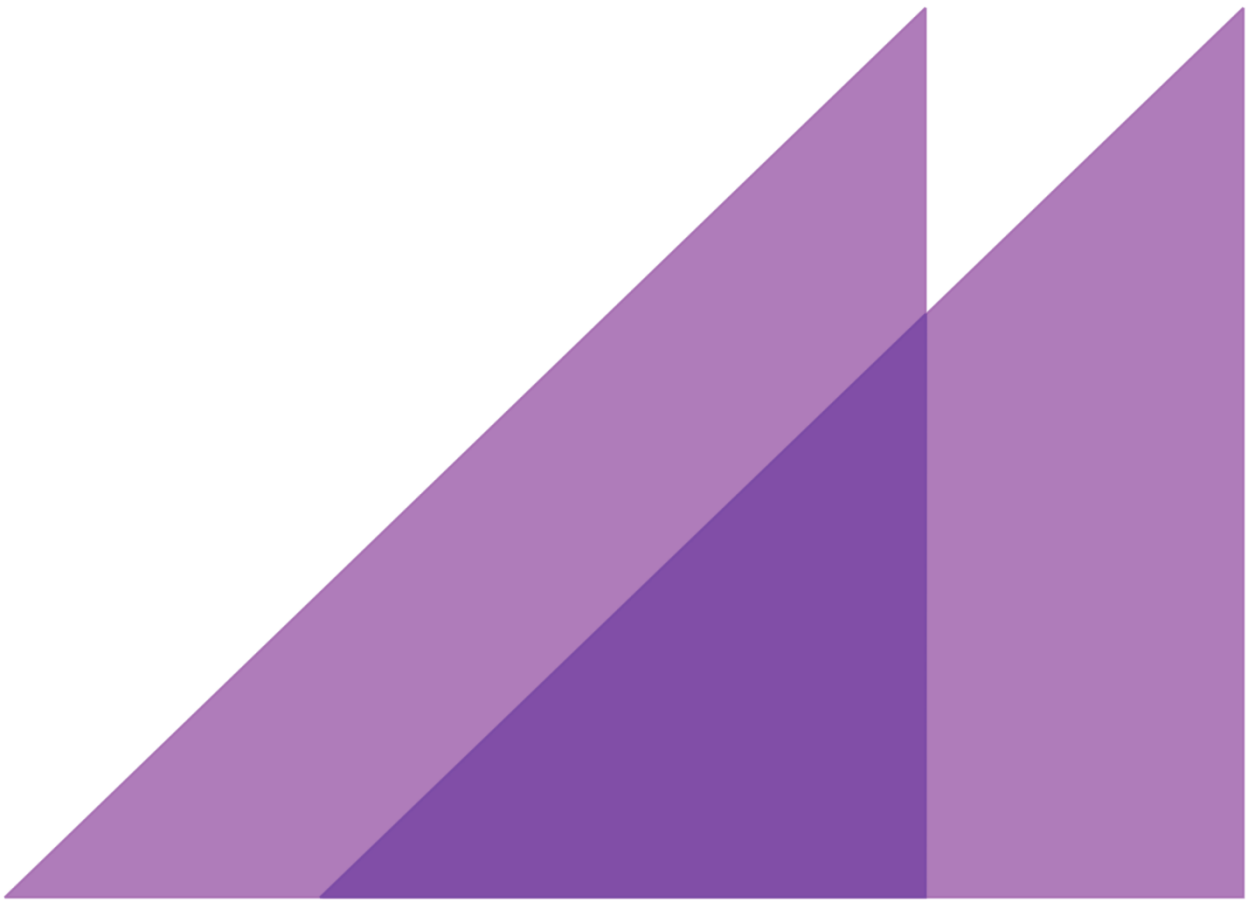
ACIL ALLEN CONSULTING

REPORT TO
MINISTER FOR COMMERCE, WESTERN AUSTRALIA

8 NOVEMBER 2013

REVIEW OF PLUMBING REGULATIONS IN WA



ACIL ALLEN CONSULTING PTY LTD
ABN 68 102 652 148

LEVEL FIFTEEN
127 CREEK STREET
BRISBANE QLD 4000
AUSTRALIA
T+61 7 3009 8700
F+61 7 3009 8799

LEVEL TWO
33 AINSLIE PLACE
CANBERRA ACT 2600
AUSTRALIA
T+61 2 6103 8200
F+61 2 6103 8233

LEVEL NINE
60 COLLINS STREET
MELBOURNE VIC 3000
AUSTRALIA
T+61 3 8650 6000
F+61 3 9654 6363

LEVEL ONE
50 PITT STREET
SYDNEY NSW 2000
AUSTRALIA
T+61 2 8272 5100
F+61 2 9247 2455

SUITE C2 CENTA BUILDING
118 RAILWAY STREET
WEST PERTH WA 6005
AUSTRALIA
T+61 8 9449 9600
F+61 8 9322 3955

ACILALLEN.COM.AU

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For information on this report please contact:
Jeremy Tustin
Principal
(03) 8650 6000
j.tustin@acilallen.com.au

Executive summary

Background

In Western Australia (WA), plumbing work is regulated under Part 5A of the *Water Services Licensing Act* 1995 and the *Water Services (Plumbers Licensing and Plumbing Standards) Regulations* 2000 (WA plumbing Act and WA Plumbing Regulations respectively).[1]

Pursuant to agreements made by the Council of Australian Governments (COAG) the Western Australian Government (the Government) is considering adopting Volume 3 of the National Construction Code, which is the Plumbing Code of Australia (PCA). If adopted, the PCA would become the primary plumbing standard for Western Australia. The Government is also considering adopting the National Occupational Licensing Scheme (NOLS) as the primary process for licensing plumbers in Western Australia.

Before doing either of these the Government engaged ACIL Allen Consulting (ACIL Allen) to carry out a fundamental review of plumbing regulation in WA.

The review was conducted in accordance with applicable processes for policy review including the Regulatory Impact Assessment process. It has considered the current arrangements for regulating plumbing and options to them.

It has considered the impact of regulation on small business and had regard for opportunities to remove controls that realise insufficient benefit.

From a process perspective a discussion paper was produced and discussed with stakeholders during a broad consultative process with public consultation sessions in Perth and several regional locations in WA between 1 and 10 July 2013.

Interested stakeholders were invited to make written submissions which are available online. The reviewers also met with all of the people and organisations who requested face to face meetings.

There were some limitations to the scope of this review. In particular, the review did not consider the detail of technical rules for plumbing such as those set out in Australian Standards and the PCA (see Layer 2 of the regulatory framework discussed in chapter 2). Nor did it consider whether technical rules should be used at all. Therefore, the lightest regulation that could possibly have been contemplated by this review is a (hypothetical) situation where it is:

- *legal* for anybody to do plumbing work without a licence or authorisation
- *illegal* for anybody to do plumbing work that did not meet the technical rules

In this sense, this review was concerned with the nature of plumbing regulation in WA rather than its existence.

[1] Recent amendments to water services legislation will see Part 5A of the Water Services Licensing Act separated into a stand-alone Plumbing Act 1995. The text, and therefore the interpretation, will remain the same.

Framework for trade regulation

The review analysed regulation of plumbing in WA and other jurisdictions. It also analysed regulation of other trades in WA. Those analyses were structured around a framework of trade regulation that ACIL Allen developed for this review. That framework is illustrated in Figure ES 1.

Figure ES 1 **Overview of trade regulation**

Layer	Decision maker	Description			
1	N/A	Commonly accepted definition of the trade Branches of the trade			
2	Minister	A	Technical rules		C
3	Minister	Regulatory definition of the trade		B	
4	Minister	Statement of objectives			
5	Minister	The licensing regime applies to work in this area **Decisions relate to:** ▪ whether licences are required ▪ the criteria for licences	Work in this area has been 'carved out' of licensing regime by horizontal separation so no licence is required	Work in this area *cannot* be made subject to either licensing or compliance regime and:	
6	Licensing administrator	Decisions relating to whether an individual applicant has satisfied the licensing criteria for work they wish to do.			
7	Technical regulator	Compliance regime	Work in this area is subject to the compliance regime, and the technical rules even though a licence is not required	▪ is subject to technical rules	▪ is not subject to technical rules

Note: Areas A, B and C all refer to work that is within the commonly accepted definition of the trade. However, the regulatory regime applies to them differently. Specifically:

- work in area A is within the regulatory definition of the trade but there are no technical rules so this work *might* require a licence (depending on horizontal separation)
- there are technical rules for work in area B, but it is outside the regulatory definition of the trade. Therefore the technical rules are not compulsory (unless another regime makes them compulsory) and no licence is required to do it. Gasfitting is an example of work in area B.
- work in area C is outside the regulatory definition of the trade so no licence is required. There are no technical rules for this work

Source: ACIL Allen Consulting

There are eight components to the trade regulatory framework, seven functional 'layers' and one 'column' of decision makers. The layering of the framework does not suggest that one layer is more important than another to the overall regulatory regime.

Layer 1 is the commonly accepted definition of the trade. It defines the maximum possible scope of the regulatory regime, though the actual scope is narrower.

Layer 2 is a set of technical rules relating to how work in the trade should be done. In Australia these are usually found in an Australian Standard though recently they have moved to National codes such as the Construction Code or the PCA.

Layer 3 is the regulatory definition of the trade. This is found in legislation, either an Act or in Regulations. This defines the legal 'reach' of the regulatory framework.

The commonly accepted definition of the trade, the regulatory definition of the trade and the technical rules for the trade will not necessarily coincide. This is highlighted by the grey shaded areas.

Only work that falls outside areas B and C is subject to the regulatory regime. That is, the regulatory regime only applies to work within the regulatory definition of the trade.

Work in area 'A' is subject to the regulatory regime because it is within the regulatory definition of the trade but there are no technical rules for this work.

Layer 4 is a statement of objectives. It states why the trade is being regulated at all.

A key principle that underlies best practice regulation is that governments should not regulate, or intervene in markets in other ways, unless the reason they are doing so is clear.[2] This layer delivers on that principle.

Layers 5 and 6 are, together, a licensing regime.[3] This is a mechanism for determining the qualifications, training and/ or experience that a person must have before they are allowed to do work in the industry in question. It defines 'who' can legally do work in the trade.

It can be separated vertically and/or horizontally:

- *vertical separation* means that some work can only be done with a higher level of licence. It is common that a person with a lower level of licence is only permitted to work under the supervision of a person with a higher level of licence
- *horizontal separation* means that a person might be permitted to work in some branches of the trade but not others.

It is important to note that the licensing regime is *independent* of the technical rules. That is, the fact that a licence is required for work does not mean that there are technical rules. This is illustrated by area A. Similarly, the fact that there are technical rules does not mean that a licence is automatically required.

Work which has technical rules but is outside the regulatory definition of the trade is in area 'C'. The licensing regime cannot be extended to apply to this work.

The distinction between layers 5 and 6 relates to the type of decision being made. At layer 6 decisions are made about licence structure and criteria. At layer 6 they relate to individual applicants and whether they have met the criteria determined at layer 5.

Layer 7 is the compliance regime. It is sometimes referred to as technical regulation.

This layer is where a government ensures that the 'how' and 'who' decisions made at other layers are implemented. The compliance regime comprises two aspects:

- the *structural aspect* defines what *can be* done
- the *operational aspect* describes what *is* done.

The *structural* aspect of a compliance regime says what can be done to ensure that the 'who' and 'how' layers are followed. It also says who can do those things.

The *operational* aspect of a compliance regime deals with implementation issues like the number of inspectors that should be appointed or the number of inspections they should conduct and in what circumstances disciplinary action would be taken.

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[2] Another key principle is that the benefit of regulation should outweigh the costs. This is discussed in section 1.3.

[3] Some trades are based on a permit or another form of authorisation, but the distinction is not important here.

The Act and Regulations that set up a regulatory regime deal with its *structural* aspect and, generally speaking, leave *operational* aspects to a key decision maker.

The **key decision maker**(s) is the last component of the regulatory framework, though it is not the least important. The decisions that must be made in the regulatory framework are all fundamentally decisions for government, though some are typically delegated. Therefore, the discussion of key decision maker in this report is really a discussion of the person or persons to whom the decisions are delegated.

A key decision maker(s) needs to operate at all layers of the framework, though this is a more active role at some levels than others.

The same key decision maker could operate at all layers or the roles could be split. The type of decision that needs to be made at each layer is:

- at **layer 2** it will be necessary to consider changing the technical rules from time to time, for example to accommodate new technology. In practice these decisions are usually made as part of a national process under the auspices of COAG
- at **layer 3** to decide on the regulatory definition of the trade
- at **layer 4** to decide on the objective of regulation of the trade
- at **layer 5**, decisions must be made to:
  - determine which branches of the trade should be done only by licenced people (that is, to apply horizontal separation)
  - determine whether, and in which branches of the trade oversight is required (that is, to apply vertical separation)
  - to determine the licensing requirements for a person who wishes to work in a particular part of the trade
- at **layer 6** to ascertain whether particular individuals have met licensing requirements and should be authorised to do certain work
- at **layer 7**, where two broad types of decision must be made:
  - *strategic decisions* – such as how to secure compliance with the 'who' and 'how' requirements
  - *tactical decisions* – such as what action to take in a particular instance.

The key decision maker(s) role is to implement the regulatory regime by applying their judgement and experience to determine to make decisions that best serve the objective of regulation in each case.

Regulatory impact analysis – WA Plumbing regulation

The first step in a regulatory review must be to identify the problem to be addressed by regulation. The discussion of this topic at the public consultation sessions was somewhat controversial. In many cases stakeholders interpreted the discussion of an unregulated plumbing industry in WA to mean that this was the intended outcome of this review. This was not the case.

Rather, good regulatory practice requires that any regulatory regime is designed to address a clearly identified problem. The problem should be one that could not be addressed satisfactorily through the market mechanism or that is caused by that mechanism.

Therefore, the first step in this review was to consider the problems that would occur if plumbing was not regulated in WA and, therefore, the problems that the WA plumbing regulatory regime should try to prevent.

Doing this requires us to consider a hypothetical situation where plumbing regulation did not exist. The benefit of regulation is that it would prevent problems that would occur in that situation from occurring. Those benefits would then be compared with the cost of regulation to ensure that benefits are larger than the cost of achieving them.

In this case the review identified the following four 'candidate' problems.

1. public health would be at risk
2. consumers would be exposed to poor quality products
3. there would be a risk of property damage due to poor plumbing
4. plumbing businesses and related industries would be at risk of failure.

Drawing on the framework set out in the Regulatory Impact Assessment Guidelines for Western Australia the review concluded that it would be appropriate for plumbing regulation to address candidate problem 1. The key reason is that candidate problem 1 is:

- caused by market failures, specifically externalities and information failures
- an unacceptable hazard or risk, that is, in an unregulated market the risk of public health problems would be unacceptably high.

The review also concluded that:

- plumbing regulation designed to address candidate problem 1 would go some way to addressing candidate problems 2 and 3, though these do not warrant regulatory intervention in their own right
- candidate problem 4 is not a valid basis for regulatory intervention.

The objective of plumbing regulation

It follows from the above that the appropriate objective of plumbing regulation is to manage the risk to public health. Therefore, the review concluded that the appropriate objective for plumbing regulation in WA is:

> To protect the long term interests and health of Western Australians with respect to the safety of the water supply and wastewater removal system by ensuring that plumbing work is performed in accordance with technical requirements appropriate for available technologies by sufficiently skilled persons.

Options for addressing the problems

In plumbing, as in other areas, there is a continuum of regulatory interventions that could be made ranging from 'loose' to 'tight' regulation.

As noted above this review took the existence of technical rules as a given. Therefore, at the 'loose' end of the continuum is the hypothetical situation mentioned in chapter 4 where it would be:

- *legal* for anybody to do plumbing work without a licence or authorisation
- *illegal* for anybody to do plumbing work that did not meet the technical rules.

The loosest conceivable approach would stop at this. In this situation the customer would have the right to have plumbing work done in accordance with the technical rules, but it would be up to them to enforce that right.

At this end of the continuum WA would be 'out of step' with other jurisdictions.

From this point there are two approaches the WA Government could take to managing the risk of public health problems associated with sub-standard plumbing. It could either:

— address the identified market failures directly

— apply a form of trade regulation.

The review concluded that it would be insufficient to rely only on addressing the market failures directly. Therefore, an appropriate form of trade regulation is warranted.

The review noted that the available data and information do not support a detailed quantitative analysis of the costs and benefits of changing the degree of regulation of plumbing in WA

Impact analysis

This review found that the available data on the cost of public health problems that would occur under different approaches to plumbing regulation are limited. They do not support a quantitative analysis of the benefit of 'tightening' or 'loosening' the regulation of plumbing in WA so a formal cost benefit analysis cannot be done. This conclusion is consistent with the conclusions reached in other reviews of plumbing regulation in recent history. Neither the Commonwealth nor other State Governments have been able to conduct formal cost-benefit analyses of plumbing regulation because there is insufficient data to know what would happen if it was removed or altered substantially.

Therefore, in this case, the impact analysis is limited to a qualitative analysis. The information that is available supports the following two conclusions:

1. there is insufficient evidence to suggest that there is currently a 'problem' in the plumbing industry and, as such, there is insufficient evidence to justify broadening the scope of plumbing work that requires a licence
2. the compliance regime as it has been applied in recent years should be 'tightened' to increase its visibility and ensure that the chance that a particular piece of plumbing work will be inspected is the same regardless of whereabouts in WA it is done.

Recommendations

For the reasons discussed above, the review does not recommend fundamental changes in the way that plumbing is currently regulated in WA. It does, however, make a number of detailed recommendations that are designed to streamline regulation and to achieve the desired outcomes as efficiently as possible.

Those recommendations are contained in Part II of the review report and summarised below. They follow the regulatory framework discussed above, though the key decision makers are discussed first.

Key decision makers

A key part of the regulatory model is the decision maker, or makers, that will administer it.

The decisions that must be made in regulating plumbing relate to developing laws and policy and securing compliance with them. Therefore, they are fundamentally decisions for Government. The fundamental question here is not *whether* Government should make these decisions, but *how* it should do so. The decisions could be made by either:

— Parliament

— a Minister

— an independent statutory office holder (Commissioner) or group of officers (Commission or Board)

— a public servant.

All of the regimes that were reviewed are characterised by at least one decision maker that is a statutory office holder or group thereof. In the WA plumbing regime the statutory office holders are the members of the PLB.

The issue of who should be the decision maker was widely discussed in the submissions and at the public consultation sessions.

The review has applied the principle that, it is generally appropriate for decisions to be made by Parliament or a Minister where they relate to what 'the rules' are. It would be appropriate for decisions to be delegated when they are more operational, for example when they relate to whether an individual incident is within or outside the rules that have been laid down, or where they are *technical* and draw on specialist expertise is required. Therefore, following the regulatory framework in Figure ES 1, the review recommends that the key decision makers should be:

— at **layer 2**, the Minister

— at **layer 3**, the Minister

— at **layer 4**, the Minister

— at **layer 5**, either the Minister or a licensing authority

— at **layer 6**, a licensing administrator

— at **layer 7**, a plumbing technical regulator

The decisions to be made at levels 2, 3 and 4 are clearly matters of policy. They relate mainly to the way that public resources should be allocated to maximise the wellbeing of Western Australians. They define the 'field' in which decisions are made at lower layers. These decisions are clearly for the Minister to make.

The decisions to be made at layer 5 would include technical decisions about the skills a person needs to do work safely and decisions about the risks associated with letting work be done with different levels of training. These are a blend of decisions that may best be made by the Minister and those that would be suitable for delegation. The choice between these two options would depend on the relative cost of the two approaches including the cost of making future changes to licensing criteria as and when required. However, the need to consider the costs and benefits of such changes gives them a legislative nature than may suit the Minister retaining this role.

In this report we refer to the decision maker at layer 5 of the regulatory framework as 'the licensing authority' noting that the licensing authority might be the Minister.

At layer 6 the role of the licensing administrator will be substantially operational. It would be responsible for determining whether a person who wanted to obtain a licence had met the necessary criteria but it would not determine the licensing criteria. Nor would it have any significant discretion over whether it is a 'good idea' to grant a licence to a particular person. It would simply apply the rules it was given.

Given these functions the review recommends that the role of licensing administrator should be delegated to either the Department for Commerce or to the technical regulator (see below). The choice between the two should depend on which can perform the necessary functions most efficiently. In practice we do not expect that there would be a substantial difference.

The review recommends that the decision maker at layer 7 should be a technical regulator. This regulator should be a statutory authority responsible for administering the compliance

regime to pursue the objective of plumbing regulation. It should be resourced appropriately to pursue its objective.

The likelihood of operational and administrative synergies leads us to conclude that, operationally, the technical regulator should be 'multi-trade'. That is, while the regulator itself may be retained as a plumbing specific legal entity, its staff should be provided, and managed, jointly with staff responsible for similar regulation of other trades.

The technical regulator's disciplinary functions make it important that it can operate with appropriate independence from the Government of the day. Therefore, it should be a statutory position rather than a public service role.

In our view the technical regulator should have skills and experience in certain areas. Therefore, the members of the plumbing regulator should be chosen using a skills matrix. That is, the necessary skills and expertise should be identified and individual members chosen to ensure that one or more of them has those skills.

This does not imply appointing one member per skill. It is likely that many appointees will have combined skills – for example, a member might have both plumbing and small business expertise, another have all three of remote areas, plumbing training and hydraulic expertise and so on. It would be inefficient for the technical regulator consisted of multiple people with substantially the same skills. We have not reached a view as to how many people would need to be appointed to the technical regulator.

We recommend that the existing model of referring to individual appointees nominated by individual groups is abandoned. In our view it is preferable for the Minister to have flexibility in making appointments to the regulator to ensure that the appropriate skills mix is achieved and avoid duplication and 'gaps'. Abandoning this approach would not prevent the Minister from consulting with the organisations currently named in the regulations or others, but it would allow broader representation as well as flexibility in representation over time.

The technical regulator should report the activity it takes in furtherance of its objective in sufficient detail that it can be distinguished from other activities.

Regulatory definition of plumbing

In principle, the review recommends that the WA plumbing regime should be able to be applied to a broad range of plumbing activities. However, it should only do so if a case is made for this to be done by showing that the benefits outweigh the costs.

The WA regulatory definition of plumbing is currently narrow and restrictive. We recommend that the regulatory definition of plumbing should be broadened to allow future flexibility. However, a broad definition should only be adopted if it is coupled with substantial flexibility in the regulatory regime insofar as licensing is concerned.

Therefore, the review recommends that the regulatory definition of plumbing should be extended, which would extend the *potential* reach of the plumbing regulatory regime. However, as noted above, no case has been found to extend the *actual* reach of that regime.

Therefore, the review recommends that the Government use horizontal separation to 'carve out' work that falls within the broadened regulatory definition of plumbing but need not be done by licensed plumbers.

The benefits of a revised definition are twofold. It would remove certain identified difficulties with the current definition and it would allow the flexibility to address problems that may be identified in future.

Drafting the appropriate definition would presumably require the involvement of the office of Parliamentary Counsel. In our view it is not important whether the definition is framed by specifying branches of plumbing, as in the Victorian definition, or by using broad language, though the latter would be more consistent with the WA approach to other trades. In our view it would be appropriate for that definition to refer to:

> the installation, alteration, extension, disconnection, repair or maintenance of pipes, fixtures and fittings to carry water, wastewater and other wastes between equipment owned and operated by a water service provider and a point of use.

Statement of objectives

The review recommends that the objective of plumbing regulation in WA is:

> To protect the long term interests and health of Western Australians with respect to the safety of the water supply and wastewater removal system by ensuring that plumbing work is performed in accordance with technical requirements appropriate for available technologies by sufficiently skilled persons.

Licensing regime

National licensing

The review recommends that WA give effect to agreements made in the context of national licensing. This should be done by ensuring that the regulations have sufficient flexibility to implement horizontal and vertical separation as described below. The Minister could then either:

- direct the relevant decision maker to give effect to the National licensing regime
- give effect to the National licensing regime by making an appropriate order (if the Minister retains the role of licensing authority).

Horizontal separation

As discussed above the review recommends that that the WA regulatory definition of plumbing should be modified to extend the potential reach of the plumbing regulatory regime.

Broadening the definition would bring certain 'branches' of plumbing that are currently outside the regulatory definition of plumbing within that definition. If this was done with no further change it would increase the regulatory burden for businesses in those 'branches' brought within the regulatory regime. The increase would probably be substantial and would result in a net cost to society.

Therefore, as the regulatory definition of plumbing is increased, offsetting changes to the licensing system must also be made to 'carve out' those branches of plumbing that are currently not subject to the regulatory regime but would be brought within it by the changed definition.

Therefore, in the first instance, the licencing regime should be reconstructed to mimic the existing arrangements with the following three exceptions:

1. urban irrigation
2. limited plumbing work in remote areas
3. plumbing in a person's own home

Any future alterations to the licensing regime should only be made following a cost benefit analysis showing that there is a clear case for making them. At this stage the review can say

that there is no case for extending the scope of 'regulated' plumbing work (i.e. that for which a licence is required).

The licencing regime should also allow prospective plumbers to define the scope of their own licence. The notion of a single 'all encompassing' plumbers licence should be abandoned. If a person wants to be licenced to do a subset of regulated plumbing work, and they are appropriately skilled to do so in accordance with the applicable technical rules, they should be entitled to a licence to do that work. If the regulator is not satisfied that the person can do other work, the licence should be limited accordingly. That is, the role of the licensing regime should be to assess whether the person in question can do the work they wish to do appropriately. Importantly, the licensing regime should not have regard to whether the person is likely to be able to find employment with a partial licence or whether the use of partial licences might have adverse impacts on incumbent plumbing businesses. Those questions should be left to the market.

The licensing regime should be constructed on a 'shall issue' basis, similar to the WA electrical licensing regime. In other words, when a person applies for a license that would authorise them to do plumbing work of whatever kind the licensing regime should ascertain whether they can do so safely and, if so, the regulations should require the licensing administrator to issue the licence.

Vertical separation

The review also recommends that the vertical structure of the licensing regime be modified to allow non-plumbers to operate as plumbing contractors. This would be consistent with the approach recommended in the National Licencing space. It would reduce barriers to entry by broadening the scope for plumbing businesses, for example by allowing corporate structures to be used.

Fit and proper person test

The review recommends that the fit and proper person test be removed from the licencing regime. This is an out dated and subjective concept. The regulations should be altered to specify the behaviours that would render a person unfit to be a plumber to increase transparency, certainty and predictability.

Compliance regime

The review recommends that the structural aspects of the compliance regime for WA plumbing should be maintained in much the same form as they are now. In particular, the regime should continue to make it illegal for a person to do plumbing work without a licence or to engage an unlicensed person to do that work. The regime should be extended to make it illegal for a person to advertise to do plumbing work that they cannot legally do.

The review recommends that the six year warranty for plumbing work should be retained.

It is not necessarily clear that this 'warranty' adds to the customer's legal rights, because it is illegal for work to be done otherwise than in compliance with the technical rules. However it makes it simpler for customers to access their rights and reduces transaction costs.

The review recommends that the regime be modified to allow the technical regulator to take disciplinary action summarily, without proceeding in the State Administrative Tribunal. The power to deal with disciplinary matters summarily is an important feature that is available to Energy Safety in WA and to plumbing regulators in other States. It should be added to the WA plumbing regime.

The review also makes a number of other more detailed recommendations that are described in the report.

The operational aspects of the compliance regime should reflect the fact that plumbing regulation is a risk management exercise. Therefore, the technical regulator should have the discretion to direct its resources where it considers they will do the most good. It should do this using a compliance pyramid approach.

The technical regulator should be empowered, and encouraged, to use information as a compliance tool. In particular it should maintain and publish statistics on its plumbing enforcement activities in periodicals or newsletters that should be made available to the industry and the public at large. Those newsletters should also provide case studies of disciplinary activities and could be sued to disseminate information relevant to plumbers.

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Part One

I

REVIEW OF THE EXISTING REGIME FOR WA PLUMBING REGULATION

1 Background

In Western Australia plumbing work is regulated under Part 5A of the *Water Services Licensing Act* 1995 and the *Water Services (Plumbers Licensing and Plumbing Standards) Regulations* 2000 (WA plumbing Act and WA Plumbing Regulations respectively).[4]

Pursuant to agreements made by the Council of Australian Governments (COAG) the Western Australian Government (the Government) is considering adopting Volume 3 of the National Construction Code, which is the Plumbing Code of Australia (PCA). If adopted, the PCA would become the primary plumbing standard for Western Australia. The Government is also considering adopting the National Occupational Licensing Scheme (NOLS) as the primary process for licensing plumbers in Western Australia.

Before doing either of these the Government engaged ACIL Allen Consulting (ACIL Allen) to carry out a fundamental review of plumbing regulation in WA.

1.1 Scope of this review

The statement of requirements for this review are reproduced in Appendix A and summarised below.

The review was conducted in accordance with applicable processes for policy review including the Regulatory Impact Assessment process. It has considered the current arrangements for regulating plumbing and options to them.

It has considered the impact of regulation on small business and had regard for opportunities to remove controls that realise insufficient benefit.

The terms of reference required that this report discusses and makes recommendations regarding certain aspects of the future regulation of plumbing in Western Australia. The specific requirements are listed below with a reference to where each of them is discussed in this report.

[4] Recent amendments to water services legislation will see Part 5A of the Water Services Licensing Act separated into a stand-alone Plumbing Act 1995. The text, and therefore the interpretation, will remain the same.

Table 1 **Report content and terms of reference requirements**

Topic	Current situation	Recommendation for future
Objectives of plumbing regulation	Section 3.1	Part II, Chapter 3
Scope of matters controlled by plumbing regulation	3.2	Part II, Chapter 2
Institutional framework	Chapter 3	Part II, Chapter 6
Arrangements to finance the administration of plumbing regulation	Not addressed	Part II, Chapter 8
Referenced standards including relevant Australian Standards and the Plumbing Code of Australia	Section 3.1	Part II, Chapter 9
Notices and other communications by which plumbers inform authorities of intended and completed plumbing work	Section 3.5	Part II, Chapter 5
Arrangements to protect consumers and the community including the plumbers licensing scheme and the statutory warranty for plumbing work;	Sections 3.4 (licensing scheme) and 3.5 (warranty)	Part II, Chapter 5
Arrangements in other Australian jurisdictions	Appendix D	N/A

The terms of reference also described the process to be followed by the review. They required that a discussion paper be produced and discussed with stakeholders during a broad consultative process with public consultation sessions in Perth and several (specified) regional locations in WA.

A copy of the discussion paper is at Appendix B.

Those public sessions were held between 1 and 10 July 2013. The details are listed in the discussion paper.

Interested stakeholders were invited to make written submissions by 19 July 2013, approximately one month after the release of the discussion paper. A number of stakeholders requested more time to prepare their submission and all of those requests were agreed to. The last submission was received on 27 August 2013.

A list of the people and organisations that made submissions is in Appendix A. The submissions themselves are available online at http://www.acilallen.com.au/plumbing-regulations-wa-submissions or on request.

In addition to written submissions a number of people and organisations requested face to face meetings with review staff. All of those requests were accommodated.

There were some limitations to the scope of this review. In particular, the review did not consider the detail of technical rules for plumbing such as those set out in Australian Standards and the PCA (see Layer 2 of the regulatory framework discussed in chapter 2). Nor was the review tasked with considering whether technical rules should be used at all.

