monitored systems, access control systems and closed circuit television (CCTV). The worksection is intended to supplement the standard and to cover general commercial grade systems, of the sort likely to be installed in office buildings, residential apartments, hospitals, nursing homes and similar buildings. The worksection can also be used for institutional projects such as schools and technical colleges by the inclusion of appropriate details in the project specification.
<b>0991 Electrical maintenance</b>	This worksection <i>Template</i> is applicable to periodic and statutory maintenance and emergency repairs of electrical services systems, during the defects liability period. It can also be used to document requirements for maintenance contracts for existing buildings. It relies on there being an operation and maintenance manual for the building.
<b>1001 Fire services systems</b>	This worksection <i>Template</i> covers fire services systems, performance requirements and standards. It includes a summary of the systems, design parameters relating to the fire services systems and details common to more than one fire services worksection.
<b>1002 Fire services design and install</b>	This worksection <i>Template</i> is applicable to simple fire service installations that are to be designed and installed by the contractor.
<b>1014 Fire services pumps</b>	This worksection <i>Template</i> is applicable to pumps used in fire services systems. The pumps in this worksection are all close-coupled type (i.e. they have no pump bearings). For direct-coupled pumps refer to <i>0714 Mechanical pumps</i> .
<b>1016 Fire services tanks</b>	This worksection <i>Template</i> is applicable to tanks used in fire services. It covers metallic-coated steel, GRP and concrete tanks for above ground and underground installation.
<b>1030 Combined wet fire suppression systems</b>	This worksection <i>Template</i> is applicable to combined wet fire suppression systems including sprinklers, hydrants and hose reels.
<b>1031 Hydrants</b>	This worksection <i>Template</i> is applicable to fire hydrant installations, accessories, piping and installation either mandated by the NCC or required for other reasons. The worksection relies almost entirely on the referenced standards, many of which are statutory.
<b>1032 Hose reels</b>	This worksection <i>Template</i> is applicable to fire hose reels. It relies almost entirely on the referenced standards, many of which are statutory. For installation, AS 2441 (2005) (Installation of fire hose reels) is a Deemed-to-Satisfy standard under the NCC.
<b>1033 Sprinklers</b>	This worksection <i>Template</i> is applicable to automatic fire sprinkler systems conforming to the AS 2118 series. It may be used for both standard fire sprinkler systems and wall wetting sprinkler (drencher) systems.
<b>1041 Gaseous fire suppression systems</b>	This worksection <i>Template</i> is applicable to gaseous fire suppression systems, accessories, piping, installation and testing to AS 4214 (2018) and AS 6183 (2011).
<b>1051 Liquid chemical fire suppression systems</b>	This worksection <i>Template</i> is applicable to the specification of proprietary pre-engineered liquid chemical fire suppression systems. It has been drafted for the most common use of such systems, fire suppression of commercial kitchen equipment, to AS 3772 (2020). The worksection <i>Template</i> can be edited to suit if being used for alternative applications.
<b>1072 Fire detection and alarms</b>	This worksection <i>Template</i> is applicable to fire detection and alarm systems in buildings connected to a remote monitoring network. It covers associated equipment, such as door holders, and the connection to air handling systems where required. Also covered are addressable detector systems, where a data cable loop can be used to connect a mixture of thermal and combustion product detectors, to a common zone.

<b>1073 Emergency warning and intercommunication</b>	This worksection <i>Template</i> is applicable to the provision of building emergency warning and intercommunication systems (EWIS) and relies on AS 1670.4 (2018), AS 60849 (2004) and AS 4428.4 (2016). It is also to be used for occupant warning systems (OWS), which are a requirement of the NCC wherever a fire alarm system is included.
<b>1082 Fire services electrical - minor</b>	This worksection <i>Template</i> is applicable to the electrical work associated with minor fire services projects. It is a simplified design and install type specification without selection schedules.
<b>1091 Fire services maintenance</b>	This worksection <i>Template</i> is applicable to periodic and statutory maintenance and emergency repairs of fire services systems during the defects liability period. It can also be used to document requirements for maintenance contracts for existing buildings. It relies on there being an operation and maintenance manual for the building.
<b>2011 Lifts design and install</b>	This worksection <i>Template</i> is applicable to machine-room-less (MRL) passenger lifts for use in buildings, other than private residences, up to four levels. As a performance based (design and construct) worksection, it is intended for use if no specialist lift consultant is engaged.



