ECONOMIC INSIGHTS PTY LTD

Economic Consultants

PUBLIC BENEFIT TEST —

THE QUEENSLAND SEWERAGE AND WATER SUPPLY ACT AND ASSOCIATED REGULATIONS

FINAL REPORT

PREPARED FOR THE QUEENSLAND DEPARTMENT OF LOCAL GOVERNMENT AND PLANNING

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PREFACE

This report has been prepared by Economic Insights for the Queensland Department of Local Government and Planning. Economic Insights is an independent, Brisbane-based firm of economic consultants.

Please note this report contains the findings of Economic Insights and not the Queensland Government.

The report presents the findings of a public benefit test of identified restrictions to competition contained in the Queensland Sewerage and Water Supply Act 1949 and its subordinate legislation.

A draft report was made available for public consultation by the Department of Local Government and Planning to inform interested parties of the public benefit test and to seek comment on the preliminary findings in the draft report. This final report takes account of views presented in submissions and from further consultation with key stakeholders in the period since the draft report was released.

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ACRONYMS

ANZRA	Australian and New Zealand Reciprocity Association
BSA	Building Services Authority
DLGP	Department of Local Government and Planning
DNRM	Department of Natural Resources and Mines
LGAQ	Local Government Association of Queensland
NCC	National Compeition Council
NCP	National Competition Review
PBT	Public Benfit Test
PIC	Plumbing Industry Commission
PDELB	Plumbers and Drainers Examination and Licensing Board
WSAA	Water Services Association of Australia

OVERVIEW

This is a Public Benefit Test (PBT) of the water and sewerage legislation

Economic Insights has been engaged by the Department of Queensland Local Government and Planning to undertake a Public Benefit Test (PBT) of certain restrictions to competition in the Queensland *Sewerage and Water Supply Act 1949* and subordinate legislation. The PBT is to examine the costs and benefits of the restrictions to competition and alternative means of meeting the objectives of the legislation.

The approach that has been adopted is based on the application of appropriate economic and governance principles, consultation with key stakeholders and identification and qualitative assessment of features of the legislation. A preliminary draft report was made publicly available to help ensure transparency in the process and to facilitate the provision of key relevant information required to conduct the PBT.

The legislation is focused on the protection of public health and safety

The objective of the Sewerage and Water Legislation is to ensure that plumbing and drainage installations meet a standard that helps protect public health and safety. At the State level, responsibility for the legislation is shared between the Department of Local Government and Planning, which focuses on on-site water, sewerage and drainage reticulation matters, and the Department of Natural Resources and Mines which is responsible for off-site matters and on-site sewerage treatment options. The Plumbers and Drainers Examination and Licensing Board, an independent statutory organisation, is responsible for the licensing of more than 10,000 operating plumbers and drainers. Local Governments hold much of the day-to-day responsibility for implementing the legislation, principally via checks on all plumbing and drainage work done.

The restrictions to competition examined by the PBT are:

There are three main restrictions to competition in the legislation

- The specification of minimum technical standards for products and materials used in plumbing and drainage. This is intended to prevent the entry to the market of materials and products deemed to be of low quality or those that have not secured certification of their acceptability.

i. Controls on materials

- The system of licensing plumbers and drainers by the Plumbers and Drainers Examination and Licensing Board which entails minimum entry standards and disciplinary procedures. The licensing system prevents non-licensees providing all but very basic plumbing and drainage services.

ii. The licensing of plumbers and drainers

- The monopoly held by Local Governments over the approval and inspection of plumbing and drainage work in their area. This prevents the emergence of

iii. Local Government checks on all work done

alternative means of checking work, such as self-assessment or the operation of private sector inspectors.

We have not been able to definitively resolve all issues

This public benefit test presents a number of key conclusions on the appropriateness of these restrictions to competition. Our conclusions are based on the application of economic and governance principles and our understanding of the current arrangements and problems associated with those arrangements, based on the consultations we have undertaken and the information we have reviewed. As this public benefit test is a minor review and is qualitative in nature we are not able to definitively resolve all issues.

There is scope to take a different view depending on the assessment of more specific information

We note that there is scope to take a different view on the relative importance of the costs and benefits of the various restrictions to competition and that a decision on a certain specific option is dependent on obtaining and assessing further specific information. This applies particularly to the appropriate system for checking plumbing work.

A clear case can be made for some form of government intervention

We have concluded that there is a clear rationale for at least some regulation of plumbing and drainage work. There are information problems in the market that would prevent buyers making sound decisions in the absence of some form of government intervention. In addition, there are third party effects that mean the decisions of one party can adversely affect another, third party, and there is a clear rationale for government intervention to protect these third parties.

But the appropriate form of intervention is not so clear

But the appropriate form of government intervention is not so clear. The current regulatory regime can be thought of as providing three layers of checks. Firstly there are checks on the material inputs used by the industry. Secondly, there are checks on who does the work via licensing. And thirdly there are checks on the output of the industry via Local Government inspections of all notified work. The PBT explores whether all three layers are required and if an alternative approach to applying each layer of checks is justified.

While all three layers of checks are warranted in some form

It is found that there is a case for all three layers of checks in some form. Although there seems to be little need to revise the system of setting minimum standards for products and materials, there is a case for considering revisions to the controls on who does the work and the checks on all outputs.

There appears to be a case for relaxing the list of reserved practices

The licensing system currently reserves almost all plumbing and drainage work for licensees or their apprentices. This can lead to the situation where very simple tasks (eg installing a showerhead as part of a new installation) require a fully qualified plumber or drainer and other trades are restricted from undertaking tasks that are probably within their capacity. There appears to be a case for relaxing these restrictions such that some of the simpler tasks can be undertaken by non-licensees, possibly subject to checks by licensees. However, this is probably a low priority.

There also appears to be value in revising the disciplinary procedures employed by the licensing regime such that appeals are heard by a court or independent tribunal and not the Minister as at present.

The licensing body could be re-considered

A further issue is the appropriate body to manage the licensing regime. Alternatives include creating a single body to manage all occupationally licensed trades in Queensland, removing plumbers and drainer contractors from the responsibility of the Building Services Authority or providing all licensing responsibility to the Building Services Authority. Key differences between these alternatives are the potential for 'regulatory capture' (where the members of the regulated industry have too much influence over the regulator), the unit cost of service delivery and the degree of consumer protection provided.

The system of local government inspections warrants further consideration

The main area requiring further consideration is the appropriate system for checking work done. The options considered were the continuation of the current system of Local Government inspection only, a mix of Local Government and private sector certification, independent private sector certification only and self-assessment by licensees of their own work.

Conflicts of interest and competitive neutrality are major issues for a mixed system

We consider that the potential conflicts of interest and competitive neutrality issues and inefficiencies that arise with a combination of Local Government and private sector certification mean that a mixed system is unlikely to be a viable option. The option of the replacement of the current arrangements by independent private sector certification only also appears unjustified as it would lead to the creation of additional licenses for plumbing and drainage certifiers.

The current system of checking all work done can ensure high quality standards

But it is expensive

The choice between the current system and self-assessment largely rests on an assessment of the higher cost of independently checking all work versus the risk to quality standards of replacing this with a system of audits. It is reasonable to expect that if a successful audit program could be established, a system of self-assessment would preserve quality work while lowering overall costs for the community relative to the current system (eg by providing for speedier inspections and lower inspection costs). But if the audit program was not very effective, it could raise overall costs for the community by lowering work standards and creating additional costs in implementing the regulatory system (eg via additional court action). If audits were unlikely to be reasonably effective, the current system is probably preferable.

There is support for self-assessment from the Victorian experience

The main support for the option of self-assessment is provided by the apparent success of: the Victorian system of self-certification of plumbing and drainage work; the introduction in Queensland of private certification of building work: and self-certification in the Queensland electricity industry. The Victorian system and the shifts in accountability and attitudes it has brought about have contributed to a reduction in the fault rate in plumbing work from 24 per cent to 4 per cent. The

impact of private building certification is perhaps best summarised by the complaint rate – there have been approximately 300 complaints since its introduction, out of more than 100,000 certifications – a complaint rate of only 0.3 per cent. Queensland electrical workers self-certify their works in a similar manner to the self-certification of plumbing work in Victoria.

Additional information is required

To be certain which option is preferable, detailed information would be required on the performance and costs of the current system relative to the expected performance and costs of a system based on self-assessment backed up by an audit program. Although such information on these aspects was sought in the public consultation phase, it proved difficult to obtain. A more exhaustive research program, for example based on surveys of practitioners, may provide this information. However, such research was outside the scope of this review.

In principle, we consider it to be most likely that a system of self-assessment would yield benefits that exceeded the costs and adequately meet the objectives of the legislation. However, we note there is insufficient evidence to present a persuasive argument that self-assessment would be clearly superior. Under the Queensland PBT guidelines, a PBT must establish that the benefits of removing a restriction to competition outweigh the costs. This cannot be established definitively, and consequently it is concluded that, under the Queensland Public Benefit Test Guidelines, there is not a sufficient case for replacing the current system of Local Government-based inspections by a system of self-assessment.

1 INTRODUCTION

1.1 REASONS FOR THE PUBLIC BENEFIT TEST

The Public Benefit Test is required by the National Competition Policy

In April 1995, the Commonwealth, State and Territory Governments signed a set of agreements to implement a National Competition Policy (NCP). Under the policy, each participating jurisdiction committed to implementing a series of competition reforms, including the review and, where necessary, reform of all legislation that contained measures restricting competition.

The Queensland Legislation Review Timetable identified potential restrictions on competition in the *Sewerage and Water Supply Act 1949* and its subordinate legislation. Under the National Competition Policy, a Public Benefit Test (PBT) is required of these restrictions and alternative means of meeting the objectives of the legislation. This report presents the findings of the PBT.

A draft report with preliminary findings was made publicly available for consultation from 28 March to 26 April 2002 as a key step in the conduct of the PBT. Consultation was undertaken with a number of key stakeholders in preparing the draft report and in seeking their views in the public consultation period. Submissions were also reviewed to take account of relevant information and views about the current system and options for reform.

1.2 THE PUBLIC BENEFIT TEST METHODOLOGY

The Test must look at the costs and benefits of regulation

The guiding principle for a PBT of restrictions to competition contained in legislation, as specified in Clause 5(1) of the Competition Principles Agreement, is that legislation should not restrict competition unless it can be demonstrated that:

(a) the benefits of the restriction to the community as a whole outweigh the costs; and

(b) the objectives of the legislation can only be achieved by restricting competition.

A PBT rests on the evaluation of the costs and benefits of the restrictions to competition and alternative means of meeting the objectives of the legislation.

This PBT of the restrictions to competition has been conducted in accordance with Queensland Government's *Public Benefit Test Guidelines*. Under the Queensland Government's Guidelines legislative restrictions to competition will only be removed if a public benefit can be demonstrated.

1.3 THE APPROACH

The Test is based on a qualitative assessment

This PBT has been undertaken by Economic Insights, an independent firm of economic consultants, for the Department of Local Government and Planning (DLGP). It has been classified as a minor review, meaning that the assessment is largely qualitative in nature (ie it is not intended to provide a detailed quantification of costs and benefits). This approach is considered reasonable given the nature and likely impact of the restrictions.

The report builds on consultation with stakeholders

The approach that has been adopted is based on the application of appropriate economic and governance principles, consultation with key stakeholders, the review of public submissions on a draft of this report and the identification and qualitative assessment of key costs and benefits. The release of the draft report was a key aspect of the consultative method to help ensure transparency in the process and to facilitate the provision of key relevant information required to fully inform the PBT.

The PBT has been confined to restrictions identified in the terms of reference. The PBT has not specifically identified or comprehensively assessed possible additional restrictions associated with the legislation.

The list of key stakeholders consulted in the preparation of the preliminary draft report is provided in Annex A. The list of persons consulted for the final report is provided in Annex B. The list of submissions received in provided in Annex C.

In preparing this report, staff of Economic Insights have relied on information obtained through consultation with a range of public and private organisations and individuals. Much of the information has been provided informally and as such its accuracy cannot be independently verified. Further information was obtained from public submissions. The consultation and public submissions have identified a range of opposing views and it is not possible without further comprehensive information to definitively "prove" one view or the other.

It is considered that sufficient reliable information has been collected to form the basis for assessment of the options as set out in this report but given information constraints there is scope to form views and conclusions that differ from those presented in this report.

However, it is considered that sufficient reliable information has been collected to form the basis for assessment of the options as set out in this report. This is because our views do not rely on the assertions of any particular group but are based on a combination of the application of economic and governance principles, review of legislation and key facts, a reasonably extensive consultation process for a minor review and evaluation of public submissions. We note however, that in some cases there is an absence of clear well documented proof so that in some cases there is scope to form views and conclusions that differ from those presented in this report.

2 THE LEGISLATION

2.1 THE LEGISLATION TO BE REVIEWED

Sewerage and Water legislation

The legislation to be reviewed is:

- Sewerage and Water Supply Act 1949
- Standard Sewerage Law 1998
- Standard Water Supply Law 1998
- Sewerage and Water Supply Regulation 1998

The Sewerage and Water Supply legislation requires that plumbing and drainage are installed in compliance with prescribed standards, in the National Plumbing and Drainage Code, AS3500. The standards and need for an associated compliance regime are not part of the PBT. However, some operational elements of the regime have been identified as potentially anti-competitive and have been specified below as part of the PBT.

2.2 THE OBJECTIVES OF THE LEGISLATION

A PBT requires a definition of the objectives of the legislation in order to help assess the costs and benefits of the restrictions to competition and its alternatives. The relevant definition is usually defined in the legislation or in documents prepared to support the introduction of the legislation (eg the Second Reading Speeches to Parliament by the responsible Minister).

The legislation is focused on public health and safety

In this instance the relevant objectives are not clearly spelt out in the legislation or supporting documents. Nonetheless there appears to be a consensus that in essence the legislation and licensing arrangements are intended to improve and safeguard the public health, safety and welfare of the community. It is widely considered that the legislation responds to a community expectation that plumbing and sanitary drainage installations will be of a standard that helps to ensure public health and safety.

The legislation is designed to facilitate the achievement of the objectives by specifying various requirements with respect to plumbing and sanitary drainage installations.

2.3 THE LEGISLATIVE FRAMEWORK

The administration of the Sewerage and Water Supply Act is shared between: the Department of Natural Resources and Mines (DNRM) and the Department of Local Government and Planning (DLGP); a statutory body, the Plumbers and Drainers Examination and Licensing Board; and Local Governments.

2.3.1 Department of Natural Resources and Mines

DNRM has offsite responsibilities

DNRM is responsible for the oversight of off-site water supply and sewerage infrastructure and the installation and operation of on-site sewerage facilities. For this aspect, the review only deals with the controls on the quality of materials used in on-site sewerage facilities and in connections to off-site water supply and sewerage infrastructure.

2.3.2 Department of Local Government and Planning

Under the Sewerage and Water Supply legislation, DLGP is responsible for the following:

DLGP has onsite responsibilities

- A safe and healthy potable water reticulation system within the boundaries of a site.
- An effective and healthy sanitary drainage system from within a site to an (off-site) sewerage system or to an on-site treatment or disposal system.
- Australian Standards adopted by reference to established technical compliance requirements.
- The approval and inspection of prescribed water supply and sanitary drainage work by local government plumbing inspectors.
- Approved materials to be used as part of plumbing and drainage work.
- The role, structure and operations of the Plumbers and Drainers Examination and Licensing Board.

2.3.3 Plumbers and Drainers Examination and Licensing Board

The Board is established under section 6 of the Act. It comprises 6 members, including a representative from each of the three relevant Government Departments (Department of Local Government and Planning, Department of Health and Department of Industrial Relations) and one from the Local Government Association of Queensland (LGAQ), Master Plumbers' Association and the Communications, Electrical and Plumbing Union (Plumbing Division, Queensland Branch).

Licensing is the responsibility of an industry board

The key responsibility of the Board is to ensure that only qualified plumbers and drainers are licensed in Queensland. More specifically, the Board is responsible for:

- Granting plumbing and drainage licenses.
- Hearing complaints.
- Investigating alleged breaches of plumbing legislation.
- Reprimanding or cautioning a license holder.
- Suspending or canceling licenses.
- Input into competency standards (i.e. apprenticeships).

2.3.4 Local Governments

Local governments hold much of the day-to-day responsibilities for the legislation

Around 125 local governments undertake the day-to-day administration of the legislation. The local governments are responsible for approving and monitoring the activities of the licensed persons to the extent that they inspect and test all new plumbing and drainage work.