Rather, the review took the existing technical rules for granted and considered how plumbing should be regulated given that those rules existed and should be followed. Therefore, the lightest regulation that could possibly have been contemplated by this review is a (hypothetical) situation where it is:

- *legal* for anybody to do plumbing work without a licence or authorisation
- *illegal* for anybody to do plumbing work that did not meet the technical rules

In a sense, this review was concerned with the *nature* of plumbing regulation in WA rather than its *existence*.

This is consistent with past work by other Governments. For example, in its 2008 review of plumbing standards the Victorian Government noted the possibility of not having technical rules (referred to as mandatory plumbing standards) but treated this as a 'discounted option' and gave it no serious consideration.[5,6]

1.2 Context

This review is not being conducted in isolation. Three other key processes are either underway or have happened in recent history and are relevant. These are:

- the rollout of national licensing for the gasfitting and plumbing trades
- the Government's consideration of the possible adoption of the PCA
- a recent review by the Western Australian Auditor General.

1.2.1 National Occupational Licensing Scheme

The rollout of NOLS for the plumbing and gasfitting trades is happening simultaneously to, and independently of, this review.

COAG decided to introduce NOLS in July 2008. During the course of this review the Decision Regulation Impact Statement for NOLS for the plumbing and gasfitting trades was released (the NOLS decision RIS). The NOLS decision RIS recommends a preferred option for policy to underpin the establishment of a national licensing scheme for the plumbing and gasfitting occupations.

The recommended option for National Licensing is 'three tier sub option 2.' The three tiers are:

- contractor
- licenced plumber
- licenced tradesperson.

Broadly, a contractor is permitted to carry on a plumbing business. A contractor might also be a licenced plumber but not necessarily. A contractor could be a company, making it impossible for it to hold a plumbers licence or the contractor might be a (natural) person who is not a plumber.

A licenced plumber is authorised to work without supervision but cannot carry on a plumbing business without a contractor's licence.

A licenced tradesperson can only work under the supervision of a licenced plumber.

NOLS does not replace the need for WA to maintain a licencing regime for plumbers. The administration of the licencing regime would still be a WA responsibility. Broadly, it would be up to the WA Government to determine whether an individual person met the requirements for a licence, but the requirements themselves would be determined at the national level.

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5 Plumbing Industry Commission, Department of Planning and Community Development, "Regulatory Impact Statement Proposed Plumbing Regulations 2008", June 2008, available from www.vcec.vic.gov.au, retrieved 24 June 2013

6 In fact there were two discounted options, but they were sufficiently similar to treat them as one in this context.

NOLS also impacts on the issue of horizontal separation of the licencing regime[7]. Under the model proposed for national licencing four branches of the plumbing trade will be defined, namely:[8]

1. plumbing work (water and sanitary plumbing)
2. drainage
3. fire protection work
4. mechanical services.

NOLS creates the potential that work in these branches could not be done without an appropriate licence, but that licences may be issued in each of these branches separately.

NOLS will also include restricted licenses for the following branches of plumbing:

1. disconnection and reconnection of hot water systems
2. urban irrigation
3. fire protection – inspect and test

The purpose of this review was not to revisit decisions that were made in developing the national licencing regime. Whether, and when, to rollout NOLS in WA is a matter for the Government to consider separately. However, the recommendations made here should, and do, create a regime that would enable the proposed structure of the national licencing scheme.

1.2.2 Plumbing Code of Australia

The National Construction Code Series is a COAG initiative developed to incorporate all on-site construction requirements into a single code. Volume three of that code is the PCA.

The PCA was completed in 2011, though it has not yet been adopted in WA.

The PCA is a set of technical rules for plumbing. There are five sections, each of which relates to a branch of the broader plumbing trade. The sections are:[9]

- section B – Water Services
- section C – sanitary plumbing and drainage systems
- section D – stormwater drainage systems
- section E – heating ventilation and air conditioning
- section F – On-site wastewater systems

Each section of the PCA contains a set of performance requirements which define the way that plumbing systems of different types must perform. For example, Part B1.2 requires that:

> A cold water service must be designed, constructed and installed in a manner as to –
>
> (a) avoid the likelihood of contamination of *drinking water* within both the water service and the *Network Utility Operator's* supply; and
>
> (b) provide water to fixtures and appliances at flow rates and pressures which are *adequate* for the correct functioning of those fixtures and appliances under normal conditions and in a manner that does not create undue noise; and
>
> (c) avoid the likelihood of leakage or failure including uncontrolled discharges; and

---

7 See chapter 2 for a definition of horizontal separation..

8 Gasfitting is defined separately and disregarded here.

9 Section A contains introductory and administrative provisions. There is also section G, which deals with product certification.

(d) facilitate the efficient use of drinking water; and

(e) allow adequate access for maintenance of mechanical components and operational controls; and

(f) allow the system, appliances and backflow prevention devices to be isolated for testing and maintenance, where required.

Each section of the PCA also contains 'deemed to satisfy' provisions. Basically, these say that a plumbing installation will satisfy the performance requirements if it is designed, constructed and installed in accordance with the applicable Australian Standard.

Therefore, under the PCA, it is possible to install plumbing work as prescribed by the applicable standard or to use another approach that will meet the performance requirements (an alternative solution).

WA has not yet adopted the PCA and so has not determined who would be able, or required, to sign off on an alternative solution. This issue is discussed further in chapter 9 of Part II of this report. Otherwise than this, the adoption of the PCA is beyond the scope of this review. However, as with national licensing, it is important that the recommendations made here facilitate the adoption of the PCA if the Government chooses to do so.

1.2.3 Recent Auditor General's report

In June 2012 the Auditor General of Western Australia reported on concerns that had been raised by the Plumbers Licensing Board (PLB) relating to the support provided to it by the Department of Commerce. Those concerns were that funds collected under the WA Plumbing Act had been used for purposes outside the Act and that the support provided by the Department of Commerce to the PLB was inadequate.

The Auditor General's key findings were that:[10]

- the PLB and the Department of Commerce did not have a common understanding of their respective roles and responsibilities, in particular concerning the control of funds
- this lack of clarity led to the PLB not having a full understanding of its financial position
- the Department of Commerce's administration and reporting of the PLB's finances was deficient and the financial information given to the PLB was inadequate.

The Auditor General had expected to find that the Public Sector Commission's *Principles of Good Corporate Governance for Western Australian Public Sector Boards and Committees* would be met in respect of the PLB, but they were not.

1.3 Best practice regulation

The WA Plumbing regulatory regime should satisfy the principles of best practice regulation, which are the 'rules' for reviewing regulation and for deciding whether regulation should be used at all. Those documents are:

- the Best Practice Regulation Handbook (July 2013)[11]
- Regulatory Impact Assessment Guidelines for Western Australia. [12]

[10] The Auditor General's findings are in its (first) Public Sector Performance Report for 2012, which is available online at https://audit.wa.gov.au/2012/?post_type=report. They were also appendix 1 to the Master Plumbers and Gas Fitters Association's submission to this review.

[11] Office of Best Practice Regulation, "Best Practice Regulation Handbook", available from http://www.finance.gov.au/obpr/about/

In this report they are referred to, collectively, as "the regulatory policy documents."

The regulatory policy documents acknowledge that regulation plays a key role in modern, well functioning economies. It is a "necessary means by which governments can achieve important and beneficial economic, social and environmental objectives".[13]

However, while regulation is necessary in some cases, it can be detrimental in others. Almost all regulation imposes costs. Worthwhile regulation also creates benefits. Best practice regulation requires that the costs imposed by regulation are smaller than the benefits regulation delivers. In this way regulation will maximise the benefit to the community taking account of the costs it imposes.

Broadly, the starting point for the regulatory policy documents is that regulation should not be used unless there is a good reason to use it. In particular, regulation should only be used where competition and the market mechanism cannot be relied on to deliver these goals. The regulatory policy documents set out a way of deciding two things:

1. whether Government intervention though regulation is justified
2. whether a particular form of intervention is the most suitable.

The two regulatory policy documents describe situations when Government regulation might be justified. There are two commonly understood reasons to regulate which are similar in both.[14] They are:

- regulatory failure – essentially changing regulation to correct an error in existing regulation; and
- market failure – which occurs "when the market alone does not efficiently organise production or allocate goods and services for consumers."

Market failure can occur for four main reasons:

- the public nature of some goods
- the presence of externalities
- the presence of information asymmetry
- the presence of market power

A practical requirement of best practice regulation is that a regulatory impact analysis such as this review is conducted periodically.

The requirements for a regulatory impact analysis vary slightly between jurisdictions. Broadly, they require that the particular elements are considered and summarised in a regulation impact statement (RIS). The elements of a RIS are:

1. identifying the problem, which refers in this case to the problem(s) that *would* exist if regulation was not in place - a clear identification of the problem allows the regulatory regime to be well focussed and a key reason for identifying the problem clearly is to ensure that the cost of regulation is smaller than the benefit it provides
2. identifying the objectives of regulation, which will usually be to solve (or address) the problem

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12 Department of Treasury and Finance (WA), "Regulatory Impact Assessment Guidelines for WA", available from http://www.treasury.wa.gov.au/cms/uploadedFiles/Treasury/Economic_reform/Regulatory_Gatekeeping/ria_guidelines_july_2010.pdf

13 Office of Best Practice Regulation, Op. Cit, p.2 at 1.3

14 WA RIA guidelines, p. 4

3. identifying options to achieve the objectives, which should include all of the available alternatives, not just an option that has been identified in advance as preferred
4. impact analysis – costs, benefits and risks, which should quantify significant impacts and might include a formal cost-benefit analysis, though it does not in this case
5. consultation, which might be done before, during or after a regulatory assessment
6. conclusion, including the recommended approach.

This report was written with these requirements in mind and, as discussed in section 1.4 follows this structure.

1.4 Structure of this report

This report is in two parts. Part I (this part) deals with the existing structures. It is structured as follows:

- chapter 2 of Part I outlines a framework for analysing a regime for trade regulation.
- chapter 3 of Part I applies that framework to the plumbing regulatory regime currently in use in WA
- chapter 4 of Part I considers the underlying problem, which is the first step in a regulatory review.
- chapter 5 of Part I builds on chapter 4 by identifying and discussing alternative ways that the problem could be addressed
- chapter 6 of Part I provides an 'impact analysis', considering the costs and benefits of altering the plumbing regulatory regime.

Broadly, the conclusion of Part I of this report is that there is insufficient evidence to justify a substantial tightening, or broadening, of the regulatory regime applicable to plumbing in WA. Nonetheless, the review identified numerous recommendations for streamlining or otherwise improving the current regime. These are discussed in Part II of this report.

Part II follows the trade regulatory framework described in Part I. Therefore:

- chapter 2 of Part II relates to the regulatory definition of plumbing
- chapter 3 of Part II relates to the objective of plumbing regulation
- chapter 4 of Part II relates to the licensing regime
- chapter 5 of Part II relates to the compliance regime
- chapter 6 of Part II relates to the key decision makers

Chapters 8 and 9 deal with other issues raised in the statement of requirements. Specifically:

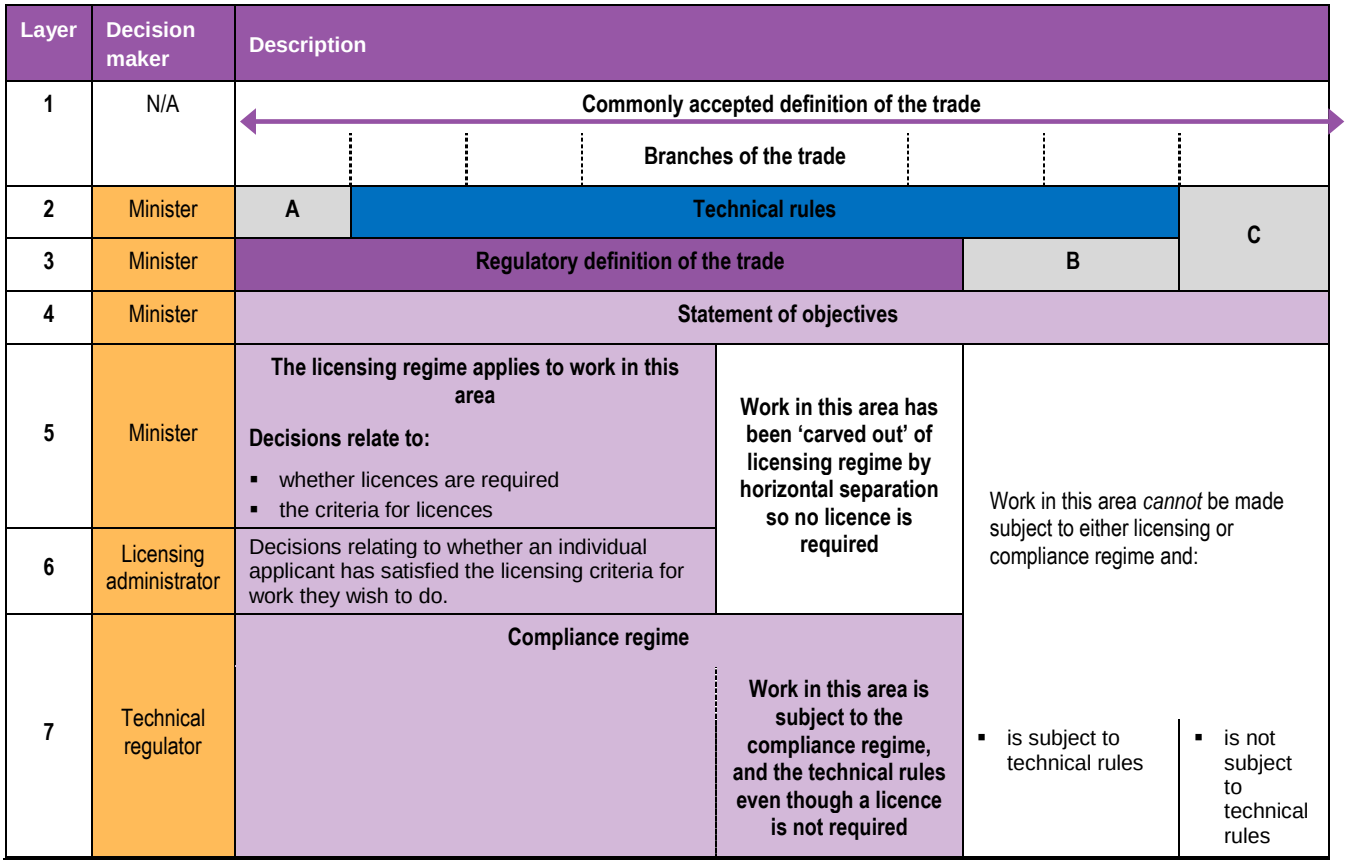
- chapter 8 discusses who should pay for plumbing regulation
- chapter 9 discusses issues relating to the implementation of the Plumbing Code of Australia.

2 A framework for analysing trade regulation

This chapter introduces a framework to summarise regulation of plumbing and other similar industries in Australia developed by ACIL Allen for the purposes of this review. The summary is general. It does not relate directly to the regulation of plumbing in WA or to any other specific trade or jurisdiction. The intention is to introduce a framework that can be used throughout this report to summarise the specific approaches taken to regulating plumbing and other trades in WA and elsewhere.

For this reason the summary provided here refers to regulation of 'a trade' rather than plumbing as such.

Figure 1 **Overview of trade regulation**



Note: Areas A, B and C all refer to work that is within the commonly accepted definition of the trade. However, the regulatory regime applies to them differently. Specifically:

- work in area A is within the regulatory definition of the trade but there are no technical rules so this work *might* require a licence (depending on horizontal separation)
- there are technical rules for work in area B, but it is outside the regulatory definition of the trade. Therefore the technical rules are not compulsory (unless another regime makes them compulsory) and no licence is required to do it. Gasfitting is an example of work in area B.
- work in area C is outside the regulatory definition of the trade so no licence is required. There are no technical rules for this work

Source: ACIL Allen Consulting

There are eight components to the trade regulatory framework. There are seven functional 'layers' and one 'column' of decision makers.

The layers are not ranked. The layering of the framework does not suggest that one layer is more important than another to the overall regulatory regime.

Layer 1 is the commonly accepted definition of the trade. This is usually not written down and different people may see it differently. It has no legal force or effect. This layer defines the maximum possible scope of the regulatory regime, though the actual scope is narrower.

Many trades will be characterised by 'branches'. For example, in plumbing the 'branches' might include water supply, sanitary, drainage, mechanical services, fire protection etc.

Layer 2 is a set of technical rules relating to how work in the trade should be done. In Australia these are usually found in an Australian Standard though recently they have moved to National codes such as the Construction Code or the PCA.

Layer 3 is the regulatory definition of the trade. This is found in legislation, either an Act or in Regulations. The regulatory definition of the trade defines the legal 'reach' of the regulatory framework. That is, regardless of the commonly accepted definition of the trade, the regulatory regime can only be applied to the trade as it is defined at this layer of the framework.

The regulatory framework shows that the commonly accepted definition of the trade, the regulatory definition of the trade and the technical rules for the trade will not necessarily coincide. This is highlighted by the grey shaded areas:

- the area marked 'B' is work that is within the commonly accepted definition of the trade but is beyond the regulatory definition of the trade. It differs from the work in area 'B' because there are technical rules describing how it should be done, though these are not necessarily mandatory. There are several examples of work in this category in the current WA plumbing regulatory regime. Issues related to this are discussed in the report
- the area marked 'C' is work that is within the commonly accepted definition of the trade but not the regulatory definition and for which there are no technical rules. No examples of this type of work have been identified during this review and, even if they do exist, they are not material for the review. Therefore, this category is not discussed in the report.

Only work that falls outside areas B and C is subject to the regulatory regime. That is, the regulatory regime only applies to work within the regulatory definition of the trade.

Work in area 'A' is subject to the regulatory regime because it is within the regulatory definition of the trade. However, there are not technical rules for this work. Depending on the approach taken to horizontal separation at layer 5 below it is possible that this work could only be done by a licenced person, but that there are no technical rules regarding how it must be done.[15]

The branches of the trade that are subject to the regulatory regime are shaded purple in the regulatory framework.

Layer 4 is a statement of objectives. It states why the trade is being regulated at all.

[15] This work could only legally be done by a licenced person, but it would be up to that person to determine how it should be done.

A key principle that underlies best practice regulation is that governments should not regulate, or intervene in markets in other ways, unless the reason they are doing so is clear.[16] The principle has been identified by a wide range of governments and the Organisation for Economic Cooperation and Development. [17,18]

The basic idea underlying best practice regulation is that, most of the time, competition and the market mechanism will ensure that these markets operate efficiently to ensure that Australian industry is productive for the benefit of consumers. When competition and the market mechanism cannot be relied to do this, it is appropriate for governments to intervene, including by regulation. However, when they do so they should make sure that they regulate in a way that imposes the least cost needed to achieve the outcome they wish to achieve.

Part of the reason that a clearly defined objective is important is that it guides key decision makers as they implement the regulatory regime.

The statement of objective could be in the Act or the Regulations. In some cases that we have reviewed the objective does not appear to be stated clearly.

Layers 5 and 6 are, together, a licensing regime.[19] This is a mechanism for determining the qualifications, training and/ or experience that a person must have before they are allowed to do work in the industry in question. It defines 'who' can legally do work in the trade.

It can be separated vertically and/or horizontally:

- *vertical separation* means that some work can only be done with a higher level of licence. It is common that a person with a lower level of licence is only permitted to work under the supervision of a person with a higher level of licence
- *horizontal separation* means that a person might be permitted to work in some branches of the trade but not others.

It is important to note that the licensing regime is *independent* of the technical rules. That is, the fact that a licence is required for work does not mean that there are technical rules. This is illustrated by area A. Similarly, the fact that there are technical rules does not mean that a licence is automatically required.

Work which has technical rules but is outside the regulatory definition of the trade is in area 'C'. The licensing regime cannot be extended to apply to this work.

The licensing regime can be applied to work that is within the regulatory definition of the trade regardless of whether there are technical rules for it.

The distinction between layers 5 and 6 relates to the type of decision being made. At layer 6 decisions are made about licence structure and criteria. At layer 6 they relate to individual applicants and whether they have met the criteria determined at layer 5.

Layer 7 is the compliance regime. It is sometimes referred to as technical regulation.

This layer is where a government ensures that the 'how' and 'who' decisions made at other layers are implemented. In other words, the compliance regime is a mechanism for ensuring

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16 Another key principle is that the benefit of regulation should outweigh the costs. This is discussed in section 1.3.

17 Australian Government 2010, Best Practice Regulation Handbook, available from www.finance.gov.au

18 Australian Government 2013, Best Practice Regulation Handbook July 2013, available from www.finance.gov.au

19 Some trades are based on a permit or another form of authorisation, but the distinction is not important here.

that work in the trade is being done as the technical rules say that it should be done by the people who the licencing regime says should do it.

Two aspects of the compliance regime are discussed in this report:

- the *structural aspect* defines what *can be* done
- the *operational aspect* describes what *is* done.

The *structural* aspect of a compliance regime says what can be done to ensure that the 'who' and 'how' layers are followed. It also says who can do those things. It might include any or all of the following elements:

1. provisions making the technical rules mandatory and, therefore, requiring person doing certain work to ensure that it is done in accordance with the technical rules. There might also be obligations to:
    a) ensure that (pre-existing) work to which their work is connected meets the technical rules
    b) disconnect any (pre-existing) work that is unsafe or does not comply with the technical rules
    c) notify a regulator of any pre-existing work that is unsafe or does not comply with the technical rules
2. provisions prohibiting:
    a) unlicensed persons from doing certain work
    b) customers from engaging unlicensed persons to do certain work
3. a system for licenced persons to notify the government of work they intend to do, are doing or have done[20]
4. a system where designated inspectors inspect work that has been, or is being, done
5. a system for disciplining licenced persons. The regulator might be able to do this either:
    a) in its own right, and/ or
    b) by making allegations in Court.

The *operational* aspect of a compliance regime deals with implementation issues like the number of inspectors that should be appointed or the number of inspections they should conduct and in what circumstances disciplinary action would be taken.

The Act and Regulations that set up a regulatory regime deal with its *structural* aspect and, generally speaking, leave *operational* aspects to a key decision maker.

A compliance regime that makes it illegal for the work in question to be done by an unlicensed person underpins demand for the services of a licenced person. This is not to say that nobody would engage a licensed tradesperson if it was legal for an unlicensed person to do the work in question, because the reasons for using a licensed person are more than just technical compliance with the law.[21] Similarly, the fact that something is illegal does not automatically mean that it does not happen so this prohibition does not automatically mean that no unlicensed work is done.

However, if the prohibition was not in place the amount of unlicensed work in a trade would increase.

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[20] The structural aspect of the compliance regime might contain significant detail about this or it might leave the detail to the operational aspect.

[21] There are a range of other reasons such as increased confidence that the work will be done professionally and appropriately.

A key decision maker(s) needs to operate at all layers of the framework, though this is a more active role at some levels than others. The decisions that must be made in the regulatory framework are all fundamentally decisions for government, though some are typically delegated. Therefore, the discussion of key decision maker in this report is really a discussion of the person or persons to whom the decisions are usually delegated.

The same key decision maker could operate at all levels or the roles could be split. The type of decision that needs to be made at each layer is:

- at **layer 2** it will be necessary to consider changing the technical rules from time to time, for example to accommodate new technology. In practice these decisions are usually made as part of a national process under the auspices of COAG
- at **layer 3** to decide on the regulatory definition of the trade
- at **layer 4** to decide on the objective of regulation of the trade
- at **layer 5**, decisions must be made to:
  - determine which branches of the trade require should be done only by licenced people (that is, to apply horizontal separation) and set licensing requirement as deemed necessary
  - determine whether, and in which branches of the trade oversight from more experience people is required (that is, to apply vertical separation)
  - to determine the licensing requirements for a person who wishes to work in a particular part of the trade
- at **layer 6** to ascertain whether particular individuals have met licensing requirements and should be authorised to do certain work
- at **layer 7**, where two broad types of decision must be made:
  - *strategic decisions* – such as how to secure compliance with the 'who' and 'how' requirements
  - *tactical decisions* – such as what action to take in a particular instance.

The key decision maker(s) role is to implement the regulatory regime by applying their judgement and experience to determine to make decisions that best serve the objective of regulation in each case.[22]

3 WA plumbing regulatory regime

In this section the regulatory framework described in chapter 2 is used to describe the current regulatory regime for the WA plumbing industry. That regime is set out in the WA Plumbing Act and WA Plumbing Regulations.

Figure 2 **Overview of WA Plumbing regulation**

<table>
<tr><th>Layer</th><th>Decision maker</th><th colspan="4">Description</th></tr>
<tr><td>1</td><td></td><td colspan="3">Commonly accepted definition of plumbing</td><td>Gasfitting</td></tr>
<tr><td>2</td><td>Minister</td><td colspan="4">AS 3500/ part 6 of WA Plumbing Regulations</td></tr>
<tr><td>3</td><td>Minister</td><td>Water supply plumbing</td><td>Sanitary plumbing</td><td>Drainage plumbing</td><td>▪ Gasfitting
▪ Plumbing for potable water where no meter assembly exists
▪ Plumbing for non potable water which is not designed to carry wastewater such as:
◆ Roof plumbing
◆ Irrigation plumbing
◆ Fire fighting work (if non potable water)
◆ Storm water work</td></tr>
<tr><td>4</td><td>Minister</td><td colspan="3">No statement of objectives</td><td rowspan="4"></td></tr>
<tr><td>5</td><td>Minister</td><td colspan="3">See Figure 3</td></tr>
<tr><td rowspan="2">6</td><td rowspan="2">PLB and registered training organisations</td><td>Water supply contractor’s licence</td><td>Sanitary contractor’s licence</td><td>Drainage contractor’s licence</td></tr>
<tr><td>Water supply tradesperson’s licence</td><td>Sanitary tradesperson’s licence</td><td>Drainage tradesperson’s licence</td></tr>
<tr><td>7</td><td>PLB</td><td colspan="3">▪ Prohibition of unlicensed plumbing work or engaging unlicensed person
▪ Certificates of compliance and notices of intention
▪ Plumbing compliance officers and inspections
▪ Rectification notices
▪ Disciplinary action at State Administrative Tribunal</td><td></td></tr>
</table>

Source: ACIL Allen Consulting

3.1 Technical rules

The technical rules for plumbing in WA are set out in Part 6 of the WA Plumbing Regulations. Regulation 47 says that plumbing work must comply with the following Australian standards:

— AS/ NZS 3500.1:2003

— AS/ NZS 3500.2:2003

— AS/ NZS 3500.3:2003

In some cases those standards are modified by the WA Plumbing Regulations.

3.2 Definition of the trade

The regulatory definition of plumbing in WA is in Regulation 4 of the WA Plumbing Regulations. It divides regulated plumbing work into three horizontally separated categories, namely:

- **water supply plumbing work**, which is work that involves the installation, alteration, extension, disconnection, repair or maintenance of pipes and fittings used to supply potable water from a meter assembly to the point of use
- **sanitary plumbing work**, which is work that involves the installation, alteration, extension, disconnection, repair or maintenance of fittings and fixtures used to carry wastewater and other waste, but excludes drainage plumbing work
- **drainage plumbing work**, which is work that involves alteration, extension, disconnection, repair or maintenance of underground pipes and fittings used to carry wastewater to a sewer or wastewater or other waste to an apparatus for treating sewage.

This definition excludes several categories of work that are within the commonly accepted definition, such as:

- mechanical services plumbing (heating, ventilation and air-conditioning)
- fire services plumbing
- stormwater plumbing
- roof plumbing
- urban irrigation.

The reference to 'a meter assembly' in the definition of water supply plumbing causes an exclusion from the WA regulatory definition of plumbing that was widely discussed.

We understand that this exclusion was intended to distinguish between water network infrastructure operated by water utilities (such as Watercorp) and the plumbing in private premises. That is, the meter assembly was seen as the point where the water utility's network stops and the privately owned system starts. [23] The Institute of Plumbing Australia said that the reference to a meter assembly:[24]

> is left over from when water service providers regulated plumbing through their bylaws simply to protect the provider's infrastructure and has no place in modern regulations

However, there are numerous unmetered water supply systems in WA, including smaller towns, indigenous settlements, mining camps and private farms.

Under the current WA regulatory definition of plumbing, water supply work on unmetered systems is not subject to the regulatory regime, though drainage and sanitary work in those places is subject to the regime.

3.3 Statement of objectives

There is no explicit statement of the objective of plumbing regulation in WA.

[23] see, for example, submissions from MPAGA (p. 10) and CEPU (p. 10)

[24] Submission of Institute of Plumbing Australia, 19 July 2013, p. 5

3.4 Licensing

Plumbing licences in WA are issued by the PLB under the WA Plumbing Regulations. There are three horizontal categories of licence corresponding to the three horizontal categories in the WA regulatory definition of plumbing, water supply, sanitary and drainage.

There are also two vertical categories of licence, specifically:

1. contractor's licence
2. tradesperson's licence.

Both a plumbing contractor's licence and a tradesperson's licence can be for any of water supply, sanitary and drainage. In practice we understand that licences are issued for either water supply and sanitary or drainage. The water supply and sanitary categories are not usually separated.

Plumbing contractors are authorised to operate plumbing businesses. They are also authorised to carry out plumbing work in the category for which they are licensed and to supervise others carrying out that work.

Unlike other jurisdictions, the authority to operate a plumbing business is not separable from the authority to do plumbing work unsupervised. One implication of this is that, in WA, a plumbing contractor's licence cannot be held by a company so a plumbing business can only be operated by a (natural) person.

Plumbing tradespeople are not permitted to operate plumbing businesses. They can carry out plumbing work in in the category for which they are licensed, but only under the general direction and control of a plumbing contractor.[25] A plumbing tradesperson can supervise an apprentice carrying out work if the tradesperson is licensed to do that work.

There is also a restricted plumbing permit, which is limited to disconnecting and reconnecting a water heater. It is typically issued to electricians.

Within this framework, the only choice the PLB has when presented with a licence application is either to issue a licence or not. The PLB cannot issue limited licences. Nor can it tailor licences to suit the training and experience of individual applicants. Nor is there any facility for probationary or transitional licences as exist in some jurisdictions.

Similarly, licences issued or renewed by the PLB remain in effect for three years.[26]The PLB cannot vary this.

The WA Plumbing Regulations specify the requirements for each category of plumbing licence. If an applicant meets those requirements and is a fit and proper person to hold a licence, the PLB may issue it.

As Figure 3 shows, to be eligible for a contractor's licence, the applicant must have either:

- a statement of competency from a registered training organisation; or
- an equivalent WA qualification as determined by the PLB; or
- a qualification in plumbing work that the Australia-New Zealand Reciprocity Association recognises at independent certifier's level; and
  - six years practical experience in plumbing work; and

[25] A tradesperson's licence (drainage plumbing) limits the person to doing drainage plumbing work.

[26] Regulation 21.

- have held a tradesperson's licence for at least three months or completed an approved familiarisation programme to the satisfaction of the PLB, unless they received their qualification in Australia or New Zealand.

Similarly, to be eligible for a tradesperson's licence, the applicant must have either:

- a trade certificate in Plumbing and Gasfitting issued by the Director of Industrial Training; or
- a class A qualification in plumbing or gasfitting[27]; or
- an equivalent WA qualification as determined by the PLB; or
- at least four years practical experience in plumbing work and
  - a recognised qualification in plumbing work at registration level, or
  - have passed a test in plumbing work, with both theoretical and practical components conducted by an approved person or body.
- The WA Plumbing Regulations give the PLB a degree of influence over the requirements for the various kinds of plumbing licence through its ability to approve, or not, a person or body to conduct practical and theoretical tests.

