

TASMANIAN  
PLUMBING  
CODE  
AUTHORISATION  
&  
ACCREDITATION

Plumbing and Drainage Products  
Authorisation Process

&

On-site Waste Water Management  
Systems Accreditation Process

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## PLUMBING AND DRAINAGE MATERIALS AND PRODUCTS AUTHORISATION AND ON-SITE WASTE WATER MANAGEMENT SYSTEMS ACCREDITATION

### BACKGROUND

The Office of the Director of Building Control is responsible for administering plumbing regulation in Tasmania. Building Control Branch develops and maintains the Tasmanian Plumbing Code 2006 (TPC) including the development and maintenance of Australian Standard AS 5200.000-2005: *Technical specification for plumbing and drainage products - Procedures for certification of plumbing and drainage products* and MP52 *Manual of Authorisation Procedures for Plumbing and Drainage Products*.

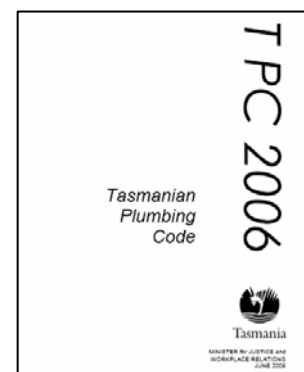
The TPC sets out the requirements for the design and construction of plumbing and drainage installations in Tasmania. The TPC applies to new installations as well as the design, construction, installation, replacement, repair, alteration and maintenance of existing installations.

The objective of the TPC is to:

- safeguard people from illness, injury or loss (including loss of amenity) due to the failure of a plumbing or drainage installation;
- ensure that a plumbing or drainage installation (including an installation provided for use by people with disabilities) is suitable;
- conserve water and energy;
- safeguard the environment;
- safeguard public and private infrastructure; and
- ensure that a plumbing or drainage installation is designed and is capable of being maintained so that throughout its serviceable life it will continue to satisfy the objectives.

To satisfy these objectives the TPC provides a process for authorisation of materials and products to ensure that plumbing and drainage materials and products are fit for purpose and that their use in a plumbing or drainage installation is sustainable and does not create significant risks or any likely outcome of:

- personal illness, loss, injury or death;
- environmental degradation;
- contamination of the water resource;
- adverse impact on infrastructure (private and public);
- contamination of the water supply;
- wastage of resources (water and energy);
- premature failure of the material or product; and
- the inability of a material or product to function as intended.



### TPC

The TPC is brought into effect by the *Building Act 2000*.

The TPC has been drafted in performance terms. In addition to setting down objectives, it also provides functional requirements, performance requirements, verification methods and any relevant deemed-to-satisfy provisions that apply to the construction of plumbing and drainage installations in Tasmania. It also sets out a system of accreditation and authorisation for the use of plumbing products or plumbing systems. The

objectives, functional statements and performance requirements set out in the Plumbing Code of Australia (PCA) apply.

The *Plumbing Regulations 2004* require **on-site waste water management systems to be accredited** and products used in **on-site waste water management systems to be authorised** under the TPC (see regulation 12).

## Authorised Plumbing and Drainage Products

Parts G of the TPC and PCA cover plumbing and drainage product authorisation. There are two different levels of authorisation provided for in the TPC and PCA. The TPC authorises the use of products that have been certified under the following schemes/procedures:

### 1. WaterMark Certification Scheme (WMCS)

Product authorisation is achieved through the application of the certification mark (WaterMark) in accordance with the rules of the WMCS and the listing of the product on the WaterMark Product Database. Plumbing and drainage products are tested and certified under AS 5200.000 and MP 52.

Products authorised under the rules of the WMCS, AS 5200.000 and MP 52 are deemed authorised, for use in plumbing installations in Tasmania, by the TPC.

### 2. State Authorisation Process

Products that are not covered by the PCA may be authorised by the Minister after review by the Plumbing Products and Systems Advisory Committee.

*In both cases evidence of certification or authorisation must be identifiable or made available on request.*

## Identification of plumbing products authorised under the WMCS

A person can satisfy himself or herself as to whether the product is authorised by one of the following methods:

Products authorised under WMCS are identifiable by a 'WaterMark' as shown in figure 1.

These marks are referred to in Figure G1.5.4.1 of the PCA as minimum levels of authorisation for plumbing and drainage products.

