Guideline for plumbing and drainage:
Installing *Code Compliant Work* and
*Alternative Solutions*

Document No: NA
Version No: 1.1
Date: Feb 2015

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1 Standards: Code compliant work

The responsible person for plumbing and drainage work must ensure the work complies with the Plumbing Code of Australia (PCA) and other prescribed codes and standards.

**Work done in accordance with this provision is Code Compliant**

1.1 Plumbing Code of Australia

The Plumbing Code of Australia (PCA) sets out performance requirements for the design, construction, installation, replacement, repair, alteration and maintenance of plumbing and drainage installations. It includes ‘Deemed-to-Satisfy’ provisions which call up the AS/NZS 3500 series of standards.

Plumbing or drainage work that complies with the provisions of AS/NZS 3500 are deemed-to-satisfy the performance requirements of the PCA.

Alternative solutions can be used as long as they meet the performance requirements of the PCA (Section A).

1.2 Code compliant work

For plumbing and drainage work to be code compliant it must satisfy the performance requirements of the PCA. Compliance with PCA performance requirements can only be achieved by:

- a. Complying with the Deemed-to-satisfy provisions;
- b. Formulating an Alternative Solution;
- or
- c. A combination of (a) and (b).

2 Deemed-to-satisfy provisions (DTS)

Plumbing and drainage work, as well as materials or products, which comply with the provisions of AS/NZS 3500 are Deemed-to-Satisfy (DTS) the performance requirements of the PCA.

This is the default method that the majority of plumbing and/or drainage work will be installed under.

- Plumbing and drainage work installed in accordance with AS/NZS 3500 is Code Compliant.
3 Alternative solution

Plumbing and drainage work can comply with the PCA by formulating a solution that meets the performance requirements of the PCA (i.e. an Alternative Solution). The alternative solution must be equal to the requirements of AS/NZS 3500.

The use of an alternative solution will require planning, research and documentation by the applicant. The applicant will need to ensure that it complies with all parts of the PCA as required by Section A.

3.1 An alternative solution must comply

The alternative solution must:

a. Comply with the performance requirements; or
b. Be shown to be at least equivalent to the DTS provisions.

3.2 Materials and products used in an alternative solution

Fair Trading require that all materials and products intended to be used in an alternative solution must be certified and authorised prior to being used or installed.

4 Alternative solution: Submissions

The Act and Regulation require the responsible person to submit a Notice of Work (NOW) together with documents and information related to the proposed alternative solution no later than 21 days before work is to be started.

All proposed alternative plumbing or drainage solutions are to be sent to Fair Trading, Plumbing Inspection Assurance Service (PIAS), Technical team for an initial review of the information provided and must be made via email in an electronic format to PCA@finance.nsw.gov.au (large files can be provided on digital media, contact PIAS Technical on 1300889099 Monday to Friday 8am to 12pm, for an address to send the digital media);

All submissions received will be acknowledged.

4.1 The initial submission requirements

a. NOW and Initial fee:

b. Letter from owner: acknowledging the proposed use of an alternative plumbing or drainage solution

c. Letter from the Network Utility Operator (NUO): giving consent for connection to their system (if NUO systems are available)

d. Evidence of suitability: The responsible person must ensure sufficient information has been provided to demonstrate compliance with PCA Performance Requirements.

Refer to Table 5.1.2
4.2 Evidence of suitability

Evidence of suitability shows that the use of a design, material, product, form of construction or installation meets the Performance Requirements or Deemed-to-Satisfy provisions.

The responsible person, and/or the recognised expert must assess the proposed alternative solution for compliance with PCA performance requirements and provide documents and information to Fair Trading that shows evidence of suitability before starting work.

Evidence of suitability provided will include but is not limited to:

a. The assessment method/s used to determine satisfactory compliance with the PCA performance requirements;

b. The qualifications and experience of the recognised expert determining whether the plumbing and drainage solution complies.

4.3 Requests for additional information

Following the PIAS Technical Support review of the initial Notice of Work (NOW) submission, Fair Trading may issue a written notice to the responsible person to supply additional documents and information within a specified timeframe. The responsible person must comply with the notice.

The written notice may request the following:

a. Additional expert assessments;

b. Details of the qualifications of the recognised expert/s the responsible person has relied upon;

c. Any other requested information on the design and suitability of the proposed alternative solution.

Note that in the event additional information is requested, work on the installation will be unable to start until the requested information has been supplied to Fair Trading, reviewed, and acknowledged.