The PLB's discretion in this area is limited by national policy processes relating to the national training package. Broadly, if WA decides to adopt positions reached in those national processes the PLB will give effect to that decision.

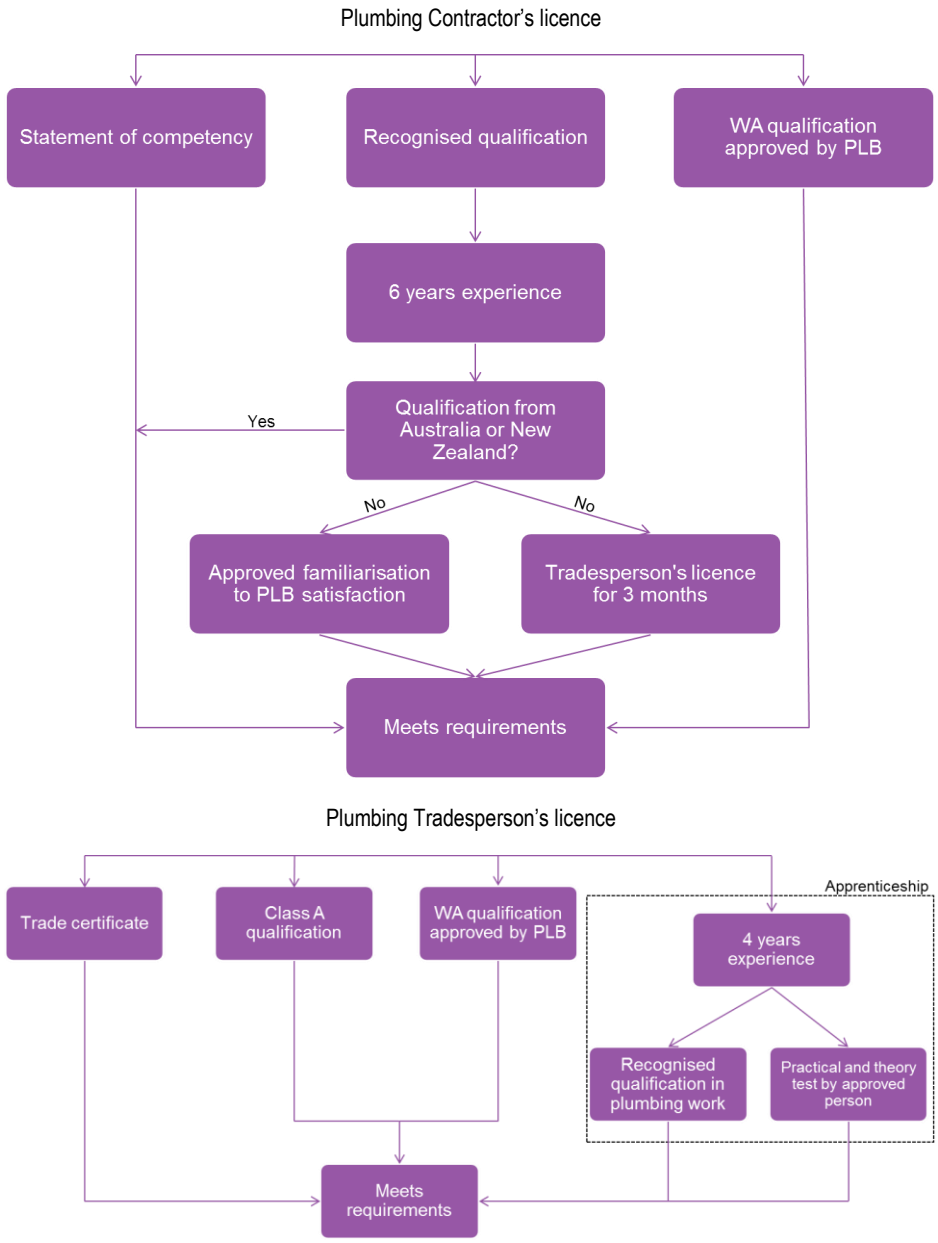
As well as giving discretion to the PLB, the regulations introduce other decision makers. They do this by saying that a person is *entitled* to a licence in certain circumstances, such as when they have passed a training program.

While the PLB can decide which programs 'count' for qualification as a plumber, it is the Registered Training Organisation which decides whether an individual student has completed those programs satisfactorily. Therefore, the PLB cannot necessarily control the degree of competency required to obtain a plumbing licence. Nor can it refuse to provide a licence to a person who has satisfied these requirements.

Figure 3 shows that there are several paths to a plumbing licence where the PLB has only limited influence.

[27] Schedule 3 clause 3(a)(ii) a qualification in plumbing or gasfitting that has been classified under the *Vocational Education and Training Act* 1996 section 60C(3) as a class A qualification.

Figure 3 **Licensing requirements for plumbing licences in WA**



Source: ACIL Allen Consulting

3.5 Compliance regime

It is illegal in WA for a person to do plumbing, as defined by the WA regulatory definition of plumbing, if they do not have an appropriate licence.[28] This includes non-plumbers doing plumbing work in their own homes.[29]

In addition, it is illegal for West Australians to employ or engage someone to do plumbing work if that person does not have the appropriate licence.[30]

[28] Regulation 10

[29] It is illegal in WA for a homeowner to change a tap washer in their own home, unless they are in an area where the water supply is unmetered.

The regulations also make it illegal for any person to do plumbing work in WA if that work does not comply with the WA plumbing standards. This applies equally to people without a plumbing licence as it does to licenced plumbers. In other words, even plumbing work done illegally by an unlicensed plumber must comply with the technical rules.

The technical rules are given additional effect through it being an offence for any person to connect plumbing to a water supply system if that plumbing does not comply with those rules. This offence provision also applies equally to licensed and unlicensed plumbers.[31]

These requirements underpin the demand for licensed plumbers.

The WA Plumbing Regulations also describe a regime for notification and inspection of plumbing work.

In WA, plumbers are required to notify the PLB of the work they are doing. In some cases this is done before the work. In other cases it is done afterwards and, for certain drainage plumbing, notification is required while the work is underway.

The PLB also operates a system of inspection and rectification of plumbing work set out in Division 2 of Part 7 of the WA Plumbing Regulations.

That system allows the PLB to designate staff assigned to it as "*plumbing compliance officers*".

Plumbing compliance officers can conduct inspections of plumbing work within six years of its completion. If they find that the work was not done in accordance with the applicable technical rules they can issue a rectification notice to either the plumbing contractor responsible for the work or, if the work was done by an unlicensed person (in contravention of Regulation 9) to that unlicensed person.[32]

A rectification notice sets out what is wrong with the plumbing work, what must be done to make it right and by when this must be done.[33] This system is sometimes referred to as a six year warranty for plumbing work.

A person who is given a rectification notice must comply with it and notify the PLB as soon as possible after it is rectified.[34] If they do not, the PLB can arrange for the necessary work to be done and require the person who was given the rectification notice to pay for it.[35] The PLB may also recover the cost of inspections conducted after a rectification notice has been issued. That is, the PLB funds the initial inspection, but, if faulty work is identified, the person who did the work funds subsequent inspections.[36]

The WA Plumbing Regulations also allow for disciplinary action against licenced plumbers. They contain a list of 'disciplinary matters'.

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30 Regulation 11

31 However, it is a defence to this offence if the person can prove that they did not know that the plumbing did not comply with the WA plumbing standards. A person who is not a licenced plumber may not know the requirements of the applicable standards and, therefore, not know that particular plumbing work does not meet them. In this case the person would appear not to commit an offence if they connect 'sub-standard' work to a water supply system.

32 Regulation 9 makes it illegal for an unlicensed person to do plumbing work.

33 Regulation 71(3).

34 Regulation 72.

35 Regulations 72 (PLB may conduct repairs) and 72(5) (cost may be recovered).

36 Regulation 73.

If the PLB receives a complaint about a disciplinary matter it can make an allegation about that complaint to the State Administrative Tribunal (SAT).

A complaint may be made to the PLB by any person, though it needs to be written. The PLB cannot make a complaint itself, though a member of the PLB or the staff assigned to it, such as a plumbing compliance officer, could do so.

If the PLB proves that a disciplinary matter occurred, SAT has a variety of options. These range from taking no action to fining the plumber in question to cancelling their plumbing licence.

Unlike other industries in WA and plumbing regulators in other jurisdictions, the PLB cannot take disciplinary action other than by making allegations to SAT.

The obligation on plumbers to ensure that plumbing work complies with the WA plumbing standards goes beyond the work they do themselves. When a plumbing contractor finishes a job and issues a certificate of compliance they certify that their work complies with the applicable technical rules. They must also give the same certification for any work that:[37]

1. they did not do
2. is relied upon by and is essential to the safe and effective operation of the work that they did
3. is not already the subject of a certificate of compliance.

This provision clearly makes plumbers who work on one part of a plumbing system responsible for the standard of other parts of that system. When coupled with the fact that it is an offence to connect 'sub-standard' plumbing to a water supply system, a licenced plumber may find themself unable to reconnect a system if part of it is sub-standard, even if their work was on a different part of the system.

3.6 Key decision makers

The two key decision makers in the WA plumbing regulation regime are the Minister for Commerce, for technical rules, and the PLB for the licensing and compliance regimes.

In addition, as discussed in section 3.4, a number of decision makers and decision making processes in the education sector have *de facto* roles at the licensing layer.

The PLB is established by s.59 of the WA Plumbing Act. It consists of seven members[38] of whom:

- one is appointed chair and should not be, or have been, a participant in the plumbing industry
- two are appointed by the Minister responsible for the *Fair Trading Act 2010* and must have the ability to represent the interests of consumers
- three must be people with knowledge and experience of the plumbing industry appointed from nominations made to the Minister responsible for the WA Plumbing Act as follows:
  - one from a list of three names submitted by the Master Plumbers and Gasfitters Association

[37] There is an exception for work that, for reasons beyond the plumbing contractor's control, they cannot inspect or test.

[38] The WA Plumbing Act allows for up to nine members but it is limited to seven by the Regulations. In practice there were only six members at the time of writing because an organisation given the right to nominate people for the seventh position no longer exists so the seventh place cannot be filled.

  - one from a list of three names submitted by each of the relevant unions
  - one from a list of three names submitted by the Western Australian drainage association[39]
- one is to have knowledge and experience in the plumbing industry and be appointed by the Minister responsible for the WA Plumbing Act.

One of the members other than the Chair is appointed Deputy Chair and performs the functions of the Chair when the Chair is unable to do so.

The PLB's functions are to:

1. monitor matters relating to the qualification and training of plumbers
2. provide advice to the Minister on the above matters and on matters relating to the licensing and regulation of plumbers
3. administer any licensing scheme provided for by regulations
4. perform licensing, disciplinary and other functions given to it by regulations
5. do other things it is authorised to do by a written law.

The PLB cannot appoint staff in its own right, which is common for Government Boards. Instead, the WA Plumbing Act allows the PLB to make arrangements with a Government Department to be provided with resources. Specifically, according to the WA Plumbing Regulations the PLB may "make use, either full time or part time, of the services" of employees of the WA public service. It may also make use of other facilities.

The use of staff and facilities is to be on terms agreed between the PLB and the department providing those resources. In circumstances such as these it is usual for the department that provides resources to be the department that supports the Minister to whom the relevant Act is committed.

The Department of Commerce has provided resources to the PLB since January 2009.[40] The Department of Commerce has chosen to support the PLB through its Building Commission Division (the Building Commission). In practice, this gives the Building Commission a degree of influence over the work of the PLB as it is the source of the PLB's staff and other resources.

[39] At the time of writing the WA drainage association does not exist. This position on the PLB is currently vacant.

[40] Before then it was the Department of Consumer and Employment Protection.

4 Nature of the problem

As noted in section 1.3 the first step in a regulatory review must be to identify the problem to be addressed by regulation, which is discussed in this chapter.

The discussion of the 'problem' in the discussion paper and at the public consultation sessions was somewhat controversial. In many cases stakeholders interpreted the discussion of an unregulated plumbing industry in WA to mean that this was the intended outcome of this review. This was not the case.

Rather, as discussed in section 1.3, good regulatory practice requires that any regulatory regime is designed to address a clearly identified problem. The problem should be one that could not be addressed satisfactorily through the market mechanism or that is caused by that mechanism.

Therefore, the first step in this review was to consider the problems that would occur if plumbing was not regulated in WA and, therefore, the problems that the WA plumbing regulatory regime should try to prevent.

Doing this requires us to consider a hypothetical situation where plumbing regulation did not exist. In this case, as noted in section 1.1, the ongoing use of technical rules for plumbing was not subject to the review. Therefore, in the hypothetical situation we considered it would be:

- *legal* for anybody to do plumbing work without a licence or authorisation
- *illegal* for anybody to do plumbing work that did not meet the technical rules.

The problems that would occur in that hypothetical situation would be identified and used to design a regulatory regime to prevent them and to provide a basis for estimating the benefit of regulation.

The benefit of regulation is that it would prevent those problems from occurring. Those benefits would then be compared with the cost of regulation to ensure that benefits are larger than the cost of achieving them.

Therefore this chapter provides a discussion of the problem to be prevented by plumbing regulation and therefore the objective of plumbing regulation. That discussion is in two parts.

First, section 4.1 provides a discussion of several problems that were identified during the review as 'candidate' problems to be addressed by plumbing regulation. These were identified either through the consultation process or literature review.

In our view, it would be appropriate for the WA Government to attempt to prevent some of these problems, but not others. The reasons are discussed below.

Second, section 4.2 takes the problems identified in section 4.1 as appropriate for the WA Government to attempt to prevent and considers whether they warrant a regulatory response. This is done by reference to the framework set out in the Regulatory Impact Assessment Guidelines for Western Australia.[41]

[41] Op. Cit, footnote 12.

The discussion in this chapter does not attempt to quantify the problem. That is discussed in chapter 5.3.

4.1 Candidate problems

In this section four problems that were identified during the course of the review are discussed, namely that without plumbing regulation:

1. public health would be at risk
2. consumers would be exposed of poor quality products
3. there would be a risk of property damage due to poor plumbing
4. plumbing businesses and related industries would be at risk of failure.

These are referred to as 'candidate' problems because it is our view that the fourth problem discussed here is not appropriate 'target' of regulation and the second and third targets are likely to be substantially addressed through broad regulation that is already in place. Therefore, those two problems do not require plumbing industry specific regulation.

The problem that has been identified as the appropriate 'target' of Government regulation is that there is a significant externality in plumbing markets. This externality is such that if plumbing regulation was inadequate, plumbing would be done poorly in some cases. This would lead to an increase in the risk of public health problems. If this continued the risk would ultimately be unacceptable.

4.1.1 Candidate problem one – protecting public health

Box 1 **Candidate problem one**

Without adequate plumbing regulation public health would be placed at risk and ultimately suffer due to increased outbreaks of water borne disease and through other problems arising from unsanitary and unsafe conditions.

Source: ACIL Allen Consulting

The general view of those who attended the consultations was well summarised by one person who said that the goal of plumbing should be to ensure a safe reliable supply of clean water and sanitary conditions. That person thought that, without adequate regulation, these conditions would not be provided.

The same general point was made by the PLB which said that:[42]

> …reliable and networked plumbing infrastructure maintains community standards of health and amenity by enabling the supply of potable water and the safe transport and treatment of sewage.

Similarly, the World Plumbing Council (WPC) said that there was general acceptance that the 'big picture' objective of plumbing was to prevent occurrences of waterborne disease and other public health problems.[43]

[42] Plumbers Licencing Board submission, p.2.

[43] World Plumbing Council, submission, p1.

The PLB continued from the quote above to say that:[44]

> Insufficient or inadequate plumbing and plumbing that does not conform to normative standards can expose the community to risks associated with:
>
> - waterborne and airborne diseases associated with sewage;
> - diseases arising from the contamination of potable water services;
> - disease and disability as a result of metallic or other chemical contamination from plumbing infrastructure;
> - scalding from poorly controlled heated water;
> - injury or property damage arising from the failure of plumbing equipment or systems, as in the explosion of a hot water system, the failure of an emergency shower to perform when needed or the failure of a water service in a structure fire;
> - [other risks not associated with public health]

There was substantial discussion during the public consultation sessions about access to clean, fresh drinking water and a high quality drinking water system as a defining characteristic of a first world society. Numerous references were made to a joint publication of the World Health Organisation (WHO) and the WPC entitled 'Health Aspects of Plumbing'. That publication says that:

> The objective of a public drinking-water system is to provide all consumers with a continuous sufficient supply of good quality drinking water at an affordable price to ensure the health and well-being of those served.

and

> The collection, transport, treatment and safe disposal of wastewater is also an essential element towards protection of public health.

These statements of the WHO and WPC go beyond the objectives of plumbing to the broader objectives of providing a public water supply. Thus they include the activities of water service providers.[45] Nonetheless, participants at the public consultation sessions were firmly of the view that plumbing is an important contributor to the safety of the drinking water supply and, therefore, to the health of the public in general.

The same general point was made in many of the written submissions, including the submissions of: [46]

- the Communications Electrical and Plumbing Union
- the Master Plumbers and Gasfitters Association
- the Plumbing Trades Employees Union
- WA Farmers Federation.

Public health problems attributable to causes other than disease were also identified and discussed. For example, in some applications plumbing installations deliver water at high temperature, or are capable of doing so. Indeed the high temperature is necessary in some cases to prevent the growth of bacteria and, therefore, to reduce the risk that water borne disease will occur.

However, the high temperature introduces the risk of scalding. Therefore, if plumbing work is done poorly, the risk of burns and related injuries would increase.

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[44] Plumbers Licencing Board submission, p.2

[45] Such as Water Corp, AqWest and others in WA

[46] These organisations each argued that the objective of plumbing regulation should be, at least, to protect public health. However, this is not to say that they argued that this should be the only objective. Different submissions argued for different objectives, though the protection of public health was common to most, if not all.

For the purposes of this review, these problems are grouped together and referred to as 'public health problems'.

An important point to make is that there is not a simple 'one to one' relationship between plumbing and instances of water borne disease. There is no particular reason to believe that a single example of poor quality plumbing work will lead automatically to an outbreak of disease or even to a single case. Indeed the opposite is the case. During the public consultations numerous anecdotal examples of poor plumbing work were recounted, usually by plumbers who had been asked to fix them or to repair damage done. None of these were linked directly to public health problems. Conversely, good plumbing work does not provide a guarantee that there will never be an outbreak of water borne disease. There is always an element of risk.

However, this is not to say that poor plumbing quality has no adverse consequences. Rather, as was identified by the PLB, the WPC and in other submissions, the important issue is risk management. If plumbing quality became progressively worse or if poor quality plumbing became widespread the risk of public health problems would increase. As the WHO and WPC said:[47]

> The second aim of plumbing systems must therefore be to manage risks.[48]

As noted in the Best Practice Guide to Regulation, it is common for regulation to deal with uncertainty. Approximately half of all new regulations are risk-related. The fact that the problem is not certain does not change the *need* for regulation, though it may change the appropriate *form* of regulation.

Regulation in the presence of uncertainty and risk focuses on two aspects of an adverse outcome, namely the likelihood and the consequence. For example, while it may be very unlikely that a widespread outbreak of disease occurs, the consequences of such an outbreak would be substantial. Therefore, the cost of a small increase in the likelihood would also be very substantial.[49] In our view this is a critically important consideration for plumbing regulation.

4.1.2 Candidate problems two and three – preventing the use of poor quality products and property damage

The second and third candidate problems are distinct but so closely related that they are dealt with jointly in this report.

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47 Health Aspects of Plumbing, Op. Cit, p20

48 The first aim of plumbing, according to the WHO and WPC, is to collect, transport and distribute water and to remove waste.

49 The cost referred to here is the 'expected' cost, which is calculated (theoretically) by multiplying the probability of an adverse outcome by the cost of its consequence.

Box 2 **Candidate problems two and three**

Product quality - without adequate plumbing regulation consumers would be at risk of buying low quality fittings and fixtures and low quality plumbing services.

Property protection - without adequate plumbing regulation there would be undue risk of property damage attributable to poor quality plumbing. Several categories of property were identified:

1. *private property* – protecting consumers from causing damage to their own property attributable to poor plumbing work
2. *subsequent owners* – protecting subsequent owners of houses from 'inheriting' the likelihood of future property damage due to poor quality plumbing conducted by previous owners
3. *community property* – protecting damage to property other than that owned by the person commissioning the plumbing work.

Source: ACIL Allen Consulting

The view that plumbers, and therefore plumbing regulation, should prevent consumers from buying inferior products or services was complex. It was discussed at most of the public consultation sessions in one way or another, though the detail varied each time. It is also reflected in many of the public submissions though, again, the detail varies between submissions.

It was often argued that consumers should be 'protected from themselves' and prevented from buying inferior products or poor quality plumbing services. However, the reason for this was not always clear. At the consultation sessions the example of a fashionable, expensive tap set imported from Europe was discussed. In the example, the tap set was expensive but was not likely to last long. The suggestion was made that the consumer should be able to choose for themselves whether to use that tap set or another that would last longer but that the consumer did not like as much.

Most of the time, participants in the consultation sessions argued that the consumer should not be able to use the tap set, which was generally perceived to be 'low quality'. However, when pressed for a reason, the people making this argument often gave examples of how poor quality plumbing products might cause health risks.

For example, it was argued that the tap set might be made from a brass that would corrode quickly and contaminate the water it delivered. Others argued that it might cause back pressure problems and damage community property.

Generally speaking, participants in the consultation accepted the suggestion that consumers are empowered to choose the quality of the products they buy for themselves in other markets. However, it was argued that consumers often underestimate or fail to understand the potential risks associated with choosing poor quality plumbing products.

4.1.3 Candidate problem four – preventing industry and business failure

Box 3 **Candidate problem four**

Without adequate plumbing regulation, there would be an increased risk of job losses and business failures.

Source: ACIL Allen Consulting

The idea that plumbing regulation should be used to prevent job losses and the failure of businesses had two facets.

Some people were of the opinion that one of the effects of changes to regulation in other industries has been job losses or failure of businesses in the affected industry. It was argued during the public consultation sessions that any change that might be made to plumbing regulation should ensure that such job losses and/ or failure of businesses do not occur in the plumbing industry.

A distinct, but related, view was that regulation of the plumbing industry and, in particular, the products that plumbers are permitted to use, should be used to control or limit job losses or business failures in industries that manufacture or supply plumbing products. In effect, this would require that all plumbing products are Australian made.

4.2 Does the problem warrant regulation

Candidate problems one, two and three are caused by market failures, particularly externality costs and, to a lesser extent, information failures.

The externalities arise because the person who caused a problem would not incur the cost of that problem. That is, if an outbreak of disease was caused by poor plumbing work, it is not the responsible plumber that would get sick but their client and possibly many other people as well.

The information failures occur because a person who buys a plumbing service may not be fully aware of the risks associated with it or, if they are, may not be able to distinguish between 'good' and 'poor' plumbing work. [50]

It is well understood that these problems will not be addressed by a market mechanism alone. As discussed in sections 4.2.1 and 4.2.2 below, it is also well understood that externalities and market failures of information, are valid 'targets' of government regulation.

Candidate problem 4 would, in our view, be an inappropriate target for regulation.

The reasons for this are discussed in detail in documents relating to best practice regulation and in the economics literature and briefly in section 4.2.3.

4.2.1 The problem of externalities

In theory, it might be possible to address the externality cost by internalising it.[51] For example, a plumber could be made responsible for the cost of an outbreak of disease or environmental harm that they had caused through poor workmanship. If plumbers knew that they would ultimately pay the cost of poor quality work there would be a reduced incentive for them to do poor work in the first place.

Of course this measure is already in place. Plumbers could already be held liable for the effect of their poor quality workmanship, either through the six-year warranty mechanism or through general liability laws and the Courts.

However, there are several reasons why this is unlikely to solve the problem in practice.

First, it assumes that the poor quality work is done intentionally, for example in response to an incentive to 'cut corners'. This approach is less likely to be effective against inadvertent errors.

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[50] there is an externality here as well. If a customer buys substandard plumbing services which lead to a problem, the cost of that problem may not be limited to the customer.

[51] This approach is referred to in economics as a Pigouvian tax after Arthur Pigou, the economist who developed the concept of externalities.

Second, the likelihood of a problem occurring and being linked to the work of a single plumber is very low. This approach is less effective in this circumstance because it is difficult, if not impossible, to distinguish the very small probability of a health outbreak from a given example of plumbing work from zero.

Third, most plumbing businesses are very small (according to the recent national NOLS Decision RIS, only two per cent of plumbing companies have more than 20 employees). Therefore they would not typically have the resources to provide redress for lives lost or environmental harm caused.

Finally, regardless of the above, it is not an appropriate solution to lose lives, and then pay compensation. It is more appropriate to prevent the problem from happening in the first place.

Therefore, in our view, the externality identified here justifies the use of a regulatory intervention subject to the costs of that intervention.

We also note that the Best Practice Regulatory Handbook identifies a separate category of problem, namely 'unacceptable hazard or risk' which can justify regulation independently of any market failure that might exist. It may be more helpful to think of candidate problem one in this way.

4.2.2 The problem of information failure

The product quality and property damage candidate problems are due solely to information failures. That is, customers cannot be sure of the quality of products they buy nor do they necessarily understand the risks associated with poor quality products.

Similarly, consumers cannot be sure of the quality of the plumbing service they buy. They cannot tell what the quality will be before they buy the service and, often, cannot tell the quality even after it has been provided.

These problems are not unique to plumbing. In fact, these are classic information failures problems that are encountered in many markets.

There are many examples of markets for *experience goods*, which are goods where the consumer cannot be sure of the quality until after they have committed to a purchase.[52] In more extreme cases, known as *credence goods*, the consumer may never know the true quality of the good they have purchased.

The appropriate regulatory treatment of these markets varies with the details, but these problems do not automatically give rise to specific regulatory treatment.

There is also regulation in place to address these problems in all markets in Australia. The leading example is the regime to prevent misleading and deceptive conduct and misrepresentation in the Australian Consumer Law.

We would argue that market mechanisms and broad based consumer protection regimes are adequate to protect consumers from problems associated with general 'poor product quality' issues.

In the case of the tap set discussed above and during consultation, we would suggest that, as long as full information is available, the consumer should be empowered to choose for themselves.

[52] Nelson, P. (1970) "Information and Consumer Behavior," 78 Journal of Political Economy, 311 (March/ April.)

This said this approach is less effective when applied to services than products. Services typically have more 'credence' characteristics. That is, a consumer may never know the quality of the service they have purchased. In the absence of regulation it would be possible for a consumer to inform themselves of the likely quality of the service they are about to purchase by rigorous research: asking for references, checking court records to ensure the person claiming to be a plumber hasn't engaged in misconduct in the past etc. However, this has relatively high transaction costs. An arguably better social outcome is for a licensing body to do the checking on behalf of the whole body of consumers.

However, this is less appropriate when the consumers' actions can cause problems for others. In this case a second externality arises.

When private and, particularly, public health can be adversely affected by poor product quality, the general market mechanism tends to be supported by more specific interventions. For example, there are numerous product safety standards that are enforceable under the Australia Consumer Law to deal with risks that are severe and poorly understood by consumers. We would argue that the same approach should be used in plumbing regulation.

Therefore, to the extent that product quality problems can result in harm to people other than the person choosing the product we accept that there is a justification for regulation. In practice, the distinction between the candidate problem one and candidate problems two and three might be artificial.

There was widespread agreement during public consultation that it would be impossible to distinguish between aspects of the regulatory regime that would be necessary only to preserve public health and those that would contribute to the second and third candidate problems. To a large extent it appears that the second and third problems would be prevented incidentally by a regime designed to prevent the first.

Therefore, the distinction between candidate problem one and candidate problems two and three may be useful only to guide the discretion of the decision makers administering the plumbing regulatory regime. While we do not necessarily recommend that candidate problem three should be the focus of plumbing regulation, it is likely that it will be addressed by a regulatory regime designed to address candidate problems one and two.

4.2.3 Candidate problem four is the role of industry advocates

As is discussed in the Regulatory Impact Guidelines for Western Australia and other similar documents, the overarching objective of well designed regulation is to maximise the productivity of Australian industry. This applies to both the industry being regulated and others that depend on it.

If candidate problem four was adopted as (one of) the problem to be addressed by plumbing regulation it would require that the Government regulate the industry to ensure the ongoing viability of incumbent businesses. This would be contrary to the objective of pursuing productivity growth and economic efficiency.

It would also be contrary to the weight of discussion at the public consultation sessions and the majority of submissions received.

The discussion of this issue in the submissions was limited to a number of organisations saying that plumbing regulation has not been used for this objective. None of those submissions called for this to change.

A related discussion during the public consultations was the view that the regulator should function as an effective 'voice' for the plumbing industry in its engagement with government.

For example in a submission Mr Fitzgerald said that he believes that the PLB "is the best frontline you have to keep plumbers informed, advised and trained in the inevitable changes to the Plumbing Standards."[53]

In our view this is a perfectly valid function, but it is not the role of government. In fact, as indicated in the discussion paper, we expect that a government body that was responsible for both regulating an industry and advocating for it would frequently find itself in a position of internal conflict, for example if it needed to discipline a business whose interests it was also supposed to represent.[54]

In our view industry representation and advocacy is a perfectly legitimate role, but it is not the role of regulators.

This suggestion was supported by two of the industry bodies that made submissions, and who we see as having this role, namely the Master Plumbers and Gasfitters Association of WA and the Plumbing branch of the CEPU.

Therefore, we do not recommend that candidate problem four be included among the problems to be addressed by plumbing regulation. Further, we recommend that it be made clear that the decision makers responsible for the regulatory regime are not and should not be advocates for the industry. That should be the role of other organisations.

4.3 The objective of plumbing regulation

As discussed in the previous sections, the appropriate problem to be 'targeted' by plumbing regulation is candidate problem 1, namely that without adequate plumbing regulation public health would be placed at risk and ultimately suffer due to increased outbreaks of water borne disease and through other problems arising from unsanitary and unsafe conditions.

It follows from this that the appropriate objective of plumbing regulation is to manage this risk. Therefore, our view is that the appropriate objective for plumbing regulation in WA is:

> To protect the long term interests and health of Western Australians with respect to the safety of the water supply and wastewater removal system by ensuring that plumbing work is performed in accordance with technical requirements appropriate for available technologies by sufficiently skilled persons.

[53] Submission, Mr Fitzgerald, 18 July 2013.

[54] In such cases the regulator may find itself acting as investigator, prosecution and defence in relation to the same issue, which would be undesirable.

5 Options – how could the problems be addressed?

As discussed in chapter 4 the problems to be addressed by plumbing regulation are:

- market failures, specifically externalities and information failures
- an unacceptable hazard or risk, that is, in an unregulated market the risk of public health problems would be unacceptably high.

This chapter discusses alternative approaches to addressing these problems and thereby achieving the objective of plumbing regulation.

The approaches that government could conceivably take can be characterised on a continuum ranging from 'loose' to 'tight' regulation.

As noted in chapter 1.1 of part I of this report this review took the existence of technical rules as a given. Therefore, at the 'loose' end of the continuum is the hypothetical situation mentioned in chapter 4 where it would be:

- *legal* for anybody to do plumbing work without a licence or authorisation
- *illegal* for anybody to do plumbing work that did not meet the technical rules.