Local government approval is required for any sanitary or drainage work (unless it is minor necessary work or unregulated work). The owners of the premises must comply with the requirements of the local government and provide necessary documentation (e.g. sanitary and drainage plans).

They check all new work done

During construction and upon completion of the work, local government inspectors must inspect and test the sanitary plumbing and drainage work. If the inspector is satisfied that there are no defects and that the plumbing and drainage work complies with the legislation, the inspector may provide the owner with a certificate.

Local governments across Queensland employ about 300 plumbing inspectors to verify compliance with the legislation.

2.4 THE REGULATED PRACTITIONERS

There are around 10,700 plumbers and drainers

In Queensland, 10,736 plumbing and drainers hold licenses issued by the Plumbers and Drainers Examination and Licensing Board under one or more of the following categories/classes:

- Plumbers license
- Drainers license
- Water plumbers license
- Country plumbers license (this license class is no longer issued)

- Restricted plumbers license
- Restricted drainers license

Within these license classes, the Board may also grant the following conditional licenses or licenses with endorsements:

A variety of licenses are available

- Interim plumbers license
- Interim country plumbers license
- Interim water plumbers license
- Interim drainer's license
- Restricted water plumbers license (Electrical)
- Restricted water plumbers license (Gas)
- Restricted water plumbers license (Irrigation)
- Restricted plumbers license (Fire protection)
- Restricted drainer's license (Domestic Sewage Treatment Plant Maintenance)
- Backflow endorsement
- Domestic Sewage Treatment Plant Maintenance Endorsement
- Thermostatic Mixing Valve Endorsement.

The various license classes reflect the competency of the practitioner. Many of the registrants/licensees hold combined licenses, for example, a license entitling the person to carry out plumbing work as well as drainage work. Licenses may also be endorsed to indicate that the person has undertaken specialist training, for example, in the testing and maintenance of backflow prevention devices.

The scope of work of the main license classes is summarised in Box 2.1.

Many plumbers and drainers also hold a BSA license

Approximately 40 percent (4,073) of the registrants/licensees are also registered as plumbing and drainage contractors under the *Queensland Building Services Authority Act 1991*. Under this Act, a plumber or drainer who wants to contract or sub-contract out or supervise work, is required to have a trade contractors license or a supervisors license.

BOX 2.1 THE SCOPE OF WORK OF THE MAIN LICENSE CLASSES

Plumber's License - Number of registrants is 9,032.

A Plumber's Licence holder is entitled to carry out the installation, alteration, extension, disconnection, removal, renewal, repair, and maintenance of pipes & fittings designed to receive & convey sewage & other discharges, and the ventilation of those pipes, fittings & fixtures and can include water plumbing & roof plumbing.

A Plumber's License registration costs $80 and is valid for 12 months. Registration can be renewed up to a maximum of 5 years, at a cost of $26 per year.

Interim Plumber's License - Number of registrants is 457.

An Interim Plumber's License holder must operate under the indirect supervision of a holder of a Plumber's License, and under this supervision the license holder may perform all activities as per a holder of a Plumbers Licence.

An Interim Plumber's License registration costs $37 and is valid for 12 months. Registration can only be renewed annually, at a cost of $26 per year.

Drainer's License - Number of registrants is 9836.

A Drainer's License holder is entitled to carry out the installation, alteration, extension, disconnection, removal, renewal, repair, maintenance of pipes & fittings designed to receive discharge from soil, stormwater & waste pipes, & convey discharge to public sewage or drainage or to a septic tank. Essentially this is work performed below ground level.

A Drainer's License registration costs $80 and is valid for 12 months. Registration can be renewed up to a maximum of 5 years, at a cost of $26 per year.

Interim Drainer's License - Number of registrants is 177.

An Interim Drainer's License holder must operate under the indirect supervision of a holder of a Drainer's License, and under this supervision the license holder may perform all activities as per a holder of a Drainer's Licence.

A Drainer's License registration costs $37 and is valid for 12 months. Registration can only be renewed annually, at a cost of $26 per year.

Water Plumber's License - Number of registrants is 63.

A Water Plumber's Licence holder is entitled to carry out the installation, alteration, extension, disconnection, removal, renewal, repair, and maintenance of pipes & fittings designed to receive & convey water.

A Water Plumber's License registration costs $80 and is valid for 12 months. Registration can be renewed up to a maximum of 5 years, at a cost of $26 per year.

Source: Work Process Procedure for various licenses and consultation with the Plumbers and Drainers Examination and Licensing Board

2.5 THE LEGISLATED RESTRICTIONS ON COMPETITION

The terms of reference for this review has specified that the PBT is to examine the restrictions to competition in the legislation relating to: technical standards for products and materials; a licensing regime that restricts entry to the industry; a statutory monopoly for the granting of licenses; and a statutory monopoly on the inspection of drainage and plumbing work.

2.5.1 The Specification of Technical Standards For Products and Materials

Only certified materials can be used in plumbing and drainage work

Under the legislation (section 47 of the Standard Sewerage Law and section 41 of the Sewerage and Water Supply Law) only material certified by the Manual of Authorisation Procedures can be installed or used in sanitary plumbing or drainage work, water plumbing work and on-site sewerage facilities. The same applies to plumbing and drainage work associated with on-site sewerage facilities.

Plumbing products must generally meet Australian standards

Currently, plumbing products are certified in accordance with the StandardsMark, TypeTest Mark and the WaterMark procedures. These "marks" are owned by Standards Australia and are licensed to Quality Assurance Services for issuance to complying products. Recently the National Plumbing Regulation Forum and Standards Australia have reached agreement that third party Certifying Bodies (other than Quality Assurance Services) can issue, under licence, certification to the WaterMark. The procedures for plumbing product certification and authorisation proposed in the draft Plumbing Code of Australia highlight that organisations approved by the Joint Accreditation System for Australia and New Zealand as Certifying Bodies will be able to issue WaterMark certification to complying products, subject to appropriate licensing by Standards Australia.

Local governments set minimum standards for water supply and sewerage

For water supply and sewerage infrastructure materials, the legislation requires that only pipes and fittings approved by the local government or its engineer can be used in building sewerage and water supply systems and that they must be installed in accordance with the local government's directions (section 29 of the Standard Sewerage Law and section 33 of the Sewerage and Water Supply Law). Local governments are also required under the Integrated Planning Act 1997 to prepare planning scheme policies that include standards for infrastructure.

Under section 74 of the Standard Sewerage Law a person is not allowed to build, install or operate an on-site sewerage facility that does not comply with the relevant code, design rules, small septic tank requirements or model specifications.

The approval for installation of on-site facilities is the responsibility of local governments. The On-site Sewerage Code, which is a performance-based code based on relevant Australian standards, sets criteria for on-site sewerage facilities with regard to performance, design, site evaluation, construction and installation, operation and maintenance, inspection and monitoring and model and type approval procedures.

2.5.2 The Licensing of Plumbers and Drainers

Plumbing and drainage work is reserved for licensees

Only persons who hold licences and particular classes of licences may perform specified categories of plumbing and drainage work. In order to be granted a licence, applicants must have prescribed experience and qualifications or

competencies as outlined in Table 2.1. The available licenses and the scope of work allowed under the main license types was summarised above.

TABLE 2.1 PRESCRIBED QUALIFICATIONS BY LICENCE CLASS

Class of License	Years of experience	Technical Requirements
Plumbers License	5 years plumbing experience OR experience equivalent to 5 years plumbing experience	Applicants must have successfully completed a Qld Plumbing and Draining Apprenticeship AND Gained 12 months experience under the authorisation of an Interim Plumber's License OR Be able to provide a Reciprocity Certificate Independent Certifier in Plumbing issued by the Australian and New Zealand Reciprocity Association (ANZRA) OR Have successfully completed an accredited Plumbers course conducted by a recognised and approved training provider
Drainers License	1 year OR experience equivalent to 1 years draining experience	Applicants must have successfully completed a Qld Plumbing and Draining Apprenticeship OR Be able to provide a Reciprocity Certificate Independent Certifier in Draining issued by ANZRA OR Have successfully completed a Plumbing and Draining Apprenticeship in another State of Territory OR Have successfully completed an accredited Drainers course conducted by an Institute of TAFE
Water Plumbers License	3 years plumbing experience OR experience equivalent to 3 years plumbing experience	Competencies (in plumbing and draining apprenticeship) for a water plumbers license, decided by an approved training organisation, and approved by the training council OR Be able to provide a Reciprocity Certificate Independent Certifier in Water Plumbing issued by ANZRA OR At least hold an equivalent qualification
Interim Plumbers License	Nil	Applicants must have successfully completed a Qld Plumbing and Draining Apprenticeship AND Be able to provide a Reciprocity Certificate Journeyman Status in Plumbing as issued by ANZRA OR Have successfully completed a Plumbing and Draining Apprenticeship in another State of Territory OR Have obtained a letter of approval to undertake an accredited Plumbers course conducted by an Institute of TAFE
Interim Drainer's License	Nil	Applicants must obtain a letter of approval from the PDELB to undertake the Drainer's Course.

Source: Sewerage and Water Supply Regulation 1998 (part 2), Work Process Procedures of various licenses.

Licensees are subject to disciplinary provisions

An important aspect of the licensing regime is the establishment of disciplinary processes. Under the Act the Board has the power to discipline a licence holder, in the event that the licence holder has infringed the legislation, failed to comply with a direction, is guilty of gross misconduct or negligence, is not entitled to hold a licence or obtained the licence by misrepresentation.

Following investigation, the Board may reprimand the licence holder, suspend or cancel the licence or make orders. A licensee who had his licence suspended or cancelled may lodge an appeal with the Minister.

2.5.3 The Statutory Monopoly of the Granting of Licences

Only one agency can issue licenses

Under the Sewerage and Water Supply Act, the Plumbers and Drainers Examination and Licensing Board is the only body with the authority to issue licences to plumbers and drainers. As outlined above, it can issue licences under 6 licence classes and it can grant conditional licences or licences with endorsements.

2.5.4 The Statutory Monopoly of Local Government Inspectors

Local governments must check all work done

Section 49 of the Standard Sewerage Law and section 43 of the Standard Water Supply Law require that the inspector from a local government in whose area the work is performed must inspect and test sanitary plumbing work, sanitary drainage work and water plumbing work.

Local government inspectors must be licensed or have the necessary competence. Local government inspectors must inspect sanitary plumbing/ drainage and water plumbing works and if the work is finished and defect-free, certify that the work is in accordance with the legislation.

3 A GENERAL RATIONALE FOR REGULATION OF PLUMBING AND DRAINAGE ACTIVITIES

Information problems are the main rationale for regulation

From an economic efficiency perspective the main rationale for government intervention in markets is to address market failures. The main forms of market failure that are relevant in relation to plumbing and drainage work are based on the scope for information problems, known as information asymmetries and the scope for adverse third party effects, known as negative externalities. Essentially the information problem is that users of buildings are at a severe information disadvantage compared with those involved in the construction and maintenance of buildings including plumbing and drainage work. The third party effects arise because defective plumbing and drainage can impact adversely on the general community and the neighbours of a problem building.

Information problems prevent quality being assessed

The nature of the information problem is such that it is too costly for individuals to overcome the problem without some form of government intervention. In particular, a significant share of buyers or users of services are likely to have difficulty in assessing in advance of purchase or leasing decisions whether plumbing and drainage work or materials meet acceptable standards. In many cases it may not be feasible to readily evaluate the quality even after purchase (eg. poor quality of work or materials may only be evidenced by system failure or there may be a physical barrier such as a wall or concrete slab that prevents work being adequately checked). There can also be a problem when the quality of work or materials cannot be determined at installation and is only apparent many years after installation (eg an underground pipe may take many years to deteriorate but do so well before the design life).

It could be argued that as long as users were aware of such risks and their implications that they should be free to choose whether to assume the risk or take their own action to reduce such risks. However this consideration ignores the extent of transactions costs that may be incurred in overcoming the information problem relative to the efficiency of some form of government intervention. In these situations the market cannot effectively deal with the transactions costs whereas the government can because of its ability to regulate activity or intervene in other ways that are efficient, eg. the public provision of relevant information.

Contrast the situation in the plumbing and drainage industry with the case of the motor vehicle industry. This industry is characterised by a small number of branded suppliers offering a well-defined product. A motor vehicle is more technically sophisticated than a typical plumbing installation, and a potential buyer cannot assess the integrity of all components of a motor vehicle and the likelihood of failure. But reputations are important in the motor vehicle industry and buyers will learn from their past experience and the experience of those they

know and may seek out independent assessment of quality (eg as provided by magazines or driver associations). Brands have emerged that can inform the buying process and sellers have an incentive to offer warranties as a means of building the confidence of buyers. In this case the market can adjust to overcome any potential information problems even though the product is complex.

Relationships and educated buyers can help solve the information problem

Relationships can develop in the plumbing and drainage industry, particularly between builders and plumbers and drainers that can overcome the information problem over time for some market participants.[1] And to some extent educated buyers such as builders may be able to adequately assess quality even in the absence of a past relationship. But homeowners would generally face serious information problems and even the educated buyer may face similar problems when engaging a plumber or drainer for the first time. Such information failures would hinder the entry of new suppliers and limit the mobility of suppliers and consequently the degree of competition in the market. Furthermore, the mobility of plumbers and drainers means that poor performers could move from one area to another once buyers in an area became aware of their sub-standard work, or potentially even before buyers became aware of poor quality work. The large number of potential suppliers may make it difficult to track such poor performers so that potential buyers are alerted to their poor record. This means that the penalty from undertaking poor quality work may be weak in a completely unregulated market.

But certain features of the industry prevent a complete solution

Third party effects present a clear rationale for regulation

The potential for adverse third party effects is also an important consideration that distinguishes plumbing and drainage from many other services and products. Adverse third party effects (negative externalities) arise where individuals who are not party to such decisions could be affected. These could arise for example when a neighbouring property is flooded by sewage from a poor connection to the sewerage system or if contaminated water flows back into the water reticulation system. In some cases the cause of the third party effect, such as the source of contaminated water, may be difficult to identify and this may hinder correction of the problem or the levying of penalties. A key concern is that the existence of information asymmetries may hide risks to public safety, as poor plumbing could lead to serious health risks.

[1] The relevance of the nature of a good is developed by Vining and Weimer (1988). They distinguish between search goods, experience goods and post-experience goods. The characteristics of search goods can be readily assessed before purchase, the characteristics of experience goods can only be assessed after use, while the characteristics of post-experience are difficult to assess even after use. Search goods are unlikely to suffer from information failures, particularly when purchased frequently. The case for intervention in markets for experience goods is typically stronger. But it remains relevant to consider frequency of purchase, variance and search costs. Information failures are very likely for post-experience goods because the quality is hard for a buyer to assess, and such goods are most likely to create a need for regulation. But market solutions are possible even for such goods, because information on quality can have market value (e.g. information on the safety of a drug or its effectiveness). This means that private supplies of information may emerge.

There are also other ways that third party effects can adversely affect the market. A buyer of plumbing and drainage services may pay little attention to the potential costs they may impose on others by choosing poor quality materials or suppliers. Some may intentionally choose a low quality option in the expectation that the cost of correction will be borne by future owners of the building.

Both individuals and third parties are affected

Some form of regulation is often perceived as the most effective form of addressing problems arising from information problems and third party effects. Although the strongest rationale for regulation probably relates to public safety concerns, the problems created by information failure may still be highly relevant for the individual buyer. For example, these problems may relate to aspects of quality such as the basic amenity and functionality of plumbing. That is, information problems can prevent even the owner of a property making well informed decisions in the absence of some form of government intervention.

Practitioners can also be adversely affected

Information failures can also be to the detriment of practitioners or suppliers of materials. If a market is unable to assess quality standards, suppliers offering better quality services or materials can find it difficult to receive an appropriate reward for their quality. This reduces the incentive to provide good quality, and may see better quality providers leave the market or lower their standards over time.[2]

Licensing can reduce the information problem

It is likely to be the case that licensing or similar regulation is an appropriate means of regulating the market and effectively addressing the problem faced by users of buildings in obtaining adequate information. Licensing of plumbers and drainers provides a signal of quality, an indication that a supplier has been confirmed as holding the skills required to undertake certain work. This helps a buyer choose between good and poor quality service providers. Given the public health concerns, technical standards and some form of government-supervised inspection are also likely to be necessary to deal efficiently with the problem. Although it may be possible to develop other mechanisms to address the information problem, regulation provides greater certainty than most other arrangements and this is likely to be important given the public safety issues.