## INDEX

## GENERAL

**GEN 001 Getting help (Oct 23)**

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 (Oct 2021)**

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

**GEN 011 Specifying NCC requirements (Oct 2022)**

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

## 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](http://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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**GEN 016 Preliminaries and contract schedules (Oct 2018)**

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 (Oct 2022)**

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

**GEN 018 Using AUS-SPEC for asset maintenance (Oct 2022)**

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 (Oct 2022)**

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 Commissioning (Oct 2021)**

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 2022)**

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 (Oct 2022)**

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

**GEN 024 Using NATSPEC Selections schedules (Oct 2021)**

Summarises NATSPEC's use of schedules.

**GEN 025 Sprayed preservation surfacing treatments (Oct 2022)**

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

**GEN 026 Otta seal – A different approach for road sealing (Oct 2022)**

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 2022)**

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 2022)**

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

**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

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Corrosion protection of building services – DES 045

Design and specification guidance text – GEN 029

Digital archiving:

Introduction – GEN 030

Digital archiving: Glossary  
A glossary of digital archiving-related terms - GEN 031

Digital archiving: File naming and folder structure - GEN 032

Door hardware scheduling – GEN 012

Duct leakage and leakage testing – DES 033

Environmental rating schemes for buildings – DES 014

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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

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**GEN 029 Design and specification guidance text in NATSPEC (Oct 2021)**

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.

**GEN 030 Digital archiving: Introduction (Apr 2021)**

Discusses requirements for successful long-term storage of, and access to, digital archival records.

**GEN 031 Digital archiving: Glossary (Apr 2021)**

A glossary of digital archiving-related terms.

**GEN 032 Digital archiving: File naming and project folder structure (Apr 2021)**

Discusses the benefits of well-considered digital file management and outlines the principles of file and project folder naming and folder structure.

**GEN 033 Understanding two-part specifications (Apr 2022)**

Provides guidance on using two-part specifications and reference specifications.

**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 2022)**

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

**DES 003 Fire hazard properties of insulation and pliable membranes (Oct 2023)**

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

**DES 004 Air, moisture and condensation (Oct 2022)**

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

**DES 005 Preventing condensation on ducts and air handling plant (Oct 2022)**

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.

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

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

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**DES 010 Atmospheric corrosivity categories (Oct 2022)**

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

**DES 011 Rainwater harvesting (Apr 2022)**

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 (Oct 2022)**

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

**DES 014 Environmental rating schemes for buildings (Oct 2022)**

Outlines the national voluntary energy efficiency schemes.

**DES 015 NCC - BCA Volume One: Energy efficiency provisions (Oct 2022)**

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

**DES 016 NCC - BCA Volume Two: Energy efficiency provisions (Oct 2022)**

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 (Oct 2022)**

Summarises the factors influencing bushfires and the planning, construction and maintenance requirements for bushfire protection.

**DES 019 Pipe support spacing (Apr 2023)**

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 2022)**

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 (Oct 2022)**

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 2023)**

Addresses the selection of appropriate levels of insulation for piping, vessels and heat exchangers with curved surfaces.

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

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 not in NSW – TG 201

Process and procedures for development and subdivision of land in NSW – TG 201 NSW

Procurement: Past and present – TR 06

Product specifying and substitution – GEN 006

Providing access for maintenance – TR 07

Rainwater harvesting – DES 011

Refrigerants – 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 air filters – DES 047

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**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 2022)**

Highlights design and construction issues and suggests suitable NATSPEC worksections for the documentation of living walls and roofs.

**DES 027 Impact sound insulation (Apr 2023)**

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 (Oct 2022)**

Describes the various meanings of R-Value and the ways in which designers and specifiers can document compliance with statutory requirements.

**DES 032 Airborne sound insulation (Oct 2022)**

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 2022)**

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

**DES 035 Improvement and stabilisation of unsealed roads (Oct 2022)**

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

**DES 036 Need for subsurface drainage on local roads (Oct 2022)**

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

**DES 037 Accessible housing (Oct 2022)**

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.

Specifying concrete –  
DES 006

Specifying design and  
construct for mechanical  
services – TR 03

Specifying ESD – TR 01

Specifying NCC  
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Specifying quality –  
GEN 013

Specifying recycled  
materials for roadworks  
using AUS-SPEC –  
GEN 028

Specifying R-Values –  
DES 031

Sprayed preservation  
surfacing treatments –  
GEN 025

Static control floors –  
DES 007

Submissions and testing –  
GEN 014

Understanding two-part  
specifications – GEN 033

Universal design:  
Acoustics – DES 046

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Universal design: Lighting  
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Using AUS-SPEC for  
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Using design and install  
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DES 041

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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



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**DES 038 Universal design: Introduction (Apr 2022)**

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.