A listing of WaterMark certified products (WaterMark Product Database) can be found on the internet at: [www.watermarkstandards.org.au](http://www.watermarkstandards.org.au)

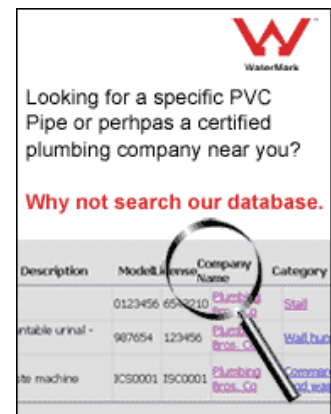
The Database is maintained by Standards Australia on behalf of the National Plumbing Regulators Forum (NPRF).

All state and territory plumbing regulators participate in the NPRF WMCS.

The NPRF with the support of Standards Australia administers the WMCS. The NPRF has plumbing regulator representatives from every Australian state and territory having jurisdiction.

One of the purposes of product certification is to provide independent assurance of the claim by the manufacturer that their products comply with the stated Australian Standard or appropriate specification listed in AS 5200.000. The certification process serves to indicate that the products consistently conform to the requirements of the stated standard or specification. Standards Australia manages the technical aspects of the WMCS on behalf of the NPRF through the following:

- Standards Australia Committee P-009 WaterMark Operations Advisory Committee
- Standards Australia Water Supply Committee 031 (WS-031): Technical Procedures for Plumbing and Drainage Products Authorisation;
- Standards Australia Water Supply Committee 014 (WS-014): National Plumbing and Drainage;
- Australian Standard AS 5200.000: Technical specification for plumbing and drainage products - Procedures for certification of plumbing and drainage products; and
- Miscellaneous Publication MP 78: Manual for the assessment of risks of plumbing products; and
- Miscellaneous Publication MP 52: Manual of Authorisation Procedures for Plumbing and Drainage Products.



WaterMark Conformity Assessment Bodies (WMCAB) approved by Standards Australia to administer the WMCS assesses the risk a plumbing or drainage product will have in terms of health and safety, infrastructure impact (private and public), water conservation (resource conservation), environmental impact and whether it will be fit-for-purpose when installed.

The assessment process determines whether a plumbing product poses a risk, and therefore, needs further assessment of the product's manufacture and installation limitations. If a product is determined to present a risk it must be assessed against an Australian Standard or appropriate specification.

Products authorised under the WMCS are required to display the WaterMark before they can be installed.

The Department of Justice (the Department), as a participant in the NPRF WMCS, recognises the WaterMark as verification of compliance with the WMCS and the TPC. The WaterMark must appear on the product at time of installation.

A list of approved WMCAB's is available on the Internet at: [www.watermarkstandards.org.au](http://www.watermarkstandards.org.au)



Figure 1: Examples of the 'WaterMark'

## STATE AUTHORISATION AND ACCREDITATION

### Part G of the TPC.

Part G1 and G2 of the TPC applies to products for use in water supply, sanitary plumbing and drainage, hot water, stormwater, on-site waste water management systems and trade waste installations.

Part G1.5 deals with products not covered by the NPRF WMCS. Part G1.5 also overrides the WMCS in certain cases. It also applies to products that are covered by the PCA but which are not marked with the appropriate mark to show compliance with the requirements of the TPC.

A plumbing product is authorised for use in a plumbing installation in Tasmania if it has been authorised by the Minister or it displays a current WaterMark.

A list of products authorised by the Minister is available on the Department's web page at [http://www.wst.tas.gov.au/industries/plumbing/authorised\\_products](http://www.wst.tas.gov.au/industries/plumbing/authorised_products)

Septic tanks are authorised for use if they display any of the marks and a license number as shown in figure 2 or alternatively tanks may be individually certified by a recognised engineer with appropriate qualifications and expertise (e.g. civil, structural) to comply with AS/NZS 1546.1 1998 (or 2008) *On-site domestic wastewater treatment units Part 1: Septic Tanks*. The department also publish a list of septic tanks that have been verified as 'fit for purpose' on the Internet at:

[http://www.wst.tas.gov.au/industries/plumbing/authorised\\_products](http://www.wst.tas.gov.au/industries/plumbing/authorised_products)

Unique products which are a prototype or made on-site, and are septic tanks, can be authorised for use by the Permit Authority (Council) if satisfied that the septic tank meets the relevant performance requirements of the Code and complies with AS/NZS 1546.1:1998 (or 2008) *On-site domestic wastewater treatment units Part 1: Septic Tanks*.