It is important to keep in mind that information problems can be overcome by providing information without necessarily constraining a person's choice. As argued many years ago by the Nobel Prize winning economist, Milton Friedman:

> *"If the argument is that we are too ignorant to judge good practitioners, all that is needed is to make the relevant information available. If, in full knowledge, we still want to go to someone who is not certified, that is our business." (Friedman, 1962, p.149)*

[2] The potential for such a problem and the rationale it presents for licensing has been well highlighted in the economics literature. See, for example, Akerlof (1972), Leland (1979 and 1980), Beales et al (1981), Heal (1976) and Kim (1985).

In summary, the transactions costs of identifying quality and rectifying problems can reduce the effectiveness of market mechanisms and provide an important efficiency argument for some form of regulation of technical standards and service providers. Given the public health concerns and the nature of the information problems, there are issues as to the optimal level and mix of regulation. There is a need to consider the extent to which materials, service providers and completed work need to be regulated and how specific regulations complement each other.

The exact form of regulation must be carefully considered

Although a strong economic rationale can be developed for some form of regulation of plumbing and drainage work to address public safety issues and improve decision making of buyers of plumbing and drainage services, it is more difficult to determine the exact nature and scope of relevant regulation or other government intervention. A key principle is to design the intervention so that it most effectively focuses on addressing the market failure, with minimal spillover effects in terms of restricting competition or otherwise imposing costs on the community.

As well as considerations of the impact on competition it is necessary to keep administrative and regulatory costs as low as feasible given the objectives. It is also important to avoid serious conflicts of interest as these can reduce overall regulatory effectiveness and compromise the focus on addressing the key problem. Regulation will normally be most effective when the relevant agencies have clear and non-conflicting objectives and mechanisms are in place to ensure effective accountability.

Regulation can actually favour bad operators

A further issue is the importance of trying to avoid overstepping the limits of a regulatory regime. It is inevitable that some aspects of the building industry cannot be effectively regulated. An attempt to regulate these aspects will tend to penalise the good operator that does comply with the regulation relative to the poor operator that makes no attempt to comply. Favouring the poor operator will tend to erode quality standards in the industry. Alternative approaches to solving the underlying market problem, such as providing more information to consumers so they make better decisions, can provide a better outcome than direct regulation (eg. via licensing).

Appropriate roles should be sought for the government and private sector

These considerations also raise the issue as to what are the appropriate roles for government and the private sector. It will not normally be appropriate for the private sector to undertake legislated regulatory functions. However the private sector is likely to be more effective at commercial functions so that careful consideration should be given to developing arrangements that effectively separate the two roles.

4 THE ASSESSMENT OF BROAD REGULATORY OPTIONS AND KEY ISSUES

4.1 INTRODUCTION

This section provides an assessment of broad regulatory options and discusses the appropriate roles of various government and private entities in relation to relevant aspects of the Sewerage and Water Supply Legislation.

This section establishes a preference for some form of licensing of occupations combined with certain controls on materials used and inspection of work to address the public health objectives of the Sewerage and Water Supply Legislation. It also assesses the key broad options for implementation of licensing, controls on materials used, inspection of work and disciplinary processes. Detailed supporting reform options are considered in section 5. Given the wide range of possible options that could be developed this two-stage approach is considered the most suitable approach for evaluating the options.

4.2 DEREGULATION

Complete deregulation is described as:

Complete deregulation is untenable

- no formal licensing. Licensing is currently undertaken by the Plumbers and Drainers Examination and Licensing Board.
- no controls on products and materials. Products and materials must currently meet either Australian standards or those set by Local Government; and
- no controls (checks and enforcement measures) on outputs. At present all plumbing and drainage work is checked by Local Government.

Given the nature and scope of information and public health issues, complete deregulation is considered to entail serious public health risks and can be clearly rejected.

However a partial deregulation option that is worth considering is the removal of regulatory or licensing requirements with respect to persons performing on-site plumbing and draining services but the retention of other regulatory mechanisms. For example, controls could be maintained on products on materials used and/or an appropriate inspection and approval regime for work done could be maintained.

From a conceptual perspective, it needs to be asked why it is not possible to just have an effective system of checking outputs since it is the output that really

Checks on outputs are insufficient in isolation

counts in terms of achieving the public health objectives. Essentially, it is not likely to be technically possible to only check outputs in a cost efficient manner. For example, a thorough check of plumbing work behind a wall may require the removal of the wall cladding, and it may be prohibitively expensive to uncover pipes or fittings in a trench. In some cases outputs may be beyond inspection, such as the quality of a pipe encased in a concrete slab. A system of checking only outputs could also be very costly if plumbing work has to be re-done when materials used do not meet what are considered minimum safe standards or because of defective workmanship

The reliability of the plumbing and drainage output will depend on the reliability of materials used as well as plumbing skills, and it is likely to be most efficient to set some consistent minimum standards for both prior to installation. In summary, a system of comprehensive checks on outputs is in itself not likely to be feasible nor cost efficient in meeting the desired legislative objectives.

Checks on materials are also insufficient in isolation

Similarly the nature of plumbing work is such that controls on materials used are not likely to be sufficient by themselves to achieve the desired public health and safety objectives. This is because the final product depends on both the use of safe materials and appropriate design and construction in undertaking the drainage and plumbing tasks.

It would be theoretically possible to dispense with controls on materials and instead require an installer to guarantee materials used. But the installer could face considerable costs in providing the guarantee in the absence of some basic standards. Such standards are important because they both inform the decisions of the buyer of the materials and provide the installer a safeguard against future claims that materials used were inadequate.

Controls on who does the work would also tend to be inefficient in isolation. There is value in the specification of basic standards for materials and some form of the certification of work would provide an important check on the quality of work done. The complete absence of a formal mechanism for either a selective audit or the comprehensive inspection of the quality of work done could see sub-standard plumbers and drainers remain in operation indefinitely and weaken the incentive of all operators to meet appropriate standards. A key problem is that many buyers of plumbing and drainage services would find it difficult to distinguish between a good and bad work or operators.

In summary it is considered that there are likely to be very substantial additional inspection and other monitoring costs for partial deregulation relative to the costs of using licensing as a simple filter. The public safety concerns and information problems in a deregulated market (including with inspection services) are considered to provide a strong rationale for some form of licensing and/or

associated regulatory requirements as an efficient mechanism to deal with the problem.

4.3 NEGATIVE LICENSING

A negative licensing scheme is normally one which allows anyone who meets a minimum qualification to practise but provides the Government with the authority to withdraw the right to practise if an individual fails to perform to certain specified standards. Negative licensing could also take the form of no formal qualifications, or some minimal restrictions on entry such as criminal convictions or certain educational requirements. The Plumbers and Drainers Examination and Licensing Board would not be required under this option.

It is assumed that under this option appropriate inspection and approval of the work would still apply guided by the Plumbing Code (and hence Australian standards). It is also assumed that the current licensing by the Building Services Authority would also be converted to negative licensing such that no alternative licensing regime applied.

Negative licensing will save licensees costs

Negative licensing will entail lower compliance and administrative costs than licensing because plumbers and drainers would no longer be required to apply and pay for a license or to pay for annual renewals. This would save an individual plumber and drainer $80, and an interim plumber or drainer $37 in application fees and $26 in annual renewal fees. The total saving across the State would be in the order of $500,000 per annum.[3] There would also be a saving in the time spent by plumbers and drainers in seeking and maintaining the license.[4]

Any may lead to more industry participants

There may also be an increase in the number of plumbers and drainers in the industry where this may lower the cost of service provision. This effect may be most notable in regional areas where there are most likely to be a problem with a shortage in the supply of plumbers and drainers.

These developments would tend to slightly reduce building costs that are borne by building owners.

[3] This saving broadly equates to the saving in administration costs from the reduced workload of the Plumbers and Drainers Examination and Licensing Board. The total value of license fees of approximately $500,000 per annum is somewhat higher than the estimated total cost of operations of $300,000 per annum.

[4] A recent review of the Building Services Authority Act found that for every $1 spent on fees each year renewing a (simple) license, in the order of another $1 was spent in time etc in meeting licence conditions and administration. Using this as a benchmark, the total cost of the licensing under the Sewerage and Water Supply Act is in the order of $1 million per annum.

But increase the risk of public safety and amenity problems

Negative licensing under the Sewerage and Water Supply Act is likely to create a greater risk of compromising the public safety and amenity objectives. Under negative licensing the number of inappropriate participants entering and remaining in the industry will be higher than under a licensing process, entailing greater risks of defects. To attempt to achieve the same level of effectiveness as licensing, there would have to be a more rigorous and more comprehensive monitoring process by authorities responsible for sewerage and water systems.

Better operators may be penalised

Better quality plumbers and drainers would tend to find it harder to compete as it becomes easier for lower quality operators to obtain work and remain in the industry. While lower quality operators would benefit under this option, there would tend to be a general lowering over time in the standard or work in the industry.

Many buyers of plumbing and drainage services would need to spend more time selecting a supplier because quality would be harder to assess. For example, more time would need to be spent checking references and past work and monitoring current work.

This is an inferior option

Concerns about compromising public health, disadvantaging the better operators and increased monitoring costs suggest that this option would also be inferior to positive licensing i.e. only allowing individuals who have met certain prescribed standards to undertake specified plumbing and drainage functions.

4.4 SELF-REGULATION BASED ON A CODE OF CONDUCT SUPPLEMENTED BY MINIMUM LICENSING REQUIREMENTS

This option is a form of self-regulation with minimum legislated standards. Appropriate inspection and approval of the work and controls on materials used would still apply and a similar form of self-regulation would be adopted under the Building Services Authority.

There could be many forms of a code of conduct

It is difficult to characterize this option as it depends on the extent of licensing requirements that are specified. These could be as high as the modified accreditation requirements in any of the options examined or they could merely relate to certain requirements in relation to a 'fit and proper person test' or even no requirements at all. Alternatively they could encompass arrangements for voluntary licensing where anyone can practise but certificates of competency are provided to people who meet specified requirements.

However a key characteristic of code of conduct arrangements is that the industry has a large role in designing and policing adherence to an appropriate standard. There are likely to be many options for policing, disciplinary and appeals processes.

Self-regulation could lower some costs

As for negative licensing, self-regulation has the potential to lower charges and administration costs and this should lower building costs. The extent of the saving depends on the form of self-regulation adopted.

The current Plumbers and Drainers Examination and Licensing Board would probably not be required under this option, although a more limited body may be required to oversee the operation of the code of conduct.

In a recent discussion paper on the regulation of the professions, the National Competition Council commented that:

But is only suitable for some industries

> *"Self regulation requires a cohesive profession with a strong sense of collegiate identity. Since limited formal sanctions for poor conduct are available to self-regulatory bodies, the informal sanction of censure or disapproval from fellow professionals must be a powerful motivator if purely self-regulatory arrangements are to be effective." (NCC, 2001, p.16)*

The large number of mobile, independent operators may preclude self-regulation

This highlights a key issue. The plumbing and drainage industry is not well suited to self-regulation. There are a large number of independent, mobile operators. They are not readily tracked or controlled, and poor performers can readily move to a new area or re-establish under alternative business arrangements. Considerable time and effort would be required to regulate the industry and the incentive for the industry to engage in extensive monitoring is probably too weak to ensure effective self-regulation.

This contrasts to other areas of the economy where self-regulation is applied. For example, the relationships between homeowners and insurance companies are subject to a general code of practice overseen by an ombudsman. Such companies have a strong interest in maintaining their public reputation and this can provide an incentive to respond to consumer complaints. Reputation would not be so important for the small plumbing and drainage operation that sought to win work by cutting corners then moving on when the clients began to dry-up. The accounting profession is also self-regulated, where the importance of maintaining the credibility of a firm's brand creates an important check on quality. However, recent developments in Australia and the United States highlight the weaknesses of self-regulation of the accounting profession.

Self-regulation may erode quality standards

The building industry argues that unlicensed operators are common and they represent substantial competition for licensed operators, at least for smaller projects. This inability to bring all operators into the licensing system highlights that there are limits as to the effectiveness of licensing. There is the prospect that those operating outside a licensing system, even if only based on self-regulation, can lead to an erosion of quality standards in the industry. It is difficult to guard against this under a government licensing system, and it would be even more

difficult under self-regulation. Self-regulation, like negative licensing, creates a higher risk of poor quality work than under current arrangements.

The greater industry role means self-regulation is better than negative licensing

The greater involvement of industry in a code of conduct is likely to facilitate the development of more efficient processes than achievable under negative licensing. This is the main distinguishing feature between the two options and may lessen the potential for better operators to be penalised. But the industry role also creates a conflict of interest issue as the industry will be judging its own performance. The conflict of interest could be so great as to undermine quality standards.

Relative to the current system, it is considered that self-regulation would lead to a weaker enforcement mechanism, inadequate transparency, greater scope for inconsistent standards and a likely greater risk of compromising the public safety and amenity objectives when compared to a licensing regime. A key weakness is in ensuring that self-regulation will be in the interest of the public rather than the industry.

In relation to voluntary licensing it is considered that this option would not adequately address the information problems and public safety risks relative to the use of positive licensing.

4.5 POSITIVE LICENSING, CONTROLS ON MATERIALS AND INSPECTION OF OUTPUTS

Regulation is justified

Given the foregoing considerations, it is considered that a mix of positive licensing, controls on materials used and some form of checking on outputs will be required to ensure the objectives of the legislation are effectively achieved.

To ensure quality and to address market failure issues, such as information asymmetries, a number of control mechanisms have been set up under the sewerage and water supply legislation. The three main mechanisms include:

Based on a combination of controls

- Controls on technical standards.
- Controls on plumbers and drainers through licensing arrangements and disciplinary processes.
- Controls on completed work.

The controls need to be carefully considered

As noted it would be ideal if controls of outputs, for example by way of inspections of all work completed, would be sufficient by themselves. However, it is likely that such a system would be very costly to be fully effective. It is generally accepted that a combination of control mechanisms is likely to be the least cost means of achieving the desired objectives. The difficulty associated with a mixture of such control mechanisms arises with the selection of the most effective options and hence the need for explicit and focussed regulations.

Section 5 specifies and assesses a number of options for each aspect of control including options for structural/administrative arrangements.

4.6 ROLES OF VARIOUS ENTITIES

If a decision has been made that formal controls are required with regard to technical standards, licensing arrangements and inspection services, it has to be decided who should be responsible for these requirements and services.

It is best if policy, regulatory and commercial functions are separated

Generally regulatory and policy functions are the responsibility of government, while the private sector is better at performing commercial functions. Furthermore, it is accepted that there is a need for the separation of policy, regulatory and commercial functions to provide clarity, avoid conflicting objectives and conflicts of interest and help ensure effective accountability.

There is a need to consider the respective roles of Local Governments, the Department of Local Government and Planning, the Department of Natural Resources and Mines, the Plumbers and Drainers Examination and Licensing Board, and the Building Services Authority (BSA).

At present Local Governments are responsible for inspecting and testing completed sanitary plumbing and drainage work. They are also responsible for the ongoing approval and inspection of prescribed water supply and sanitary drainage work by local government plumbing inspectors. Local Governments can prosecute unlicensed persons performing work in their area.

The Department of Natural Resources and Mines is responsible for setting standards for materials and work external to building sites (ie. for offsite work). It is also responsible for setting standards for on-site sewerage systems.

The Department of Local Government and Planning is responsible for the adoption of technical standards for onsite materials and work and, through the Plumbers and Drainers Examination and Licensing Board, the licensing and disciplining of plumbers and drainers.

There is dual licensing of many plumbers and drainers

The Plumbers and Drainers Examination and Licensing Board is principally responsible for the licensing of plumbers and drainers. It also has the power to investigate complaints and to discipline licence holders found guilty during the complaints investigation. Licensing of plumbing or draining contractors and supervisors is the responsibility of the Building Services Authority. Plumbers and drainers who wish to perform supervising or contracting functions, are required to hold separate licences, from the Plumbers and Drainers Examination and Licensing Board and from the BSA.

Ideally, the Department would have a policy role only

Ideally, the Department of Local Government and Planning should be responsible for policy matters and the overall performance of the regulatory regime for plumbing services. In relation to regulatory matters, this means that it can have responsibility for establishing the broad regulatory regime and assessing its performance, but should not be responsible for day-to-day regulatory matters that should be the responsibility of a separate regulatory entity. It is considered that to achieve clarity and consistency in decisions and avoid conflicts in decision making that regulatory, mediation and disciplinary functions should be effectively separated from the policy functions.[5] In this respect the independence and effectiveness of the Plumbers and Drainers Examination and Licensing Board, its authority and reporting arrangements need to be assessed. This is considered in more detail in Section 5.