The loosest conceivable approach would stop at this. In this situation the customer would have the right to have plumbing work done in accordance with the technical rules, but it would be up to them to enforce that right.

At this end of the continuum the risk of plumbing work not being up to standard would be high, relative to other options. Therefore the cost associated with sub-standard plumbing, principally the cost of public health problems, would also be relatively high.

At this end of the continuum the cost of regulation would be low. However, this would also place WA 'out of step' with other jurisdictions.

From this point there are two approaches the WA Government could take to reducing the cost of public health problems associated with sub-standard plumbing. It could either address the identified market failures directly or apply a form of trade regulation. These two potions are described in sections 5.1 and 5.2 respectively. A comparison of the merits of each is in chapter 5.3.

5.1 Address market failures directly

One approach that the Government could pursue to regulating plumbing would be to address the identified market failures directly. Two separate market failures have been identified, namely an information failures and an externality. Conceptually, these could be addressed by providing consumers with information to overcome the information failures and 'internalising' the externality.

In theory, the externality could be addressed by ensuring that plumbers who cause public health problems by doing poor quality work are liable for the cost of that work. In fact this is already in place through the 6 year warranty mechanism. Further, if substandard plumbing work was linked to a public health outbreak there are various legal mechanisms for holding the plumber to account.

However, as discussed in section 4.2.1, this approach alone is unlikely to reduce the risk sufficiently. Therefore, while it should remain in place, it should be supplemented.

Another factor to consider is that if WA were to proceed down the path of relying on this approach alone it would be moving substantially away from the national approach. This would, in itself, be undesirable and would add to the regulatory burden, though perhaps not within WA.

5.2 Degrees of trade regulation

As discussed in the previous section direct targeting of the market failures that cause the 'target' problems is insufficient. The only real alternative is to apply some form of trade regulation.

There are a variety of measures that the Government could take to reduce the cost of public health problems associated with sub-standard plumbing. These measures include self-regulation through a voluntary code of conduct, tighter regulation using a mandatory code of conduct and licence based approaches with binding legal effect managed by the Government.

Mechanically, these measures would be similar to one another, but they differ in matters of detail and degree.

They would all require rules to be made as to the skills and qualifications required to work in different branches of plumbing.

They would also require a mechanism for ensuring that those rules were followed and for sanctioning people who did not follow them.

At the less regulated end of the continuum is the self regulation model. This is characterised by voluntary codes of conduct enforced by the industry.

In the self regulation model an industry code would describe the skills and qualifications required to be a *recognised* plumber. The code would be administered by an industry body and *recognised* plumbers would subject themselves to it voluntarily. For example they would agree to be bound by the code administrator's decision if a customer complaint was made against them.

In this model it *would not* be illegal for an *unrecognised* plumber to work as long as they met the technical rules.

The next step is co-regulation. In co-regulation the industry would develop and administer a code of practice but it would have legal force. Therefore, plumbers would have no choice but to submit to the code so, unlike self regulation, they would be legally bound by the administrator's decisions. Parts of the telecommunications and energy industries are regulated this way through ombudsman schemes.[55]

The last step is formal government regulation. It would typically be illegal for anyone to do plumbing work without meeting the requirements set out by the Government. The Government would administer the regulatory regime. The WA Plumbing industry is currently subject to Government regulation as described in chapter 3.

[55] See the Telecommunications Industry Ombudsman and the utility Ombudsman schemes in South Australia and Victoria for example.

5.3 Impact analysis

In the previous two sections two broad regulatory approaches that could be used to achieving the objective of WA plumbing regulation were identified, namely target the market failures directly or use trade regulation of some form.

In this section the impact of adopting one of those other methods is discussed.

The impact of any regulatory proposal should be analysed by reference to the groups of stakeholders who will bear the cost. In this case five groups are relevant, namely:

1. plumbers - meaning licensed plumbers
2. illegal plumbers - meaning people who do not have a plumbing licence but run businesses doing work (illegally) that is within the WA regulatory definition of plumbing
3. non-plumbers - meaning people who run businesses doing work (legally) that is within the broad definition of plumbing but is not within the WA regulatory definition of plumbing
4. consumers and businesses who buy plumbing and 'non-plumbing' services
5. consumers who do not buy either plumbing or non-plumbing services

The impact on each of these groups will be different and is discussed separately.

The costs of potential changes are discussed first followed by the benefits.

The discussion here starts from the status quo rather than from a hypothetical situation where no regulation is in place. This follows the approach in the NOLS Decision RIS and others before it. Therefore, the discussion in this chapter deals with the possibility that regulation could either be 'relaxed' or 'tightened'.

Relaxing the regulation would mean either:

- adopting a 'looser' form of trade regulation
- abandoning trade regulation entirely and relying on broad measures to address the externalities that were identified in chapter 4.

The possibility that the quality of plumbing services might increase as regulation is tightened is treated as a benefit, rather than treating the deterioration in quality as a cost. Therefore, benefits increase as regulation becomes tighter.

Consistent with this, the discussion of costs is focussed on other costs of the regulatory regime. Therefore costs increase as regulation becomes tighter.

5.4 Costs

From a plumber's perspective, the costs of the current WA plumbing regulatory regime are:

1. the time and financial cost of the training they must undergo to qualify for a licence
2. the fees that must be paid for licences and when they submit notices of intention, multi-entry certificates and certificates of compliance to the PLB
3. the time cost of complying with the compliance regime, such as the time required to complete and submit certificates of compliance and keep records.

As the regulatory regime 'tightens' the *gross* cost of regulation to plumbers increases. That is, the tighter the regulation, the more plumbers have to pay to operate as plumbers.

However, plumbing in WA is conducted in a competitive market and these costs apply to all plumbers equally.[56] Therefore, the majority of these costs would be passed on to consumers. That is, if the cost to a plumber of submitting a certificate of compliance increased so would the price the consumer pays for plumbing work. Therefore the plumber does not bear the cost of regulation, even if they pay.

As discussed in Part II of this report, there are ways that the cost of the regulatory regime could be reduced, though we expect that these would flow to the consumer rather than the plumber.

There may be some cost to plumbers if increases in the price of plumbing cause consumers to buy less plumbing services. However, we expect this effect to be very small.[57]

For this reason the *net* cost of regulation to plumbers is likely to be small. It is also likely to be very much the same regardless of which form of regulation is used.

Another issue that was raised during the public consultations was the cost associated with reduced quality of plumbing. As noted above, reductions in this cost are treated as a benefit and discussed in the next section.

From a non plumber's perspective there are no costs associated with the WA plumbing regulatory regime. They are not required to undergo any particular training, to pay fees or to engage with the regulatory regime in any way. This changes if the tightening of the regulatory regime redefines the work they do as regulatory work, in which case the costs are the same as they are to an illegal plumber.

From an illegal plumber's point of view there are substantial costs associated with the WA plumbing regulation regime because this is what makes the work they do illegal.

At the looser end of the regulatory continuum, 'illegal' plumbers are able to go about their business legally. However, as the regulatory regime is tightened they lose this ability and, therefore, they must either lose their livelihood, pursue other work or obtain the necessary licence.

For an illegal plumber the cost of the regulatory regime is no greater than it is for a licensed plumber. It depends on the way the requirement is implemented.

If the licence requirement is expressed in terms of the training that must be conducted the illegal plumber would need to spend the same amount of time training as other plumbers. If the test was 'skills based' the cost might be smaller depending on whether the person in question had the full range of necessary skills.

The costs that non-plumbers and illegal plumbers incur due to the various forms of regulatory regime would be recovered from consumers in the same way as they would be by licensed plumbers.

The cost of the WA Plumbing regulatory regime is borne by the end user of the plumbing services. The total cost is the sum of the licence and compliance fees and the return plumbers earn on the time they spent training to qualify for their licence. The allocation of the cost varies depending on the market, though we understand that customers are

[56] There may be some variation in the cost of training fees but it is not material. It is also likely to be outweighed by the opportunity cost of the person's time while they undergo training.

[57] That is, there may be a price effect but the price elasticity of demand for plumbing services is likely to be very low because plumbing is very rarely a discretionary purchase.

routinely asked to pay the cost of submitting certificates of compliance as an additional item on their invoice, so it is mainly in proportion to the amount of plumbing work done.

A plumbing regulatory regime might include a limitation on the types of product that can be used or the types that can be installed. For example the current regime prohibits plumbers from using products that have not been endorsed through the watermark system. This causes costs to the consumer through reduced choice and utility. It also adds costs to suppliers, or would be suppliers, of products.

The cost of the WA plumbing regime to consumers who do not buy plumbing services is zero.

5.5 Benefits

The benefit of a plumbing regulatory regime is that it prevents, or reduces, the problems identified in chapter 4. Therefore, the primary benefit of a plumbing regulatory regime is that it avoids, or reduces, the cost to society of public health problems that would be caused by plumbing problems that would otherwise occur.

For the reasons discussed in section 5.5.1 below, the review has been unable to quantify the benefit of plumbing regulation or to distinguish between the benefit likely to be achieved by different approaches to plumbing regulation. There are several reasons.

First, an unregulated plumbing industry has not existed in Australia for a long time, making it impossible to know what standard of plumbing work would be done in the absence of a regulatory regime.

Second, the approaches taken in different jurisdictions are much the same, making it difficult to distinguish between the benefits of each. This is further complicated by the fact that data regarding the quality of plumbing is very limited in WA and other jurisdictions.

However, these reasons are small by comparison to the third, which is that the risk of a public health problem being caused by poor plumbing is small. The different benefit achieved by one approach to regulation rather than another relies on differences in the risk that public health problems would occur under different regimes.

While the risk is small, the potential consequences are very large. Thus a very small reduction in the risk of a problem occurring could result in a substantial benefit. The analytical problem is that the different levels of risk cannot be estimated in a meaningful way so the benefits of one mechanism over another cannot be quantified.

However, the fact that the benefit cannot be quantified does not mean that the benefits do not exist. In fact, it is likely that the benefit of plumbing regulation is substantial, as discussed in section 5.5.2.

5.5.1 The benefit of regulation cannot be quantified

In 2008 the Victorian Government reviewed the Victorian plumbing regulatory regime. It said that an assessment of plumbing regulation would ideally begin with an exploration of each relevant risk. The assessment would then quantify the extent of the problem that would arise from each risk and, later, compare the cost of the proposed regulatory intervention to the size of those problems.

However, the Victorian Government concluded that this was impossible for the plumbing industry. It said that:[58]

> this cannot be done for a no regulation base case as the data on the extent of problems that would occur if the existing regulations were allowed to lapse [are] unavailable.

The quantification task is different in this case than it was for the Victorian Government. Unlike this review, the Victorian Government gave consideration to the world as it would be if there no plumbing regulations were in place at all including no technical rules. However, this does not make the task possible.

We examined the possibility that public health data such as reports of disease could be used to quantify this problem but, similarly to the Victorian Government's conclusion in 2008, concluded that this is not possible.

The key problem, which was discussed during consultation, is that the link between the water supply and a health problem is often not clear. The symptoms that present when a person is exposed to contaminated water cannot easily be attributed to one cause or another. Unlike an electrocution where a live wire can be 'pointed at' as the cause of the problem, the effect plumbing has on health can be indirect and can spread more subtly.

This does not mean that we have concluded that relaxing regulation is justified or that the current level of regulation is not warranted. The problem is mainly that an unregulated plumbing industry has not been seen in Australia. As the Commonwealth Government noted, this is because the case for regulating core plumbing work "has been made in all jurisdictions over decades."[59]

This led the Commonwealth Government to conclude that there is a case for regulating plumbing work even if that case cannot be quantified. We accept this and adopt the same approach.

5.5.2 The benefit of regulation is potentially very large

However, notwithstanding that a formal quantification is impossible, it is helpful to consider the type of problems that might arise if plumbing regulations were relaxed. Those problems are not readily quantifiable but it is not hard to imagine them being very substantial.

One way that plumbing systems can contribute to public health problems is by transmitting disease. One example of this that was cited on several occasions and is mentioned in several submissions, including those of the PLB and the Master Plumbers and Gasfitters Association (MPAGA), was the occurrence of an unusual cluster of severe acute respiratory syndrome (SARS) in a particular apartment complex in Hong Kong in 2003. An epidemiological investigation after the event concluded that SARS appears was spread through the plumbing (wastewater) system in that apartment complex.[60]

The WHO reports that the source of the cluster of SARS in that complex appears to have been infectious material that was disposed of through the plumbing system.

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[58] Plumbing Industry Commission, Department of Planning and Community Development, *op cit*

[59] Commonwealth Government, NOLS Decision RIS, p. 29

[60] WHO and WPC, "Health Aspects of Plumbing, p.3

This should not have necessarily caused a problem, as the plumbing system in question was appropriately designed and installed and "(had) all the necessary plumbing features" to ensure waste containment.[61]

However, certain design elements had failed, with a key problem being that floor drain traps had lost their sealing function due to not being primed regularly. This allowed infectious material to enter some apartments in gaseous/ droplet form through those drains.

The meaning of the SARS example for plumbing regulation is difficult to interpret.

The key problem the WHO identified was that certain floor drain traps had dried out. Therefore, they did not prevent contaminated air from spreading through the apartment complex.

It seems very unlikely that this particular problem would have been prevented by a plumbing regulatory system. In fact, even after the fact the WHO found that all the necessary plumbing features were present in the apartment complex but the infection spread anyway. While SARS was transmitted through the plumbing system in this apartment complex, the cluster cannot be attributed to poor plumbing as such.[62]

A more helpful example of a problem in the plumbing system can be found closer to home. Cryptosporidium and giardia were detected in Sydney's water supply in a series of tests between 21 July and 5 September 1998. This led the NSW Government to issue several 'boil water alerts.'

As it turned out, not a single health problem *actually* occurred as a result of the outbreak, or at least none were linked to it directly. Nonetheless, the impact was substantial. The ten year review of the Sydney Water Crisis inquiry said that the disruptions were so large that they were "difficult to overstate."

The problem in that case was with the water catchment rather than plumbing and it could not have been prevented by plumbing regulation. In fact, we understand anecdotally that the problem was not a change in the level of pathogens but a change in the measuring systems. Nonetheless, it highlights the potential impact of a loss of confidence in a city's water supply, which is very substantial.

While this particular example was not caused by a plumbing problem, it could have been. If it had been, the disruption could have been just as large, which shows that plumbing problems can lead to very large, and costly, disruptions to society.

Of course disruptions of this type are extremely uncommon. This is evidence of many things. One of these is that broader water quality, health and disease control mechanisms applied in Australia have been effective.

Another is that plumbing work in Australia is generally done well, but that it is easy to conceive of situations where very large problems could occur if this was not the case. It is also easy to conceive of smaller problems affecting fewer people in a more localised way.

Therefore, the review accepts that, if plumbing regulation were relaxed completely, problems would ensue. Those problems cannot be quantified. They are inherently uncertain but they could potentially be very large.

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61 WHO and WPC, "Health Aspects of Plumbing, p.3

62 WHO and WPC, "Health Aspects of Plumbing, p.3

5.5.3 The risk of a problem in WA is higher than in other jurisdictions

As discussed in section 5.5.1 it is likely that if plumbing regulation was relaxed completely plumbing standards would deteriorate to the point that the public health was at an unacceptably high risk. Therefore regulation of the plumbing industry is warranted.

There is currently no evidence that plumbing regulation in WA is not achieving its objective. That is, there is no evidence to suggest that West Australians are currently experiencing an unacceptably high incidence of public health problems due to the quality of plumbing work.

The Plumbing Division of the CEPU said that:[63]

> Due to the sound regulatory system in place in WA there has been minimal loss of life through the outbreak of disease as a result of poor plumbing…

This could be interpreted to suggest that the WA Plumbing regime is currently working optimally and should not be altered. In cost benefit analysis terms, it could be interpreted to mean that the benefit of any 'tightening' of regulation would be outweighed by the cost.

However, this conclusion does not reflect the broader view of stakeholders as expressed at consultations. Numerous stakeholders expressed concerns that the risks attributable to plumbing in WA have risen in recent years and are currently unacceptable even if actual problems are not yet prevalent.

The basis of these concerns is plumbers perception that it is rare their work to be inspected.[64]

In the public consultations most plumbers reported that they rarely, if ever, experience an inspection. This was especially true in some regional areas where plumbers reported that there have been no plumbing inspectors, and therefore no inspections at all, in recent years.

The only notable exception was plumbers who work primarily in the commercial sector in Perth.

The general impression that plumbers have is that domestic plumbing work is subject to the regulatory regime, but is never inspected.

Similarly, Watercorp said that it is not aware of a comprehensive inspection program or the results of the results of inspections of plumbing work. However, it would find the result of any such program "useful information…particularly regarding backflow and partial connections."[65]

Information provided by the Department of Commerce shows that this perception is not necessarily well founded. According to the Department of Commerce, the Building Commission Division conducts random inspections of plumbing work based on a quarterly list of new connections provided by Watercorp.

The Department of Commerce suggested that the perception that domestic plumbing work is not subject to inspection may be attributable to the low visibility of the inspections, fuelled by the facts that:

1. inspections are usually carried out in the plumber's absence

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63 Communications Electrical and Plumbing Union submission, p. 4

64 Some submissions referred to inspections, others audits. In this report we use the term 'inspection' to refer to a physical examination of plumbing work by a plumbing compliance officer. We use the term 'audit' to refer to examinations of records.

65 Submission from Watercorp, undated, received 26 August 2013.

2. plumbers are not routinely notified that their work will be inspected. Nor are they notified that it has been inspected unless rectification is required
3. the vehicles used by plumbing inspectors were not marked until recently.

Data regarding the number of plumbing inspections that were conducted have only been collected in the last two financial years. The data that are available are summarised in Table 2.

Table 2 **Inspections by 'branch' of plumbing – 2011/12 and 2012/13**

Plumbing 'branch'	2011/12					2012/13				
	Jobs	Inspections	% inspect	Failures	% Fail	Jobs	Inspections	% inspect	Failures	% Fail
Water supply	55,371	3,039	5%	947	31%	51,538	2,801	5%	559	20%
Drainage	19,905	1,437	7%	223	16%	19,449	1,149	6%	119	10%
Sanitary	21,920	3,160	14%	589	19%	20,348	3,089	15%	355	11%

Source: Department of Commerce

The Department of Commerce was unable to disaggregate the data between commercial and domestic sectors, though it advised that most of the inspections referred to in Table 2 related to domestic plumbing. This is consistent with the allocation of staff. We understand that there are currently eight plumbing inspectors, one of whom has focussed on commercial work for some time. The others work in both the commercial and domestic sectors.

In it's 2011/12 Annual Report the Department of Commerce reported that the PLB had conducted inspections, and identified non-compliance, as shown in Table 3.

Table 3 **PLB inspections and compliance rates 2007-08 to 2010-11**

	2007-08	2008-09	2009-10	2010-11
Number inspections	121	293	512	547
Number (%) compliant	104 (94%)	222 (76%)	297 (58%)	365 (67%)
Number (%) non-compliant	17 (6%)	71 (24%)	215 (42%)	182 (33%)

Source: Department of Commerce, Annual Report 2011-12, Table 8

In addition to these inspections, or in some cases arising from them, the Government, through the PLB, investigates allegations of unlicensed plumbing unsatisfactory workmanship and other breaches of the WA plumbing regulation. In 2011/12 it conducted and completed investigations as shown in Table 4.

Table 4 **WA Plumbing Act – compliance investigations in 2011/12**

	Unsatisfactory workmanship	Unlicensed plumbing	Other	Total
Matters ongoing as at 1 July 2011	14	5	11	30
New matters commenced	14	33	40	87
Matters completed	28	22	26	76
Matters ongoing as at 1 July 2012	0	16	25	41

Source: Department of Commerce, Annual Report 2011-12, Table 36

Therefore, data provided by the Department of Commerce suggest that, contrary to the reported experience of plumbers, there is investigation and compliance activity in the plumbing industry.

The fact that plumbers are not aware of inspections of domestic work may be partly attributable to the approach that is taken to conducting these inspections. We understand that inspections of non-drainage plumbing work are based on connection notices supplied by Watercorp. They are typically conducted in the plumber's absence after the work has been completed.

In our view, though, the fact that plumbers are not aware that their work is being inspected is a problem in itself. Plumbers' perception that domestic work is not subject to inspection was widely regarded as increasing the risk of poor plumbing and related problems. Whether this concern is valid cannot be tested directly. However, it is concerning that the inspections that are currently being conducted result in failure rates in excess of 10 per cent, in some cases well above this. This suggests that a significant portion of plumbing work in WA is not being completed as it should be. Further, we note that only a portion of domestic plumbing work is associated with new connections, with a significant portion being associated with repairs and modifications to existing plumbing. As we understand the current approach to inspections, this work is likely to be missed.

Our conclusion is that it would be beneficial for the WA Government to cause plumbing inspections to be conducted and for existing inspections to be more visible to the plumber whose work is being inspected. This would act as a greater disincentive for them to 'cut corners' on plumbing work.

Whether the benefits of this would exceed the costs of doing so is discussed in the next section.

6 Impact analysis – costs vs. benefits

As noted above, the available data on the cost of public health problems that would occur under different approaches to plumbing regulation are limited. They do not support a quantitative analysis of the benefit of 'tightening' or 'loosening' the regulation of plumbing in WA so a formal cost benefit analysis cannot be done.

Nor do we have sufficient data regarding the number of plumbing jobs done in WA each year to make a detailed estimate of the cost of increasing the number of inspections. Therefore, in this case, the impact analysis is limited to a qualitative analysis. The information that is available supports the following two conclusions:

1. there is insufficient evidence to suggest that there is currently a 'problem' in the plumbing industry and, as such, there is insufficient evidence to justify broadening the scope of plumbing work that requires a licence
2. the compliance regime as it has been applied in recent years should be 'tightened' to increase its visibility and ensure that the chance that a particular piece of plumbing work will be inspected is the same regardless of whereabouts in WA it is done.

6.1 There is no evidence of a current problem

Our first conclusion is that, while there is no doubt that substandard plumbing *could* lead to substantial public health problems, there is no evidence to suggest that it is *currently* doing so. Therefore, consistent with the position reached in the NOLS Decision RIS, we conclude that there is insufficient evidence to broaden the scope of plumbing work for which a licence is required beyond the status quo.

Without more detailed evidence we cannot say for sure that there is no problem. Put another way, we cannot necessarily conclude that that there would be no gain to Western Australians from broadening the scope of plumbing work for which a licence is required or otherwise 'tightening' the regulation of the plumbing industry. However, we have not identified a case for doing this.

Numerous stakeholders put forward their view that 'plumbing standards have slipped' in WA in recent years but despite numerous requests for evidence to support this none was provided beyond anecdotal reports. Nor were we able to identify sufficient evidence to justify increasing the regulatory burden ourselves.

There are three possible reasons for this, namely:

1. the standard of most plumbing work in WA is high
2. the available evidence is limited. There is insufficient evidence to say with confidence whether or not there is a 'problem'
3. there are many different mechanisms in place for protecting the health of Western Australians so, even if there is a 'problem' in the plumbing industry, the problem may be addressed elsewhere.

As discussed in Part II of this report the fact that this conclusion rests, in part, on an absence of evidence leads us to recommend that data collection should be improved.

6.2 The visibility of the compliance regime should be increased

As discussed in section 5.5.3 licenced plumbers who attended the public consultation sessions and/or made submissions were generally of the view that there are insufficient inspections of work in the plumbing industry. As such they are concerned that the work that is currently being done is not being done to standard. Further, they are concerned that the risk of sub standard work will increase over time.

If the number of inspections was increased the regulatory burden on the plumbing industry would also increase. If the increase was funded from existing resources, the increase would be due to the time cost (to plumbers) of attending inspections more frequently.

This type of increase in the regulatory burden usually causes participants in the industry under review to call for regulation to be relaxed and to resist any possible increase. This is especially the case when the participants are small businesses, which is common in plumbing.

The WA Small business Commissioner commented on this saying that one of his goals is to identify and advocate for the removal of red tape. The Commissioner said that:[66]

> Unnecessary red tape costs [WA] millions of dollars in lost productivity, with small businesses more heavily impacted by this burden than any other sector of the community.

However, the plumbing industry does not regard inspections as 'unnecessary red tape'. In its submission MPAGA argued that inspections should be conducted more frequently.

Similar, virtually all of the plumbers who made submissions and/ or attended the public consultation sessions lamented the lack of inspections.

Given that the industry participants who would bear the cost of increased regulations do not oppose it, our conclusion is that the benefits of conducting plumbing inspections more frequently would outweigh the costs of doing so.

It is not possible with available data to recommend the optimal rate of inspections. Rather, we recommend that an appropriately structured Government agency should have discretion to develop and maintain an enforcement program to deliver the desired outcomes. This should be a risk based enforcement program. That is, the agency responsible should direct its resources to sectors where non compliance with the technical rules is likely to present the greatest risk to the public health of Western Australians. This should apply independently of the geographic location where work is done, so equally risky work should be equally likely to be inspected regardless of whereabouts in WA it is located.

[66] The Small Business Commissioner did not make detailed comments about the subject matter of the review, but noted that the MPAGA would do so on behalf of its members.

Part Two

II

THE RECOMMENDED MODEL FOR THE REGULATORY REGIME FOR PLUMBING IN WA

1 Introduction

Part one of this report summarises the review of the existing regulatory regime for plumbing in WA. This part builds on the review to recommend changes to that model. It deals partly with the broad issues discussed in part one and partly with other issues identified during the review, some of which were known before it commenced.

The recommended model for plumbing regulation in WAis based on the framework for trade regulation discussed in chapter 2. The following chapters each focus on one layer of that framework as indicated in Figure 1.The key decision makers recommended by the review are discussed in chapter 6.

Figure 1 **Overview of trade regulation**

<table>
<tr><th>Layer</th><th>Chapter</th><th colspan="8">Summary of recommendations</th></tr>
<tr><td>Technical rules</td><td>9</td><td colspan="8">Plumbing code of Australia</td></tr>
<tr><td>Regulatory definition</td><td>2</td><td colspan="8">Work involving the installation, alteration, extension, disconnection, repair or maintenance of pipes, fixtures and fittings to carry water, wastewater and other wastes between equipment owned and operated by a water service provider and a point of use.</td></tr>
<tr><td>Objective of regulation</td><td>3</td><td colspan="8">To protect the long term interests and health of Western Australians with respect to the safety of the water supply and wastewater removal system by ensuring that plumbing work is done sufficiently safely in accordance with technical requirements appropriate for available technologies by sufficiently skilled persons</td></tr>
<tr><td rowspan="4">Licensing regime</td><td rowspan="4">4</td><td colspan="4">Licensing regime</td><td colspan="4">No licence required – PCA applies</td></tr>
<tr><td colspan="3">Contractor</td><td rowspan="3">Roof</td><td rowspan="3">Fire</td><td rowspan="3">Mech. service</td><td rowspan="3">Irrig-ation</td><td rowspan="3">Home plumb-ing</td></tr>
<tr><td>Water plumber</td><td>Sanitary plumber</td><td>Drainage plumber</td></tr>
<tr><td>Water tradesperson</td><td>Sanitary tradesperson</td><td>Drainage tradesperson</td></tr>
<tr><td>Compliance regime</td><td>5</td><td colspan="8">Compliance regime</td></tr>
</table>

Source: ACIL Allen Consulting

2 Regulatory definition of plumbing

We recommend that the regulatory definition of plumbing should be broad to allow future flexibility. However, a broad definition should only be adopted if it is coupled with substantial flexibility in the regulatory regime insofar as licensing is concerned (see chapter 4).

In principle, we recommend that the Government should have the flexibility to introduce regulatory requirements to a broad range of plumbing activities. However, it should only do so if a case is made for this to be done by showing that the benefits outweigh the costs.

The WA regulatory definition of plumbing is currently narrow and restrictive. In WA plumbing is defined as either:

1. water plumbing
2. sanitary plumbing
3. drainage plumbing.

The detailed definition is contained in Regulation 4 of the WA Plumbing Regulations and in section 3.2 of this report.

The WA definition is broadly similar to the definitions in South Australia and Queensland. It is substantially narrower than the definition in Victoria, which is the broadest of all the jurisdictions. If gasfitting is excluded there are three 'branches' to plumbing in the WA, Qld and SA definitions, whereas in Victoria there are seven.

The four 'branches' of plumbing that are captured by the Victorian regulatory definition but not those in WA, Qld or SA are:

1. roof plumbing
2. mechanical services plumbing
3. fire protection plumbing
4. irrigation plumbing.

In its submission the PTEU identified eight other 'branches' of plumbing, though some of these overlap with the above and one (design) is discussed separately in this report.[67]

As discussed in chapter 2 of Part I of this report, the regulatory definition of the trade sets boundaries within which plumbing regulation can be applied and beyond which it cannot go. Several problems with the current WA regulatory definition of plumbing were identified and discussed during the public consultation sessions which lead us to recommend that the definition should be amended.

[67] The other branches identified by the PTEU were ships plumbing, reticulation, bore water plumbing, lead worker, design plumbing, aircraft plumbing, caravan plumbing, temporary accommodation (mine sites). It also identified irrigation, which is noted above.

2.1 The WA regulatory definition of water supply plumbing

The WA Plumbing Regulations define water supply plumbing as (with emphasis added):

> work that involves … fittings used to supply **potable** water from a **meter assembly** to the point of use

As discussed in chapter 4 of Part I of this report, there was widespread agreement that the objective of plumbing regulation should continue to be to protect public health. It follows from this that plumbing regulation would be applied equally where the risks to public health are equal.

However, it became clear during the review that the current definition of water supply plumbing makes this impossible.

2.1.1 Water supply plumbing - reference to 'a meter assembly'

The first problem with the current definition, which was discussed widely, is created by the reference to 'a meter assembly' in the definition of water supply plumbing.

We understand that the reference to a meter assembly was originally intended to distinguish between water network infrastructure operated by water utilities (such as Watercorp) and plumbing in private premises. That is, the meter assembly was seen as the point where the water utility's network stops and the customer's system starts.

However, there are numerous water supply systems in WA which are unmetered, at least at the boundary between the shared network and the customer's system.[68] These include smaller towns, indigenous settlements, mining camps and private farms.

With the current WA regulatory definition of plumbing, water supply work on these systems is not subject to the regulatory regime, though drainage and sanitary work is.

Given that the objective of plumbing regulation is to protect the public health, it is not logical to exclude plumbing work in places supplied by an unmetered water supply system from the regulatory definition of plumbing. The public health risks are the same whether a meter is present or not so the approach to plumbing regulation should also be the same.

Therefore, as was widely discussed, the reference to a meter assembly does not necessarily achieve the distinction that was intended. No information has been provided to suggest that this distinction is not serving Western Australians well or that bringing the water distribution networks into the realm of plumbing regulation would be beneficial.

Therefore, the distinction between the shared water network and private plumbing should be retained. However the definition should be altered to remove the reference to the meter assembly.

2.1.2 Reference to potable water

A second problem with the WA regulatory definition of plumbing that emerged during the review relates to the reference to 'potable water.'

During the review it was generally accepted that working on urban irrigation systems is not, and should not be, considered plumbing work. Under the current arrangements urban

[68] In some cases there bulk supply meters may be in place, for example to measure the quantity of water extracted from bores.

irrigation work can be done without a licence with the exception of the 'cut in' to the plumbing system, where a backflow prevention device must be installed by a plumber.