Refer to Table 5.1.4

| Note that it is the applicant's responsibility to demonstrate that compliance with the PCA has been achieved |

4.4 Installation of alternative solution plumbing and drainage work

The responsible person will need to install alternative solution work in accordance with the design provided to them (by the designer/recognised expert) and as per the version submitted to Fair Trading.

a. Inspection of the installed work and payment of appropriate fees for the inspection/s is required

b. Variations or modifications to the original submitted version will require a new submission
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c. Following satisfactory completion of the work the Sewerage Service Diagram (SSD) for the property will be notated that an alternative solution has been used.

5 Alternative solution: PIAS review

The following information provides guidelines for Plumbing Inspection Assurance Service (PIAS) Technical Support when checking submissions of proposed alternative solutions.

To ensure plumbing and drainage work is Code Compliant, Fair Trading requires details of an Alternative Solution to be submitted prior to starting any work. The purpose of a submission to Fair Trading is to ensure that a responsible person is installing plumbing and drainage work in compliance with the PCA.

Under the requirements of the Act and Regulation all proposals for the installation of an alternative solution are to be sent to Fair Trading. Following the review, details of the proposal will be sent to the appropriate delegated regulator for any further actions (in areas where Fair Trading is not directly responsible for onsite inspections).

5.1 Review of proposed alternative solutions

Important note:

It is not the role of Fair Trading to investigate, prove or disprove that an alternative solution will meet PCA performance requirements. This is the responsibility of the recognised expert, designer and/or responsible person.

- Fair Trading will not approve or endorse submissions

The review by Fair Trading is to ensure the responsible person has followed PCA process by providing documentary evidence the proposed alternative solution will meet the Relevant Performance Requirements

5.1.1 Review of initial submission

Due to the nature of alternative solutions there will be a variation in the actual proposals however there is a basic process to follow as outlined in the regulations.

The Regulation requires the responsible person for plumbing and drainage work to submit an initial bundle of information at the same time a notice of work is submitted.

1) Submitted documents and information
All documents and information provided must be in an electronic format. Large files may be provided on digital media.

   a. Emails are the preferred method
   b. Digital media with the relevant documents and information may be mailed only when the information is too large to send via email. (contact PIAS
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Technical on 1300889099 Monday to Friday 8am to 12pm, for an address to send the digital media

2) Submission timeframe
Check correct timeframe.
   a. The Notice of Work (NOW) and documents must be provided no later than 21 days before work is to be carried out

3) Document Check
Check the minimum information has been provided, refer to Table 5.1.2
   a. Check for fee, the initial inspection fee is required to be paid at time of submission of NOW

4) Insufficient information submitted
When insufficient information has been provided a written notice is to be issued to the responsible person to provide information or documentation as listed in the notice and within the timeframe specified in the notice.

5) Checking the proposal
It is not the role of Fair Trading to approve proposed installations or to investigate in detail if the work that is proposed meets performance requirements, that is the role of the responsible person and/or the recognised expert providing the evidence of suitability.

However it is still prudent for Fair Trading to ensure the responsible person has followed due process to comply with the PCA, and that:
   • the recognised expert/s providing the assessment has suitable industry experience and/or qualifications;
   • there are no obvious issues or faults with the proposal that could contravene any requirements or create public health issues.

Accordingly, on a “case-by-case” basis each proposal is to be checked, and Technical Support must be satisfied that:
   a. Correct information and documentation has been provided (refer to Table 5.1.2);
   b. The recognised expert is suitably qualified;
   c. The proposal appears to be satisfactory.

Provided the correct information has been supplied that apparently demonstrates compliance with the PCA the installation of the proposal should proceed.

6) Scenario Examples:
1. Qualifications
   a. Issue: A proposal is received from a responsible person for the installation of a new form of sanitary plumbing “stack-work” to a multi-storey building that deviates greatly from AS/NZS 3500 requirements.
   b. Qualifications of the designer: The provided information indicates the person that designed the system is an engineer but no further details are available (for example, an electrical engineer would not be acceptable).
   c. Response: A written notice to be issued to the responsible person requiring them to provide further information about the qualifications of the person they have relied on to design the system. This should include examples of their
experience or previously designed (similar) plumbing installations, as well as their formal qualifications. Refer to Table 5.1.4 Item (8).

