
8. Implementation of the plumbing code of practice

If a plumbing code of practice is to operate effectively, it is important that the authority responsible for its implementation fully understands its roles and responsibilities and the limits of its powers. These roles will vary according to the scope and power of the authority, but usually include the interpretation of the code, approval of applications, inspection and certification of new work and functions such as periodic inspection to ensure continued compliance and penalties for non-compliance.

8.1 Application and approval process

The plumbing code of practice will set out requirements regarding the submission of application forms and plans and other essential information relating to the proposed plumbing work. “Plumbing work” must be clearly defined within the code of practice and it is likely to cover new installations, as well as substantial replacements or additions to existing systems.

Types of work that are exempted from the need for approval, such as the repair or replacement of a single plumbing fixture or small domestic installations connected neither to a water main nor to a public sewer, should be defined. Inspectors employed by the authority should be competent to give guidance in cases of doubt. Borderline cases are most likely to arise in industrial and commercial premises, where temporary piping is subject to continual adjustment and realignment. These realignments must be carefully scrutinized where cross-connection with unsafe sources might occur. Some countries make an exception regarding domestic property where the work is to be carried out by the owner, but others regard this exemption as dangerous as it may result in defective installations that may contaminate public supplies.

Normally the responsibility for making application to the authority lies with the owner of the property or the plumbing contractor. Most authorities require applications to be made on standard forms; this saves time by ensuring that essential items of information are presented in a recognizable and uniform manner. The detail required on the application form will depend on the extent and complexity of the work in question. All application forms should include the name of the plumber or plumbing business responsible for the work and the registration number of the individual or business.

Applications for particular types of work usually need to be supported by

plans, and the code should contain details of the authority's requirements. Some flexibility is appropriate. Relatively simple domestic jobs may require basic plans whereas proposals for larger installations in multi-storey apartments or in industrial or commercial premises should be shown in considerable detail. In some cases it may be appropriate to require no more than notification of certain categories of work rather than require the submission of a formal application for approval. This will largely depend on the nature of the work, the inspection resources of the authority (which are often limited) and the terms of the code of practice. Advance notification is typically required and the code of practice should specify the number of days before the work is due to begin. The authority will usually reserve the right to inspect the site at any time before, during or upon completion of the work, and prior to it being put into service. Failure to notify is likely to be treated as a breach of the code.

Once the application and plans are submitted an inspector should be given responsibility either to approve or reject plans or to recommend their approval or rejection to the authority. Rejection should only be on the grounds that the proposals do not comply with the code of practice, or may indicate a health risk or significant failing, and the reasons for rejection should be specified by the inspector. Negotiations would usually be capable of resolving differences. There have been examples of bribery of inspectors and this should be scrupulously prevented. Inspectors must be well trained and aware of their fiduciary responsibilities as public health and welfare officials.

8.2 Certification of conformance

After the plans and applications are approved the plumber should notify the inspector (often on a standard form) when work is due to begin. Similar notification will be required of the date when the completed work is ready for testing and approval. Between these dates the inspector should have the right to enter the premises at any reasonable hour to inspect the progress of the work and to examine any materials used. At the conclusion of any test (whether intermediate on part of the system or final on the completed installation), the inspector should confirm the findings in writing, usually on a standard form.

In some countries a system of self-certification operates. This allows appropriately qualified and approved plumbers or plumbing businesses to issue a certificate confirming that they have carried out the work in accordance with the plumbing code of practice. Such self-certification will be limited to those who have met specified approval criteria (such as holding formal plumbing qualifications, being trained in the content of the code itself and holding appropriate liability insurance coverage) and may be limited to particular types of work. It might also be possible under such a system to waive the normal requirements for notification or approval of certain types of work where the work is to be undertaken by a plumber or plumbing business with a proven track record that meets

the authority's approval criteria. Work completed under a system of self-certification may also be subject to periodic audit by the authority, and the ability to issue future self-certification may be withdrawn in the light of any significant problems arising from the audit.

The authority may provide its own apparatus for testing (such as pressure-measuring equipment and drain plugs) or it may require the plumber to supply these items. Where the authority's equipment is used, it is common for the plumber to collect it, set up the test and return the apparatus after successful completion. A rental fee may sometimes be charged by the authority for this service.

8.3 Periodic inspection

An essential feature of risk prevention and risk minimization strategies is that facilities are regularly monitored and maintained. As part of its responsibility for protection of public health and safety, the authority must make certain that plumbing systems are assiduously maintained at the standard required in the plumbing code of practice. Ensuring ongoing compliance with the code of practice through a process of periodic inspection of installations is expensive, so appropriate priorities need to be set.

For systems that have the potential to pose a serious risk to public health (such as premises where food or drink is processed, hotels and lodging houses, and industrial or commercial premises) it may be a condition of the authority's approval that the plumbing system should be retested at specific intervals (such as every two years), and that such tests should be witnessed by the inspector. The inspector should be satisfied that no cross-connections or other violations of the code have occurred since the previous inspection and test.

8.4 Penalties and enforcement

The long-term effectiveness of a code of practice depends on effective enforcement. Any contravention of the provisions of the plumbing code of practice should constitute a breach of the law, and should be punished accordingly after the nature of the offence and the identity of the offender have been established. Because this process can be costly and time consuming, comparatively minor breaches are rarely followed up in this way. It is common practice to annex to the code of practice a schedule of administrative penalties related to violation of particular sections. In case of dispute over breaches the authority may take the matter to the courts, or settle it by arbitration if the offence is of a technical nature. More drastic sanctions such as the withdrawal of the licence of a practising plumber, refusal to permit connection of a new system to the public mains, or disconnection of an existing installation are reserved for serious breaches of the code of practice. Some examples might include carrying out work while not being registered or licensed; altering plumbing systems without notifying the

authority; allowing water to be wasted or contaminated through misuse or neglect of pipes or fittings; using water for unauthorized purposes; interfering with valves or other apparatus belonging to the authority, or tampering with the operation of any meter upon which water charges are based; and refusing admission to the authority's inspector, or otherwise obstructing the inspectors in the performance of their duty.

8.5 Financial aspects of administration of the plumbing code of practice

Implementation of the code of practice and ensuring ongoing compliance have necessary costs. These include costs of hiring staff to process applications, inspect work and test systems, as well as office accommodation, training and management, printing, transport and other incidental items. In some countries these expenses are recovered from applicants through fees for particular services (such as an application fee or an inspection fee) and these fees are shown as a schedule in the code of practice. They should be clearly distinguished from the fees or charges that may be levied by the water, sewerage or other authority for specific items of work such as for making a connection to a water main or sewer, for replacing the highway surface after backfilling a trench, for clearing a septic tank or for permitting discharge of industrial waste into public sewers.

Many countries prefer not to include the collection of fees as part of the code. One justification for this approach is that the services described are provided to the community as a whole and should therefore be borne by the community as a whole through the taxing system. Another reason is that it is difficult to produce a scale of fees where the amount charged is fairly apportioned in accordance with the service provided. However, it is possible that the reason sometimes is more practical, in that the income likely to be received may be more than outweighed by the cost of extra staff and other expenses incurred in collecting and accounting for it.