However, on our reading of the regulations, urban irrigation is currently 'captured'. Therefore, notwithstanding current practice, as we read the regulations, it involves installing fixtures and fittings to supply potable water to a point of use on a customer's property. The point of use is a sprinkler or similar fitting. Therefore, assuming that a meter is present, urban irrigation falls within the existing definition of water supply plumbing.

Most stakeholders during the review considered this unnecessary. With only a few exceptions, stakeholders saw no reason why urban irrigation should be the domain of licensed plumbers, who are generally not trained to use the equipment used in urban irrigation systems.

One stakeholder argued that our reading of the regulations is wrong and that urban irrigation is not captured by the current definition of water supply plumbing because once the water has passed downstream of the backflow prevention device it is no longer considered potable.

Whether this is correct is a legal question that we cannot answer definitively. However, if this stakeholder is correct the ramifications would be substantial because backflow prevention devices are found in many places.

If this interpretation is correct it would mean that any work on fixtures or fittings downstream of a backflow prevention device is excluded from the regulatory definition of plumbing.

On the other hand, the suggestion that water that has passed through a backflow prevention valve is no longer considered potable may be incorrect. In this case, urban irrigation work would seem to be captured by the WA regulatory definition of plumbing.

Therefore, regardless of whether the argument that water is not potable downstream of a backflow prevention valve, the current definition appears to create uncertainty and has the potential to have unintended consequences. The definition should be altered to make it clearer.

2.2 The WA regulatory definition of sanitary and drainage plumbing

The WA regulatory definitions of sanitary and drainage plumbing are:

> sanitary - work that involves … fittings and fixtures used to carry wastewater and other waste, but excludes drainage plumbing work
>
> drainage - work that involves … underground pipes and fittings used to carry wastewater to a sewer or wastewater or other waste to an apparatus for treating sewage.

Some concerns were raised that these definitions are unclear. It was also apparent that they are understood differently by different stakeholders. For example, it was not clear whether either of these definitions would capture stormwater or roof plumbing. These are widely done by non-plumbers.

In WA stormwater and roof plumbing are generally not considered to be within the regulatory definition of plumbing. However, there was some debate about whether this is the correct interpretation of the regulations.

For stormwater the question seems to turn on the correct interpretation of the word 'wastewater'. If stormwater is properly considered to be wastewater then fixtures and fittings used to carry it would fall within the definition of sanitary plumbing, though this seems unlikely to be the intention of that definition.

Wastewater is defined in the *Water Agencies (Powers) Act 1984 (WA)*, but not in a way that makes it clear whether it includes stormwater, though it probably does not.[69]

2.3 Plumbing for non-potable water

A third issue with the WA regulatory definition of plumbing is that it is not clear how it would capture recycled water, grey water or any other form of non-potable water that may be used in future.

The current definition is such that plumbing regulation can only apply to:

- potable water, through the definition of water supply plumbing
- wastewater or other waste – through the definitions of sanitary and drainage plumbing

This definition appears to prevent plumbing regulation from being applied to any form of work relating to water that is neither potable water nor wastewater or other waste. For example, it is unclear how greywater, rainwater or non-potable recycled water would be captured by this definition. If these sources of water are not captured they would then be excluded from the plumbing regulatory regime. This appears to be contrary to the objective of protecting public health as these water sources are currently considered to be higher risk by regulators in other jurisdictions.[70]

2.4 Conclusion – WA regulatory definition of plumbing

In relation to the WA regulatory definition of plumbing we recommend two things.

First, the WA Regulatory definition of plumbing should be broadened. This would extend the *potential* reach of the WA plumbing regulatory regime.

However, as discussed in chapter 6 of Part I and section 4.4 of Part II of this report, we do not recommend that the Government extends the *actual* reach.

Therefore, second, we recommend that the Government use horizontal separation at the licensing level of the framework to 'carve out' work that falls within the broadened regulatory definition of plumbing but does not currently require a plumbing licence (see chapter 4 of Part II for details).

The benefits of a revised definition are twofold. It would remove certain identified difficulties with the current definition and it would allow the flexibility to address problems that may be identified in future.

Drafting the appropriate definition would presumably require the involvement of the office of Parliamentary Counsel. In our view it is not important whether the definition is framed by specifying branches of plumbing, as in the Victorian definition, or by using broad language,

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[69] That Act defines wastewater as:

> ***wastewater*** means liquid waste, whether domestic or otherwise, and includes faecal matter and urine

This definition relies on the definition of waste, which is defined in the same Act:

> ***waste*** includes solid, liquid and gaseous waste

That Act mentions stormwater in the definition of surplus water. Other than this, we are not aware that stormwater is defined in WA legislation.

[70] For example in South Australia the Technical Regulator inspects 100 per cent of 'purple pipe' recycled water systems, but not as many potable water systems.

though the latter would be more consistent with the WA approach to other trades. In our view it would be appropriate for that definition to refer to:

> the installation, alteration, extension, disconnection, repair or maintenance of pipes, fixtures and fittings to carry water, wastewater and other wastes between equipment owned and operated by a water service provider and a point of use.

3 Statement of objectives

As discussed in chapter 4 the problem to be targeted by plumbing regulation is that if it was inadequate, plumbing would be done poorly in some cases. This would lead to an increase in the risk of public health problems. If this persisted the risk would ultimately be unacceptable.

It follows from this that the appropriate objective of plumbing regulation is to manage this risk. Therefore, as outlined in Part 1 of this report, our view is that the appropriate objective for plumbing regulation in WA is:

> To protect the long term interests and health of Western Australians with respect to the safety of the water supply and wastewater removal system by ensuring that plumbing work is performed in accordance with technical requirements appropriate for available technologies by sufficiently skilled persons.

4 Licensing regime

As discussed in chapter 2 of Part II of this report we recommend that the WA regulatory definition of plumbing should be modified to remove certain identified problems and extend the potential reach of the plumbing regulatory regime.

Broadening the definition would bring certain 'branches' of plumbing that are currently outside the regulatory definition of plumbing within that definition. If this was done with no further change it would require people currently working in those branches to obtain plumbing licences, which may require training. It would also require them to participate in the plumbing regulatory regime by submitting notices of intention and certificates of compliance etc.

This would increase the regulatory burden for businesses in the 'branches' brought within the regulatory regime. The increase would probably be substantial and, as discussed in section 5.5 of Part I of this report, it would result in a net cost to society.

Therefore, as the regulatory definition of plumbing is increased, offsetting changes to the licensing system must also be made to 'carve out' those branches of plumbing that are currently not subject to the regulatory regime but would be brought within it by the changed definition.

It would also be prudent to allow further changes to be made in future as the need arises.

However, as discussed in in chapter 6 of Part I of this report the available evidence suggest that the current arrangements insofar as licensing is concerned are appropriate. That is, the evidence does not warrant increasing the scope of work for which a plumbing licence is required beyond the status quo.

Therefore, in the first instance, the licencing regime should be reconstructed to mimic the existing arrangements.

There is then a question of flexibility. That is, the process that should be established for dealing with future changes. That question is discussed in section 4.4.

4.1 Vertical separation – plumbers, tradespersons and contractors

The current regulatory regime in WA provides for two vertical layers in the licensing regime. A person can either be a tradesperson or a contractor. A contractor is authorised to operate a plumbing business, to conduct plumbing work without supervision and to supervise other tradespersons.

A tradesperson cannot run a business and can only conduct plumbing work under the supervision of a contractor.

This tiered approach, with senior and junior plumbers is common in other jurisdictions and is widely accepted in the industry. For the most part the review identified no problems with it and recommends that it be retained.

There are two exceptions, though, both relating to the contractor level of the licensing regime.

First, we recommend that the regulations be amended to allow contractors who are not plumbers. Second, we recommend that the Government drop the requirement that contractors undergo business training and introduce a requirement that they carry public liability and professional indemnity insurance.

These exceptions are discussed below.

4.1.1 Contractors need not be plumbers

It was pointed out during the consultations that the current regime does not permit corporate structures in the plumbing industry. In particular, a plumbing business can only be run by a contractor, who must be a natural person.

The fact that a person cannot operate a plumbing business unless they are a plumber themselves represents a barrier to entry to the plumbing market. According to the best practice regulatory approach that barrier to entry should be removed unless there is a reason to retain it. We were unable to identify any such reason.

We see no reason why a plumbing business could not be operated by a non-plumber or a company. This is not to suggest that plumbing work should be done by an unlicensed person. Of course the person doing the plumbing work must have the necessary technical skill to do so, but this need not be the person running the business. This is the role of the 'nominated person' in the proposed approach to national licensing. In our view this approach should be adopted in WA.

An extension of this is that a plumbing contractor need not be associated with any particular branch of plumbing. Therefore, the same contractor's licence could span across the scope of plumbing work for which a licence is required.

4.1.2 Contractors should not be required to undergo business training, but they should have insurance

As well as having more experience as plumbers than tradespersons, contractors must also complete certain business training to be eligible for their licences.

In our view this is also a barrier to entry and should be removed.

During consultation it was argued that without this business training plumbing contractors would not be well equipped to run their business and may fail. This may be true but, in itself, this is no reason for the Government to introduce a mandatory training requirement. Certainly it does not contribute to the public health of Western Australians to require that a contractor undergoes business training.

Simply put, if a person chooses to start a business it should be left to them to decide what training they need before doing so.

This same principle is widely used in Australian markets. For example, there is no requirement to obtain a licence or to undergo business training before opening a café, restaurant or other food service business. Nor is there sufficient evidence to support this requirement being placed on plumbers.

However, we note that plumbing contractors in WA are not required to carry indemnity insurance. In other jurisdictions they are required to do so. We expect that many plumbers maintain this type of insurance and that it is often a requirement placed on them by their clients, at least when they work for larger clients. We see this as a useful consumer protection measure and recommend that it should be introduced in WA.

4.2 The fit and proper person test

In the current licensing regime (regulation 17(a) of the WA Plumbing Regulations), at both the contractor and tradesperson level, is a catch all requirement that the applicant for a licence must be a 'fit and proper person'. In our view this is a loosely defined and out dated test that should be removed.

The PLB currently has the power to disqualify people from working as a plumber if it does not regard them as a fit and proper person. This power is ill defined and subjective. In the interests of procedural fairness we consider it important that the particular things that would lead to this type of disqualification should be stated in advance and applied equally.

In fact the WA Plumbing Regulations already contain a list of those things. They are listed as grounds for disciplinary proceedings in regulation 27(c), but not as license criteria.

The effect is that the WA Plumbing regulations provide very little guidance as to who is eligible for a plumbing licence. They give much more guidance as to what would cause a licence to be revoked or cancelled. Perhaps the latter should be read as eligibility criteria, though this is not made clear.

In our view the subjective 'fit and proper person' test in regulation 17(a) should be removed and replaced with a list of factors that would disqualify a person based on regulation 27(c).

This same point was made in the submission by the MPAGA, which objected to the lack of a definition of a 'fit and proper person' in the regulations.

Further, we take the view that the factors that would disqualify a person from plumbing should be limited to those necessary to achieve the objective of plumbing regulation. Those factors should be set in the context of the broader legal system and should not attempt to make the plumbing regime the only legal authority applicable in the industry. In other words, the fact that the Government does not want to tolerate certain behaviours from plumbers does not necessarily mean that the plumbing regulatory regime should prevent them. For example, presumably the Government would want to prohibit fraudulent behaviour by plumbers. However, the police force already has responsibilities, powers and resources to prevent this behaviour. Therefore, it may be unnecessary to require the plumbing regulatory regime to 'reach' this conduct as well. It may be pragmatic to allow people with a history of ongoing fraudulent behaviour to be disqualified from becoming plumbers.

4.3 Horizontal separation – matching licensing and risks

As noted above, the appropriate objective of plumbing regulation is to ensure that plumbing work is carried out with sufficient safety to protect the public health. It is recommended in chapter 2 of Part II of this report that plumbing is defined broadly for regulatory purposes.

Plumbers are highly trained people with a broad range of technical skills. However, not all aspects of plumbing are as technically challenging, especially when plumbing is defined broadly.

One consequence of broadening the regulatory definition of plumbing is that work would be brought within it that does not require as high a skill level as other work. Further, there would be aspects of plumbing, when defined broadly, that do not require the full range of plumbing skills.

As noted in the Decision RIS for the National Licencing regime, a best practice approach to licencing would ensure that licence eligibility criteria are linked directly to the risk to be mitigated.[71] Where the risks are lower it follows that the criteria required for a licence would be lower and vice versa. Therefore, some aspects of plumbing should be 'carved out' of the regulatory regime.

In the next three sections we discuss three 'carve outs' that should be made, namely:

1. urban irrigation (section 4.3.1)
2. limited plumbing work in remote areas (section 4.3.2)
3. plumbing in a person's own home (section 4.3.3).

We recommend that the licensing system be modified to provide the flexibility for these carve outs to be made along with others that might be identified in future.

The same approach would allow the way that migrant plumbers are introduced to the WA industry to be improved, as discussed in section 4.3.4.

During the review several arguments were made against the notion of horizontal separation. We acknowledge the sincerity and positive intentions of those who made these arguments but we were not persuaded. Those arguments and brief responses to them are discussed in section 4.3.5.

4.3.1 Urban irrigation

As discussed in section 2.1 and Box 4, urban irrigation work would be captured by the broad regulatory definition of plumbing work. However, the skills required to install an urban irrigation system are less than those needed to perform the full range of plumbing work. For example irrigation systems do not deal with hot water or sanitary waste.

Box 4 **Urban irrigation**

Urban irrigation is the business of installing fixtures and fittings for watering home gardens and similar.

There are a number of businesses in Western Australia that currently install urban irrigation systems and, by and large, this is not done by licenced plumbers.

A key characteristic of an urban irrigation system, as it was described by Irrigation Australia, is that it begins *downstream* of a backflow prevention device. The installation of that backflow prevention device is currently considered plumbing work and Irrigation Australia does not consider it appropriate for its non-plumber members to carry out that installation. However, downstream of that valve, the most commonly expressed view during consultation was that the public health risks associated with an urban irrigation system were minimal and that the market and standard consumer protection mechanisms would be sufficient. A notable exception to this consensus view was expressed by a plumber who outlined a risk that water could pool on a lawn. It was argued that under certain circumstances, the pooled water could be drawn back into the water supply system taking any contaminants found on the lawn with it. Those contaminants could include pet waste, garden chemicals and fertiliser (among other things).

While we do not disagree that this is possible, as we understand it this would be prevented by the presence of a properly function backflow prevention device and, therefore, is not inconsistent with the suggestion that the installation of irrigation systems *downstream* of that valve could be conducted safely without specialist expertise as a plumber.

Source: ACIL Allen Consulting

[71] NOLS Decisions RIS p. 59

As discussed above, it was widely agreed during consultation that, aside from 'cutting in' the backflow prevention valve, urban irrigation work should not require a plumbing licence. The same conclusion was reached in the national licencing process.[72]

With the broadened regulatory definition of plumbing, the Government should also 'carve out' urban irrigation from the work that requires a plumbing licence. To do this, it would need the flexibility to determine that this particular 'branch' of plumbing need not be subject to the licensing regime. This flexibility should be retained in the regulations, with a decision maker given the ability to specify the branches of plumbing work that could only legally be done by a person with a licence.

4.3.2 Limited plumbing licences for use in remote communities

The Environmental Health Directorate of the Department of Health (EHD) submitted to the review that there is:[73]

> a need for recognition of persons with suitable training and other than licensed plumbers to effect basic repairs to plumbing in many non-urban settings

In summary, the need identified by the EHD arises from the remoteness of some parts of WA.

The EHD provided numerous examples of plumbing problems in remote communities that could be repaired relatively easily. However, the communities in question are far from the nearest plumber, which makes it difficult, if not impossible, for the community to have those repairs done. The result is that plumbing can be left in a state of disrepair for an extended period.

Rather than wait for a plumber to be available, the EHD called for a system enabling the Environmental Health Workers (EHWs) assigned to each community to attend to plumbing repairs. Under the current regulatory regime there is a concern that it may be in breach of the regulatory regime for them to do so as they are not licenced plumbers.[74]

The Environmental Health Association of WA (EHA) made a similar comment. One of its three main areas of concern was to ensure that:

> …the plumbing regulation system protects all Western Australians from bad operators all the while providing flexibility to allow minor/incidental repair and maintenance works to be completed by suitably skilled workers but not necessarily licensed plumbers (e.g. Aboriginal Environmental Health Workers in remote aboriginal communities).

The EHA said that if the plumbing regulatory regime does not deliver adequate plumbing coverage "alternatives need to be accommodated within the regulations".

The review was also asked by stakeholders in regional areas to consider the notion that those EHWs should be eligible for a licence to perform basic plumbing work.

This issue is not new. It was noted by the PLB in 2002, when it wrote to the Karrayili Adult Education Centre saying that:[75]

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[72] NOLA Decision RIS, p. 34

[73] Environmental Health Directorate submission, p. 1

[74] The reference to a 'meter assembly' in the current regulatory definition of plumbing means that this is probably incorrect because the water supplies in indigenous communities are typically not metered. Therefore, under the current regulatory definition work on those systems is not legally defined as plumbing. However, this would change if the regulatory definition is amended as recommended in this report. In any case, it is a technicality, not an appropriate regulatory response to this issue.

[75] Letter, Mr K. Fare, Executive Officer PLB to Ms Tamela Vestergaard, Karrayili Education Centre, 1 October 2002 supplied by EHD.

> The [PLB] agreed in-principle to the introduction of a (restricted) plumbing permit for those people who have obtained the Certificate 2 of Aboriginal Environmental Health Work.

However, the PLB found that the regulations prevented it from giving effect to that in-principle decision. The regulations still do not allow the PLB to give effect to this in-principle agreement.

This is a good example of the need for the Government to balance risks in regulating plumbing.

On the one hand the objective of plumbing regulation is to protect Western Australians from health risks associated with poor plumbing. Generally, this leads to the position that water supply and sanitary plumbing work (at least) should be done by qualified plumbers.

However, the remoteness of the communities in question can change the balance between risks. The remoteness of some communities and the cost associated with bringing a plumber to them means that in some cases plumbing repairs are not done, or are not done for quite some time.

During consultation in regional WA the review was urged to consider the health risk associated with *not* repairing plumbing that is in need of repair. It was argued that, if the alternative is to leave plumbing 'broken' this poses a greater health risk than that presented by allowing an EHW to make repairs notwithstanding their lower level of training. It was argued that this is the case even if the repairs made by the EHW are not to the standard of a professional plumber.

Some stakeholders took a different view, saying that it would be unacceptable to allow less qualified people to do plumbing work anywhere, especially in remote areas. It was argued that people in remote communities, indigenous or otherwise, should be entitled to the same quality of plumbing work as people in cities.[76]

Of course this is true. However, we do not necessarily believe that the work done by an EHW would be done to a lower standard than if it was done by a professional plumber, at least not in the context of the minor repairs that were proposed.

EHD submits that EHWs are trained in basic plumbing (Certificate 2 level) and, therefore, are suitably skilled to perform basic plumbing tasks. While EHWs are not as highly trained as plumbers, this is more likely to mean that there are things that plumbers can do that EHWs cannot. It does not necessarily follow that plumbers will do a better job of things that EHWs are trained to do.

In any case, even if EHWs are not able to do the work as well as a licenced plumber, we would still expect the health risk associated with leaving problems unrepaired to outweigh the incremental benefit of having better repairs.

Further, allowing remote communities to avail themselves of the services of EHWs would not prevent them from choosing to use licenced plumbers if they considered this to be worthwhile.

In our view there is a strong argument in favour of allowing EHWs to perform minor plumbing works. Given the flexibility to enable it, the Government should ensure that they are able to do so legally.

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[76] Indeed some argued that the risks in regional communities are greater so the standard of plumbing should be higher. For example the water used may be harder, which can cause faster calcification of parts. In turn this may require that plumbing is done differently in some cases.

4.3.3 Plumbing at home

Regulation 10 of the WA Plumbing Regulations makes it illegal in WA for a person to do plumbing, as defined by the WA regulatory definition of plumbing, if they do not have an appropriate licence. This includes non-plumbers doing plumbing work in their own homes.

Strictly speaking this makes it illegal for a person to change a tap washer in their own home.

There was substantial confusion about this during the public consultation sessions. Most plumbers were of the understanding that it was legal for a person to do plumbing work in their own home or for a family member as long as they were not paid to do so. Some thought that it is illegal but that it is a policy of the PLB not to enforce this aspect of the law. Most stakeholders considered it reasonable for people to do minor plumbing work in their own home.

Our review of plumbing legislation and regulations in other jurisdictions indicates that there is typically some form of 'carve out' of the plumbing regime to permit people to do plumbing work for themselves in their own home. The details vary from jurisdiction to jurisdiction.

We recommend that WA introduce a similar carve out. There are several ways that this could be achieved. One would be to use the horizontal separation mechanism and have the licensing authority determine that plumbing work that is not done for payment is not subject to the licensing regime. The definition of payment would need to be broad enough to discourage avoidance through devices such as bartering.

Another approach would be to write the regulatory definition of plumbing to carve out the relevant tasks.

A third approach, which would allow commercial 'handymen' to provide minor plumbing services would be to define simple plumbing tasks that should be 'carved out' of the regime entirely. In our view this approach would provide the greatest benefit to Western Australians because it would maximise their freedom to choose.

4.3.4 Migrant plumbers

As WA has been through the mining boom in recent years many people, including plumbers, have migrated from many different countries. Notwithstanding this, Australia, and WA in particular, has experienced a skills shortage in recent years.

One way to alleviate that skills shortage is to make efficient use of the skills of plumbers who emigrate to Australia. This was discussed by WA Farmers, which said that:[77]

> …is concerned to ensure that regional areas are not disadvantaged by additional regulatory compliance for these critical service providers.
>
> …
>
> While we accept that (migrant plumbers) may have undertaken different training to plumbers in Australia it is imperative that these skills should not be lost to the market, especially for rural regions. WA Farmers supports a flexible approach to determining the merit of overseas plumber's training by allowing the regulator to assess applications on a case by case basis.

However, the current licensing regime does not give the PLB any more flexibility in respect of plumbers arriving in WA from other countries than it does other plumbers. Therefore, the PLB can either grant a migrant plumber a water supply, sanitary and/ or drainage licence, at either the contractor or tradesperson level, or not. It can only grant those licences for three years at a time.

[77] WA Farmers submission, page 1

In other jurisdictions licences can be granted for different time periods and with various conditions or other limitations. This can be used to introduce migrant plumbers into the market gradually. For example, they can be limited to a subset of plumbing work to correspond with their training. They could then supplement their training and return to the relevant licensing authority to have the limitation altered or removed.

This is not possible in WA, though it would be made possible by horizontal separation.

4.3.5 Arguments against horizontal separation

The preceding sections summarise arguments that were made in favour of horizontal separation and examples where it could be helpful. However, in the consultation sessions many stakeholders argued against horizontal separation. It is fair to say that most plumbers did not support the idea.

Three main arguments were put.

The first argument against horizontal separation was that it would create plumbers who were unemployable. The argument was that if plumbers were licenced to do only some work contractors would not hire them because it would be too difficult for the contractor to 'keep track' of which plumbers could do which work. It was argued that, therefore, contractors would only hire fully trained plumbers.

This might very well be correct but we do not see it as a reason to disallow horizontal separation.[78] In fact we see this as none of the licensing authority's concern.

The second argument, which is related to the first, was that the licensing authority would not be 'doing the right thing' by prospective plumbers if they give them partial licences knowing (or suspecting) that they will find it difficult for them to find employment.

This might also be correct. However, in our view providing this type of advice is beyond the proper role of the licensing authority or, for that matter, the Government. We see this as no reason to disallow horizontal separation.

In our view, these are matters for the plumber seeking partial licencing. If that person decides that it suits them to pursue part of a trade and they are sufficiently skilled that they can do so safely then they should be permitted to do so.

Rather than making the Government responsible for protecting the interests of prospective plumbers it is well within the market mechanism's capacity to address these two concerns.

Further, some submissions suggested that consumers may prefer easier access to a less well qualified plumber to the current situation. For example, WA Farmers expressed the concern that regional areas should not be disadvantaged by a regulatory regime that is so strict regarding the licence criteria for plumbers that there are not enough plumbers to service regional areas. This is also closely related to the discussion of EHWs in remote areas.

The third argument was that if people had 'partial licences' they might start to do work that was beyond the scope of their licence. The argument was that this would make it difficult to ensure that plumbing work was done by properly licenced people.

We acknowledge that it would be a concern if people with 'partial' licences worked outside the scope of those licences. However, in our view this should be managed within the

[78] In the context of a shortage of trade skills it might also be incorrect. Contractors might prefer to hire plumbers who can do some of the work if the alternative is not to be able to hire plumbers at all.

compliance regime. We do not see it as a reason to disallow horizontal separation, but we do see it as a reason to ensure that the compliance regime is effective. We see it as no different to the risk in the existing model that unlicensed plumbers will do work they are not permitted to do.

4.4 Implementing horizontal separation

Under the licensing model we propose, the licensing authority would have the ability to introduce, or remove, licensing requirements for different branches of plumbing. However, we recommend that this ability should not be unfettered.

The appropriate approach to this is to balance the regulatory risk introduced by:

1. the chance that regulations might be tightened, which would be costly to industry sectors whose activities would be made illegal if changes were made
2. the risk of public health problems if changes are not made.

This is a matter of balancing the cost of changes with their benefits. Rather than 'hard coding' these in the regulations the changes we recommend would give licensing authority greater flexibility over the way that plumbing licencing is administered in WA. This would facilitate the implementation of National Licencing and would give the licencing regime the flexibility to apply horizontal separation to adapt to:

1. the different risks involved in different branches of plumbing work
2. other circumstances that may arise from time to time.

However, that discretion should not be unfettered. Increases in the scope of plumbing work that requires a licence should only be made based on evidence that the following three conditions are met:

- **condition 1** – allowing work in the branch of plumbing being considered to be done by unlicensed persons is placing the public health in WA at an unacceptable risk
- **condition 2** – bringing the branch of plumbing work in question within the scope of work which requires a licence is the lowest cost way of ameliorating that risk
- **condition3** - the benefit of increasing the breadth of the licensing regime, and thereby reducing the risk to the health of Western Australians, is greater than the cost that would be imposed, including the cost of retraining that would be imposed on businesses currently operating in the branch of plumbing to be brought within the scope of work for which a licence is required

The licensing authority should be required to provide evidence for changes it proposes to make before making them and to have regard to the costs and benefits of any such changes.

In the immediate term we do not anticipate that any changes would be made. As noted in the NOLS decision RIS and discussed in chapter 6 of Part I of this report, on the evidence at the moment there is no case for introducing mandatory licensing requirements into branches of plumbing where they do not currently exist.

4.5 Implementing National Licensing

Through the COAG process the Government has decided, in principle, to implement National Occupational Licensing, which will begin with the plumbing and gasfitting trades. The purpose of this review is not to revisit those decisions, but the mechanism recommended here should be capable of giving effect to those agreements.

The proposed model for National Licensing in the plumbing industry is described in the NOLS Decision RIS. In terms of the regulatory framework discussed in this report there is both horizontal and vertical separation as follows:

- horizontal – plumbing licences would be available for (any or all of) water and sanitary plumbing, draining, fire protection, mechanical services, with endorsements possible for urban irrigation and other aspects of plumbing
- vertical – licences would be available at plumber, tradesperson and contractor levels.

This framework could be implemented using the framework described above. In practice, if the Government is satisfied that National Licensing should be implemented for plumbing we recommend that the Minister either implement the framework or direct the licensing authority to do so. This direction would overcome the need for the licensing authority to satisfy itself that it was in the interest of Western Australians to so implement national licensing, which would be repetitive given the consideration that has already taken place.

4.6 Conclusion – licensing regime

Given the broadened regulatory definition of plumbing recommended in chapter 2 of Part II of this report it is essential to alter the licensing regime. This would allow the Government increased flexibility to allow people with skills to make full use of them while still protecting the public health in WA. It would also allow the Government to give effect to decisions it has made in relation to National Licensing for plumbers as well as any decisions it may make in future.

The key change that is recommended to the licensing regime is to introduce flexibility. The Government should give prospective plumbers the right to be licensed to conduct work that they are sufficiently skilled to conduct safely regardless of whether they are also skilled to do other work. Therefore, horizontal separation should be allowed and placed at the discretion of the prospective plumber.

The licensing regime should be constructed on a 'shall issue' basis, similar to the WA electrical licensing regime. In other words, when a person applies for a license that would authorise them to do plumbing work of whatever kind the licensing authority should ascertain whether they can do so safely[79] and, if so, the regulations should require the licensing administrator to issue the licence.

[79] We anticipate that this would usually be done in advance in an aggregate way. For example the licensing authority might determine that a person who has completed an apprenticeship in plumbing at a suitable training institution is sufficiently skilled to work in certain branches of plumbing. However, there may be specific cases which require individual consideration. It would be prudent to allow for this.

5 Compliance regime

A well designed compliance regime should complement the other layers of WA plumbing regulation. Against the background of a broad regulatory definition of plumbing and a flexible licensing regime it should ensure that plumbing work is done as it should be done by people who are duly authorised to do it.

The compliance regime should provide a means of redress for the customer if one or the other of these conditions is not met.

It should also provide a means for sanctioning two groups of people:

1. plumbers who fail to perform plumbing work as it should be done
2. for people who perform plumbing work without the necessary licence.

As discussed in chapter 2 of part I of this report a compliance regime comprises:

— *structural* elements, which are written into legislation and regulations

— *operational* elements which are within the control of a key decision maker.

This chapter deals with the *structural* elements of the regime in section 5.1. The *operational* elements are discussed in section 5.2.

5.1 Structural aspects of the compliance regime

Our recommendations for the structural elements of the compliance regime for WA plumbing are based mainly on comparing the existing regime with other similar regimes. Specifically, the compliance regimes for

— gasfitting, electrical and building trades in WA, which are summarised in Appendix C

— plumbing in other states, which are summarised in Appendix D.

Our recommendations in this area are fairly detailed, which reflects our overriding view that the operational aspects of the WA plumbing compliance regime are appropriate. For the most part we would characterise these recommendations as 'fine tuning' the existing regime, with the exception that we propose a fairly substantial extension to the way that disciplinary action can be taken.

5.1.1 Prohibition of unlicensed plumbing

As discussed in chapter 3 of Part I of this report, the requirement to use a licensed plumber is underpinned by a prohibition against unlicensed plumbing. That prohibition could make either or both of the following illegal:

— for an unlicensed person to do plumbing work

— for a customer to engage an unlicensed person to do plumbing work.

The existing regime in WA prohibits both of these and we see no reason why this should be changed.[80]

One change that we do recommend, however, relates to advertising. In WA it is illegal for a licenced plumbing contractor to advertise without including their licence number in the advertisement. However, it is not illegal for an unlicensed person to advertise.[81] In practical terms this means that the PLB cannot take action against a person who advertises themselves as a plumber unless they can link specific plumbing work to that person. Unlike plumbing work, an advertisement is readily identifiable and can easily be linked to the person who placed it because that person will typically put their contact details in it to allow customers to contact them.

In our view it would be more pragmatic and cost reducing to allow the PLB to act on an advertisement rather than requiring it to identify plumbing work done by an unlicensed person. Therefore, we recommend that the regulations be amended to make it illegal for a person who is not legally allowed to offer plumbing services to advertise or otherwise offer to provide those services.