2. **Design**
   a. **Issue**: A proposal is received from a responsible person for the installation of a drainage system that uses a maximum size of 90mm diameter pipe for the main drain of a commercial building.
   b. **Qualifications of the designer**: The provided information indicates the person that designed the system has suitable qualifications and experience to design the system.
   c. **The design**: Technical Support finds that despite the designer’s qualifications they are not satisfied the system will work due to insufficient evidence supplied to support the design.
   d. **Response**: A written notice to be issued to the responsible person requiring them to provide further evidence to support the use of the design and/or additional recognised expert judgement that the drainage solution will comply with the PCA performance requirements. Refer to Table 5.1.2 Item (6) and Table 5.1.4 Item (7).

5.1.2 **Table 5.1.2 Checklist for initial NOW submission**

Table 5.1.2 provides a guide to the type of information required as part of a submission under the Plumbing and Drainage Regulation 2012 for the responsible person to give documents and information at the same time as a NOW.

<table>
<thead>
<tr>
<th>Item</th>
<th>Title</th>
<th>Description of requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>NOW submitted within timeframe</td>
<td>NOW must be submitted (electronically), and; must be received at least 21 days before work is due to start</td>
</tr>
<tr>
<td>2.</td>
<td>Fee</td>
<td>Operationally, PIAS require payment of the initial inspection fee at the time of submission (not when work starts)</td>
</tr>
<tr>
<td>3.</td>
<td>Covering letter</td>
<td>Property details, and; Summary description of the proposal stating if the whole job is to be installed under an alternative solution or part only</td>
</tr>
<tr>
<td>4.</td>
<td>Owners letter</td>
<td>Owner is to acknowledge they have been made aware that an alternative solution is to be used</td>
</tr>
<tr>
<td>5.</td>
<td>Network Utility Operator (NUO) letter</td>
<td>Letter/evidence supplied of NUO consent to connect to their system/s (relates to connection conditions, discharges to their system etc)</td>
</tr>
</tbody>
</table>
| 6.   | Evidence of suitability                                                | Evidence in accordance with Section A of PCA;  
   \*  Documentary evidence of the assessment method used to demonstrate the acceptable performance of the alternative solution.  
   Note: assessment must be by a person that has an appropriate level of knowledge and qualifications to determine if it complies. |
5.1.3 Response to submission

A response notice in writing may be issued to the responsible person requesting additional information and documents as specified in the notice.

5.1.4 Table 5.1.4 Response letter checklist

Table 5.1.4 provides a guideline for the type of information requested under the Plumbing and Drainage Regulation 2012 requiring the responsible person to provide documents or information.

<table>
<thead>
<tr>
<th>Item</th>
<th>Title</th>
<th>Description of requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.</td>
<td>Expert assessment</td>
<td>Provide additional recognised expert assessment of the proposed work.</td>
</tr>
</tbody>
</table>
| 8.   | Qualification and experience | A Curricula Vitae or similar is required to show demonstrated technical knowledge of the issues involved (appropriately qualified recognised expert)  
• Fair Trading must be satisfied the person responsible for developing the alternative solution has an appropriate level of knowledge and qualifications |
| 9.   | Plan                         | Plan of the proposed installation that has been designed by an appropriately qualified recognised expert |
| 10.  | Any other information or supporting documents | Any other information or evidence appropriate to support the submission (as specified in the notice) |

5.2 Satisfactory review

When Fair Trading is satisfied all requirements have been met a letter of acknowledgment will be issued to the responsible person with details of inspection requirements.

- Letter to acknowledge that PCA requirements appear to have been met
- Letter will detail inspection requirements and contact details for inspections bookings.
6 Alternative solutions: Inspections

6.1 Inspections in Sydney and Newcastle areas

For areas where Fair Trading directly conducts on-site inspections, alternative solution inspections will be conducted using the standard inspection process.

- The initial fee paid covers the first onsite inspection
- Any additional inspections require additional fees
- Details of the alternative solution will be made available to the inspector
- Inspections of alternative solutions will involve checking compliance with the submitted design or installation details that were submitted for review.

6.2 Inspections in regional areas

For alternative solution installations in regional areas of NSW where regulation has been delegated, full details of the solution will be referred to the relevant council.

- PIAS Technical Support will continue to liaise with the local regulator for conducting inspections, and provide technical support
- Local inspection process and fees will apply.

7 Review

It is proposed that reviews may be done frequently in response to unforeseen issues arising from this new process. It may be reviewed earlier in response to new legislation, process changes and post-implementation feedback from Business Unit or as required.