Figure 2: 'WaterMark', 'Standards Mark', 'TypeTest', Mark

### Accreditation of on-site waste water management systems

Accreditation of on-site waste water management systems is required as it has long been recognised that public health and safety and prevention of environmental harm is critically dependent on the design, manufacture, installation and management of plumbing systems. Accreditation of on-site waste water management systems is carried out by the Department to relieve manufacturers from having to approach each individual council to assess their systems to determine whether the system is fit-for-purpose in Tasmania and to also relieve each council from this task.

The TPC provides for the accreditation, installation, operation and maintenance of on-site waste water management systems.

The installation, operation and the maintenance of accredited systems with a designed hydraulic loading of up to 100 kilolitres per day Average Dry Weather Flow (ADWF) are regulated by municipal councils except where they are defined as Level 2 Activities under the *Environmental Management and Pollution Control Act 1994*.

In general, an on-site waste water management system should only be installed if it has been granted a certificate of accreditation under Part G2 of the TPC (see regulation 12 of the plumbing Regulations 2004).

Regulated Entity (water and sewerage authority) owned and operated on-site waste water management systems do not require accreditation. Likewise, some on-site waste water management systems with a capacity less than 100 kL ADWF are level 2 activities and, therefore, dealt with under the *Environmental Management and Pollution Control Act 1994* and need not be accredited under the TPC.

A list of accredited on-site waste water management systems is kept and maintained on the Department's Web Site at: [http://www.wst.tas.gov.au/industries/plumbing/waste\\_water](http://www.wst.tas.gov.au/industries/plumbing/waste_water)

For those who do not have Internet access, copies of the list may be obtained by contacting Workplace Standards Tasmania in the following ways:

Helpline on Postal address: Workplace Standards Tasmania | PO Box 56 | ROSNY PARK TAS 7018; or

Phone: (03) 6233 7657 (Outside Tasmania) - 1300 366 322 (Inside Tasmania) - Fax: 03 6233 8338.

To obtain accreditation of an on-site waste water management system a manufacturer or an agent of the manufacturer need to apply to the Department on the form provided.

Before evaluation for accreditation of on-site waste water management systems can be carried out, the supplier must provide sufficient evidence to the Director of Building Control to establish the suitability of the system for its intended use. The Director may consult with a voluntary committee of experts known as the Plumbing Products and Systems Advisory Committee to determine the systems suitability.

A description of the system and its processes, design data including drawings and specifications and procedures for operation, maintenance and risk management of the system must accompany the application.

Systems that have been accredited in other states or territories or under a Joint Accreditation Systems of Australia & New Zealand (JAS-ANZ) may require assessment by the Committee to determine compliance with Tasmania's legislation and climatic, geological or geographical conditions. Accreditation already granted to these systems will be taken into consideration in the assessment process.

Suppliers of on-site waste water management systems must nominate (in the systems specifications) the range of conditions of temperature and humidity under which the system is designed to operate. The certification body in its evaluation report on the systems design criteria and the construction requirements and test criteria, is to include details of the system's performance under the nominated range of conditions of temperature and humidity.

For Aerated Wastewater Treatment Systems (AWTS) that do not incorporate primary settlement chambers (e.g. activated sludge systems) and have been tested in accordance with AS/NZS 1546.3 Appendix A, at a wastewater treatment plant, further on-site performance testing may be required. This is because the effluent being used to test the system is delivered directly to the main (single) reactor of the system which does not provide for primary settlement like standard AWTS'. Although the raw effluent from the test installation meets the test parameters set out in AS/NZS 1546 the effluent may have travelled through a number of pumping stations prior to reaching the installation. The effluent is then coarse screened at the wastewater treatment plant to remove gross solids. Due to this process, a differing result may be obtained when attached directly to the influent source at a premises. On-site performance testing will identify the systems performance under normal and abnormal operating conditions such as receiving gross solids or shock loading due to sudden increase in occupancy at the premises or increased washing loads.

## **The System Accreditation and Plumbing Product Authorisation Process**

The process of system accreditation and product authorisation involves assessment and review of the design, performance and suitability of a product or system for use in plumbing and drainage installations in Tasmania at a nominated performance level. The process reviews the supplier's ability and the product's suitability to:

- meet the objectives of the Code;
- fulfil the required level of performance;
- meet the expected design life;
- establish how and where it will be used, i.e., installation and maintenance procedures; and
- ensure the conformity and quality of product.