No submissions were made in relation to this issue, though it was apparent from some of the public consultations that stakeholders are currently under the impression that it is illegal for an unlicensed person to advertise to provide plumbing work. Therefore, the change proposed here would bring the law in line with the community understanding as expressed by those stakeholders.

5.1.2 Redress for customers

The existing regime provides redress for customers through what is described as the six year warranty, which is in Regulation 71. This regulation says that a plumbing compliance officer can issue a notice saying that plumbing work was not done in accordance with the technical rules at any time within six years of the work being done. When such a notice is issued the plumber who did the work is required to rectify it.

It is not necessarily clear that this 'warranty' adds to the customer's legal rights, because it is illegal for work to be done otherwise than in compliance with the technical rules. Therefore, if a customer was able to show that work they had commissioned was not done in accordance with the rules they would presumably be able to take action under contract law.

However, the warranty in Regulation 71 makes it simpler for customers to access their rights. Pursuing rights under contract would typically be a costly exercise. Thus the warranty gives a benefit to the customer, either by reducing the cost of pursuing their rights or by making it more likely that plumbing work will be done properly in the first place.

The warranty reduces costs for plumbers as well. If a plumber does their work according to the technical rules they will not receive a rectification notice and will not need to honour the warranty. If they are issued with a rectification notice it indicates that they have not met the technical rules. Absent the rectification notice that work might give rise to legal action for breach of contract, which would be more costly than responding to a rectification notice (assuming that the work would be rectified either way).

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[80] At a practical level it might be necessary to change the prohibition to reflect the broadened definition of plumbing and the decisions of the licencing authority regarding the need for a licence.

[81] More precisely, this is not prohibited by the WA plumbing regulatory regime. It may amount to misleading or deceptive conduct and thus be illegal under consumer and fair trading legislation.

Of course, the work might not give rise to those proceedings, but this would be a failure in the alternate system. That is, the plumber would be 'getting away with' substandard work. While this may be less costly for the plumber it is no reason not to adopt an otherwise efficient enforcement regime.

In our view the warranty regime is more likely to be cost reducing than cost increasing and should be retained.

5.1.3 Sanctions

The third aspect of the compliance regime is sanctions for misconduct. As noted above, two categories of misconduct should be considered, namely:

1. people doing work for which they are not appropriately licenced
2. plumbers doing work for which they are licenced, but not doing it according to the technical rules.

Our recommended approach to sanctions for these two types of misconduct is outlined in turn below. A common element to both schemes is that there would need to be inspectors in place to identify circumstances where sanctions are appropriate. Those inspectors are also discussed below.

Sanctions for non-plumbers

The current regime makes it an offence for a person to do plumbing work without an appropriate licence and for a customer to engage an unlicensed person to do plumbing work. As discussed above we recommend that these prohibitions should be retained.

The question to consider in this section is what should happen if the Government discovers that one of these things has happened. At present the only action the PLB can take is to prosecute the person in the State Administrative Tribunal (SAT). It cannot access the range of sanctions that are available in respect of licensed plumbers because those rely on the license.

At present the (maximum) penalty that SAT can apply either for unlicensed plumbing or for commissioning an unlicensed plumber is a $5,000 fine.

Taking action in the SAT or any Court is costly and time consuming. In our view it would be an improvement to the system if the regulatory regime included the same option as the Director of Energy Safety has to use infringement notices in lieu of prosecution for these offences.

That would allow it to sanction a person found doing plumbing work without a licence quickly and efficiently, while preserving natural justice by allowing the person to proceed to SAT and contest the allegation against them if they chose to do so.

Using infringement notices would also allow the compilation of statistics on the extent of (detected) unlicensed plumbing. These could be used to identify 'serial offenders' who might later be targeted for sterner compliance activity.

A mechanism for infringement notices exists in Regulation 75. Under that regulation an infringement notice can be issued with a value of 10 per cent of the maximum penalty payable for certain types of misconduct.[82] This could be extended to the prohibitions against

[82] At present this provision is limited to administrative and other issues applicable to plumbing contractors.

commissioning and doing unlicensed plumbing, which would then result in a $500 infringement notice.

Sanctions for plumbers

The existence of a licensing regime introduces the possibility of disciplinary action and sanctions that cannot be used outside the licensing regime. For example a licence can have conditions applied to it or be suspended or cancelled.

The WA plumbing regime is similar to the other regimes we examined in terms of the actions that can be taken. That is, most regimes include a list of matters that would give rise to disciplinary action and allow conditions or restrictions to be placed on licences to address these. They also allow licences to be suspended or cancelled in more severe cases.

However, all of the other regimes that were reviewed give the regulator the opportunity to deal with disciplinary matters without proceeding in Court. This power is subject to rules of procedural fairness and other administrative law principles as are all decisions of government authorities. In any case, procedural fairness is assured because the regulator can only deal with a matter summarily if the person in question agrees not to pursue the matter in Court.

The power to deal with disciplinary matters summarily is an important feature that is missing from the WA plumbing regime. In our view the regulations should be amended to provide this ability.

We also recommend that the regulations should be amended to allow disciplinary actions to be resolved by enforceable undertaking.[83] The relevant decision maker would have the ability to accept an enforceable undertaking from a plumber suspected of misconduct and, in doing so, accept a commitment that the plumber would take action specified in the undertaking. The undertaking need not be limited by the regulations and could be negotiated between the plumber and the relevant decision maker on a case by case basis. It might include agreeing to rectify substandard plumbing, agreeing to refrain from specified conduct in future and other things.

The advantage of an enforceable undertaking is that it allows the relevant decision maker regulator to tailor the resolution to a specific problem and simplifies the process of taking future action for the same type of misconduct if it is necessary.[84]

Another change that we recommend to the regulations relating to disciplinary action is the removal of the 'fit and proper person' ground in Regulation 27(b). For the reasons discussed in chapter 4 of Part II of this report our view is that a person should be eligible for a plumber's licence, or not, based on their actions rather than on a loosely defined concept of fitness for the work. As discussed there, our view is that this clause should be removed.

Other minor changes to these regulations that we recommend are:

- amend Regulation 27(f) to add committing an offence of dishonesty to the list of grounds for disciplinary action. Regulation 27(c) and (f) already make it grounds for disciplinary action if a plumber is convicted of certain offences in relation to plumbing work. In our

[83] An enforceable undertaking is an undertaking given by a regulated entity to the regulating body where there has been a contravention of the regulations. Enforceable undertakings are generally accepted by the regulator as an alternative to taking civil or administrative action, where the regulated body and regulator agree upon action the regulated body will take to rectify the contravention. These undertakings are enforceable in the court system.

[84] Enforceable undertakings are commonly used in other contexts. See s.87B of the Competition and Consumer Act for example.

view this limitation is unnecessary. it should be grounds for disciplinary action if a plumber is convicted of a similar offence regardless of whether that offence is in relation to plumbing work

- delete Regulation 28 – this regulation implies that the PLB cannot take action about a disciplinary matter unless it first receives a complaint. In our view the relevant decision maker should be able to commence action on its own
- clarify Regulation 29 – this regulation says that "if the PLB receives a complaint…or is of the opinion that it is appropriate…" it can take disciplinary action in SAT. This may be intended to allow the PLB to take action on its own, as we recommend above, but it is ambiguous. Given our recommendation to delete Regulation 28, Regulation 29 would need amendment in any case. We recommend amending Regulation 29 to make it clear that the relevant decision maker can take action in SAT if it considers it appropriate to do so regardless of how it reached that view

Inspectors – plumbing compliance officers

The current WA regime allows any person employed by the Department to be designated a plumbing compliance officer (regulation. 66). In practice this enables the PLB to designate its staff as plumbing compliance officers. This arrangement is common and should be preserved.

The MPAGA and the CEPU called for this regulation to be amended to remove the reference to the Department.[85] We understand that this is linked to the MPAGA's general view that the PLB and the Department of Commerce should be separated from one another, which is discussed in chapter 6. If that change was made, which we do not recommend, the language of many of the regulations would need to be amended.

In our view it would be appropriate for Regulation 66 to be broadened to allow any person to be designated as a plumbing compliance officer. As with other aspects of the compliance regime we see no harm in providing flexibility. For example, if there were machinery of Government changes it may be convenient for to allow employees of a different Government department to be designated as compliance officers.

There was some concern during public consultation that allowing any person to be designated a plumbing compliance officer would be the beginning of a slippery slope whereby the skills of plumbing compliance officers declined. In our view this concern is unfounded as the relevant decision maker would retain control of who is designated. They would also presumably have management responsibility for those people and, if it came to it, the ability to revoke designations. The change that is proposed would give flexibility, but not force the relevant decision maker's hand.

It may assist in overcoming labour shortage problems, especially in regional areas of WA, by allowing the regulator to designate people who are available in the regions. It would also enable the regulator to delegate this type of work to people employed by organisations that are already represented in the regions, in particular local Governments, which is broadly the model used in Queensland.

Regardless of whether the person designated as a plumbing compliance officer is employed by the Department or otherwise, the key issue is that they have the necessary skills. A

[85] There seems to be a minor error in both submissions on this point. If followed literally the regulation as proposed would say that any "person of the Department" could be designated a plumbing compliance officer. We interpret this to be a suggestion that "any person" could be so designated.

strong theme of the public consultations, particularly from plumbers, was that plumbing inspectors must be senior, experienced plumbers. The view of many stakeholders was that if they are not they will not command the respect necessary from the plumbers whose work they are inspecting.

We agree with this partially. Plumbing skills are no doubt an important part of the skillset needed by a plumbing compliance officer. However, those officers would also require other skills to do their job. For example, from time to time the need may arise to take disciplinary action against a plumber. That action should be based on properly collected evidence to afford natural justice to the plumber being disciplined. Therefore, compliance officers would need investigative and evidence gathering skills.

In practice it may be best to assemble a team of compliance officers with complementary skills. Some would no doubt be experienced plumbers with suitable experience in technical issues. Others may be weaker on the technical side but be more skilled in evidence gathering and investigative work. The compliance team may also conduct paper based audits as part of its work, for example matching notices of intention, compliance certificates and invoices to ensure that all the work plumbers do is reported appropriately (this approach was suggested by a plumber during consultations). If this is part of its approach the team would also need auditing skills similar to those of some accountants.

However, these are *operational* compliance issues. Our suggested approach to addressing them is in section 5.2 below. From a structural perspective, it is only important that the PLB has the ability to designate people as compliance officers and that those compliance officers have appropriate powers.

Under the current regime, plumbing compliance officers have the power to:

- deal with dangerous situations (Div 4)
- enter premises, inspect plumbing and conduct investigations (Div 5)

In summary, the entry, inspection and investigative powers of plumbing compliance officers are that they can:

- enter premises other than dwellings whenever it is reasonable to do so
- enter dwellings with 24 hours notice to the occupant
- inspect premises and places
- require answers to questions.

They can use assistants and equipment in discharging these powers where it is appropriate to do so.

As well as plumbing compliance officers, the existing regime allows the PLB to designate a person to be an authorised person (regulation 75). An authorised person can either issue infringement notices or vary or cancel them, but not both. As we understand it there is currently only one authorised person, making it impossible for infringement notices to be varied once issued.

In our view issuing infringement notices should be a standard part of a plumbing compliance officer's 'toolkit.' Therefore, we recommend altering the regulations to remove the distinction between authorisation to issue infringement notices and designation as a plumbing compliance officer.

However, there is value in preserving the separation between a person who can issue an infringement notice and a person who can vary or withdraw it. This separation reduces the risk of improper or corrupt behaviour.

Therefore, we recommend that Regulation 80 is altered to relate only to authorising a person to vary or withdraw an infringement notice. Issuing a notice should be made a default power of a plumbing compliance officer.

5.1.4 Information gathering

An important part of the compliance regime will be information gathering. The technical regulator will need to know where plumbing work is being done so that inspectors can be sent as appropriate.

For the reasons set out in chapter 8 we recommend that the use of certificates of compliance and multi entry books as a means of funding the plumbing regulatory regime should be discontinued. However, this does not mean that these should no longer be used at all.

We recommend that the regulations allow the technical regulator to require information to be provided to support its compliance activities. The details should be presented in the business plan discussed in section 5.2. Broadly, the technical regulator should have the ability to identify work that it considers high risk and therefore worthy of targeted inspections. Having done that it should be able to require that plumbers who intend to do that type of work, or who have recently done it or are currently doing it to notify the technical regulator of that fact. This would then provide the basis for inspections of other compliance activities.

In our view this should be a discretionary activity of the technical regulator. That is, it should choose whether to require plumbers to notify it of work and choose the types of work the must be notified. This may change from time to time as risks change.

Sometimes the technical regulator may choose not to rely on this type of notice as a source of information at all. For example, the Building Commission has advised that it does not currently use certificates of compliance as a source of information for its compliance activities. In our view this makes collecting the certificates a largely futile exercise, which the technical regulator should be able to stop doing if it chooses to maintain this approach to regulation. The Building Commission cannot do so at the moment because this also represents a key source of funding for the PLB, though this is an expensive way to raise funds given the administration required.

5.1.5 Alternative means of securing compliance

The compliance tools discussed in the previous sections could be described as ‘hard’ tools. Broadly, they allow the Government to punish a person found to have ‘done the wrong thing’.

This is an important part of compliance as it increases the incentive to ‘do the right thing’. However, it is by no means the whole picture. In fact, as discussed in section 5.2 these ‘hard’ tools would ideally be used less often than other measures.

The technical regulator should have the ability to take other measures to ensure that the objective of plumbing regulation is met. Those measures should be addressed at the problems identified in in chapter 4 of Part I of this report. Examples would include publicity campaigns, which might be designed to:

- overcome the information failures discussed above, for example:
  - alerting customers to the risks associated with using substandard plumbing products and DIY plumbing

- informing customers of their obligations in relation to plumbing, such as to use a licensed plumber where this is required and to ensure that their plumbing is maintained properly

- increase the visibility of the technical regulator and the compliance regime, for example by publishing a newsletter that could contain, among other things, the number and summary results of plumbing inspections on a quarterly basis. For example see the newsletters of the Director of Energy Safety[86] and the South Australian Technical Regulator[87] (samples are in Appendix E). A newsletter of this type would also provide a vehicle for informing stakeholders of any other matter the technical regulator thought relevant.

Further, the technical regulator may choose to raise awareness of the risks involved in plumbing in other ways, for example by appearing at trade shows. The regulator might also choose to provide advice and interpretation of the technical standards. However, if it were to do so, it should be careful to remain aware that the responsibility for compliance with the technical standards lies with the plumber. While the regulator may provide guidance on how to do this, that guidance does not replace the need for training. Nor should that guidance be seen as an authorisation. In particular, it would be illegal to install plumbing work that did not meet the technical standards and the fact that the regulator had given advice would not change this.[88]

5.2 Operational aspects of the compliance regime

The compliance regime should be administered by a technical regulator. The nature of that regulator is discussed in chapter 6. This section describes the way that we envisage the technical regulator administering the compliance regime at layer 6 of the framework for trade regulation.

The technical regulator is part of the broader plumbing regulatory regime. Insofar as the compliance regime is concerned its role is secure compliance with the 'how' requirements described at layer 2 of the framework.

By doing this the technical regulator will to contribute to achieving the objective of WA plumbing regulation.

In practice, the technical regulator will not be able to pursue every instance of non-compliance with the plumbing regulatory regime. Nor would it necessarily be desirable for it to do so. Rather, as discussed in section 6 of Part I of this report, the regulator should adopt a risk based approach to securing compliance.

The technical regulator will not be alone in taking a risk based approach to securing compliance. In fact there are many examples of this approach in Australia, including within the Department of Commerce which is the Australian Consumer Law (ACL) regulator for WA.

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[86] Energy Bulletin is published quarterly and distributed by email. It is also available from available from the publications section of EnergySafety's website at http://www.commerce.wa.gov.au/

[87] Regulation Roundup is published twice a year and distributed by email. It is also available from http://www.sa.gov.au/subject/Water%2C+energy+and+environment/Electrical%2C+gas+and+plumbing+safety+and+technical+regulation/Regulation+Roundup

[88] Note that the customer may choose to pursue their legal right to have work done in compliance with the standard. That right should not be altered by advice provided by the regulator.

While the ACL is not a trade regulatory framework, there are parallels between it and the plumbing regulation in that both are concerned with regulating the conduct of a large number of businesses to preserve the broader public interest.

The way that ACL Regulators operate is described in "Compliance and enforcement How regulators enforce the Australian Consumer Law", which was developed jointly by all ACL regulators.[89]

In summary, ACL regulators take a risk based approach to regulation. They allocate their resources to matters that meet certain criteria and, in doing so, seek to achieve published objectives. The enforcement criteria and objectives are set out in Box 5.

Box 5 **ACL regulators enforcement objectives and priorities**

ACL Regulators choose how to allocate their resources by giving priority to matters that demonstrate one or more of the following

- conduct of public interest or concern
- conduct resulting in significant consumer detriment
- conduct affecting disadvantaged or vulnerable consumer groups
- conduct that suggests a pattern of non-compliance by the trader or is indicative of a risk of future misconduct
- conduct involving a significant new or emerging market issue
- conduct that is industry-wide or likely to become so
- a significant impact on market integrity
- whether action is likely to have a worthwhile educative or deterrent effect
- conduct demonstrating a blatant disregard for the law.

When enforcing the law, ACL regulators have the following objectives:

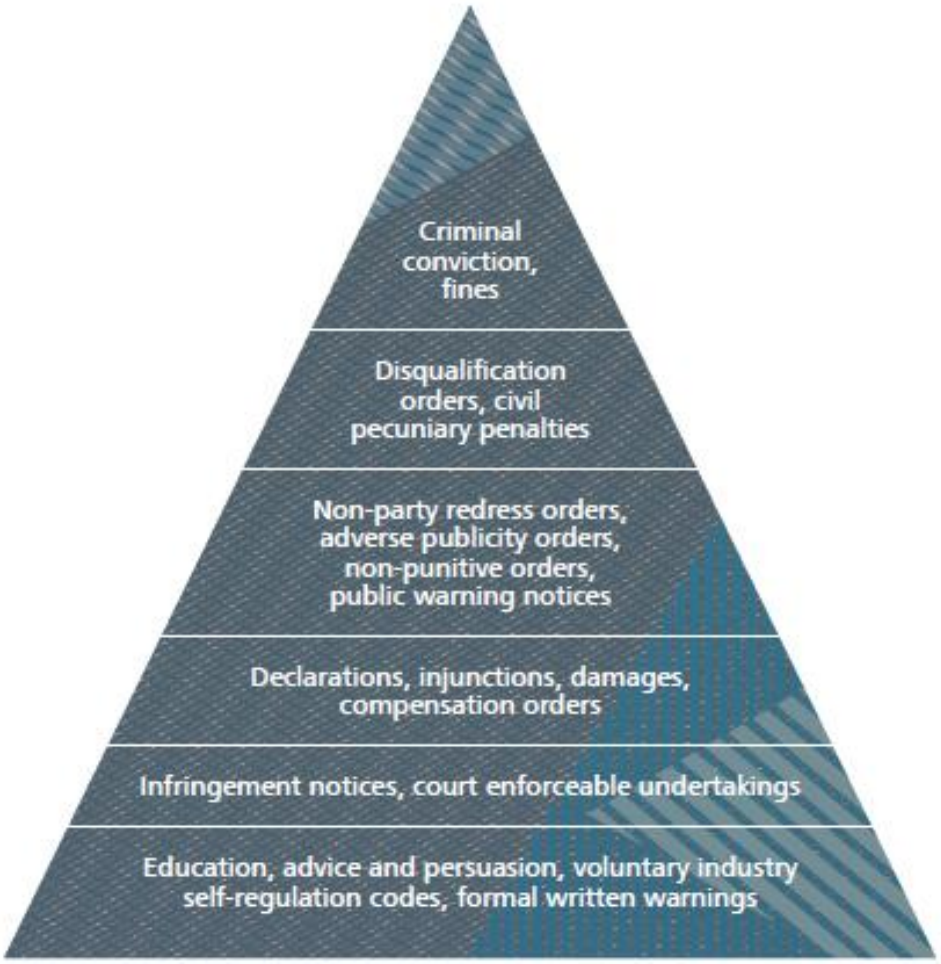
- stop the unlawful conduct
- undo the harm caused by the contravening conduct (for example, by corrective advertising or redress for those adversely affected)
- ensure future compliance with the law
- deter future offending conduct
- encourage the effective use of compliance systems
- when warranted, punish the wrongdoer with penalties or fines.

Source: ACL Regulators, "Compliance and enforcement How regulators enforce the Australian Consumer Law", available from www.accc.gov.au

ACL regulators have a variety of compliance and enforcement options at their disposal. Those options range from education, advice and influencing good practice to legal actions and, in some cases, criminal conviction. The general approach that ACL regulators take to compliance is summarised using the enforcement pyramid shown in Figure 2.

[89] available from www.accc.gov.au

Figure 2 **ACL enforcement pyramid**



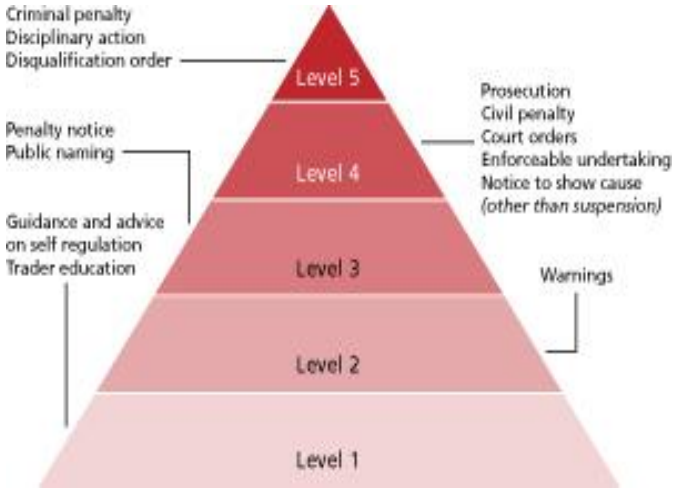
Source: ACL Regulators, "Compliance and enforcement How regulators enforce the Australian Consumer Law", available from www.accc.gov.au

The particular options available to the ACL regulators and the technical regulator will not be the same. Notably, the technical regulator would not be able to pursue criminal conviction. However, the broad message from the enforcement pyramid is applicable. That message is that many matters are resolved using relatively 'light' approaches such as written warning letters, advice and persuasion. As the compliance option becomes 'heavier' the number of matters is fewer.

Use of the compliance pyramid was advocated in the submissions of Mr Goodchild and Mr Johnson.[90] The pyramid presented in those submissions, reproduced in Figure 3, is not discussed in detail but the point is that the technical regulator should have access to a range of enforcement options in much the same way as the ACL regulators.

[90] Mr Johnson's submission appears to be based on Mr Goodchild's.

Figure 3 **Compliance pyramid from submissions of Messrs Goodchild and Johnson**



Source: Submissions of Mr B. Goodchild (p4) and Mr J Johnson (p.4)

We agree with these submissions that a compliance pyramid is a useful tool for managing a compliance regime. It would be an appropriate basis for the technical regulator's compliance activities.

To give effect to a risk based enforcement approach based on a compliance pyramid the technical regulator should develop compliance objectives and priorities. These would be updated annually and published in a similar form to the Director of Energy Safety's annual business plan.[91]

The priorities in the business plan would be used by the technical regulator's staff as the basis for recommending the appropriate action to take when specific instances of suspected non-compliance are identified. They would also help industry understand what is expected of them and contribute to natural justice by ensuring consistent and even treatment of suspected misconduct. It would also provide the basis for pro-active compliance activities such as audits, which we understand are currently being considered by the PLB.

It is also possible to apply a compliance pyramid approach to the implementation of inspection regimes. Large contractors, or indeed individual sole traders, who demonstrate good record keeping, logs of their work, quality checks, up to date standards and monitoring of industry developments, and a positive record of compliance with regulations may (unless there is contrary evidence) require less frequent inspection and monitoring than those without.

It is also important that the various enforcement options are provided in the regulations as set out earlier in this chapter.

[91] see Appendix C.

6 Key decision makers

A key part of the regulatory model is the decision maker, or makers, that will administer it.

The decisions that must be made relate to developing laws and policy and securing compliance with them. Therefore, they are fundamentally decisions for Government. Even if the industry was to be self regulated, this would be a result of Government deciding that this should be so (or not deciding that it should not).

The fundamental question here is not *whether* Government should make these decisions, but *how* it should do so. Several approaches are available. The decisions could be made by either:

- Parliament
- a Minister
- an independent statutory office holder or group of officers
- a public servant.

All of the regimes we reviewed are characterised by at least one decision maker that is a statutory office holder or group thereof. In the WA plumbing regime the statutory office holders are the members of the PLB. While the details vary, all of the regulatory regimes that were considered are substantially similar insofar as the key decision makers are concerned.

Nonetheless, the issue of who should be the decision maker was widely discussed in the submissions and at the public consultation sessions. The trade regulatory framework is reproduced in Figure 4, which shows that the decisions to be made at different layers of the regulatory framework are different by nature.[92]

[92] Of course decisions must be made to establish the other layers, but once they are established they do not require ongoing decision making.

Figure 4 **Trade regulatory framework**

Layer	Decision maker	Description	Decisions to make
1		**Commonly accepted definition of the trade**	
2	Minister	**Technical rules**	▪ What should be the minimum standard of plumbing legally acceptable in WA? ▪ Would proposed technical rules place Western Australians at an unacceptable level of risk of problems due to plumbing?
3	Minister	Regulatory definition	▪ What is the scope of the plumbing regulatory regime? ▪ Where does plumbing 'stop' and other trades 'start'?
4	Minister	Objectives	▪ Why should plumbing regulation be used? ▪ What objective should the technical regulator (and possibly licensing authority) pursue as it administers the compliance regime?
5	Minister or licensing authority	**Licensing regime**	▪ Which branches of the trade should be reserved to licenced persons ▪ What skills do those persons need?
6	Licensing administrator	**Licensing regime**	▪ Have individual applicants met the licensing criteria? ▪ Should individual people be given a licence? With or without conditions?
7	Technical regulator	**Compliance regime**	▪ How should Government resources be allocated to ensure that plumbing work is done properly by authorised people? ▪ Has specific plumbing work been done in accordance with the technical rules? ▪ What should be done about specific individuals who have broken the rules?

Source: ACIL Allen Consulting

At layer 2, the decision maker must choose what the rules should be. Given that the objective of plumbing regulation is to manage the risk of public health problems, the decision maker must evaluate whether the risk to the health of Western Australians will be unacceptably high if changes to the technical rules are made. In practice, these decisions tend to be made through national processes under the auspices of COAG (e.g. through the Australian Building Codes Board).

At layers 3 and 4 the decisions are simply what the regulatory definition of the trade and the objective of plumbing regulation should be. They define the 'field' in which decisions are made at lower levels.

The decisions at layer 5 are a blend of technical decisions about the skills a person needs to do work safely and decisions about the risks associated with letting work be done with different levels of training (including with no particular training).

Most of the decisions to be made at layers 6 and 7 are fundamentally different to the decisions at higher layers because they relate to whether 'the rules' *have been followed*. At those levels decision must be made about:

— whether an individual person has satisfied the criteria and can be given a licence

— how to administer the compliance regime to secure compliance

— how to deal with a person suspected of misconduct of one form or another.

As a general proposition it is appropriate for decisions to be made by Parliament or a Minister where they are decisions relating to what 'the rules' are. They would ideally be

made by an independent statutory officeholder where they relate to whether an individual incident is within or outside the rules that have been laid down.

Our recommendations for the appropriate decision maker at each layer are provided below with the exception that our recommendation for the decision maker at layer 7 of the framework is discussed in chapter 7.

6.1 Decision maker at layer 2 – what are the technical rules

The decision maker at layer 2 should be the Minister.

In practice, responsibility for decisions concerning the technical rules cannot be meaningfully delegated because doing so would be contrary to a pre-existing Intergovernmental agreement (IGA).

The technical rules are developed by the Australian Building Codes Board (ABCB). The ABCB was established by an IGA in March 1994. The original IGA was replaced with another on 30 April 2012.

In that IGA the WA Government and each of the other Australian jurisdictions retained primary responsibility for regulating buildings, including the plumbing in buildings. However, the WA Government (and others) also agreed that the technical rules for plumbing and other industries should be as consistent as practicable across the country. To ensure that this is the case, Governments established the ABCB as a national advisor to develop the appropriate rules (and perform other functions). The ABCB has, in turn, established the Plumbing Code Committee (PCC) to advise it on technical matters relevant to plumbing regulation. Each Australian Government is represented on the PCC along with various industry bodies.

The intention of this arrangement is that WA's input into the development of the plumbing technical rules is to be at the PCC level. Of course WA also has the choice of adopting, or not, the technical rules as recommended by the PCA but if the system is 'working' there will be no reason not to adopt those recommendations.

In any case the ABCB's recommendations must be adopted, or not, by the WA Government in Parliament or through regulations. Therefore, the decision maker must be either the Parliament or the Minister.

This said, the Minister will require technical advice in making decisions regarding the technical rules. Therefore, the technical regulator's functions should include providing the Minister with technical advice. The Minister may also choose to seek advice from the Department or from other sources such as industry. This is the prerogative of a Minister of the Crown.

The real question here is whose advice the Minister will seek in making relevant decisions and who will be WA's delegate to the PCC. While it seems sensible that the Minister would take advice from the technical regulator, the Minister may also choose to take advice from others. For example the Minister may wish to consult with industry, though industry is also represented on the PCC so this may be unnecessary.

The question of whose advice the Minister will seek in considering recommendations from the PCC is not, in our view, a matter which should be prescribed by regulations.

6.2 Decision maker at layer 3 – regulatory definition of the trade

The regulatory definition of plumbing would typically be in the relevant Act, which makes the decision maker the Minister in the sense that the Minister introduces the relevant legislation. In another sense the decision maker is the Western Australian Parliament. In either case, this is not a matter that should be prescribed by regulations.

6.3 Decision maker at layer 4 – objective of plumbing regulation

As with the regulatory definition of plumbing, the objective of plumbing regulation would typically be in the relevant Act, which makes the decision maker the Minister in the sense that the Minister introduces the relevant legislation. In another sense the decision maker is the Western Australian Parliament. In either case, this is not a matter that should be prescribed by regulations.

6.4 Decision maker at layer 5 – licensing criteria

In the licensing regime discussed here two distinct types of decisions must be made. Therefore, we recommend that there should be two separate decision makers.

The first decision maker would operate at layer 5 of the regulatory framework. It would make decisions relating to horizontal and vertical separation and licensing criteria. Broadly, it decision maker would decide:

- which branches of plumbing pose a sufficient risk that they should be reserved for licenced people
- the skills that a person should have before they are allowed to do work in those branches.

The first decision would take account of factors such as how difficult it is to do the work well, how likely it is that work would, if done poorly, lead to public health problems and the risk that untrained people would do that type of work if this was permitted.

The second decision would flow from the first.

These decisions could be made in advance and 'hard coded' into the regulations. However, as noted above, this would limit flexibility and, in our view it would be preferable to avoid this approach. However, notwithstanding the flexibility, the decisions should be based on a thorough consideration of the costs and benefits of any changes that are contemplated.

In our view it would be appropriate for these decisions to be made by the Minister by Ministerial order or for them to be delegated to a licensing authority such as a licensing Commissioner. If the latter choice is made, it would be possible to delegate those decisions to the technical regulator discussed in chapter 6 or to delegate them to a separate decision maker.