The options for the appropriate regulatory authority need to consider such issues as whether the responsibility should be at the State or Local Government level and where best to place occupational licensing of plumbers and drainers from a regulatory/administrative perspective.

Local government licensing is considered inappropriate

It is considered that it would not be appropriate to provide Local Governments with the responsibility for occupational or business licensing of plumbers and drainers. There are likely to be important cost efficiencies in a centralised government entity having responsibility for either or both occupational licensing and business licensing. There would also be a greater risk of issues arising with varying, discretionary and inconsistent standards if the responsibilities for occupational licensing of plumbers and drainers rested with Local Governments.

If a centralised State government entity is to have responsibility for occupational and/or business licensing there is a need to consider whether the one entity should have responsibilities for both for one or more occupations. A full examination of this issue is beyond the scope of this review, however some basic options are presented in the Section 5. At this point it is worth noting some key advantages and disadvantages of some basic options.

A single occupational licensing entity can focus on its industry

The main advantage of a single occupational licensing entity is in being focussed on the requirements for a particular occupation. The role often extends to one of co-ordinating occupational development and is often favoured by participants in the industry. However an entity with responsibility for licensing of a single occupation is considered to run a significant risk of "regulatory capture" by members of the occupation they are regulating. It is often claimed that this problem can be addressed by ensuring wide representation on the board of the regulatory entity but such representation often means that expertise of the industry

[5] It is possible that administrative constraints prevent an effective separation of these functions. For example, problems may arise because the BSA is accountable to a different Minister to the Department of Local Government and Planning. In which case, we would argue that administrative arrangements should be revised to relieve these constraints.

is compromised. There is a need to ensure an appropriate balance between expert and broader community perspectives.

But faces regulatory capture

Even if individuals with wider interests but appropriate expertise can be found it is considered there is still a tendency for regulatory capture because of the close and regular interaction with participants in the industry and the likelihood that the regulatory entity would have responsibilities for training and other industry development functions. There is essentially a conflict in being an effective and impartial regulator and having industry development functions. When there is such a mix of functions and when regular interaction with the one occupation occurs there is an incentive by the regulator to maintain a friendly and supportive stance that can conflict with the role of impartial monitoring and enforcement.

Given these considerations another option is to house occupational licensing for several occupations, for example for all building trade occupations, in the one entity. For example, such an initiative was recommended by a recent review of occupational licensing in the ACT (see Allen Consulting Group, 2000). This is more likely to avoid the likelihood of "regulatory capture". It would probably also entail some cost efficiencies relative to separate occupational licensing.

A single regulator for the building industry is possible

In considering this option there is also a need to consider whether such an entity should have business licensing responsibilities as is currently the case for Electricians. This then raises the issue of the role of the Building Services Authority (BSA) and whether it should be the entity with responsibility for both occupational and business licensing for the entities that are currently required to have business licenses. There could be cost savings by combining duplicated activities (eg duplicate computer, accounting and reporting systems), and a potential improvement in effectiveness under such a model. For example, the greater regional coverage offered by the BSA may improve the control of poor performers.

However, in view of comments received during consultation, it is unlikely that most plumbers and drainers would be in favour of shifting all responsibility to the BSA. It is not possible to definitively determine which is the best option for occupational licensing in this review however Section 5 specifies the options with more context and detail.

Responsibility for plumbing and drainage could be removed from the BSA

An alternative approach for realising the benefits of a single regulatory body for the occupation would be to exclude plumbers and drainers from the coverage of the BSA and for an occupational licensing board to adopt responsibility for business licensing. One of the main weaknesses of such an approach is that it puts at risk consumer protection and has the potential to weaken an important accountability measure facing the industry. A recent review of the Building Services Authority found that one of the features of the Building Services Authority Act was the generally high level of consumer support provided by the

dispute resolution process. The mediation process rests on a mediation overseen by the BSA with consumers provided the option of taking unresolved disputes to the Queensland Building Tribunal. An in-principle appraisal of the BSA system suggests it is both comprehensive and relatively inexpensive for the consumer to access. Support for this interpretation was also provided by consultation with the building industry and a small number of homeowners that have accessed the BSA process. The benefits of the Queensland mediation process have also been recognised interstate. Both New South Wales and Victoria are now reforming their dispute resolution processes along the lines of the Queensland model.

But this would require the duplication of an effective dispute resolution system

Even if plumbers and drainers were removed from the BSA, the agency would need to continue to offer this dispute resolution process for other building trades. It is doubtful whether it would be possible or sensible to establish a duplicated process for addressing consumer complaints. These complaints are an important check on the industry as they impose pressure on licensees to perform and signal to the regulators those licensees that are likely to be undertaking sub-standard work. In effect consumers are a cheap 'early warning system' that play an important role in the regulatory system.

And probably reduce information available to consumers

Another aspect of the system is that it is designed to inform consumers and builders as to the quality of suppliers so they can make better choices when engaging building contractors. For example, a consumer or builder can conduct a search of the number of directions issued against a license holder by the BSA, and there is also the potential for the BSA to further improve information flows to users. This is important as better decisions by buyers of services will help lift quality standards in the industry.

One problem in trying to redefine the roles of the Department of Local Government and Planning and the Building Services Authority to achieve more effective accountability arrangements is that the two agencies are responsible to two different Ministers (the Building Services Authority is formally responsible to the Minister for Housing). It is possible that the split of Ministerial responsibility makes it more difficult for Government policy to be formulated and implemented, and this could be a rationale for centralising the policy and regulatory function in one agency. Options include: shifting the regulatory function held by the BSA to the Department of Local Government and Planning; shifting the policy function held by the Department of Local Government and Planning to the Department of Housing; or creating one centralised state authority reporting to one Minister that would be responsible for all occupational and business licensing for building and related activities. An alternative would be to establish revised decision-making and accountability frameworks within the current structure.

5 THE REFORM OPTIONS

5.1 OVERVIEW OF OPTIONS

The previous section assessed the broad regulatory options and determined a preference for a mix of controls on materials used, licensing and inspection of output as the preferred broad regulatory approach. This section specifies and evaluates the key options for implementing this approach.

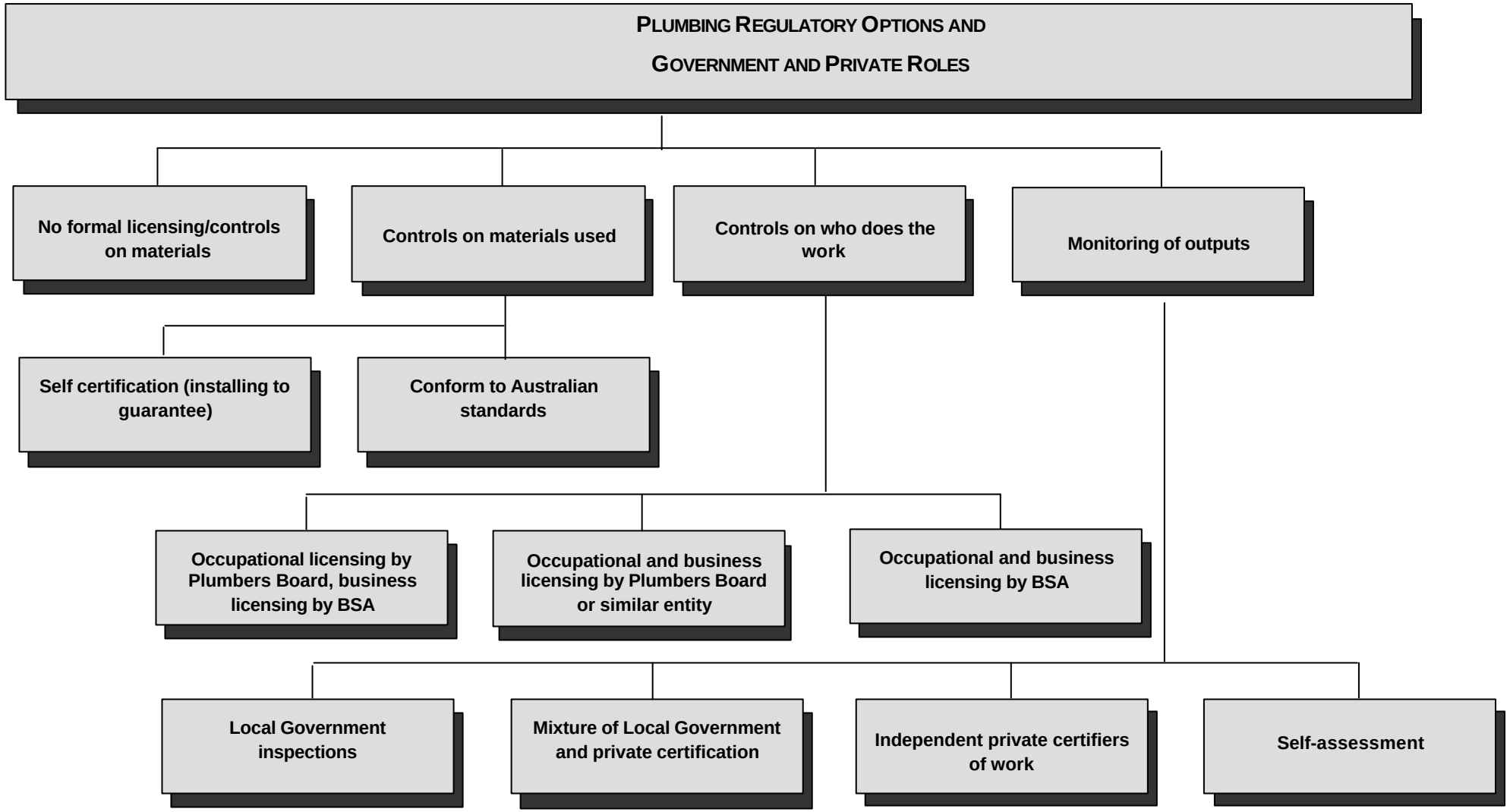
A stylised representation of the regulatory options and the government and private roles is depicted in Figure 5.1. Once a decision has been made with regard to the appropriateness of formal controls, there is a need to specify and assess the options for each aspect that is controlled.

In relation to controls on materials used, the main alternative is for a system of self-certification.

In relation to controls on who does the work there are decisions about the nature of those controls and who will be responsible for regulating them. The options for specific licensing requirements are not specified in Figure 5.1 but are evaluated later in this section. The options for regulation include: occupational licensing by the Plumbers Board and business licensing by the BSA; occupational and business licensing by the Plumbers Board or similar entity including integration in other trade licensing bodies; and occupational and business licensing by the BSA.

In relation to comprehensive monitoring of output the options include: the current arrangements where Local Government inspectors are responsible for checking all new contracted work; a mix of Local Government and private inspectors similar to the current situation with building certifiers; the use of only independent private certifiers; and self assessment by plumbers. The latter three options would all require an effective audit system and the roles of Local Government and State authorities would need to be specified and assessed for each option.

FIGURE 5.1 PLUMBING AND DRAINAGE – REGULATORY OPTIONS AND GOVERNMENT AND PRIVATE ROLES



Note: The role of local governments and the State government needs to be specified for each option. There are also various options for monitoring and disciplinary processes that need to be specified.

5.2 TECHNICAL STANDARDS FOR PRODUCTS AND MATERIALS

All products and materials must be certified

Under the legislation only pipes and fittings approved by the local government can be used in building sewerage and water supply systems (infrastructure). In addition, only certified material can be installed in sanitary plumbing/drainage and water plumbing work.

It is not clear whether the health and safety objectives under the legislation could be achieved if the certification controls were removed entirely. However, there are several possible options, which would allow competition under this area of the legislation.

A system of self-certification would mean that the use of certified material would be voluntary for plumbers and drainers. The onus could rest with the plumber and drainer, the supplier or possibly the manufacturer to ensure that products and materials are suitable and safe for the purpose intended. It is not clear whether public health and safety could be guaranteed under such a system.

Information failures can create a need for standards

The main economic rationale for technical standards is the need to overcome the information failures facing consumers and plumbing practitioners. Generally, consumers and plumbing practitioners do not have the necessary knowledge to assess the quality of a plumbing product vis-à-vis another plumbing product used for the same purpose. By installing an inadequate product, risks to the community at large may arise. In particular, that can be a contamination of water supplies due to the use of inappropriate products and materials and this may affect the entire community. Such adverse spillover or third-party effects warrant government intervention.

Some practitioners or building owners may favour low quality products

Non-compliance with product standards may also negatively affect future building owners. While uncertified pipes may be adequate for a period of time, they may have too short a life expectancy. This could have a negative impact on a future building owner and ultimately spill over onto the community at large. A contributing factor to this potential problem is the incentive for practitioners to minimise their costs by buying lower quality products. A building owner may also specify the use of the lower quality products or materials.

Consultation with a small number of industry and product manufacturers confirmed the importance of minimum standards for infrastructure for:

- Maintaining public health and safety. For example, use of appropriate materials that do not contaminate water supply.
- Ensuring a reliability of service. For example, appropriate materials and designs that ensure systems do not fail, do not have excessive breakages nor blockages and have an appropriate life expectancy.

- Protecting the environment. For example, overflows from sewerage systems are both a health issue and environmental contamination issue.

The Water Services Association of Australia (WSAA) codes provide information on the appropriate selection of materials and provide a 'default' standard for local governments' infrastructure. These standards include the Water Reticulation Code of Australia, the Sewerage Code of Australia and the Sewerage Pumping Station Code of Australia.

There is a risk that the standards put in place at present are excessive and represent an unnecessary cost. However, no evidence to that effect was provided to us during consultation with practitioners and manufacturers.

The minimum standards appear to be appropriate

At present, some standards specify the names of Australian manufacturers producing certified products. The relevant authorities have already planned to remove this list. It is important that this initiative is implemented as standards that specify particular manufacturers will tend to restrict competition. We emphasise that we have not sought to verify these claims.

Non-certified products and materials are in use

An important issue revealed in consultation is the apparent widespread use of non-certified products. Industry reported that non-certified products imported from overseas are generally sold at a cheaper price than certified products. Non-certified products do not carry the required "marks" and consumers, plumbers and inspectors will find it difficult to assess the quality of these products. Some plumbing practitioners consulted suggested that a large proportion of plumbing products available in Australia are not MAP certified and furthermore that in some cases certified substitutes are often not available.

If non-certified products were in extensive use, as suggested in consultation, this finding would have important implications. It would probably indicate that the system of having all work checked by local governments is considerably less than 100 per cent effective, and that licensees should be monitored more closely. It may also suggest that tighter controls are required on the side of non-certified products as a means of preventing their use and that non-licensees are very active in the industry. However, it has not been possible during the course of this review to explore in a systematic fashion how extensively non-certified products are used and if this is the case, why this is so.

While it appears that technical standards are deemed necessary for public health and safety objectives, the standards would need to be equitably enforced across the entire industry. Manufacturers of certified products consulted also indicated that they are facing strong competition from manufacturers of non-certified products, which are able to sell their products at a lower price. This also indicates that controls need to be strengthened to discourage the use of such products and to better manage the risk to society.

While we have no firm evidence to confirm the widespread use of non-certified products, consultation suggests better enforcement is required. This is both to ensure appropriate health and safety standards are met and to prevent an inappropriate competitive advantage being provided to manufacturers that do not certify their products and their suppliers.

Deregulation appears to be impractical

The option of removing the mandatory requirement to use certified products placing the onus on manufacturers or plumbers, does not seem practical. While it may temporarily reduce construction costs, it has potentially high costs to the community at large, to neighbours and to future building owners. The risk of contamination of water supplies and environmental damage would increase thereby putting the entire community at danger. While the current system appears to be in need of a better policing system, it provides some justified controls over products and materials.

5.3 LICENSING

If licensing is kept the next stage to consider is the extent to which current regulatory arrangements may need to be modified. With this approach, the structure of the current licensing system would not change as such, but requirements for the various licence classes may need to be modified to ensure they are effectively focussed on addressing the identified problems.

5.3.1 Entry Restrictions

In particular, the entry criteria and allowable activities for each licence class may need to be adjusted to take into consideration the amount of damage that can be caused by poor performance of the plumber or drainer undertaking the work prescribed for that class. If the risk of serious harm is relatively low, entry requirements and the list of reserved activities may be relaxed accordingly.