The process may also identify the training needs for the successful adoption of the product or system throughout the plumbing industry.

### Process time

An assessment would normally take between 6 and 14 weeks subject to the following:

The process time for a product or system assessment relies on the comprehensiveness of the application. Suppliers or their agents are encouraged to thoroughly read the application form and document schedule, and supply as much of the requested information as possible. An assessment of a quality certified product or system (ISO Type 5 or equivalent e.g. StandardsMark) has most of the manufacturing requirements satisfied in terms of the nominated Standard, therefore, would normally reduce the process time.

The assessment then looks at the 'fit-for-purpose' features of the product or system that will determine suitability for use in plumbing installations. The availability of staff to carry out assessments may delay the start for a short time but with the use by the supplier of private certifying bodies the Department does not have to heavily rely on its Plumbing Products and Systems Advisory Committee which is made up of voluntary professionals that work in the plumbing industry and a Committee Secretary to project manage the process. The process usually commences with the application being received by the Committee Secretary who takes the following actions:

- Record Application (check application form is complete and place documents on a unique file).
- Application Check (check all documentation against the application form document schedule).

- Where necessary, request further information from the supplier (product/system information in electronic format for distribution with the Preliminary Review).
- Preliminary Review.
- Distribution to the Plumbing Products and Systems Advisory Committee of a Preliminary Review, which fully describes the product/system and seeks advice on accreditation/authorisation requirements and any other issues that need to be resolved for the accreditation/authorisation to be satisfactorily completed. It is distributed by e-mail and generally takes about four weeks).
- Review of feedback.
- Set accreditation/authorisation conditions including quality requirements.
- Prepare and submit draft conditions of accreditation/authorisation and request for additional information as requested by the Committee.

The expected time for the above actions is about six weeks. The time taken for the supplier to respond with requested information and formal acceptance of drafted conditions of accreditation/authorisation is a major cause for delay and progress at this point. This is totally in the hands of the supplier.

On receipt of the requested information, the Committee Secretary actions the following:

- Evaluate completed product/system data.
- Prepare draft accreditation/authorisation report and conditions.
- Submit the draft to the supplier for comment and to the Committee for peer review and quality clearance.
- Issue a draft copy of the report to the supplier for final review.
- Make any required final changes to the authorisation/accreditation report and conditions and recommend to the Minister or his/her delegate for authorisation/accreditation to be issued.
- Forward Certificate, report and conditions of accreditation/authorisation to supplier.
- Publish the accreditation/authorisation report and conditions on the Department's Website.
- Advise Local Government, that the product authorisation or system accreditation is available on the Department's Website by email.

The expected time for the second stage to complete the accreditation/authorisation report to publication depends on the complexity of the product/system and the need or otherwise for installation trials.

The above times are totally dependent on speedy responses by the supplier or their nominated representative where applicable. Given prompt responses, the authorisation/accreditation assessment process can take up to three months, subject to the quality status, the complexity of the product/system and the provision and adequacy of requested information.

#### Cost of Authorisation/Accreditation applications

Tasmania's Product Authorisation and System Accreditation Process is free of charge.

However, suppliers are responsible for all private certification, the arrangement and cost of testing and any negotiation with permit authorities for trial installations if required. Any quality management system auditing is also additional to the evaluation work with the cost also being borne by the supplier.

#### Committee Secretary

The Department's appointed Principal Plumbing Advisory Officer is the Secretary to the Plumbing (Products and Systems) Advisory Committee. The Secretary project manages and conducts the product authorisation and system accreditation process by drawing upon specialist advice from within the Committee. The Secretary assesses all the documentation detailing previously conducted testing and trials of the product/system before seeking input from the Committee. Copies of overseas or interstate standards relied on to evaluate products or systems are required to be supplied and must be in English. The Committee Secretary reviews the quality assurance aspects and members of the Committee then peer review the draft final report and conditions of authorisation/accreditation prepared by the Committee Secretary.

### Authorisation/Accreditation of overseas sourced products/systems

When the Department authorises the use of products or accredits the use of on-site waste water management systems sourced from overseas or interstate manufacturers they are also considered with respect to the overseas or interstate manufacturing standards. The Department's primary interest is in demonstrating 'fit-for-purpose' of the product or system in typical Tasmanian operating conditions.