Water sensitive urban design (WSUD) –  
DES 024

**DES 039 Universal design: Slip resistance (Oct 2022)**

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 2022)**

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 2022)**

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.

**DES 042 Universal design: Lighting (Oct 2022)**

Discusses lighting as part of a universal design approach. It looks at available standards, universal design guidelines, the design process, and other considerations for lighting design.

**DES 043 Universal design: Wayfinding (Oct 2022)**

Discusses wayfinding as part of a universal design approach. It looks at available standards, universal design guidelines, the design process, and other considerations for wayfinding design.

**DES 044 Weatherproofing of external walls (Oct 2022)**

Discusses design considerations and specification of weatherproofing of external walling to meet Performance Requirements of the National Construction Code.

**DES 045 Corrosion protection of building services (Oct 2021)**

Discusses causes of corrosion of building services components and approaches to determining appropriate corrosion protection.

**DES 046 Universal design: Acoustics (Oct 2022)**

Discusses acoustics as part of a universal design approach. It looks at available standards, universal design guidelines, the design process, and other considerations for acoustic design.

**DES 047 Specifying air filters (Apr 2022)**

Discusses options for specifying particulate air filters for air conditioning and ventilation.

**DES 048 Chiller schedules (Oct 2022)**

Provides guidance on completing chiller schedules, including adapting and replacing information to accommodate chiller options.

**PRODUCTS****PRO 001 CCA (copper chrome arsenate) treated timber (Apr 2022)**

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

**PRO 002 Mineral wool (Oct 2023)**

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

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

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

**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 2023)**

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 2022)**

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

**PRO 007 Refrigerants (Oct 2023)**

Discusses the background and implications of Australia's phase-out of chlorofluorocarbon (CFC) and hydrochlorofluorocarbon (HCFC) refrigerants and the phase-down of hydrofluorocarbon (HFC) refrigerants, in conformance with international protocols and market forces.

**TECHREPORTS****TR 01 Specifying ESD (Oct 2023)**

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 (Oct 2023)**

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 (Oct 2022)**

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

**TR 04 NATSPEC for refurbishment, retrofitting and adaptive re-use (Oct 2023)**

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 (Oct 2022)**

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 (Apr 2023)**

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 (Oct 2023)**

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

## INDEX

**TR 08 Management of Council gravel pits in country areas – A case study (Oct 2023)**

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 2023)**

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 2023)**

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.

**TG 103 Guidelines for Principals - period supply and service contracts (Oct 2023)**

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 2023)**

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 not in NSW (Oct 2023)**

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

**TG 201 NSW Process and procedures for development and subdivision of land in NSW (Oct 2023)**

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

**TG 401 Guide to parks and open space maintenance system and documentation (Oct 2023)**

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*.

**INDEX****TG 403 Guide to the building and facility maintenance management system and documentation (Oct 2023)**

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 2023)**

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)**

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 National BIM Guide (Oct 2022)**

The Guide's core document is an information only (non-normative) reference document that provides an overview of BIM primarily directed at stakeholders in strategic and executive management roles or those new to the subject. It includes an introduction to AS ISO 19650 concepts and principles and high-level guidance about implementation considerations.

#### **NATSPEC National BIM Guide Appendix A – Glossary**

Definitions of terms and abbreviations used in the Guide.

#### **NATSPEC National BIM Guide Appendix B – AS ISO 19650**

##### **Resources Descriptions**

Brief descriptions of documents and resources that support the information management processes described in AS ISO 19650.

#### **NATSPEC National BIM Guide Appendix C- BIM Use & Enabler descriptions**

Descriptions of BIM uses and enablers including their potential value, scope considerations and useful references that can be used as a resource when selecting appropriate BIM uses on a project.

#### **NATSPEC National BIM Guide Appendix D – Defining Information Requirements**

Guidance and resources for using the NATSPEC AIR, PIR and EIR Templates to document information requirements.

#### **NATSPEC Project BIM Brief Template (Oct 2022)**

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. The Template serves a similar function to the PIR and EIR Templates for simpler projects.

#### **Asset Information Requirements (AIR) Template**

An editable document for specifying the asset information required by the client/appointing party for decision making during the operational phase of a built asset. AS ISO 19650 aligned.

#### **Project Information Requirements (PIR) Template**

An editable document for specifying the information required by the client/appointing party for decision making during the delivery phase of a built asset. AS ISO 19650 aligned.

#### **Exchange Information Requirements (EIR) Template**

An editable document for specifying appointment-based information requirements derived from the AIR and PIR. AS ISO 19650 aligned.