The presence of many suppliers suggests existing restrictions are not excessively onerous

An issue is whether the entry restrictions created by licensing are precluding the entry of an adequate number of suppliers and in so doing inappropriately raising the price of plumbing and drainage services. There are approximately 10,000 licensed plumbers and drainers, and plumbers and drainers account for around 10 per cent of the approximately 50,000 licensees with the BSA. Given this seemingly generous supply of plumbers and drainers, it would appear difficult to argue that the entry restrictions preclude the entry of an adequate number of suppliers. Casual observation of the charges of plumber and drainers indicate that they are broadly comparable to trades of a similar skill levels, and this also suggests that prices are not being pushed up by supply restrictions. However, we do not rule out there being some circumstances or areas of Queensland where the supply restrictions are excessive and having a price raising effect.

5.3.2 The List of Reserved Practices

Reserved practices are very generous

The issue of potentially greater concern is the list of reserved practices. There is trend in the regulation of the professions towards the relaxation of the extent of practices reserved to an occupation. In broad terms the aim is to only reserve those activities to a licensee where there is significant risk associated with the activity and to link the level of risk to the required skill level of the licensee.[6]

The NCC has offered the following guidance in assessing reserved practices:

> *"There may be justifications for wide-ranging restrictions of practice for some professions. For others, there may be only relatively small areas in which risks to consumers or the public would justify restrictions. In these cases, a specific reservation or reservations should be favoured over a general approach to ensure that regulation is not unduly restrictive and unnecessary costs are not incurred." (NCC, 2001, p.8)*

We have not undertaken extensive consultation on the risk associated with certain plumbing activities. However, it is clear there are a variety of views on the level of risk. Some consulted advised that all activities were high risk and should be reserved for plumbers. However, others pointed to the high risk activities as limited to the connection to the public sewerage and water reticulation systems. Under the latter view, most of the work within a building may be considered to be relatively low risk.

Most plumbing and drainage work is reserved for licensees

At present almost all sanitary and plumbing and drainage work is reserved for licensees or their apprentices. In broad terms the reserved work covers all work undertaking on water reticulation systems in buildings and the connections between the main water supply and a building, and sewerage systems and the connections between a building and sewerage systems. The exclusions are limited to certain minor works such as replacing a showerhead (see Box 5.1).

[6] See for example NCC (2001) for a summary of recent trends in the regulation of the professions.

BOX 5.1 PLUMBING AND DRAINAGE ACTIVITIES THAT NON-LICENSEES CAN PERFORM

Unregulated Work

For sanitary plumbing and sanitary drainage:

- cleaning or maintaining ground level grates to traps on sanitary drains.
- replacing caps to ground level inspection openings on sanitary drains.
- maintaining an above or below ground irrigation system for the disposal of effluent from an onsite sewerage facility.

Water plumbing

- installing or maintaining an irrigation or lawn watering system downstream from an isolating valve, tap or backflow prevention device on the supply pipe for the irrigation or lawn watering system.
- replacing a jumper valve or washer in a tap.
- changing a shower head.
- replacing, in a water closet cistern, a drop valve washer, float valve washer or suction cup rubber.

Other Matters

- A person executing any work consisting merely of the excavation or backfilling of trenches or any other work of an unskilled manner.
- An apprentice who performs any work under the direct supervision of a person holding a license or interim license which entitles such a license holder under this Act to perform that work.
- A person who performs work on house drainage under the direct supervision of a person holding a drainer's license.

Source: Sewerage and Water Supply Act (Section 21), Standard Sewerage Law (Schedule 2) and Standard Water Supply Law (Schedule)

At present simply changing a showerhead does not require a license but installing one does. This illustrates the potential weaknesses of such an extensive list of reserved activities as applies to plumbing and drainage. Consider a hypothetical case where a plumber completes all their work in a new house but a stock shortage means a showerhead is not available for installation. A licensed plumber would then be required to return to the house on a separate day just to attach the showerhead when available. But the task is clearly a simple one, after all anyone is allowed to detach a broken showerhead and replace a new one. In this case the cost incurred for paying for the attendance of a plumber is unnecessary, and the cost could easily exceed the cost of the showerhead itself.

Some restrictions are excessive and may be costly

A weakness of greater concern is highlighted by Table 5.1 which lists key activities that different skills can undertake in a typical house construction. An apprentice plumber is able to undertake all the activities of a fully licensed plumber, but only under the direct supervision of a licensed plumber. Apprentices early in their training are essentially unskilled labourers, and this suggests that some activities are relatively simple to undertake. But it is not possible for other tradespeople, even those with many years experience, to undertake the plumbing work undertaken by such apprentices. It is unclear why the restrictions could not be relaxed to allow other parties to undertake some of the simpler tasks, even if there remains a condition that the final work be checked by a qualified plumber.

TABLE 5.1 ROUTINE PLUMBING ACTIVITIES IN HOUSE CONSTRUCTION

Activity reserved for licensees[a]	Plumber's license	Drainer's license	Water plumber's license	Apprentice Plumber (under supervision of a licensed plumber)
Setting out of trenches	**No**	**No**	**No**	**No**
Supervision of the digging of a trench	**No**	**No**	**No**	**No**
Selection of piping materials[b]	**No**	**No**	**No**	**No**
Laying of pipe in a trench	**Yes**	**Yes**	**Yes**	**Yes**
Laying of sewage discharge pipe	**Yes**	**Yes**	**No**	**Yes**
Connection of a pipe in a trench	**Yes**	**Yes**	**Yes**	**Yes**
Connection of sewage discharge pipe in trench	**Yes**	**Yes**	**No**	**Yes**
Supervision of the backfilling of a trench[c]	**Yes**	**Yes**	**Yes**	**Yes**
Backfilling a trench	**Yes**	**Yes**	**Yes**	**Yes**
Attaching piping and fixtures to the frame of a house	**Yes**	**No**	**Yes**	**Yes**
Attaching sewage discharge piping to the frame of a house	**Yes**	**No**	**Yes**	**Yes**
Installation of storm water pipes	**No**	**No**	**No**	**No**
Installing interior/exterior taps	**Yes**	**No**	**Yes**	**Yes**
Installing piping inside the house	**Yes**	**No**	**Yes**	**Yes**
Installing showerheads[d]	**Yes**	**No**	**Yes**	**Yes**
Replacing showerheads	**No**	**No**	**No**	**No**
Installing shower recesses	**No**	**No**	**No**	**No**
Installing guttering	**No**	**No**	**No**	**No**
Installing roof flashings	**No**	**No**	**No**	**No**
Installing downpipes	**No**	**No**	**No**	**No**
Installing an irrigation system[e]	**No**	**No**	**No**	**No**
Replacing a drop valve washer[e]	**No**	**No**	**No**	**No**
Installing pool plumbing	**No**	**No**	**No**	**No**
Installing spa bath plumbing	**No**	**No**	**No**	**No**

Note:

a. This table refers to licenses issues under the Sewerage and Water Supply Act. Licenses would also be required for most of these activities under the Building Services Act (except for those working as employees or when the work is below a set value).

b. Piping materials must receive MAP (Standards) certification or interim certification before installation and use.

c. This can include specifications regarding the amount of sand required around the pipe.

d. Unregulated work.

e. Such an activity is termed a 'fit-off' and it is assumed that the plumber completes such installation as part of the service.

Source: Sewage and Water Supply Act 1949 and consultation with industry, the Department of Local Government and Planning, and the Plumbers and Drainers Examination and Licensing Board.

It is unclear why urban and rural standards are the same

There is also an issue as to whether the same standards should apply in remote areas as in urban areas. In remote areas the risk to public safety would appear to be much less, and perhaps zero for buildings that are connected to neither public sewerage systems nor reticulation systems. Furthermore, the stronger personal relationships often seen in rural areas can create an effective means of controlling poor workmanship. Yet the same standards apply in rural areas as urban areas. It is possible that a lighter form of regulation is appropriate in such circumstances.

For example, an isolated home that operates its own septic and fresh water systems (i.e. is not connected to a main water system) is required to employ a fully licensed plumber or drainer to install or repair its plumbing and drainage systems. Due to the distance and time required for a licensed plumber or drainer to travel to the isolated home, compliance with the legislation can impose significant costs.

Yet there is no risk to public health to guard against because the only people exposed to potential health risks through faulty plumbing are the inhabitants of the home.[7] In this case regulation may be required to protect a future owner of the home. But this does not seem to provide sufficient grounds for applying the same standards as apply in Brisbane.

We have not undertaken a detailed examination of the list of activities associated with reserved practices. Nonetheless there would appear to a case for relaxing the restrictions on some low risk activities such that a more extensive set of tasks could be undertaken by unlicensed operators or other licensed trades (perhaps under the supervision of a licensed plumber or their certification of work done).

It may be possible for other trades to do incidental work

For other building trades (other than those for occupational licensed trades), this issue is handled by allowing for incidental work of one trade (to a set value) to be undertaken by another trade. Such an option is a practical way to minimise the risk of reserved practices imposing unnecessary costs.

While there appears to be a sound case for relaxing the list of reserved practices, it is noted that consultation did not reveal any serious concerns in relation to the current list. This may indicate that relaxation of the list of reserved activities is either not a problem or is a low priority.

5.3.3 Disciplinary Processes

Disciplinary processes

At present, disciplinary processes are undertaken by the Plumbers and Drainers Examination and Licensing Board and appeals can only be lodged with the Minister. There is no established, transparent disciplinary process in place.

[7] This could be likened to someone drinking alcohol in their own home. The only person exposed to the direct health risks of alcohol consumption in their own home is the person consuming the drink - it is not a public health issue. There can be a case for informing the drinker about the health risks of drinking, but there is no rationale for policing the drinking (as there can be when drinking outside one's home). Similarly it may be sensible to inform the isolated home of the health risks they face if they installed their own plumbing, but there is not necessarily a case for controlling their behaviour.

Transparency and accountability are important

The main problems with disciplinary processes normally relate to a lack of consistent treatment and lack of transparency and accountability in the hearing of complaints and the application of sanctions. These issues can be dealt with by requirements for appropriately transparent processes and for an adequate appeal mechanism including final appeals in the normal courts.

Plumbing and drainage contractors and supervisors are also licensed by the Building Services Authority. The BSA has a system in place which allows mediation between the parties involved in a dispute over workmanship issues. Appeals are heard by the Queensland Building Tribunal. This approach has a number of advantages. In particular, it removes the role of the Minister in hearing appeals and instead places responsibility with a specialised, low cost tribunal. It also reduces the role of the public servants (who ideally should focus on policy issues alone and not day-to-day management) and industry practitioners (who may face a conflict of interest), instead creating more independence in the disciplinary process.

Alternative options to this approach would be the establishment of a separate body, which is not also responsible for the licensing of the plumbers and drainers. Alternatively, the Board could delegate its investigative and disciplinary functions to a competent and appropriately qualified person.

Some improvements can be made

The detailed consideration of which agency should be responsible for the licensing of plumbers and drainers is beyond the scope of this review. However, if it is deemed appropriate for the Board to keep the investigate powers, then the disciplinary processes would benefit from the introduction of a transparent, established complaints process and the inclusion of a right to appeal to an independent tribunal or court.

5.4 MONITORING OF OUTPUTS

Only local government can inspect

At present only licensed local government inspectors can inspect sanitary plumbing, sanitary drainage work and water plumbing work. Each local government appoints a licensed inspector to undertake inspection tasks within the local government area.

The first issue to consider is whether it is sensible to have more than one licensing authority. Once a decision has been made to have a system of licensing, one of the roles of government is to establish an appropriate regulatory authority to issue licenses and establish arrangements for compliance with licensing requirements. Although there could be some benefits from the rivalry associated with having more than one regulatory authority, there would be significant costs in terms of duplication and scope for confusion. There are no known instances of establishing more than one regulatory authority to undertake the same functions in the same government jurisdiction, so it is reasonable to rule out such an option.

The options of private and self-certification should be considered

The basic options for monitoring outputs comprise the current arrangements where local council plumbers inspect and approve all work, a mixture of local council and private certification (similar to the current arrangements for building certifiers), the use of only independent private certifiers for all approvals and inspections and the self-assessment of all work. Under each of these options, there would be a need to specify the role of local governments and the State Government in relation to appropriate auditing and disciplinary processes. There is also a need to consider whether all inspections and approvals could potentially be devolved to Local Governments and how alternative options could be funded.[8] An evaluation of each of the options follows.

5.4.1 Local Government Inspectors

This option is based on retention of the existing arrangements. Local Government inspectors would retain all authority to inspect plumbing and drainage work. There may be scope for some improvements, but these are considered of minor importance so that the assessment is focussed on the benefits and costs of the existing arrangements.

Under this option all regulated plumbing and drainage work is inspected and Local Governments accept responsibility for all inspected work that is faulty. Where the inspection process is thorough and of high standard, the option can be expected to provide a high standard of work and thereby a low risk of problems arising after construction. There would be a high degree of protection for building owners.

The potential for conflict of interest is low

An important advantage of this option is that a quasi-regulatory function is retained within government. If instead this function was undertaken by the private sector, there are issues as to how effectively motivated private sector inspectors would be in achieving the desired public health and safety objectives. Such motivation could be compromised by their incentives to make acceptable incomes and profits in a highly competitive environment that may not directly reward a concern for public health in the wider community. This is a key issue that needs to be addressed by the other options to ensure their effectiveness.

The main disadvantage of this option is that it is likely to be a high cost alternative to implement. For example, checking all work requires a more extensive input by Local Governments than a program of audit based on a representative sample of projects.

[8] The reform options considered below examine the potential for the private sector to have a greater role in overseeing the work of licensees. This mainly relates to the activity undertaken by licensees of installing plumbing and drainage systems and not their design by the other professions (eg. hydraulic engineers). It is understood that some Local Governments (eg. Brisbane City Council and the Gold Coast City Council) do not approve plumbing and drainage plans for residential houses, but they do approve the work once it is completed. In contrast, other Local Governments require the preparation of plumbing and drainage plans or prepare such plans themselves before the work is done. The capacity to open the preparation and/or approval for plumbing and drainage plans to competition has not been captured in detail, however, it would appear possible for at least simple constructions where the Local Government has established clear policies and guidelines.

An issue raised in consultation was the less than complete inspection of replacement and refurbishment work. It was argued that the need to obtain local government approval ensured that all or almost all new work was inspected. But it was argued that inspections of other work are not as thorough, mainly because local governments are not notified of work done. If this is true, it suggests there is a potentially major deficiency in the current regulatory system. However, it was not possible to conduct a systematic assessment of the likely extent of the problem.

But the incentive to perform may be weak

It is important to recognise that the motivation and effective accountability of Local Government inspectors under this option cannot always be assured. It is often presumed that the absence of a profit incentive and specification of a public interest objective will by themselves make a big difference in ensuring an effective focus of public sector employees on the public interest. However, it is also possible that the absence of competitive pressures means that in Local Government areas, some inspectors are not as responsive to client needs as a private sector service provider would normally be. Some Local Governments may have well managed, effective and efficient inspection regimes that respond well to client needs. However, in other Local Governments, the outcome of the absence of competitive pressures may be unreasonable delays in providing approvals, a reluctance of inspectors to work outside normal hours in periods of high demand, or inadequate work standards set by inspectors.

Accountability can be difficult to ensure

Local Governments can address the issues of motivation and performance of local plumbing inspectors through effective accountability for performance within their organisations. It is well recognised that improving the performance of local Councils and the public sector generally is a major ongoing issue and that a major weakness in the public sector is the absence of rivalry, competition and the discipline of the market place that applies in the private sector to drive efficiencies.

The point is that one cannot be sure that retention of plumbing inspection services in Local Government will see superior service delivery in all Local Government areas compared to a system involving the private sector, backed by effective regulatory mechanisms.

Private certification of building has yielded benefits

The consultations that were undertaken in the course of preparing this report raised a number of concerns about the cost and delays in having plumbing work approved and inspected (see for example the views of one industry organisation as expressed in Box 5.2). A couple of basic observations are relevant. First, although the current mix of private and public building certification arrangements is not without its problems, there seemed to be widespread agreement that opening of the building certification market to private certifiers has improved the certification system and reduced delays in the approval process, particularly when local governments have withdrawn from certification services and concentrated on

their regulatory functions.[9] Second, a system of self-certification with a centralised and systematic audit program backed by effective enforcement for failed audits appears to be working well in Victoria.