The choice between Minister and delegated authority and between the possible authorities should be based on an analysis of the relative efficiency of each. In practice there may be little difference between the costs involved with each approach given that whichever decision was made the analysis would be done by similar people.

6.5 Decision maker at layer 6 – licensing administrator

The second decision maker in the licensing regime would be a licensing administrator. Their role would be substantially operational. That is the administrator would be responsible for determining whether a person who wanted to obtain a licence had met the necessary criteria but it would not determine the licensing criteria. Nor would it have any significant discretion over whether it is a 'good idea' to grant a licence to a particular person. It would simply apply the rules it was given.

The licensing administrator would have the responsibility for collecting and collating data and making it available to the Minister and the public. Those data would assist the Minister in making decisions relating to the licensing criteria.

Given these functions the review recommends that the licensing administrator could either be a role given to the Department for Commerce or to the technical regulator. The choice between the two should depend on which can perform the necessary functions most efficiently. In practice we do not expect that there would be a substantial difference.

6.6 Decision maker at layer 7 – technical regulator

Our recommendations in relation to the decision maker at layer 7 of the trade regulatory framework are provided in chapter 7.

7 The technical regulator

The review recommends that the compliance regime should be administered by a technical regulator.

The likelihood of operational and administrative synergies leads us to conclude that, operationally, the technical regulator should be 'multi-trade'. That is, even if the regulator itself is retained as a plumbing specific legal entity, its staff should be provided, and managed, jointly with staff responsible for other trades. This is discussed in section 7.1.

It does not necessarily follow from this that the legislation establishing the plumbing regime should be merged with legislation establishing other trade regulators. We note, for example, that the WA energy safety regulator appears outwardly as a single entity though its gas and electricity functions are established under different legislation.

In our view the key issues to consider in establishing the technical regulator are the skills and information it needs and a clear definition of its roles, rights and responsibilities. These are discussed in section 7.2, though some are discussed in other documents such as the Public Sector Commission's *Principles of Good Corporate Governance for Western Australian Public Sector Boards and Committees*, to which the Auditor General referred in the earlier review. The discussion here is not intended to replace those documents.

Another key issue to be considered is the way that the technical regulator reports its activities. In large part we expect that if reporting was improved, both to the regulator and by the regulator by the public, the concerns raised in consultation would be allayed.

Issues relating to reporting *to* the technical regulator were identified in the Auditor General's report and are not revisited here, though we understand that progress has been made towards implementing a Memorandum of Understanding between the PLB and the Building Commission Division.

Issues related to reporting *by* the technical regulator are discussed in section 7.3.

Regardless of whether the determination of licensing criteria is delegated to the technical regulator it might be most efficient for it to have the role of license administrator. The alternative would be for the administration to be done by the Department of Commerce.

7.1 Horizontal dimension – single or multiple trades

The question of whether technical regulation should be managed by an organisation with a single or multi trade focus was widely discussed. The discussion in this chapter begins in section 7.1.1 with a summary of the discussion on this topic at the public consultation sessions and the submissions that were made.

Our analysis of those views and submissions is provided in section 7.1.2.

7.1.1 Horizontal dimension – views from submissions

The overwhelming view of the plumbing industry was that the technical regulator should focus on the plumbing industry alone.

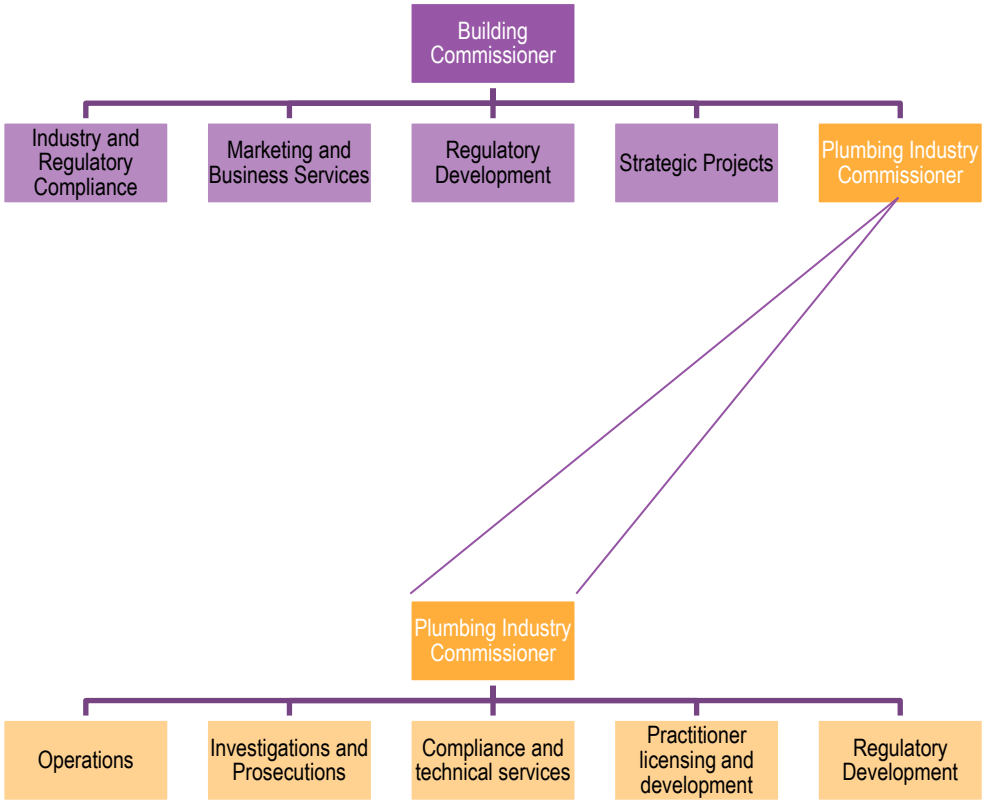
Many stakeholders joined the MPAGA in arguing that plumbing regulation could not be done competently by a multi-trade regulator and that it should be the domain of a plumbing

specific regulator. It was also commonly argued that plumbing could, or should, be regulated by the Director of Energy Safety and the broader organisation that is EnergySafety, though this was usually seen a 'second best' option behind a plumbing industry specific regulator.

The PLB submitted that there should be a broad ranging plumbing regulator and that it should be an independently financed body reporting to the responsible Minister.

The MPAGA and CEPU made similar submissions in which they proposed an organisational structure of the plumbing regulator, which is adapted in Figure 5.[93,94]

Figure 5 **MPAGA and CEPU proposed structure for plumbing regulator**



Source: Adapted from Master Plumbers and Gasfitters association submission, Appendix 4

[93] In the MPAGA submission the various teams subordinate to the Plumbing Industry Commissioner were stacked vertically, which might imply a ranking between them, though we understand that this was not intended so they are shown here in a horizontal structure. We also deleted 'Executive Assistance' from the plumbing Industry Commissioner's 'branch' of the organisation chart for ease of presentation and because it is not shown in the Building Commission either.

[94] The MPAGA and CEPU made separate submissions, though they were the same as far as this issue was concerned.

The key point of the MPAGA's submission is that the plumbing regulator would be an autonomous, self funded, unit within the Building Commission.

The Institute of Plumbing Australia (IPA) also proposed a structure for the plumbing regulator (referred to as the plumbing technical regulator).

In the IPA's proposal, the plumbing regulator would be similar to the Director of Energy Safety. That is, the regulator would be a person appointed by the Minister with engineering expertise. The regulator would be supported by an Office which would be a division of the Department of Commerce (as is EnergySafety). The regulator would also be supported by a board that would be chaired by the regulator and otherwise be similar to the current PLB, with two additional members, namely as Chief Examiner and a Chief Compliance Officer.

There would also be two technical advisory committees, one for licensing and training and another for regulation and compliance.

7.1.2 Horizontal dimension – analysis and discussion

In considering the difference between a single-trade or multi-trade approach it is important to distinguish between the legal status of the regulator and the arrangements made to provide it with staff.

Legally the PLB is already the type of entity that the majority of stakeholders have called for. That is, it is:

- a stand alone entity established under the WA Plumbing Act and Regulations
- funded by fees collected from plumbers
- legally independent and answerable to the Minister for Commerce.

However, by and large, the PLB is not perceived as an independent, self funded entity. This seems to be largely because its staff are provided by the Building Commission division of the Department of Commerce.

When submissions were made to the effect that the plumbing regulator should be independent of other trades the underlying point was that the staff who support the regulator itself should not work for an organisation that also has responsible for other trades and, therefore, that the regulator's staff should be focussed only on plumbing.

In our view this argument is not strong.

In part the argument here was that a plumbing compliance officer must be a plumber. It was often said that if a plumbing inspector came to a work site to inspect plumbing work they would not be respected unless they were known to be a well credentialed senior plumber.

In our view this is not the same thing as saying that the plumbing regulator must be a single trade regulator. Even if every plumbing compliance officer must be a trained plumber, there is no reason why the organisation those officers work for should not also have responsibility for other trades.[95]

In fact, WA's EnergySafety is an example of a multi trade regulator, with responsibility for both electrical and gas-fitting trades.

[95] As discussed below, we do not necessarily accept that all plumbing compliance officers should necessarily be plumbers, though no doubt some should.

When we pointed this out during the public consultations the response was usually that the multi trade model in EnergySafety works because the Director of Energy Safety has a strong technical focus.

The underlying argument was, usually, that the plumbing regulator should place appropriate emphasis on technical regulation and that this is only likely to happen if the plumbing regulator is separated from the Building Commission.

We do not agree.

We are not persuaded that there is a need for a single all encompassing plumbing regulator. In particular, as discussed in section 6.4 we are not persuaded that the decision maker who determines licencing criteria needs to be the same decision maker who administers the compliance regime. This is a possibility but there are alternatives.

We do agree with the central thrust of the MPAGA, CEPU and IPA (and other) submissions that that technical regulation is important and that physical inspections of plumbing work, where they are used, should be conducted by people with experience and qualifications in plumbing. However, we see no reason why 'multi trade' technical regulation should be less effective than single trade technical regulation. In fact, the 'single trade' model is progressively being replaced around the country. For example, energy regulation is multi-trade around the country, with the Director of Energy Safety and interstate equivalents having similar responsibilities in both electrical and gasfitting trades. We take the experience in South Australia, Victoria and WA (through EnergySafety) as evidence that multi-trade regulation can work perfectly well.

We also agree that, regardless of whether the technical regulator is also responsible for other trades it should have, as the PLB suggested in its submission[96], a 'clear mandate' to pursue the objective of plumbing regulation for the benefit of Western Australians.

However, once this mandate is in place the question of single vs. multi-trade regulation is a question of organisational design and efficiency. There is no reason that we can see why a well managed organisation couldn't achieve this mandate as well as others that are similar.

The PLB's mandate is similar to that of the Building Commission and EnergySafety. That is, to administer the regulatory regime for the good of all Western Australians.

The functions that each of these organisations must perform are fundamentally the same as one another. Those functions are summarised in the MPAGA's proposed structure for the plumbing regulator (in Figure 5). However, it is clear from that figure that there is overlap in those functions.

For example, in the MPAGA's proposed structure:

- both the Plumbing and Building Commissions have 'Regulatory Development' functions.
- the Building Commission has 'Industry and Regulatory Compliance' and the Plumbing Commission has both 'Investigations and Prosecutions' and 'Compliance and Technical Services'.
- both organisations would also have license administration functions (though this is not shown for the Building Commission).

In at least these three areas the two organisations would require staff with similar expertise performing similar functions.

[96] PLB submission, p. 5, recommendation regarding Governance of Plumbing Administration

Similar overlaps exist between the existing Building Commission and the model proposed by the IPA. There are already overlaps between EnergySafety and the Building Commission. If a plumbing regulator was created as a third standalone entity there would be three overlaps in some of these areas.

We see no reason why an efficient organisation that can perform those functions in one trade could not also perform them in another. Of course that organisation would need to employ people with appropriate technical expertise for some functions, but it should make no difference whether those people have colleagues who work in other trades.

In fact we anticipate that there would be synergies in a multi-trade regulator. First, a multi trade regulator would automatically be larger than a single trade regulator giving it access to economies of scale by sharing functions such as license administration and processing. The skills needed in these areas are primarily clerical and could easily be shared across trades. Similarly, basic administrative tasks such as filing, processing mail, collating documents and the like can benefit from economies of scale.

Second, a team of compliance officers working across multiple trades should be able to work collaboratively to identify problems in one another's 'home' trades.

For example, a building inspector might find themselves on a site inspecting some aspect of building work while a plumber is present. The inspector would not have detailed technical knowledge of the plumbing trade but would be capable, at the very least, of ascertaining whether the plumber has an appropriate licence and had completed the necessary paper work. In a single trade regulatory model they would have no legal authority to ask for the plumber's licence whereas in a multi trade organisation they could.

If the building inspector found that the person doing plumbing work was not properly licensed, they would not need plumbing technical skills to take whatever action was considered appropriate for working unlicensed, which would presumably be similar in the various trades.

In addition, the building inspector could call in a plumbing colleague to conduct a physical inspection of the work that was being done. In this way the multi-trade regulatory model increases the chance that an unlicensed plumber would be identified, but it does so without increasing the number of plumbing inspectors.

Of course the reverse is also true. In a multi-trade regulatory model a pluming inspector could just as easily conduct licence checks for non-plumbers.

In a series of single trade organisations this would not be impossible but in a multi-trade organisation it would be simpler and more efficient.

Third, a multi trade regulator could share non-technical functions relating to the compliance regime. Some submissions call for plumbing compliance officers to be, exclusively, people with plumbing qualifications. We accept that anyone responsible for physical inspections of plumbing work should have those qualifications. However, there is more to compliance work than this. Therefore, it does not follow that all compliance officers need these qualifications. Nor does it follow that those qualifications are the only skills a compliance officer needs.

For example, the plumbing regulator may choose to invest resources in making sure that plumbing work that should be reported to it is reported properly. This would not necessarily replace the need for physical, technical inspections, but it may still be considered a valid exercise. If so, the compliance officers given this task would need skills similar to auditors. A compliance officer with these skills could just as easily audit plumbing related paperwork as they could electrical, gasfitting or building paperwork.

Similarly, the decisions that would need to be made as to how to deal with allegations of misconduct in disciplinary matters would require legal skills, but not necessarily (trade) technical skills.

Those legal skills could also be shared across trades. Processing disciplinary matters, conducting interviews and negotiating settlements would all require legal skills as well, which could also be shared between trades. Other compliance functions could also be shared. One example would be as screening advertisements to identify potentially unlicensed tradespeople, which would not require technical skill in one trade or another.

Finally, there are strategic synergies that could be tapped in a multi-trade model. The objective of regulating different trades is more or less the same, that is, trades are regulated to protect the public from the problems that would arise if work in the trade was done poorly. The reason regulation is required, that is to overcome information failures and externalities, is also the same.

It follows that there will be some activities that the regulator of one trade will want to do that the regulator of another trade would also find useful. For example, plumbing regulators around the country have, from time to time, run media campaigns urging the public to use licensed plumbers. Electrical and other regulators have run similar campaigns in their own trades. As discussed in section 5.1.4 this type of campaign is a legitimate way of improving outcomes in a trade as it addresses market failures of information directly.

Sometimes a multi-trade regulator might choose to run a multi-trade campaign –such as '*Don't risk using an unlicensed plumber or electrician*' rather than limiting the campaign to one trade or another.

There are also strategic synergies that can be realised through sharing of common learning about developments in regulation more generally. For example, improvements in regulatory practice in transport, energy, consumer goods or other markets both in Australia and internationally can have lessons for regulatory practice more broadly, both in plumbing regulation and in relation to other trades. While individual regulators will often attempt to stay abreast of the state of play in other industries there are practical limits to the ability of individuals, no matter how dedicated, to do so. A multi-trade regulator has greater capacity to allocate resources to identify, summarise and disseminate such lessons.

We do not necessarily say that the Government should pursue the activities listed as examples here. Rather, we note that, if an organisation with a multi-trade focus considered these to be appropriate ways to spend resources in the pursuit of its objectives, it would have access to efficiencies in doing so. These things would not be impossible to accomplish cooperatively between several single-trade regulators. However, they would be easier to accomplish and probably more efficient if the regulator had responsibility for multiple trades.

7.2 Structure

In our view the technical regulator should be a statutory office holder or group thereof. It should be supported by a staff provided from the Western Australian Public Service

A key issue is to ensure that the technical regulator can operate with appropriate independence from the Government of the day. Therefore, its members should be appointed for a fixed term.

The regulator, or its members, should have the necessary skills to perform its role. This will include technical plumbing skills, but it will also go beyond that to legal and government administrative skills.

In our view the plumbing regulator should have the skills and experience in the following areas:

- plumbing
- hydraulic design
- plumbing training
- public administration and governance
- enforcement and compliance administration (legal skills)
- consumer issues[97]
- issues facing Western Australians in remote areas
- issues relevant to small business

It is not necessary that the person, or people, who are appointed as the regulator have all of these skills themselves. Some could be provided from within the staff assigned to the regulator. We recommend that the members of the technical regulator should be chosen using a skills matrix. That is, the necessary skills and expertise should be identified and individual members chosen to ensure that one or more of them has those skills.

A skills approach does not imply appointing one member per skill. It is likely that many appointees will have combined skills – for example, a member might have both plumbing and small business expertise, another might have all three of remote areas, plumbing training and hydraulic expertise and so on. Similarly, there is no reason why there should be several members with substantially the same skills.

Consistent with the skills matrix approach we recommend that the number of members or the regulator should not be fixed. It will not be possible to know in advance how many members will be needed to fully populate the skills matrix and this will change over time as individual members come and go.

Just as the regulator should be independent from the Government of the day, it should also be independent of the plumbing industry. Therefore, we recommend that its chairperson continue to be a person from outside the industry. It is also appropriate that one member of the regulator should be deputy chair and that the deputy chair should act as chair in the chair's absence. If, on the other hand, the regulator is a single person this would be unnecessary. In this case it may be appropriate for the person to have been a plumber in the past, though any conflicts of interest, either actual or perceived, would need to be managed carefully.

We recommend that the existing model of referring to individual appointees nominated by individual groups is abandoned. The PLB's current composition shows one of the pitfalls with this approach, namely that it may be impossible to appoint a full complement of members to the regulator if an organisation named in the regulations winds up or is otherwise unable to make a nomination. In our view it is preferable for the Minister to have flexibility in making appointments to the regulator. This would not prevent the Minister from consulting with the organisations currently named in the regulations, but it would allow broader representation as well as flexibility in representation over time.

[97] Given its importance to consumers it should also have consumer protection expertise and skills. However, plumbers' *customers* are often not *consumers*. Rather they are often businesses themselves, in many cases businesses in the construction industry. The interests of these groups should also be represented.

7.3 Data gathering and reporting

During this review we requested information from the Department relating to activity in the plumbing industry and to compliance activity. The Department of Commerce provided the information we requested to the best of its ability, but the information was limited and it was difficult and time consuming for the Department of Commerce to produce it.

In our view this should change. Detailed statistics should be kept regarding the full range of compliance related information.

These statistics should be used in (at least) three ways:

1. to allow the technical regulator to target its compliance activity
2. to allow the Government to monitor the industry and identify trends
3. to enable public reporting of compliance outcomes and other matters.

The data that should be collected would include the amount of plumbing work done as measured by the number of jobs reported to the technical regulator.[98] To support this, and generally to reduce the administrative and transaction costs in the industry we recommend that the Department of Commerce proceed with the implementation of an online system for reporting plumbing work to the technical regulator as foreshadowed in the 2011/12 Annual Report.

Statistics drawn from this system would be useful in many different ways. For example, by comparing the number of plumbing jobs reported in WA with corresponding statistics from other jurisdictions would assist the technical regulator in estimating the extent of unlicensed and unreported plumbing.[99] Analysing compliance statistics would allow the technical regulator to identify areas where compliance is poor, whether these are geographic or functional areas.

It is also important that statistics relating to plumbing regulation are reported publicly. This will give the public confidence that regulation is being applied appropriately. However, it also forms part of the compliance approach by reminding:

- plumbers of their various obligations
- non-plumbers that they may be penalised if they are found to be doing work for which they are not properly licensed
- the public of the issues relating to plumbing.

As discussed in section 5.1.4 we recommend that the technical regulator publish a regular publication similar to EnergySafety's 'Energy Bulletin'. That publication should include statistics relating to the amount of plumbing work done, the number of inspections conducted and their outcomes. It should also include case studies of enforcement actions and the details of plumbers whose licences have been suspended, cancelled, varied, revoked or reinstated. [100]

While we recommend that the technical regulator should operate on a multi-trade basis we would argue strongly that reporting should be on a 'trade by trade' basis. Partly this would

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[98] In present terms this would mean the number of compliance certificates or notices of intention submitted. As discussed in section 5.1.4, the details might change

[99] Of course this comparison would need to be made carefully to account for differences as to what must be reported in different jurisdictions.

[100] Those actions should be conducted in the public eye and licenses are on a public register so privacy should be no barrier to publishing this type of information.

allow the public, and that industry, to see the focus being given to plumbing regulation, but it also has important compliance benefits.

As discussed in section 5.5.3 of Part I of this report, plumbers in WA have the perception that domestic plumbing work is not subject to inspection. The Building Commission has provided information to show that this perception is not well founded, but the perception is there nonetheless. If reporting was aggregated across trades, this perception would be likely to persist. Correcting this perception is an important part of reducing the extent of unlicensed plumbing as it increases the perceived chance of getting caught which is more important than the actual chance in this context.

8 Who should pay for plumbing regulation?

The Terms of Reference for this review included providing advice on the means of funding plumbing regulation.

At present, the PLB is funded by licence fees and the fees paid with notices of intention and multi entry certificates. That is, plumbers pay a certain amount each year in licence fees and then an additional amount every time they do a job. In practice we understand that the cost of a notice of intention is typically passed through to the customer as a line item on the invoice, though there may be plumbers who do not do this in all cases.

In our view two issues should be considered in relation to funding plumbing regulation:

1. monies raised from those people purportedly for plumbing regulation should not be spent on other activities
2. the cost of plumbing regulation should be met by those who benefit from it.

The first of these criteria was mentioned by the Auditor General in its review. It said that a significant surplus of fees raised by a government agency such as the PLB in excess of the cost of providing the service it provides would be an 'illegal tax'. It follows from this that the fees raised for plumbing regulation should not exceed the amount spent on plumbing regulation.

In EnergySafety this criteria is met using the Director's business plans. Each year the Director prepares a business plan which sets out the activities the Director will undertake in the year ahead. The plan includes budgets for those activities, which are translated to levies to be raised. The Minister considers that plan and, when it is approved, the levies are set, the revenue raised and the plan put into effect.

This approach seems to be appropriate, pragmatic and flexible. We recommend that it be adopted in the plumbing sector as well.

The second criteria relates to who pays the cost determined in the business plans.

In our view it is appropriate that the beneficiary of plumbing regulation pays for it. In its submission the IPA suggested that the beneficiaries of effective plumbing regulation are:

- the community at large, through improved public health
- plumber's customers, including the government, through increased confidence in the work done for them
- plumbers
- the government, due to the existence of a healthy workforce
- water service providers, whose infrastructure is protected from poor plumbing
- the environment

We accept that these groups benefit from a well regulated plumbing industry with the exception of the government due to a healthy workforce. In our view this benefit flows to the community at large and is better thought of as part of the benefit of improved public health. Further, while we agree that there are environmental benefits from high quality plumbing, the environment cannot be asked to pay for plumbing regulation.

There is also an argument that plumbers themselves are the main beneficiaries of a regulatory regime. That regime allows plumbers to provide an important service for which there is substantial demand and prevents others from doing the same. The existence of a regulatory regime, and in particular a licensing regime, is a barrier to entry to the market for plumbing services.

It could be argued, therefore, that plumbers should fund the regulatory regime because they are the key beneficiaries of it.

In our view this argument should be addressed not by requiring plumbers to fund the regime, but by ensuring that the regime represents the smallest barrier to entry possible while still achieving the objective. That is, the regulatory regime should take the lightest touch that can be taken while still constraining the risk to public health attributable to plumbing.

If this approach was adopted we would agree with IPA that the beneficiaries of plumbing regulation are not just plumbing customers. All Western Australians benefit from plumbing regulation, which suggests that all Western Australians should contribute to the cost. In practice, we recommend that this be achieved by a levy on water service providers.

Recovering funding through water service providers would maintain the link between the objective of plumbing regulation, which is to protect the public health from water borne disease, and the funding model. It may also provide a matching of risk and payment if the levy was recovered in a volumetric way (i.e. on a per kl basis), though this may prove too costly in terms of transaction costs to warrant it.

Another advantage of this approach is that it would be open, transparent and subject to the scrutiny of the Economic Regulatory Authority.

On the other hand, if the plumbing regulatory regime was to remain in its current inflexible form presenting entry barriers that we consider unnecessary, we would recommend that the funding remain as it is, with plumbers funding the regime.

9 The Plumbing Code of Australia

A further issue that the review was asked to consider is the adoption of the PCA.

Plumbing has historically been regulated through different legislative and administrative arrangements than building and other trades. In July 2008 following a review by the Business Regulation and Competition Working Group Australian Governments agreed at COAG to develop and implement a single, national construction code to cover building, plumbing, electrical and telecommunications.

The first stage of this was to consolidate codes for building and plumbing. This has now been done. The result is that the National Construction Code is now in three volumes. Volumes One and Two are, jointly, the Building Code of Australia. Volume Three is the PCA.

In terms of the regulatory framework described in this report the NCC contains technical rules. That is, it says how plumbing and building work should be done. However, unlike its predecessors, it is a performance based code. This means that it defines how plumbing and drainage systems must perform but does not necessarily specify how they must be constructed.

The PCA consists of the following five sections, each relating to a branch of plumbing:[101]

- section B – Water Services
- section C – sanitary plumbing and drainage systems
- section D – stormwater drainage systems
- section E – heating ventilation and air conditioning
- section F – On-site wastewater systems

Each section of the PCA contains a set of performance requirements which define the way that plumbing systems of different types must perform.

Each section of the PCA also contains 'deemed to satisfy' provisions. Basically, these say that a plumbing installation will satisfy the performance requirements if it is designed, constructed and installed in accordance with the applicable Australian Standard.

Therefore, under the PCA, it is possible to install plumbing work as prescribed by the applicable standard or to use another approach that will meet the performance requirements (an alternative solution).

At present, the WA plumbing Regulations are based on the same standard as the PCA so, while the PCA does not apply in WA the practical effect is that the technical rules in WA are the same as the deemed to satisfy provisions of the PCA.

However, it is not possible, or at least not legal, to use an alternative solution in WA at the moment.

[101] Section A contains introductory and administrative provisions. There is also section G, which deals with product certification.

The Western Australian Government decided to adopt the PCA in 2008 at COAG together with other Governments. Therefore, the question for this review was not *whether* to adopt the PCA but *how* to do so. Two questions were raised during consultation and are discussed below:[102]

1. Does adoption of the PCA necessarily mean that WA would expand the scope of work for which a plumbing licence is required?
2. how should alternative solutions be applied and, in particular, who should be able to 'sign off' on an alternative solution?

9.1 The PCA and the scope of the licensing regime

In our view the answer to the first question is 'no'. We see no direct link between the PCA and the question of licensing. As discussed throughout this report the technical rules and licensing layers of the regulatory regime are independent of one another.

As discussed in section chapter 4 of this part of the report and in chapter 6 of Part I, the evidence that is available does not justify an expansion of the scope of work that requires a licence. Therefore, broadening the scope of the licensing regime to 'match' the PCA is not supported by the evidence.

However, this is no barrier to adoption of the PCA. This fact is illustrated by the national licensing process. The NOLS Decision RIS makes it clear that jurisdictions need not introduce licensing to branches of plumbing which are currently not subject to a licensing regime.

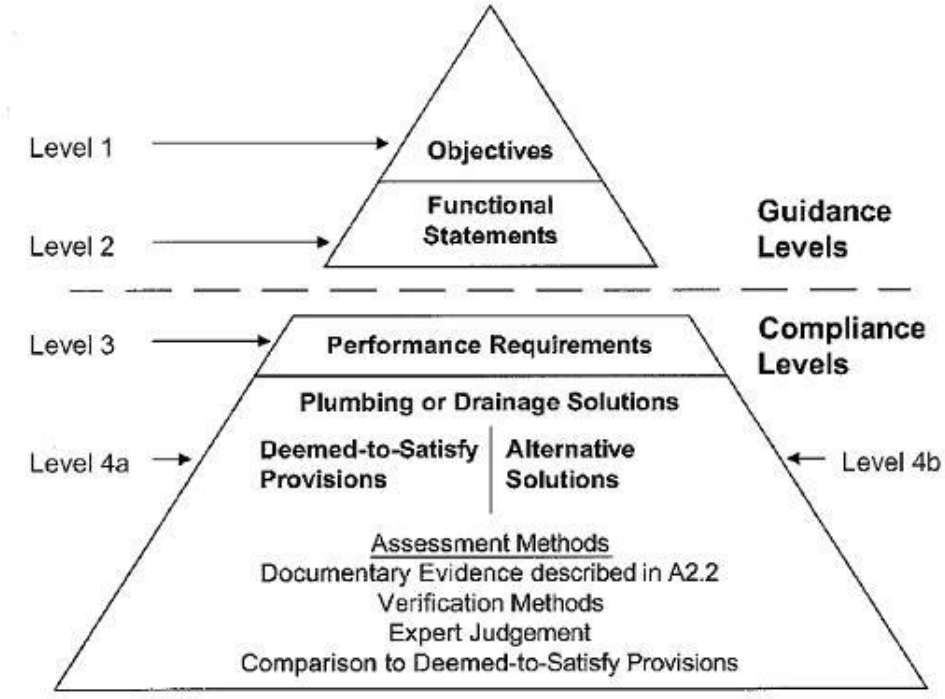
We recommend that WA treat the question of adopting the PCA independently of the licensing regime. Subject to issues surrounding the adoption of alternative solutions, WA should proceed to adopt the PCA regardless of the extent of the licensing regime.

9.2 Alternative solutions

The introduction of alternative solutions raises issues of proper risk management. Alternative solutions devolve control of the way plumbing work is done away from the Government and into the hands of the industry. The way this works is illustrated in the PCA itself using the diagram in Figure 6.

[102] These questions are our synthesis of issues that were discussed at various times during consultation.

Figure 6 **Hierarchy of the Performance Based PCA**



Source: Australian Building Codes Board, www.abcb.gov.au

The key issue arises where level 4 splits into two 'sides'.

At level 4, the PCA allows for *someone* to decide whether a proposed alternative solution can be used in a particular situation. The question is *who* should be able to make that decision.

Three broad options emerged during the consultation and from the submissions:

1. the determination could be made by the plumbing regulator[103]
2. the determination could be made by an engineer or similarly qualified person[104]
3. the determination could be made by a 'senior plumber'[105]

In our view the first approach would substantially defeat the purpose of introducing alternative solutions into the PCA. According to the Australian Building Codes Board, the:[106]

> benefit of having a performance based [code] is that it provides practitioners with a strong degree of flexibility to determine the most appropriate means for demonstrating compliance with the relevant Performance Requirements.

Therefore, a key objective of a performance based approach is to give flexibility to practitioners. If the implementation of the PCA meant that practitioners were required to persuade the regulator that every alternative solution they proposed met the applicable

[103] PLB, submission, p. 9.