#### **BIM Management Plan Templates (Mar 2016)**

The Templates are editable Word files that can be used to create a BIM Management Plan (BMP).

#### **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.



**INDEX****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.

**NATSPEC BIM Scheduling Guidelines (Dec 2010)**

These Guidelines summarise the findings of the 2010 NATSPEC BIM Scheduling project.

Part A sets out working principles for allocating properties to objects in digital models for scheduling purposes. The aim of these principles is to facilitate a consistent approach to scheduling and thereby improve information exchange in the construction industry.

Part B outlines general concepts associated with schedules that form the basis of the working principles set out in Part A.

**OBOS - Open BIM Object Standard (Oct 2018)**

NATSPEC worked with Masterspec (New Zealand) to develop a BIM object standard. The result is the Open BIM object standard (OBOS) intended for use by all construction professionals – from designers and specifiers to manufacturers and BIM content developers – to assist in the creation of standardised generic, manufacturer and project-specific BIM objects.

With the aim of harmonising BIM practices internationally, an extensive review of existing global guides, standards and protocols relating to the creation of BIM content was completed as part of the research and preparation work.

The OBOS complements and aligns with the NATSPEC BIM Properties Generator - both are mutually supportive tools. The former sets out the rules for applying properties to objects, specifies their format and provides requirements for the graphical modelling and functionality of a BIM object. The latter is an online compendium of properties conforming to the standard.

## SPECIFICATIONS

### WHY HAVE A SPECIFICATION?

The primary function of the drawings and specification is to give effect to design decisions. Many design decisions cannot be expressed in graphic form and therefore rely on words for their expression. Other decisions would be too tedious or impractical to be conveyed in graphic form. The drawings and specification complement each other.

### THE IMPORTANCE OF A SPECIFICATION?

The quality of a building project is dependent on the documentation provided. The contract documentation includes the conditions of contract, the drawings, the schedules and the specification. Whilst the specification is a multi-purpose document, its primary function is to define precisely and succinctly the quality required and the processes necessary for achieving it. Its role includes, but extends beyond, the selection of materials by providing the criteria for acceptable quality of construction.

### THE ROLES OF THE SPECIFICATION

The specification has many roles including being:

- a document embodying design decisions.
- a document demonstrating compliance with statutory requirements.
- an estimating document.
- a tendering document.
- a legal (contractual) document.
- an on-site working document.
- a dispute settlement document.
- a project management tool.

### THE FORM OF A SPECIFICATION

NATSPEC specification worksections are classified, numbered and sequenced in a logical order, which responds to the Australian construction industry. There are recognised methods of specification writing. These include specifying by:

- **Reference:** Where an identifiable printed and published document is incorporated by reference to it. These may be Australian Standards or manufacturer's technical manuals.
- **Performance:** That is, by stating a desired end result and the criteria by which the result will be judged for its acceptability.
- **Description:** Detailing the materials, workmanship and installation procedures to be used.
- **Direct/Proprietary:** Specification stating a proprietary trade name product.

Typically, each NATSPEC worksection is divided into General, Products, Execution and Selections:

- **General** includes cross referencing, standards, interpretation, tolerances, submissions and inspection requirements.
- **Products** includes details of materials and components.
- **Execution** deals with the fabrication, installation, erection and completion as part of a project.
- **Selections** may be made within the text, in schedules within the worksections or provided separately. With simple projects, all selections may be on the drawings.

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

NATSPEC, founded in 1975, is a 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 provision of the comprehensive national specification systems endorsed by 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 system for the life-cycle management of assets. Packages include Urban and Open Spaces, Roadworks and Bridges, Public Utilities, and Maintenance.

NATSPEC's objective is to improve the quality of construction in Australia through its updating services and via the provision of information, tools, products and other services.

#### Stakeholders

- Air Conditioning and Mechanical Contractors' Association of Australia
- Australian Elevator Association
- Australian Institute of Architects
- Australian Institute of Building
- Australian Institute of Building Surveyors
- Australian Institute of Quantity Surveyors
- Construction Industry Engineering Services Group
- Consult Australia
- Dept for Infrastructure and Transport (SA)
- Dept of Energy and Public Works (QLD)
- Dept of Finance (Federal)
- Dept of Finance (WA)
- Dept of Infrastructure, Planning and Logistics (NT)
- Dept of Treasury and Finance (TAS)
- Dept of Treasury and Finance (VIC)
- Engineers Australia
- Major Projects Canberra
- Master Builders Australia
- Public Works Advisory (NSW)
- Standards Australia

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## CORPORATE INFORMATION

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

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