Options that allow some private sector involvement are preferable

It was suggested in consultation that the existing arrangements could be improved by placing a reasonable time limit on local government for providing plumbing approvals. However, such an approach would need to be supplemented by some kind of self-assessment arrangements with auditing to ensure the public health objective was not compromised. Recognising this, it is considered that other options for involving the private sector as specified below would be superior.

BOX 5.2 AN INDUSTRY VIEW ON HOW THE NEED FOR INSPECTIONS AFFECTS THE INDUSTRY

There are a number of fees and charges associated with having an inspection carried out on a plumbing installation, it is obvious the effect these fees can have on the overall cost of a fairly minor plumbing alteration. For example, in the Brisbane City Council, the cost for an inspection to be carried out on a domestic installation can vary from $87 for an inspection to an alteration to $360 for a new building plumbing inspection.

Considering that in some Local Government areas it can take up to two days for a plumbing inspection to be carried out, is it acceptable that a plumber may have to keep what could be a minor drainage installation exposed and awaiting an inspection for that amount of time? In addition to this delay, the plumber will need to return to the job to meet the inspector and then carry out the remainder of the work, ie. back filling and cleaning up the site. All additional costs resulting from this system are passed on to the customer.

Under the current system, a large proportion of plumbing installations are being carried out without being inspected. A plumber who is willing to carry out work and not have his work inspected is going to be able to undertake the job at a substantially lower cost than a plumber that works in accordance with the law and has to include an inspection into his costs. This practice gives the 'cowboys' the unfair advantage.

These are just some of the consequences to the industry of the current system for inspecting domestic installation.

Source: Master Plumbers Association of Queensland

5.4.2 Local Authority and Private Sector Certification

Under this option the arrangements would be similar to those that currently apply with local government and private building certification. There would be a need for some modifications to be incorporated including effective audits and more effective disciplinary processes than current applies to building certifiers. There would also be a need to establish a separate licensed occupation of a plumbing certifier.

This option would see all work subject to independent inspection and this can be expected to achieve much the same quality standards as achieved at present. However, quality standards may decline or improve to the extent that private sector certifiers do not maintain the same standards as local authority inspectors or actually exceed those standards.

[9] The performance of private certification is considered in a separate Public Benefit Test being undertaken concurrently by Economic Insights.

The option would create a need to establish an accreditation system and auditing and enforcement mechanism. This would probably need to be a state-wide system and a transfer of more responsibility for the day-to-day oversight of plumbing and drainage work from Local Governments to the State Government.

Competition should promote improvements

These additional costs need to be weighed up against the potential benefits, relative to the current system, of opening up the inspection process to competition with the private sector. This is the major advantage of this option compared with the option of using local government certifiers only. As appears to have occurred in relation to building certification, this could lead to significant improvements in terms of reducing delays.

However, it is understood that, under the current arrangements, delays largely relate to the approval process and not the inspection process. We have not fully determined whether the approval function could be fully devolved to private certifiers. It is possible that Local Government would need to retain some approvals and this may see some existing bottlenecks remaining.

But it would be hard to ensure competitive neutrality

A disadvantage of this option is that it is considered likely that there would be extensive competitive neutrality issues to be dealt with. It is considered that these are still a major problem arising from the continuing role of many Local Governments in building certification and that these problems cannot be effectively resolved while Local Government undertakes both regulatory and commercial functions.

The option creates a new licensed occupation

A further disadvantage of this option is that it may unnecessarily create a separate licensed occupation. It is not clear this is necessary in the case of plumbing, as it is for building certifiers. Licensed plumbers are considered to have the basic relevant skills already such that a system of self-assessment with appropriate audits should be more cost-effective for inspections and possibly at least some approvals. It is considered that unlike most plumbing and drainage activities, building certifiers require a range of technical and planning skills, and builders are generally not likely to possess both. In contrast, licensed plumbers and drainers are likely to have most of the relevant skills to self-certify most, if not all, of their activities so that a separate licensed plumbing certification occupation is probably not warranted.

There may only be a few high risk activities that warrant inspection. For these aspects, there may be some value in retaining some scope for local government inspectors to inspect these aspects only with the remainder of the work being undertaken by private independent certifiers or through a system of self-assessment.

5.4.3 Independent Private Sector Certifiers Only

Under this option, local government would not undertake comprehensive inspections of plumbing and drainage work and may have a more limited role in relation to approvals. As for option 5.4.2, a separate licensed occupation of a plumbing certifier would be established. There would be a need for effective audits of the certifiers decisions and an effective disciplinary process.

Local council inspectors would probably retain a role of inspecting complex or critical aspects of plumbing and drainage work that would not otherwise be effectively audited. They would also be involved in audits of work in their local government area.

A separate audit and disciplinary entity would be required

There would be a need for an entity to organise and monitor the audit program and coordinate an effective disciplinary process. The evaluation of broad roles has determined that it would be best if a centralised State authority was responsible for licensing and that it is best if such an entity was responsible at least for occupational licensing in a number of occupations to avoid the potential for 'regulatory capture' by the occupations being licensed and to achieve cost efficiencies. If such an approach were adopted, this entity could also be responsible for co-ordinating audit work of the occupations and managing disciplinary processes.

This option is preferable to current arrangements

In some respects, this option would represent an advance over options 5.4.1 and 5.4.2. It would open the market up to effective competition and avoid the problems associated with conflicts of interest and competitive neutrality. If an effective audit program was developed, it should mean that quality standards and the public health objective was not compromised.

The main disadvantage of this option is the additional cost associated with establishing a separate licensed occupation of a plumbing and drainage certifier. There is also a risk that it may not be possible to establish an effective audit program and this would place quality standards at risk.

This option may also create problems in remote regions where the market is too small to allow the operation of a private certifier.

5.4.4 Self-Assessment

An effective audit program would be necessary

This option would entail self-assessment by plumbers, inspection by local government inspectors of some complex or critical aspects of plumbing and drainage work that could not otherwise be effectively audited and an effective audit program. The current arrangements in Victoria, which are administered by a State Government entity, are seen by many industry participants as a good guide for this model (see Box 5.3 for an overview).

Another option is a modified form of self-assessment that would allow for a much greater role of Local Government in Queensland compared to Victoria and a graduated, risk-based approach to the introduction of self-assessment. In this model self-assessment would be limited to works posing low risk to health and safety (i.e. domestic installations). Local governments would retain the right to inspect higher risk work. The audit program that must underlie self-assessment would probably need to be coordinated at the State level, although certain functions could be conducted by Local Governments in much the same way as at present.

For the purposes of illustration, Table 5.2 outlines these two broadly defined alternatives based on the Victorian model and a modified form of self-assessment.

BOX 5.3 THE VICTORIAN MODEL OF SELF-CERTIFICATION

Up until 1997 the regulation of the Victorian plumbing industry was similar to our own in Queensland. But instead of having inspectors employed by local councils, there were 21 regional water boards spread around the state with their own team of inspectors.

From 1997, a licensed plumber has been required to certify his/her own work. Any job worth $500 or more requires the plumber to complete a document known as a Certificate of Compliance. A copy of this is given to the customer, and the details are registered with the Plumbing Industry Board simply by phoning in the information. There is a $20 fee for all certificates of compliance issued.

At the completion of any job worth $500 or more, plumbers are simply required to call the Plumbing Industry Board's voice response computer system and lodge the basic details of the job, including the Certificate of Compliance number. They can call 24 hours a day 7 days a week. The system then logs the information and retains it both for statistical purposes and in the event of any problem arising in the future.

Once the customer has his or her copy of the signed certificate, it means that they have a 10-year guarantee on workmanship, ie. a plumber must be responsible for the work he has carried out for a 10-year duration. It has been found that due to a good public awareness of this process, it has made it considerably more difficult for a plumber to carry out work and not issue the compliance certificate that guarantees the work. With the incentive for the customer to have a 10-year guarantee on the work they have done, less unregistered work is now being carried out.

The new system calls for random audits to be carried out on at least 5 percent of all registered jobs. This audit process can virtually guarantee that a plumber will have a number of his/her jobs audited in a 12-month period. The data obtained by the auditors are fed into a computer system, analysed, and used to help determine whether there are any problems of a general nature that may require particular attention. If a particular plumber is found in the audit process to be carrying out work in an unsatisfactory way, then the plumber is notified by the Authority and due action is taken. This action could include a recommendation of further education or fines.

Under our current Queensland model, many plumbers are under the misconception that once work is inspected by the local authority the responsibility in relation to workmanship is then removed.

Under the Victorian model, there can be no doubts about responsibility when it comes to the quality of work. A plumber is fully aware that the workmanship must be guaranteed for 10 years. This extra responsibility has other advantages. The plumber's license becomes the centrepiece, and it becomes a license that is worth a great deal more, because it gives the holder much more freedom and trust than in days gone by.

Source: Master Plumbers Association of Queensland

TABLE 5.2 POSSIBLE OPTIONS FOR SELF-ASSESSMENT

Role of Players	Current System (Local Government inspections of all plumbing work)	Proposed System A – (Plumber self-assessment of work based on acceptable risk)	Proposed System B – Self-assessment based on the Victorian model
Overview of treatment of plumbing and drainage work	All regulated work requires approval by the local government. The local government must inspect and approve all work for which an application is received. Local government procedures in regard to approvals vary. Some local governments require the preparation of plumbing and drainage plans or prepare such plans themselves before work is done. Some local governments do not approve plumbing and drainage plans for residential houses (ie low risk domestic works), but do approve the work once it is completed based on 'as constructed plans". The trigger for the approval and inspection process is the submission of an application. Anecdotal evidence suggests there is a level of work (particularly domestic refurbishments) for which no applications are received and therefore are not inspected. No formal evidence as to the extent of this is available.	Regulated plumbing work is divided into several categories, only one of which requires a formal application and approval process by the local government. The categories are based on an assessment of the potential risk of a failure to public health and safety, the environment and local government infrastructure. There are three categories of work, two of which are subject to self assessment. These categories are – 1. Low risk works would be self assessable without any approval required from a local government. This category could be domestic or other low risk works which do not connect to water and sewerage infrastructure. 2. Any work connecting to water and sewerage infrastructure would be self assessable, but the plumber must notify the local government before connecting or altering the connection. The local government could choose to inspect the connections. 3. Higher risk works would be subject to an application and approval processes. The local government would verify the works are done to standard before issuing final certificate. A further arrangement may need to be made for rural and remote areas, where it is difficult for local governments to operate an inspection service.	All regulated work must be certified by the plumber as complying with the relevant standards, ie is subject to self assessment. An audit system based on random audits of at least 5% of work and random inspections of at least 5% of sanitary drains is in force. The trigger for the audit process is the submission of a certificate of compliance. Anecdotal evidence suggests there is a level of work (particularly domestic refurbishments) for which no certificates are lodged and are therefore not subject to the risk of an audit. No formal evidence as to the extent of this is available

Role of Players	Current System (Local Government inspections of all plumbing work)	Proposed System A – (Plumber self-assessment of work based on acceptable risk)	Proposed System B – Self-assessment based on the Victorian model
Buyer of plumbing services (eg. builder, homeowner)	The home warranty insurance scheme under the BSA provides protection for plumbing work as part of a new building in respect of contracts above a certain value.	The system of consumer protection could be expanded to provide the buyer of plumbing services with some assurance of workmanship or means of correcting defective work.	The buyer receives a 10-year guarantee of workmanship from the plumber with the copy of the certificate of compliance. This is backed by a mandatory insurance scheme for plumbers.
Plumber	Plumbers are required to carry out plumbing work in accordance with applicable standards.	Plumbers are required to carry out plumbing work in accordance with applicable standards. Category 1 works (self assessable). Plumbers must certify the work is constructed to relevant standards Category 2 works (self assessable, but connected to infrastructure). Plumbers must certify the work is constructed to relevant standards. Plumbers must notify the local government of their intention to connect or alter the connection to infrastructure, and give the local government the opportunity to inspect the connection within a set period. Category 3 works (high risk and full approval process). An application for approval must be submitted which is subject to inspection and approval procedures. Consumer protection measures may impact on plumbers.	Plumbers are required to carry out plumbing work in accordance with applicable standards. Plumbers certify their own work as complying with the relevant standards. For any work over the value of $500 (including materials), when the job is complete, the plumber must - complete a Certificate of Compliance, and provide a copy to the customer with a copy lodged within a reasonable time with the State Government coordinating agency - once a certificate has been filled out, register the details by phone with the State Government coordinating agency. Calls cam be made 24 hours a day, 7 days a week. Plumbers guarantee their workmanship for 10 years, and must carry insurance on that basis.
Local Government	Local Government inspects and approves all regulated work for which an application is received. Local government reports breaches of standards by licences plumbers to licensing body. Local government prosecutes unlicensed persons for carrying out plumbing and drainage works.	Local government role varies with the categories of work. Category 1 works. The local government is provided with certificates of compliance and carries out random audits as quality control. There may be a need for co-ordination of the audit process by a State Government agency. Category 2 works. The local government is notified by the plumber of the intention to connect or alter the connection to	The local government would have a role with some aspects of plumbing work, including: Inspecting complex or critical aspects of plumbing and drainage work that could not otherwise be audited. Conducting certain functions of audit program in much the same way as present.

Role of Players	Current System (Local Government inspections of all plumbing work)	Proposed System A – (Plumber self-assessment of work based on acceptable risk)	Proposed System B – Self-assessment based on the Victorian model
		infrastructure. The local government has the option to inspect the connection. If no inspection is made, the random audits would apply as quality control. Category 3 works. The local government would inspect and approve all regulated work for which an application is received. The local government would also be responsible for providing evidence of breaches of standards to the body responsible for licensing and disciplining plumbers.	
State Government/regulator	Licenses plumbers and drainers. Investigates and takes disciplinary action against licensees breaching standards, based on evidence provided by the local government reporting the breach.	Licenses plumbers and drainers. Investigates and takes disciplinary action against licensees breaching standards, based on evidence provided by the local government auditors. Disciplinary role. Informs building contractors, homeowners and local governments of directions to licensees and of complaints, and outcomes of complaints. May have a role in coordinating the audit process by local government and in ensuring local government auditors operate consistently across State. May conduct audits on state-wide basis if requested by a local government or when triggered by poor performance.	Licenses plumbers and drainers. Co-ordinates the audit program (Victoria has random audits on at least 5% of all registered jobs). Maintains information from all Certificates of Compliance.

The main advantages of self-assessment is that it is considered to be likely to lead to time and cost savings given the nature of self-assessment, would not entail the costs of addressing competitive neutrality problems and would not incur the costs of establishing a separate new licensed occupation of a plumbing and drainage certifier. The main disadvantage of this option is that it may, if the audit program was not adequate, put the quality of plumbing and drainage work at risk.

Self-assessment may be impractical in some remote rural areas. Consequently, a two-tiered system may need to be considered where the system in such areas is different to that generally applying in the State.

An issue that would be highlighted by a system of self-assessment is the varying technical standards and rules between Local Governments. At present, a licensee's lack of knowledge of the area-specific standards is picked up by the Local Government inspector. But an audit process may not do this as effectively, unless the audit was specifically designed to do so (eg. by satisfying the sample of the audit such that a representative audit was done of work in the Local Government area, as opposed to the industry as-a-whole). This is an implementation issue that would warrant further consideration in designing a system of self-assessment.

A further issue is the funding impact on the regulator and Local Governments. The regulator may bear an increased workload dealing with complaints made regarding private self-assessment by licensees or increased administration costs (eg in overseeing a state-wide audit program or in legal costs). However, it needs to be kept in mind that private self-assessment may reduce fault rates in the industry (as it appears to have done in Victoria), and reduce the overall cost of operating the regulator. It is anticipated that costs would be funded by a combination of license fees and penalties.

Under this option some Local Government inspectors would be required to find alternative forms of work. They may enter the private sector or find alternative work in Local Government, such as an auditor of private self-assessment.

Local Governments may face a funding problem if they need to retrench any of the 300 or so plumbing inspectors currently employed (remember that Local Governments would probably need to retain some staff to perform the audit function and set policy guidelines, etc). It may also be that current inspection charges exceed the cost of supply and provide a contribution to general revenue, so the loss of this revenue has broader implications.