In many cases, overseas and interstate manufacturing standards will only partially demonstrate 'fit-for-purpose' and will require additional technical information, and in some cases, performance testing to meet nominated test requirements. Where overseas manufacturing standards have been used the supplier is required to conduct a comparative review of the overseas manufacturing standards used to highlight any differences that must be satisfied before authorisation or accreditation proceeds.

### Acceptance by other jurisdictions

Products authorised under Tasmania's Product Authorisation Process or on-site waste water management systems accredited under the System Accreditation Process are not guaranteed to be accepted by other jurisdictions even though the product or system has been successfully authorised or accredited for use in Tasmania. There are no reciprocal arrangements in place other than for the sale of the product under mutual recognition legislation.

### Unique products and systems

All 'unique' products or systems do not have to be submitted to the Department for product authorisation or system accreditation before they can be used or installed in plumbing and drainage installations as the Department sees this as impracticable given that some products or systems are project/site specific.

The *Plumbing Regulations 2004* exempt certain on-site waste water management systems from accreditation provided they meet the following criteria:

- *The system is to be installed or constructed as a prototype for the purposes of testing; or*
- *The system is specifically designed for the owner or occupier of the premises on which it is to be installed and the system is specifically designed for those premises and is constructed on-site and is not for sale (see regulation 12(2)) of the plumbing regulations 2004)*

If the product or system is a unique product or system the supplier and the permit authority (council) must decide on whether local authorisation is appropriate. The Department should be consulted when making these judgements.

### Conditional Authorisation/Accreditation

Some applications for authorisation or accreditation are granted on the conditions that field trials are to be carried out. This is done to conduct in-situ testing and to verify 'fit-for-purpose' under normal use.

### Product/System testing

Product and system testing is carried out after the Plumbing (Products and Systems) Advisory Committee identifies the range of tests required. The Committee Secretary negotiates with the supplier where the testing will be conducted. Preference is usually given to NATA (National Association of Testing Authorities) or equivalently registered laboratory. In-house or field-testing may be permitted with independent third party supervision. In-house and field testing criteria are to be developed by the supplier or their agent and are subject to agreement by the Secretary before proceeding. The supplier is responsible for all testing and witnessing costs.

### Problems encountered during testing

If a problem(s) is encountered during testing, auditing or trialling of a product or system that cannot be resolved the Committee Secretary, will advise the supplier if there are any obvious barriers to the acceptance of the product or system. The Committee Secretary will further advise of any change(s) necessary for the product or system to become a 'fit-for-purpose' to enable its use in a plumbing installation in Tasmania. Given the supplier is then prepared to make the necessary change(s) the assessment can proceed whenever appropriate.

If, during any aspect of an assessment a product or system fails to be deemed 'fit-for-purpose' in terms of its performance, the quality system requirements, its ease of installation or any other matter, the supplier is consulted and given the opportunity to make amendment(s) to the product/system/quality system/or other. If an amendment(s) is not possible, the supplier is entitled to withdraw his or her application.

Confidentiality

Nominated confidential material submitted by the supplier to support the authorisation or accreditation process remains confidential within the limitations of the Committee Secretary, the Plumbing (Products and Systems) Advisory Committee and the Department. The report may carry general advice of supportive confidential material subject to any editing nominated by the supplier. Confidential material will not be copied for inclusion in the authorisation or accreditation report. As a matter of practice, submitted test certificates and reports will not be published in the authorisation or accreditation report unless expressly directed by the supplier to further support any perceived benefits of the product.

Access to certificates of authorisation/accreditation and reports

Certificates of authorisation, accreditation and their associated reports are posted on the publicly accessible part of the Department's website in Portable Document File (PDF) format, with security, so that the file can be printed or downloaded and saved in its original format.

Additional auditing by the Department

The Department is not in the business of auditing. The Department relies on feed back from councils and property owners. However, depending on suppliers' responses to the questions on their quality management system (QMS) referred to in the Department's product authorisation and system accreditation application forms, the Department will conduct an assessment and review in accordance with its own procedures or as specified in the conditions of accreditation or authorisation. The outcome will vary from full acceptance without the need for any action to a situation where the supplier may have to pay for a third party audit of their business and/or that of their manufacturer.

Period of Authorisation or Accreditation

Accreditations and Authorisations are granted for a maximum of 5 years and are subject to conditions.



Tasmania

Explore the possibilities

CONTACT DETAILS

Workplace Standards

Tasmania

PO Box 56,

Rosny Park, 7018, or

by email to

[wstinfo@justice.tas](mailto:wstinfo@justice.tas)