6 OTHER REGULATORY MATTERS

There is a prohibition on on-site treatment plants in sewered areas

The sewerage and water legislation contains a prohibition on the installation of on-site sewerage systems in sewered areas, where this effectively provides the relevant Local Government a monopoly in the provision of sewer services.[10] This is a restriction to competition because it prevents the entry of alternative suppliers of effluent disposal. From an economic perspective there can be at least two potentially sound rationales for such a prohibition. The first is the presence of economies of scale which mean that the unit cost of service delivery is minimised when a monopoly is provided to the sewer system. The second is a third party effect owing to the potential adverse effect on public health and the environment of allowing poorly treated effluent in densely population areas.

This may be justified by the potential risk to public health and the environment

The prohibition on on-site sewerage systems in sewered areas is outside the scope of this PBT and we have not investigated the costs and benefits of the restriction. However, we have been advised by the Department of Natural Resources and Mines that —

> *"There are serious public health and environmental concerns about on-site sewerage in sewered areas compared with the outcomes achieved by conventional sewerage systems.*
>
> *In spite of the current performance based technical guidelines that apply to the approval, installation, operation and maintenance of on-site sewerage facilities in unsewered areas, poorer environmental outcomes are being achieved with on-site sewerage systems, on average, than is the case with conventional sewerage systems.*
>
> *Sewered areas typically have higher population densities and site restrictions eg lot size than is the case for unsewered areas. Thus there is some question as to whether existing technical guidelines used to regulate the installation, operation and maintenance of on-site sewerage systems in unsewered areas will adequately address the full range of situations likely to be experienced in sewered areas. The environmental and public health consequences of inappropriate guidelines could be potentially severe.*
>
> *Given these circumstances, the Queensland Government[11] has recently approved a regulated trial of greywater in sewered areas. The aim of these trials is, in part, to enable the development of appropriate regulatory guidelines for greywater use in sewered areas.*

[10] There may be some areas in Queensland where sewer systems are provided by the private sector.

[11] NR&M is currently amending legislation to allow a 5-year trial to investigate the potential impact of the re-use of grey water (being low risk waste water, such as flows from sinks, washing machines and showers). The trial is intended to assess whether the restrictions on the re-use of wastewater could be relaxed.

> *The current prohibition for blackwater (toilet and urinal wastewater) will remain. There are major potential adverse health consequences associated with blackwater reuse in heavily populated areas. Accordingly until adequate guidelines are available for greywater reuse in sewered areas, it is not desirable to attempt to deal with the much higher public health risk of blackwater reuse."*

In brief, there appear to be serious practical difficulties faced in ensuring that on-site treatment plants meet appropriate health standards at all times. In the Department's view, the risk of allowing on-site treatment is currently unacceptable. If this is the case, we consider it very likely that the benefits of the prohibition on on-site plants would outweigh the costs and the prohibition would satisfy a PBT.

7 CONCLUSION

We have not been able to definitively resolve all issues

This section summarises key conclusions that we have made in this public benefit test. Our conclusions are based on the application of economic and governance principles and our understanding of the current arrangements and problems associated with those arrangements, based on the consultations we have undertaken and the information we have reviewed. As this public benefit test is a minor review and qualitative in nature we are not able to definitively resolve all issues.

There is scope to take a different view depending on the assessment of more specific information

We note that there is scope to take a different view on the relative importance of the costs and benefits identified and that a decision on certain specific options is dependent on obtaining and assessing further specific information. The key conclusions we have reached at this stage and the associated underlying rationale are outlined below, along with an indication of the key information required to establish a preference for certain options.

Some form of intervention is justifiable

We consider that information problems and public safety concerns and the efficiency of some form of government intervention in dealing with these effects are considered to provide a strong rationale for some controls on the materials and products used in plumbing and drainage work, for the licensing of who does plumbing and drainage work and for some checks on work done.

The system of local government inspections warrants further consideration

The existing controls on the materials and products used in plumbing appear reasonable based on the information available. However, while the licensing regime is broadly defensible, there does appear to be a case for relaxing somewhat the list of activities reserved by licensees, perhaps by allowing other trades to undertake some incidental work subject to oversight by a licensee. There also appears to be a case for revising disciplinary procedures and for re-considering the roles of the various agencies involved in the licensing regime.

The main area requiring further consideration is the appropriate system for checking work done. The options considered were the continuation of the current system of Local Government inspection only, a mix of Local Government and private sector certification, independent private sector certification only and self-assessment by licensees of their own work.

Conflicts of interest and competitive neutrality are major issues for a mixed system

We consider that the potential conflicts of interest and competitive neutrality issues and inefficiencies that arise with a combination of Local Government and private sector certification mean that a mixed system is unlikely to be worth pursuing. The option of the replacement of the current arrangements by independent private sector certification only also appears unjustified as it would lead to the creation of an unnecessary new licence class (of plumber and drainage certification).

The current system of checking all work done can ensure high quality standards

But it is expensive

The choice between the current system and self-assessment largely rests on an assessment of the higher cost of independently checking all work versus the risk to quality standards of replacing this with a system of audits. It is reasonable to expect that if a successful audit program could be established, a system of self-assessment would lower overall costs for the community (eg by providing for speedier inspections and lower inspection costs). But if the audit program was not very effective, it could raise overall costs for the community by lowering work standards and creating additional costs in implementing the regulatory system (eg via additional court action).

It is important to note that it cannot be assumed that the current regulatory system is effective. During consultation a number of industry participants advised that non-certified products are in widespread use and that a considerable share of refurbishment and repair work (as opposed to new work) is undertaken without any local government inspection. We have been unable to undertake a systematic examination of the likely extent of such problems. However, should they prove to be as extensive, as advised, it would point to significant gaps in the current regulatory system. In which case it would be reasonable to conclude that there is significant potential to improve the system of local government inspections and the oversight of the industry by the regulatory agencies (Plumbers and Drainers Examination Licensing Board and the Building Services Authority) and the Department of Local Government and Planning.

There is support for self-assessment from the Victorian experience

The main support for the option of self-assessment is provided by the apparent success of: the Victorian system of self-certification of plumbing and drainage work; the introduction in Queensland of private assessment of building work: and self-assessment in the Queensland electricity industry. The Victorian system and the shifts in accountability and attitudes it has brought about are attributed with a reduction in the fault rate in plumbing work from 24 per cent to 4 per cent (see Annex E). The impact of private building certification is perhaps best summarised by the complaint rate – there have been approximately 300 complaints since its introduction, out of more than 100,000 certifications – a complaint rate of only 0.3 per cent. Queensland electrical workers also self-certify their works in a similar manner to the self-certification of plumbing work in Victoria (see Annex F).

Additional information is required

To be certain which option is preferable, detailed information would be required on the performance and costs of the current system relative to the expected performance and costs of a system based on self-assessment backed up by an audit program. Although such information on these aspects was sought in the public consultation phase, it proved difficult to obtain. A more exhaustive research program, for example based on surveys of practitioners, may provide this information. However, such research was outside the scope of this review.

In principle, we considered it to be most likely that a system of self-assessment would yield benefits that exceeded the costs and would adequately meet the

objectives of the legislation. However, we note there is insufficient evidence to present a persuasive argument that self-assessment would be clearly superior. Under the Queensland PBT guidelines, a PBT must establish that the benefits of removing a restriction to competition outweigh the costs. This cannot be established definitively, and consequently it is concluded that, under the Queensland Government Public Benefit Test Guidelines, there is not a sufficient case for replacing the current system of Local Government-based inspections by a system of self-assessment.

ANNEX A PERSONS CONSULTED FOR DRAFT REPORT

The conduct of the Public Benefit Test has been overseen by a Review Committee comprising representatives from the Department of Local Government and Planning, Queensland Treasury Department, the Department of Natural Resources and Mines and the Queensland Building Services Authority.

Review Committee

- Ain Kuru, General Manager, Building Codes Queensland, Department of Local Government and Planning
- Ashley Anderssen, Principal Treasury Analyst, Resources, Treasury Office, Queensland Treasury
- Bill Hastie, Acting Project Manager, NCP, Department of Local Government and Planning
- Ian White, Acting Assistant General Manager, Queensland Building Services Authority
- Ann Woolley, Manager, Urban Water Supply Services, Department of Natural Resources and Mines.

Queensland Government Agencies

- Dr Ted Campbell, Director-General, Department of Local Government and Planning
- David Howe, Department of Local Government and Planning
- Barry Robertson, Department of Local Government and Planning
- Ann Woolley, Manager, Urban Water Supply Services, Department of Natural Resources and Mines
- Rolf Ross, Principal Engineer, Infrastructure Management Water Industry Asset Management and Standards, Department of Natural Resources and Mines.
- Peter Beavers, Senior Engineer, Infrastructure Management Water Industry Asset Management and Standards, Department of Natural Resources and Mines.
- Veronica Mauri, Manager Licensing, Electrical Safety Office
- Barry Dieckman, Manager Electricity Supply, Electrical Safety Office
- Eve Baker, Secretary, Plumbers and Drainers Examination and Licensing Board

- Steve Greenwood, Manager, Planning and Social Policy, Local Government Association of Queensland.
- Malcolm Griffin, Planning and Development Policy Officer, Local Government Association of Queensland.

Queensland Industry Representatives

- Phil Breeze, Manager, Dispute Resolution, Queensland Master Builders Association.
- Geoffrey Ewing, Executive Director, Master Plumbers' Association of Queensland.
- Gavin Jackson, Technical Officer, Master Plumbers' Association of Queensland
- Ross Sadler, Fairfield Plumbing
- Bill Watson, Connector's
- Craig Loynes, D&C Services.
- David James, President, Master Plumbers' Association of Queensland.
- Kelvin Cuskelly, Technical Advisor, Housing Industry Association of Queensland
- Warwick Temby, Executive Director, Housing Industry Association Queensland.
- Neil Middleton, Quality Assurance Manager, Ramtaps
- Craig Holmes, Saxon Water Heaters
- Stan Spyrou, President, Australian Institute of Building Surveyors, Queensland.

Queensland Local Councils

- Jim Graham, Principal Officer, Plumbing Services, Brisbane City Council.
- Stan Spyrou, Logan Development Services Manager, Logan City Council.
- Bob Wallis, Manager, Development and Regulatory Services, Brisbane City Council.
- David Kay, Supervisor, Building Certification Unit and Plumbing Services, Ipswich City Council

Interstate Agencies

- Department of Industry, Tourism and Resources
- Master Plumbers and Mechanical Services Association of Australia
- Master Plumbers Association of New South Wales
- New South Wales Department of Fair Trading
- Productivity Commission
- Victorian Department of Infrastructure
- Victorian Department of Treasury and Finance
- Victorian Plumbing Industry Commission

ANNEX B PERSONS CONSULTED FOR FINAL REPORT

Focus Forum held 18 April 2002

- Ian White, Queensland Building Services Authority
- Jim Graham, Chief Plumbing Inspector Brisbane City Council
- Ann Woolley, Department of Natural Resources and Mines
- Brad Hodgkinson, President, Institute of Plumbing Inspectors Queensland
- Keith Farelley, Plumbing Reference Group Representative
- Phil Breeze, Queensland Master Builders Association
- Linda Melhuish, Logan City Council, representing Stan Spyrou, AIBS Queensland president
- Barry Robinson, Department of Local Government and Planning
- Kate Peters, Department of Local Government and Planning
- Ashley Anderssen, Queensland Treasury
- Ain Kuru, Department of Local Government and Planning
- Bill Hastie, Department of Local Government and Planning
- David Howe, Department of Local Government and Planning

Focus Forum held 24 April 2002

- Geoffrey Ewing, Executive Director, Master Plumber's Association of Queensland
- David James, President, Master Plumber's Association of Queensland
- Brad O'Carroll, President, Plumbing Division, Communications Electrical and Plumbing Union (CEPU)
- Ashley Bowman, CEPU representative
- Bill Watson, Connectors
- Barry Robinson, Department of Local Government and Planning
- Kate Peters, Department of Local Government and Planning

ANNEX C LIST OF SUBMISSIONS

The following submissions were received in response to the Draft Report of the Preliminary Public Benefit Test of the Queensland Sewerage and Water Supply Act and Associated Regulations.

- Biggenden Shire Council
- Brisbane City Council
- Building Services Authority.
- Bundaberg Shire Council
- Burdekin Shire Council
- Cambooya Shire Council
- Colin Job
- Communication, Electrical and Plumbers Union
- Council of the Shire of Esk
- Fitzroy River Water
- Gold Coast City Council
- Housing Industry Association
- Institute of Plumbing Australia Inc.
- Institute of Plumbing Inspectors
- Ipswich City Council
- Jim Gardner
- Local Government Association Queensland
- Maroochy Shire Council
- Maroochy Water Services
- Maryborough City Council
- Master Plumbers' Association of Queensland
- Nanango Shire Council
- Pine Rivers Shire Council
- Redland Shire Council
- Robert Farmer, Clarendon Homes (Qld) Pty. Ltd.
- Rockhampton City Council
- Sarina Shire Council
- Shire of Hinchinbrook
- Thuringowa City Council
- Toowoomba City Council
- Warwick Shire Council

ANNEX D OVERVIEW OF INTERSTATE LICENSING ARRANGEMENTS

	Qld	Vic	NZ	ACT	Tas	NSW	WA
Structure and Role of Licensing Body							
Title of Licensing Body	Plumbers and Drainers Examination and Licensing Board	Plumbing Industry Commission (Victoria)	Plumbers, Gasfitters & Drainlayers Board (New Zealand)	The Plumbers, Drainers & Gasfitters Board of the ACT	Plumbers and Gasfitters Registration Board	Department of Fair Trading – Building Licensing is administered under the 'Home Building Act 1989'	Plumbers Licensing Board
Is the licensing body the sole licensing authority for plumbers and drainers?	Yes	Yes	Yes	The Board is the sole licensing authority for plumbers, drainers, gasfitters and automotive gasfitters	Yes	Yes	Yes
Does the role of the licensing body include the following -							
Issuing licenses	Yes	Yes	Yes	The Board is responsible for the issuing of new licences at independent and journeyman levels. Renewals are also issued for a period of 1 to 5 years	Yes	Yes	Yes
Receiving and investigating complaints about licensees	Yes	Yes	Yes	The Board receives complaints and utilises plumbing and gas inspectors for assistance with investigations	Yes	Yes	Yes
Disciplining licensees	Yes	Yes	Yes	The Board has the power to cancel or suspend licences after conducting a formal inquiry	Yes	Yes	Yes

	Qld	Vic	NZ	ACT	Tas	NSW	WA
Auditing the performance of licensees	No	Yes	Yes	There is no formal auditing system	No	The Act provides for auditing of performance of licensees where auditing is deemed to be in the public interest	Yes
Providing advice to the plumbing industry	Very little	Yes	Yes	Periodic newsletters are circulated to industry	In relation to the licensing area only	Yes, on matters concerning administration of the Act	Yes, in relation to licensing issues
Disciplinary Processes							
Is there a separate body/authority that investigates and enforces disciplinary actions?	No, the Board may investigate complaints and enforce disciplinary action	No	No	No	No	Individual supply authorities (Water Boards, Councils, etc) may investigate and prosecute under their respective legislation	Yes
If not, can the licensing body delegate its investigative powers or functions? If so, to whom?	No	Yes	No	No	No – The Board seeks details from either the Local Government Plumbing Inspectors or the relevant Dangerous Goods Inspectors in relation to any complaint involving bad or faulty workmanship and then holds a disciplinary meeting with the relevant person to ascertain the details and then makes a decision		Yes, the Board can delegate the performance of any of its functions including investigate powers) to: a member of the Board any committee established under the regulations with the approval of the Minister, any other person
Is there a statutory process for dealing with complaints received?	Formal complaints are made to the Board for investigation	Yes	Yes	No	Yes	Yes	No
Is the disciplinary body required to provide reasons for decisions?	Yes, reasons are given	Yes	Yes	Yes – decisions can be appealed through the Administrative Appeals Tribunal	Yes	Yes	Yes

	Qld	Vic	NZ	ACT	Tas	NSW	WA
Is there an appeal to an independent body/tribunal on a decision of the disciplinary body?	Yes, appeals can be lodged with the Minister	Yes to the Administrative Appeals Tribunal	Yes	Yes – the Administrative Appeals Tribunal	Yes	Yes	Yes – Appeals can be lodged in the local court
Are there any other particular requirements for the disciplinary process?	-	-	Natural justice	-	No	Yes, as set out in the Act	The Board can conduct an inquiry if it receives a complaint or is of the opinion that there is cause to inquire into whether or not a disciplinary matter exists or has occurred with respect to a licensee
Occupational Licensing – Plumbers and Drainers							
Is a license required to perform all plumbing and drainage work?	Yes	Yes	Yes	Yes	Yes	Yes	Yes

	Qld	Vic	NZ	ACT	Tas	NSW	WA
How many different classes of licenses are there?	Plumbers license Drainers license Water plumbers license Country plumbers license (no longer issued) Restricted plumbers license Restricted drainers license	Registered plumber Licensed plumber Restricted registration Provisional registration	Craftsman Plumbers (independent) Registered Plumber Limited trade (works under supervision)	Sanitary Plumber Water Supply Plumber Journeyman Plumber Advanced Sanitary Drainer Operative Drainer Advanced Gasfitter Gasfitter Journeyman Gasfitter Class A Liquefied Petroleum Gasfitter Class B Liquefied Petroleum Gasfitter Class A Restricted Liquefied Petroleum Gasfitter Class B Restricted Liquefied Petroleum Gasfitter Sprinkler Fitter	Mechanical Services Sanitary Water Roof Draining Gasfitting (LPG only) Backflow Prevention Mechanical Services and Sanitary is first at Journeyman level which is upgradeable to Advanced level	Plumber (includes sanitary and water plumbing) Water Plumber Drainer Gasfitter LP Gasfitter Advanced LP Gasfitter Restrictions are able to be imposed depending on qualifications and experience	Plumbers License Tradespersons License

	Qld	Vic	NZ	ACT	Tas	NSW	WA
What are the entry requirements for the various licenses?	Prescribed years of experience. Prescribed technical qualifications.	Completion of apprenticeship in Victoria 4 years experience	Competence examinations and/or assessments	(See attachments)	Minimum requirement of: 1. Completion of relevant apprenticeship, or 2. Completion of relevant TAFE training and at least 5 years of relevant trade experience	Yes, as set out in the Department's licensing brochures and forms	Plumbers License – a statement of competency or equivalent WA qualification Tradespersons License – Trade certificate in Plumbing & Gasfitting or equivalent WA qualification Tradespersons License (Drainage Plumbing) – 5 years' experience
Are there any other specific requirements for obtaining a license?	-	-	5 years experience or completion of apprenticeship	Licences are issued to an individual person (not a company)	To enable the apprentice to upgrade from journeyman status to the advanced registration level he is required to sit the Board's advanced examination	Yes, as above and as set out in the Act (eg. fitness and propriety, bankruptcy, association with failed businesses, previous disciplinary action, etc)	The applicant must be a 'fit and proper' person

Source: Queensland Department of Local Government and Planning (for Interstate information)

Plumbers and Drainers Examination and Licensing Board (for Queensland information)

ANNEX E THE VICTORIAN AND NSW SYSTEMS

The objective of this interstate review is to provide an overview of the key features of plumbing legislation, in particular systems to ensure the quality of a plumber's output, in two selected states and their past and present policy experiences. The systems of ensuring quality vary across and within the States and Territories from inspections to self-certification. Government departments and agencies, regulators, plumber practitioners and industry representative groups were consulted on the regulation of plumbing in Victoria and NSW.

Victoria

Under the *Building Act 1993*, the self-funded Plumbing Industry Commission (PIC) is responsible for all aspects of plumbing regulation from licensing to the auditing of self-certified work. The Commission has an active role in the investigation of complaints from consumers and undertakes disciplinary hearings and prosecutions.

A major component of the Victorian system is that licensed plumbers self-certify their own work. A licensed plumber makes the decision that his or her work is complete and that it complies with all of the relevant regulations, standards and codes. A registered plumber is entitled to perform plumbing and drainage work as an employee of a licensed plumber. The registered plumber is entitled to supervise apprentices but is unable to certify work.

A plumber is required to complete a *Compliance Certificate* at the completion of each job. A copy is provided to the consumer and details of the job are provided to the PIC through a computerised telephone system. The certificate is valid for 10 years on the quality of the work and is tied to the professional indemnity insurance of licensed plumbers (see below). Plumbers need to complete a *Compliance Certificate* for all sanitary work and work valued at $500 or more. Difficulties arise when plumbers fail to record completed work with the PIC. This means that PIC staff are required to liaise with plumbers, following consumer complaints, for plumbers to lodge a compliance certificate. About 1100 certificates are lodged each day.

Plumbers purchase compliance certificates from the PIC or resellers. Each certificate has a serial number and a record is kept of the plumber that has purchased a set of certificates. The certificates are not transferable.

The integrity of system is maintained by an audit of ongoing and completed work. The PIC conducts random audits of 5 per cent of all plumbing and

drainage work across the state. All rectification work is inspected. The audit involves checking that the plumber has performed the work as certified and that it meets quality standards. The PIC also maintains a sophisticated database on all plumbing work from which it conducts audits and monitors plumbers.

The PIC contracts companies via public tender to conduct audits and inspections. The contracted company is required to have the qualifications to be able to hold a plumbers licence, but do not have to hold a licence, in all classes of plumbing in Victoria. To avoid conflicts of interests, the companies are restricted from doing any plumbing work.

The PIC has also contracted a company to inspect underground sanitary drainage. Five per cent of all underground sanitary drainage is inspected prior to being backfilled. Occasionally, a plumber backfills a drain prior to inspection and the plumbing work is then inspected by requesting the plumber to remove the fill or by the use of cameras. Given the structure of the system, it is possible for an underground sanitary drainage installation to be subject to an inspection and an audit.

Disciplinary procedures and mandatory insurance protect the public and consumer for all plumbers. The PIC actively pursues legitimate complaints and applies its disciplinary powers. There are significant penalties in Victoria for performing illegal or dangerous work or performing plumbing work whilst not being registered.

A condition of being granted a plumber's licence is to hold comprehensive insurance cover. The required insurance provides security to the consumer and the plumber in the event that a consumer makes a legitimate claim. Plumbers may take out greater cover than the minimum requirements set out in a Ministerial Order. The insurance covers the workmanship for a period of 10 years.

The PIC ensures that standards are maintained through continual training. An effective tool that has been well received by the industry is education videos on the latest developments in the plumbing industry. These videos are funded, partially or fully, from commercial sponsors and have been well received by plumbers.

Outcomes

The new system of plumbing was introduced in 1997 and considerable work was required by the PIC to educate and change the work culture of the industry to meet the new legislative requirements.

There are a number of positive outcomes from the current scheme. Plumbers are considered to be taking more pride and responsibility for their own work, standards have increased and insurance premiums for plumbers have been significantly reduced. Premiums have decreased from about $1100 per year in 1996 to about $850 per year. The plumbing failure rate has been reduced from about 24 per cent in 1995 to about 4 per cent in 2001 and there are now a reduced number of consumer complaints. However, in 1995 100 per cent of plumbing work was inspected and since 1997 5 per cent of work is audited.

NSW

Under the *Home Building Act 1989,* the Department of Fair Trading is responsible for the licensing and registration of plumbers, competency standards and disciplinary processes across the state. Geographical water supply authorities, such as water corporations and local councils, administer on-site plumbing regulation within their respective geographical areas.

The regulation of the plumbing industry in NSW is very fragmented with different regulatory bodies being responsible for the same functions in different geographical areas. The requirements under the regulation also vary between geographical areas. A private sector industry participant commented that they would prefer the NSW Government to adopt, part or all, of the Victorian system. They believe that it is more efficient for plumbing regulation to be centralised in one agency.

The certification system in NSW varies from on-site inspections to self-certification for each geographical area. Differences also occur between regimes that use the same or similar certification systems. Some use a random audit system where a percentage of connections are inspected for faulty plumbing. Others conduct full inspections, some as part of broader building inspections. Levels of self-certification of compliance by plumbers vary across NSW and some regulators require that plumbers complete a *Certificate of Compliance*.

Hunter Water Corporation employs an audit system for residential plumbing work and random inspection for commercial properties. Plumbers sign a *Certificate of Compliance* to certify that work has been carried out according to the *New South Wales Code of Practice Plumbing and Drainage*. Copies of the certificate are provided to Hunter Water Corporation and the consumer.

Sydney Water Corporation inspects all plumbing and drainage work that has been notified by plumbers operating within its area. Plumbers must obtain a permit from Sydney Water that authorises any plumbing or drainage work and provide a *Certificate of Compliance* to Sydney Water and the property owner on completion. Sydney Water also conducts two inspections of all advised plumbing work. Firstly, at the construction of drainage stage and secondly, at the completion of work. The plumber signs a *Certificate of Compliance* and provides a copy to the inspector from the relevant water authority and the consumer.

The *Hunter Water Regulation 2000* and *Sydney Water Regulation 2000* applies to all plumbing and drainage work and fittings connecting to the respective water corporation's water main, sewer main or stormwater drain.

Key Issues

Standards

While objective evidence is limited, many stakeholders thought that the removal of certification would result in poorer plumbing work. A NSW industry participant was particularly concerned that moving towards greater reliance on plumbers to approve their work would lead to deteriorating standards. They acknowledged that an audit system would contribute to maintaining standards but not to the same level as thorough inspections by a regulator. A Victorian regulator commented that auditing combined with continual education and training, and effective disciplinary procedures has improved the level of standards.

A NSW private sector industry participant thought that plumbers could schedule the timing of their work, particularly in regional areas, to avoid an audit. NSW plumbers close to the Victorian border prefer and use the Victorian self-certification system to their advantage. NSW plumbers obtain a Victorian plumbing license and schedule their work to avoid an audit. Victorian auditors visit regional areas on a regular basis and plumbers are aware of when these visits take place. To avoid an audit, a plumber may schedule the start and completion of work many weeks before an auditor's visit.

They also thought that the introduction of private certifiers would maintain standards. However, private certifiers generally have limited enforcement powers while inspectors from a regulator are usually granted greater enforcement powers such as the power to suspend or cancel licenses.

Audits and Inspections

Most audits and inspections usually occur at the completion of plumbing work. Most plumbing work is buried and the inspector (and consumer) does not know the quality of the work that is being undertaken. In many cases, it is difficult if not impossible to ensure that plumbing work meets quality and product standards.

In NSW, the methods for determining the plumbing work to be inspected ranges from ad hoc samples to structured percentage audits by region and plumber. This is further fragmentation within NSW. An industry participant thought that inspectors from water corporations only focus on visible and/or high risk plumbing. Depending on the geographical area, a less thorough inspection or no inspection is made for other plumbing work.

The separation of licensing and on-site regulation is seen by some as the cause of this weakness. The centralisation of licensing and inspections in a single regulator may provide better communication channels between the personnel who grant the licenses and those that monitor or conduct audits.

Qualifications of Auditors and Inspectors

Industry participants thought that plumbing inspectors need to be technically proficient in plumbing to perform efficient and effective inspections. Further, all inspectors should be a licensed plumber or qualified to be a licensed plumber.

In NSW, some local councils combine plumbing inspections with other inspection services such as building inspections. Broad-based building inspectors may not to be familiar with the necessary technical aspects of plumbing to be able to approve plumbing work. A private sector industry participant could recall instances where inspectors were unfamiliar with plumbing work.

Conflict of Interest

An industry participant also thought that there was a conflict of interest between the supplier of water also inspecting and approving plumbing work. This is particularly the case in NSW where water corporations supply water and approve plumbing work. They may be inclined to quickly approve poor plumbing work so as to have an immediate revenue stream from the new connection.

Complaints

There are few complaints to the NSW government on plumbing and there have been very few prosecutions for poor plumbing work. Most of the complaints are about being charged a price that is greater than the quoted price or the installation of wrong equipment such as different coloured taps than those requested. Only a few complaints are about the quality of the work.

When quality problems do arise between plumbers and consumers, it is difficult to assess whether the problem was caused by poor plumbing work or other factors such as the life of the plumbing expiring in older homes. Few complaints may, to varying degrees, be a function of other aspects of a regulatory system such as effective auditing, complaints handling and enforcement.

Administrative Compliance

In NSW, an industry participant also identified a number of potential administrative difficulties. Many consumers are unaware of the plumbing process in terms of lodging documents with the water authorities. Plumbers could possibly complete work and issue a *Certificate of Compliance* to the consumer but not seek the necessary plumbing permit or request inspection from the regulator.

In Victoria, non-complying plumbers are more likely to be detected by the regulator. Plumbers are required to lodge their compliance certificates with the PIC each day over the phone. Compliance certificates have a serial number and a record is kept of the certificates that are issued to each plumber. Where a certificate is issued but not lodged, any consumer complaint can be traced to a particular plumber. It is still possible that some plumbing work is completed without the issuing of a compliance certificate and/or is not notified to the PIC. When this occurs and the PIC becomes aware of non-lodgement it has the power to impose a fine.

Different Certification Schemes in NSW

Some view the different certification schemes in NSW as catering certification to the respective geographical area. On-site regulators have the ability to make decisions about their respective inspection regime based on local influences and resources. They can choose to have thorough inspections based on the potential risk to public health and safety. Some argue that the different certification systems also provide flexibility. Regulators can choose between employing their own inspectors or contracting inspectors. They can also choose to conduct random inspections rather than to inspect all plumbing work.

On the other hand, local influences are unlikely to be that significant to warrant different certification regimes. The number of regimes is also confusing for plumbers (and consumers) that operate under a licence that permits a plumber to conduct business throughout NSW.

ANNEX F SELF-CERTIFICATION IN THE ELECTRICITY INDUSTRY IN QUEENSLAND

In Queensland, a person must be licensed to undertake "electrical work". Electrical work is defined as the work of installing or repairing an electric line or electric article used for generating, supplying or using electricity.

The licensing of electrical contractors was introduced in 1962. Currently there are approximately 19,500 electrical mechanics, 1,000 electrical fitters, 280 electrical linespersons and electrical joiners, 2,500 restricted electrical workers and 5,493 licensed electrical contractors in Queensland.

The Electrical Safety Office within the Department of Industrial Relations, is responsible for ensuring compliance by electrical entities and electrical contractors, workers, manufacturers and suppliers with the Electricity Act 1994.

The Electrical Workers and Contractors Board administers all licensing arrangements in the electrical services industry, including business licences. The Board's functions include:

- Issuing licenses
- Deciding on standards of competency
- Investigating complaints
- Taking disciplinary action.

Until 1989 all electrical work was inspected by local authority inspectors. In 1989 self-certification was introduced and since then electricians have been required to test any electrical installations and to issue a "certificate of test". The certificate confirms that the work has been completed and tested and is in compliance with the Act. A copy of the certificate is sent to the customer and the contractor is required to keep a copy for 2 years.

Upon commencement of a job, contractors are required to send a notification to the electricity provider and the regulator. The supplier then undertakes visual inspections on the main switchboard prior to connection.

Initially, the Electrical Safety Office performed audits on approximately 10 per cent of all new installations. However, there were shortfalls with this system, as maintenance work was not being audited and hence the work of contractors who only perform maintenance work was not being monitored. The audit system is in the process of changing to account for such anomalies.

At present, the supply authorities request contractors to provide them with a sample of their work and audits are performed on about 10 per cent of the work. While this system ensures better coverage (maintenance work is included) it is biased in that contractors can provide a sample of their best work. Generally, electrical contractors are audited every two years. Where unsatisfactory work has been discovered through audit checks, audits are undertaken on a more regular basis. There are moves for inspections to be undertaken by staff from the Electrical Safety Office as opposed to supply authority staff.

Generally, on-site audits focus on the compliance of the work with the Act and the Australian Wiring Standards (AS3000). "Systems audits" are currently trialed whereby the focus is on the processes adopted by the electrical contractor. For example, system audits would check the processes undertaken by an electrician in testing certain appliances.

Minor faults (no live wires involved) are generally noted and directions for rectification are issued. No reinspections are undertaken. More serious faults (live wires) or repeated minor faults are automatically referred to the Electrical Safety Office for investigation.

Complaints can be lodged with the Electrical Safety Office. While matters of a contractual nature are referred to the Small Claims Tribunal, non-compliance matters are investigated by the Electrical Safety Office. The Office has the power to discipline contractors and appeals can be lodged with the Industrial Magistrate.

There does not seem to be any evidence that self-certification has resulted in more complaints or accidents. For example, since 1994-95, hospitalisation rates for non-fatal electrical accidents (not including wilful acts involving electricity) have fallen significantly indicating the severity of electrical accidents may have declined (Queensland Department of Industrial Relations, 2001).

However, Queensland has a higher incidence of accidents. The reasons for this are not clear, but climate and lifestyle factors have been suggested as possible explanations. The Government is currently developing new stand-alone electricity legislation designed to ensure the safety of electrical workers, other workers, customers and the general public.

ANNEX G REFERENCES

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