[104] AHSCA, submission, p. 1.

[105] PLB, submission, p. 9.

[106] Australian Building Codes Board website, The NCC – a performance based code, http://www.abcb.gov.au/about-the-national-construction-code/the-ncc-performance-based-code, accessed 10 September 2013.

performance requirements the cost would likely be prohibitive and, in effect, the PCA would be limited to the deemed to satisfy provisions.

This leaves the second and third models. These two proposals are similar in that they give flexibility to a member of the industry. The difference between them is just the skills and qualifications that person must have

It is clearly important that the person making this decision has the appropriate technical skills to do so. The way to choose between the remaining two models is to determine who has the appropriate technical skills. This in itself is a technical decision upon which ACIL Allen is not able to provide advice beyond making a general observation that designing a plumbing system appears to be beyond the conventional training of most plumbers.

The expertise required here is not plumbing in the sense of installation, but design. Therefore the person signing off on the alternative solution should have appropriate expertise in design. Broadly we understand that this expertise is usually found with engineers and hydraulic designers. We would not expect that all plumbers would have this expertise or that it would be learned 'on the job'. Therefore, we would not expect that this role would fall to plumbers.[107] However, rather than being a decision for the review this is, in our view, a decision for the licensing authority.

It would be appropriate for the licensing authority to have a role similar to that proposed above for plumbers. That is, it should determine the particular expertise necessary to determine whether alternative solutions are appropriate and authorise, or licence, people with that expertise to do so.

Once the decision is made as to the skills and qualifications that are necessary to 'sign off' alternative solutions it will be important that the regime has the capability to manage the process. For this we recommend that an additional category of licence is introduced named 'plumbing designer'. The licensing would then be managed the same way as other plumbing licences. That is, the licensing administrator would have the responsibility for ascertaining whether an individual applicant has met the criteria for a plumbing designer's licence in the same was as they would assess an application for a plumber's or tradesperson's licence.[108]

As the performance based PCA is introduced it will be necessary to consider how to address issues arising when plumbing systems fail. As a general proposition the liability for a system failure should rest with the person who made the judgement that led to the failure. In principle, if a system fails due to a design flaw the designed should be liable for the consequences. On the other hand, if a system fails because it was not installed as designed the installer should be liable for the consequences.

Our recommendation is that, in the hypothetical situation where a plumber installs a system as per design and the system fails due to the way it was design, the plumber (installer) should be free of liability. In our view this liability should rest with the designer and should not be able to be transferred to the plumber, whether contractually or otherwise. Therefore, the designer should be prevented from seeking indemnities or similar from a plumber to protect against design flaws, though not against flaws in the installation.

This issue was widely discussed during public consultation and it was met with some unease from plumbers. Plumbers often mentioned that plans they are given routinely carry words to the effect that the installation must comply with the applicable standards and that it

[107] Of course a person who is a plumber may also train in design and therefore develop the necessary expertise.

[108] Of course the criteria would be different

is the plumber's responsibility to ensure that it does. This may be suitable for deemed to comply approaches and the current technical rules, but it will not be satisfactory when performance based solutions are introduced.

A related issue that was discussed briefly in some consultation sessions was whether introduction of an independent designer would remove the need for licenced plumbers entirely. That is, if a system is designed to meet the performance requirements in the PCA and signed off as such should the Government concern itself with how it was installed (or manufactured).

On our reading and understanding of the PCA it should not replace the need for a licenced plumber. The performance related aspects of the PCA relate to the system design. They amount to a guarantee from an appropriately qualified person that if a system is installed in a certain way, it will perform as it should.

This 'sign off' would happen before the system is installed. The PCA is not, as we understand it, a system where an expert signs off after a system is installed (or manufactured) that it *does* work.

The expert sign off relates to the design, but not to the installation and, therefore, does not replace the role of a properly trained installer.

In our view the regulatory regime should make it clear that liability for design failure of an alternative solution would rest with the designer. The licensing authority may, therefore, reach the view that it is appropriate to require designers to carry an appropriate level of indemnity insurance.

As with other aspects of the regime the issue here is risk management. In this case, the question is who should bear the risk that an alternative solution does not perform as it should. The person who signs off that the solution will work should also bear the risk, and the liability, if it does not.

The PLB recommended an alternative model whereby the Government initially signs off on alternative solutions itself through the technical regulator. Then, when the system was better understood, responsibility would be delegated to recognised expert plumbers.

In our view the PLB's proposal that the Government should sign off alternative solutions should be avoided. This would tend to insulate designers from liability for their own designs and transfer the risk to the Government. Broadly, this seems to defeat the purpose of introducing the performance requirements to the PCA in the first place.

9.3 Conclusion – Plumbing Code of Australia

In conclusion we see no reason why WA should not adopt the PCA in full. As it does so, it should ensure that it has the capacity to authorise (licence) designers with suitable expertise to 'sign off' on alternative solutions. It should also ensure that the liability for (design) failure of such solutions rests with the designer, not the Government and not the installer.

Contrary to a view that was expressed frequently during public consultation, adoption of the PCA bears no relationship to the scope of work for which a plumbing licence is required. As discussed elsewhere in this report and consistent with the NOLS Decision RIS, there is currently insufficient evidence to warrant expanding the scope of the licensing regime for plumbing in WA.

Appendix A Statement of requirements and submissions received

A.1 STATEMENT OF REQUIREMENTS

Box A1 contains a reproduction of 'Schedule 2 Specification / Statement of Requirements' to Department of Commerce Request number 13003"Review of Plumbing Regulations in Western Australia."

Box A1 **Statement of requirements**

1.1. Introduction and Background

Plumbing work in Western Australia is generally regulated under Part 5A of the *Water Services Licensing Act 1995* and the Water Services (Plumbers Licensing and Plumbing Standards) Regulations 2000. Recent amendments to water services legislation will see Part 5A of the Water Services Licensing Act separated into a stand-alone Plumbing Act 1995 from mid 2013. For copies of legislation see www.slp.wa.gov.au.

Under agreements made by the Council of Australian Governments, the Western Australian Government is considering adoption of Volume 3 of the National Construction Code (the Plumbing Code of Australia) as the primary plumbing standards for Western Australia, and the National Occupational Licensing Scheme as the primary process for licensing plumbers in Western Australia. For copies of the National Construction Code see www.abcb.gov.au. For information about the proposed National Occupational Licensing Scheme see www.nola.gov.au.

Regulation of plumbing consists of assessing and accrediting the competence of individuals and the capability of contractors (the "licensing function"), setting plumbing standards (the "standards function"), certifying compliance with standards (the "compliance function"), approving plumbing work (the "approval function") and monitoring compliance and prosecuting offences (the "compliance function"). The underlying driver for regulation is to protect the health and safety of the Western Australian community and the needs of consumers of plumbing services.

The Western Australian Government wishes to review the current framework for regulation of plumbing and obtain recommendations for future regulation.

1.2. Terms of Reference

The Context for Review

Recent and proposed national and State reforms affecting plumbers, the plumbing industry and its regulation could collectively change the framework for the regulation of plumbing in Western Australia. These reforms include the:

- commencement of the Building Commission and the Building Act 2011;
- passage of the Water Services Act 2012, the renaming of the Plumbers Licensing Act 1995 and changes to other relevant legislation;
- proposal to adopt the Plumbing Code of Australia (volume 3 of the National Construction Code) as the standard for plumbing works; and
- proposal for national licensing of plumbing occupations.

In this context it is both opportune and desirable to comprehensively review the framework for the regulation of plumbing in Western Australia. It is intended to commence this review within 2 months with a direction to the reviewer to make recommendations within a further 6 months from commencement.

The Scope of the Review

The independent review will be undertaken in accordance with applicable processes for policy review including the Regulatory Impact Assessment process. It will consider the current arrangements and options for regulating plumbing including the:

- objectives of plumbing regulation;
- scope of matters controlled by plumbing regulation;
- fit between plumbing regulation and other relevant controls;
- institutional framework, including but not limited to the roles of the Plumbers Licensing Board, licensed water service providers, the Department of Water/Public Utilities Office, EnergySafety and the Building Commission;
- arrangements to finance the administration of plumbing regulation;
- referenced standards including relevant Australian Standards and the Plumbing Code of Australia;
- notices and other communications by which plumbers inform authorities of intended and completed plumbing work;
- arrangements to protect consumers and the community including the plumbers licensing scheme and the statutory warranty for plumbing work; and
- arrangements in other Australian jurisdictions.

The review will consider the impact of regulation on small business and have regard for opportunities to remove controls that realise insufficient benefit.

The Task

Building on prior reviews this review will:

- include consultation with industry members, government and licensing agencies, and other stakeholders, and
- analyse the strengths and weaknesses of reform options including the preparation of a discussion paper including a Decision Regulatory Impact Statement.

It is intended that a discussion paper will be published by the review to invite broad industry and community comment. The review will use the evidence and material gathered during this process to assist in the preparation of its report and recommendations. A Decision Regulatory Impact Statement will be prepared to examine the costs and benefits of the recommended reform proposal.

Source: Department of Commerce, Request 13003, Schedule 2

A.2 Submissions received

Table A1contains a list of people and organisations that made submissions. The submissions themselves are available online at http://www.acilallen.com.au/plumbing-regulations-wa-submissions.

Table A1 **List of submissions received**

#	Submitter
1	WA Plumbing Solutions
2	AHSCA WA Chapter
3	Alan Atkins
4	Aquatherm Australia Pty Ltd
5	Pride Plumbing and Gas
6	Double 'G' West Consultancy Services
7	acu-tech Piping Systems
8	CEPU (Communications Electrical Plumbing Union)
9	Shire of Irwin
10	City of Belmont
11	Pilbara Meta Maya Regional Aboriginal Corporation
12	Department of Fire & Emergency Services (DFES) WA
13	Environmental Health Australia (EHA)
14	Fred Crompton
15	Kelly's Hot Water Gas & Air
16	Boeing Plumbing WA
17	Institute of Plumbing Australia
18	Gro Agencies Pty Ltd
19	Electrical Licensing Board
20	Nu Pipe Plumbing
21	Max Garbin
22	Gregory Gibson Plumbing Pty Ltd
23	Master Builders WA
24	Master Plumbers & Gasfitters Association of WA
25	Master Plumbers Australia
26	Health Department of Western Australia
27	National Fire Industry Association of Western Australia
28	Neil O'Brien
29	Curtin University
30	Plumbers Licensing Board (PLB)
31	Plumbing Trades Employees Union (PTEU)
32	Diploma Plumbing
33	Broome Plumbing & Gas
34	Shane Calegari
35	Small Business Development Corporation
36	Stephen Johnson
37	Swans Plumbing
38	Shire of Dandaragan
39	Vacuum Toilets Australia
40	WA Farmers
41	World Plumbing Council
42	Water Corporation

Appendix B Discussion paper

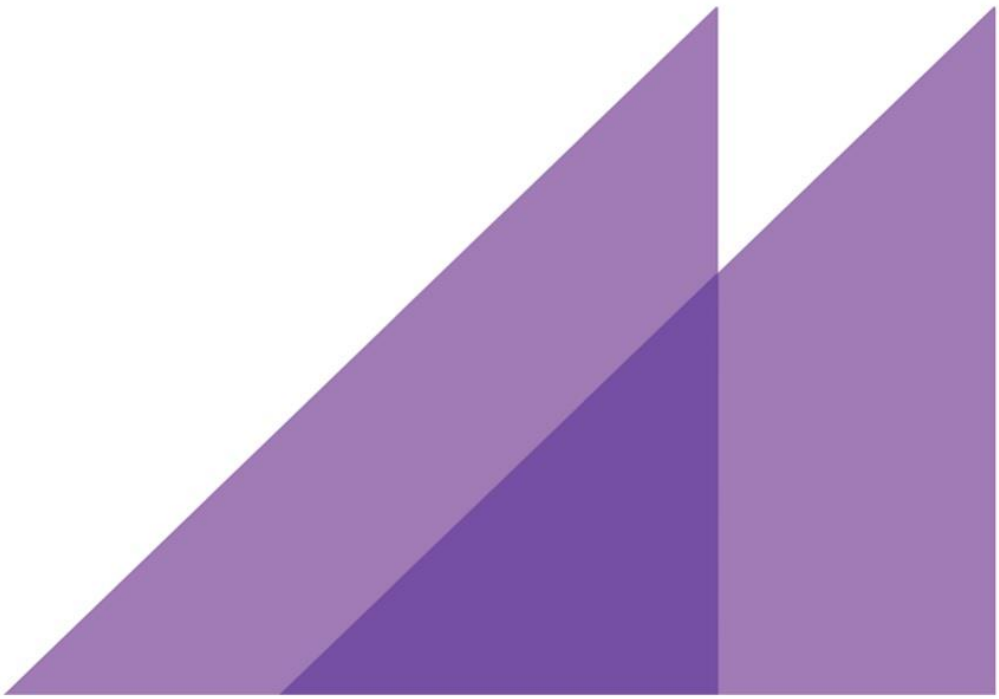
ACIL ALLEN CONSULTING

PREPARED FOR
THE MINISTER FOR COMMERCE

18 JUNE 2013

REVIEW OF PLUMBING REGULATION IN WESTERN AUSTRALIA

DISCUSSION PAPER



ACIL ALLEN CONSULTING PTY LTD
ABN 68 102 652 148

LEVEL FIFTEEN
127 CREEK STREET
BRISBANE QLD 4000
AUSTRALIA
T+61 7 3009 8700
F+61 7 3009 8799

LEVEL TWO
33 AINSLIE PLACE
CAN BERRA ACT 2600
AUSTRALIA
T+61 2 6103 8200
F+61 2 6103 8233

LEVEL NINE
60 COLLINS STREET
MELBOURNE VIC 3000
AUSTRALIA
T+61 3 8650 6000
F+61 3 9654 6363

LEVEL ONE
50 PITT STREET
SYDNEY NSW 2000
AUSTRALIA
T+61 2 8272 5100
F+61 2 9247 2455

SUITE C2 CENTA BUILDING
118 RAILWAY STREET
WEST PERTH WA 6005
AUSTRALIA
T+61 8 9449 9600
F+61 8 9322 3955

ACILALLEN.COM.AU

For information on this report

Please contact:

Jeremy Tustin
Telephone (03) 8650 6027
Mobile 0421 053 240
Email j.tustin@acilallen.com.au

Contributing team members

Tess Metcalf

Nick Wills-Johnson

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1 Introduction

This discussion paper is the first step in a review of the way that plumbing in Western Australia is regulated.

The review is being undertaken by ACIL Allen Consulting (ACIL Allen) for the Minister for Commerce. ACIL Allen will follow a public and consultative process for this review. There will be a series of public consultation meetings in various locations around Western Australia (see page 23 for details) and some one-on-one consultations.

This discussion paper outlines some specific issues ACIL Allen has identified and seeks your input on these and any other issue you wish to raise. Throughout the paper there are grey boxes which contain questions for thought and discussion at the public consultations, or by written submission. Written submissions don't need to be formal. An email containing your thoughts is fine, though you should note that the content will be made public unless you request otherwise (we will not publish the names of individuals who make submissions).

This discussion paper is structured as follows.

Chapter 2

- Sets the regulatory point of view and looks at why regulation is used in Australia, and what it is intended to do. A key conclusion is that regulation should not be used for its own sake, it should be designed to solve, or address, a problem(s) that would occur without regulation. The problem(s) should be well identified by asking 'if the industry was not regulated, what would go wrong?'

Chapter 3

- Considers the types of problems that might exist in the plumbing industry and that might be prevented (or addressed) by regulation. This point is not that these problems exist in the plumbing industry *now*, but that they might occur if the industry was not regulated.

Chapters 4 to 7

- Introduce and then detail three regulatory instruments that could be used to address issues; specifying products standards, licensing plumbers and monitoring and policing plumbers

Chapter 8

- Brings the regulatory elements together and details of when, where and how you can provide input to the review

2 Introduction

The first chapter of this discussion paper sets the scene from a regulatory point of view. It describes the 'rules' for developing regulation and indeed for deciding whether regulation should be used at all.

Two Government documents sit in the background and define the requirements of this and any other regulatory review. These are:

- The Guide to Best Practice Regulation[109]
- Regulatory Impact Assessment Guidelines for Western Australia. [110]

In this report they are referred to, collectively, as "the regulatory policy documents."

Two key goals of regulation are to ensure that industries are as productive as they can be and that the benefits of that productivity flow to the community.

The basic idea underlying the regulatory policy documents is that most of the time competition and the market mechanism will ensure that these two goals are met.

Broadly, the starting point for the regulatory policy documents is that regulation should not be used unless there is a good reason to use it. In particular, regulation should only be used where competition and the market mechanism cannot be relied on to deliver these goals. The regulatory policy documents set out a way of deciding two things:

1. Whether Government intervention though regulation is justified?
2. Whether a particular form of intervention is the most suitable?

The two regulatory policy documents describe situations when Government regulation might be justified. There are two commonly understood reasons to regulate which are similar in both. [111] They are:

- **regulatory failure** – essentially changing regulation to correct an error in existing regulation; and
- **market failure** – which occurs "when the market alone does not efficiently organise production or allocate goods and services for consumers."

  Market failure can occur for four main reasons:
  - the public nature of some goods
  - the presence of externalities
  - the presence of information asymmetry
  - the presence of market power

[109] Office of Best Practice Regulation, "Best Practice Regulation Handbook", available from http://www.finance.gov.au/obpr/about/

[110] Department of Treasury and Finance (WA), "Regulatory Impact Assessment Guidelines for WA", available from http://www.treasury.wa.gov.au/cms/uploadedFiles/Treasury/Economic_reform/Regulatory_Gatekeeping/ria_guidelines_july_2010.pdf

[111] WA RIA guidelines, p. 4

In summary, the regulatory policy documents set out four questions to consider when deciding how best to regulate an industry:

1. What is the problem(s) to be prevented?
2. Can regulation solve it?
3. Is it serious enough to justify regulation?
4. Are there other ways of solving it that do not require regulation?

The answers to these four key questions determine whether some kind of regulation is appropriate or not. The next step is to examine different regulatory options to determine which is most suitable.

3 Is regulation of the plumbing industry justified?

In this chapter we explore the four questions from chapter 2 that are used to determine whether regulation is justified. That is:

1. What is the problem(s) to be prevented?
2. Can regulation solve it?
3. Is it serious enough to justify regulation?
4. Are there other ways of solving it that do not require regulation?

We pay particular attention to the problems that are relevant in the context of the plumbing industry. This discussion will form the basis of our consideration about how the regulatory framework of the industry should be structured.

In the next chapter, we begin the process of assessing different regulatory instruments, and how suitable they are in meeting each of the problems mentioned.

3.1 Identifying the relevant problem

The first question to consider is 'what is the problem to be prevented?'

We need to know this so that we can consider whether regulation is justified. Therefore, in asking it, we assume that there is no regulation in place already. In other words, the appropriate question is:

> If the plumbing industry was not regulated what problems would be expected?

This raises two questions, which are discussed in turn below:

1. Whose problems should be considered?
2. What are the potential problems?

Before the problems to be prevented can be identified it is necessary to consider 'whose problems' are the appropriate focus of regulation.

The regulatory policy documents show that, in most cases, the objective of regulation is productivity. Productivity is related to the concept of economic efficiency and, in turn, to vigorous and effective competition in Australia. In plumbing a key part of this will inevitably be ensuring public safety. That is, plumbing could severely hinder productivity in Australia if it was done unsafely and disease broke out as a result.

In some industries in the past, regulation has been used to protect businesses in particular industries. This caused major issues in terms of productivity as it removed the incentive for businesses to 'keep up'. That incentive is now provided through market forces, which have given us much of the gain in productivity in Australia over the last few decades.

In this respect, one issue that has already been raised in early discussions with stakeholders is a concern that the regulator cannot be an effective 'voice' for the plumbing industry in its engagement with Government. In our view it is not the role of a regulator to represent industry in this way. In fact, if the regulator had this role it would face frequent conflicts of interest when it sometimes represented the industry and sometimes regulated it. Industry representation and advocacy is a perfectly legitimate role, but it is the role of industry associations rather than regulators.

Regulation is used to complement the competitive forces in a market and improve the overall viability of an industry by providing it with incentives to keep improving its products. Therefore, the objective of regulating the plumbing industry, or any other industry, is not necessarily to solve problems that are, or would be, experienced by plumbers.

In our view the objective of the regulator is to solve or prevent problems that would be experienced by society more generally. Several potential problems that have been identified are discussed next.

You may wish to add to these through your submission or at the public consultation sessions.

In our preliminary review we have identified three potential problems[112] that may be the basis for regulation in the plumbing industry. These are:

- **Public health and the environment:** Sub-standard plumbing or poorly-qualified plumbers could have major impacts on public health and the environment. A plumber who connects a sewerage outlet to a potable water system could give cholera to thousands of people in a city. A plumber who designs or installs an industrial wastewater system poorly could pollute fragile ecosystems. In a competitive market plumbers with good intentions may feel pressure to 'cut corners' if their competitors are doing so. If they don't, they may be unable to win work.
- **Information asymmetry:** Plumbers know a great deal more about the equipment they install than the consumers who purchase their services. Many people may know nothing at all about the plumbing services they have purchased bundled together with a house, because they cannot see them inside the walls or beneath the slab upon which the house is built. This makes it very difficult for consumers to judge the quality of the plumber's work. As above, this leaves room for 'poor quality' work to be sold at a lower price to customers who cannot distinguish poor quality work from high quality work. It may become practically impossible for plumbers to provide high quality work if customers cannot tell the difference.
- **Consumer protection:** This refers not to the equipment being installed, but to the characteristics of the plumbers themselves, both in a business and a personal sense. Consumers need some form of redress in the event of poor business practices on the part of a plumber, and also confidence that the person they bring into their home is, essentially, safe.

Amongst these three problems, public health concerns are by far the most important because the outcomes could be extremely serious. They are also the most difficult to solve via market forces. In fact, we expect that they could not practically be prevented by a market. Fortunately, they are well understood and the plumbing industry in Australia and around the world has a sound understanding of how to prevent them.

Information asymmetry is an important issue that is also very difficult to solve via market mechanisms. It is common to many markets.

[112] It should be stressed that this does not mean that we think these problems exist in the plumbing industry now. Rather, these are problems that we expect would occur if the plumbing industry was not regulated at all. Therefore, they are problems that could be, and already are, being addressed by regulation.

The problem is that there is a substantial imbalance of information between suppliers (plumbers) and consumers. The imbalance means that consumers cannot be sure whether they are 'getting what they pay for' in terms of quality plumbing work. A related problem arises when a person sells a building. The buyer had no involvement with the plumbing in the building and cannot be sure that it was well designed or installed properly. The vendor may have more information, but has no reason to disclose the truth.

In an unregulated market this can place downward pressure on quality as suppliers cannot achieve a reasonable return for high quality work. A client won't pay a plumber to do a job properly if others can do it improperly, but more cheaply without the client knowing that this has happened. Even a well-meaning plumber may feel unable to 'afford' to do the job properly and feel pressured to join others in doing the job improperly.

In the plumbing context this might have major public health effects in the event of a sewage leakage, or a decision to skimp on fire-service pipes by a high-rise developer may result in the deaths of hundreds of people in the event of a fire. The basic point is that information asymmetries interact with externalities and produce a significant market failure.

The third potential problem is consumer protection, though this label refers to the solution rather than the problem itself.

The issue here is that often with plumbing there needs to be substantial trust between plumber and customer. This is especially true for domestic plumbing, where plumbers work in and around people's homes. Similarly to the information asymmetry problem discussed above, customers cannot really be sure that their chosen plumber will conduct themselves appropriately and apply sound business practices until it is too late.

This is perhaps the smallest of the three problems discussed here. This is not to say that consumers do not need protection from poor business practices. However, there are structures already in place for all industries so the need for *plumbing-specific* structures may be relatively small.

For example, whenever plumbing work is supplied there is a contract between the plumber and the customer. Therefore, performance that is not up to the standards of that contract can be addressed in a court of law. Similarly, existing verification systems, such as police checks, can be used by householders concerned about whom they are inviting into their home, without a need for additional regulation.

One of the main issues here is the cost of redress. If the plumbing work is in the slab under a house, fixing it may require substantial work. That is a major inconvenience to the consumer, and a major cost to the plumber, who may not be sufficiently solvent as a business to carry this cost.

This may mean that the generic consumer protection mechanisms may need to be supplemented with plumbing-specific requirements.

Another issue is the cost of applying the generic consumer protection methods. For example, while (domestic) plumbers could choose to undergo police checks and offer these to their clients it might be more efficient for some things to be dealt with in advance.

3.2 Can regulation address these problems?

The answer to this question depends on the particular problem. For the most part, it appears that the answer is "largely".

No regulatory system will be able to prevent all public health problems. A regulator can't watch over every single plumbing installation.

Indeed, as with many similar industries, there is a strong argument for maintaining an industry culture based around safety and safe work practices. With this type of culture in place the industry will naturally avoid unsafe practices both in terms of workplace safety and practices that may lead to public health problems.

The same is true for information asymmetries and consumer protection. No regulatory regime can provide the customer with the information they lack all of the time. Nor can regulation completely eradicate poor business practices.

However, regulation can prevent most poor operators from entering the system in the first instance. For those already in the industry, provided ongoing policing occurs, regulation can remove those from the industry who were not caught at the initial barrier.

3.3 Are the problems worth regulatory intervention?

Whether the three problems discussed above, and any others identified through the consultation process are 'worth' preventing is a difficult question.

Conceptually, the approach that is used is in two parts, with the benefit and the cost of regulation estimated separately and compared to one another. Regulatory intervention would be 'worth it' if the benefit is greater than the cost.

In practice, the benefit of regulating in this case would be that the three problems discussed above (and others that may be identified through the consultation process) would not occur, or at least would not occur as often.

The cost of regulating plumbing in WA at present is illustrated in Figure 1.

FIGURE 1 THE COST OF REGULATING PLUMBING IN WA

In terms of training it is not the total costs of training that should be considered because a person would always need to be taught how to do plumbing work (or learn somehow) regardless of the regulatory regime. The cost we are interested in is the marginal, or additional, increase in training cost above what might be incurred in an unregulated market.

The benefit of regulation is, broadly, preventing the problems discussed above. It is different for each problem and is discussed below.

3.3.1 The benefit of regulation – public health and the environment

Insofar as the public health and environmental problems are concerned, the benefit is that[113]:

- outbreaks of disease would be prevented
- environmental contamination and pollution would not occur.

If a cost benefit analysis was done the benefit of preventing the loss of life would be calculated using the concept of the value of statistical life. The Office of Best Practice Regulation has previously estimated this value at approximately $4 million per lost life.[114]

Related concepts such as the value of quality adjusted life years, disability weights, the cost of medical treatment and the value of lost time due to illness would be used to calculate the cost of illness.

To estimate the benefit of regulation to prevent public health problems fully would require an estimate of how likely it would be that disease would break out and, if it did, the number of lives that would be lost. These are both beyond the scope of this discussion paper, but we can say that if an outbreak of disease occurred, hundreds of lives may be lost or affected by illness so the potential benefit of regulation is hundreds of millions of dollars per incident.

This is likely to be much higher than the costs of regulation. Even if an outbreak occurred rarely, the cost of that outbreak would be much higher than the annual cost of preventing it. For this reason Western Australia would be almost unique in the world if it chose to abandon regulation of the plumbing industry on public health grounds. It is not proposed to conduct a detailed analysis of this issue in this review.

On the other hand, regulation to prevent environmental problems requires further consideration.

The approach to estimating the benefit would be similar, though it would consider the cost of environmental damage inflicted rather than the avoided cost of illness and lost life. In part, the same regulatory steps may prevent environmental problems as are currently preventing public health problems. For example, the rules and regulations requiring that plumbing systems do not discharge effluent inappropriately have both health and environmental benefits.

3.3.2 The benefit of preventing information and consumer problems

The benefit of preventing information and consumer problems is likely to be much smaller and much more difficult to quantify than the benefit of preventing public health and environmental problems. However, since the regulatory instruments needed to address public health concerns also address these concerns (see below), it is arguably unnecessary to develop a separate case for imposing some form of regulation to meet these problems.

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[113] These benefits are described here in absolute terms, though in reality nothing is absolute. Strictly speaking the benefit may be that these problems do not occur *as much* as they would otherwise.

[114] See, OBRP, "Best Practice Regulation Guidance Note: Value of Statistical Life", available at http://www.finance.gov.au/obpr/cost-benefit-analysis.html. The figure quoted there is $3.5 million in 2007 dollars. Allowing for indexation this is approximately $4 million today.

3.4 Are there alternate non-regulatory solutions available?

The public health and environmental management problem cannot be addressed by the market alone. The key issue is that they are externalities. That is, the person (plumber) who causes a problem would not be responsible for the cost of that problem.

In theory, it might be possible to make a plumber responsible for the cost of an outbreak of disease or environmental harm that they had caused through poor workmanship or poor equipment. This could be done using liability laws in the courts.

However, this does not really solve the problem. First, most plumbing businesses are very small (according to the recent national Consultation RIS, only two per cent of plumbing companies have more than 20 employees), and so any lawsuit would send the plumber bankrupt long before it provided redress for lives lost or environmental harm caused.

Second, even if this was not the case, it is not really an appropriate solution to lose lives, and then pay compensation. It is more appropriate to prevent the problem from happening in the first place.

QUESTION 1: THE OBJECTIVE OF THE PLUMBING INDUSTRY AND THE PROBLEMS

a) What is the objective of regulating the plumbing industry?

b) What problems should we be trying to prevent?

c) Are the problems 'serious enough' to warrant regulation?

d) Can regulation solve (or address) these problems?

e) Are there 'better ways', could the problems be addressed without using Government regulation?

4 Potential regulatory instruments

The discussion in chapter 0 identifies three problems that could occur if the plumbing industry were not regulated and suggests that these three problems are suitable 'candidates' for regulation. In this chapter we introduce three regulatory instruments that could be used to address the problems.

These are:

- licensing plumbers - referring to the plumbers themselves, and the basic licence they have which allows them to ply their trade
- specifying product standards - referring to the equipment plumbers install and the way they are installed, whether this is specified (deemed to comply) in the Code or performance based
- monitoring and policing plumbers - the regime of inspections of both plumbers' work and their business activities, to ensure both meet relevant standards. It also incorporates the types of punishments which are meted out for poor performance, which are necessarily more complex than simply revoking a licence.

None of these instruments is a total "fix" for all of the issues above, but there is a degree of overlap between them. This is shown in Table 1.

TABLE 1 REGULATORY INSTRUMENTS AND PROBLEMS MATRIX

	Public health	Information asymmetry	Consumer protection
Product standards	✓	✓	✓
Plumber licensing	✓	✓	✓
Monitoring and policing	✓	✓	✓

For example, having appropriate plumbing standards can assist in protecting public health by ensuring that plumbing installations *should be* adequate for the job at hand. However, if the standards are not followed plumbing installations may not perform as they should.

Therefore, standards appear to be a necessary condition for preventing public health and environmental problems, but they are not likely to be sufficient. The role of plumber licencing and a monitoring or policing regime is to ensure that plumbing installations *actually* perform as they *should*. The role of plumber licencing ensures that plumbers have been trained to know how something *should be* done. An appropriate monitoring regime ensures that things are *actually* done this way.

5 Licensing of plumbers

The second regulatory instrument for discussion is plumber licensing. This refers to the sets of qualifications required, and the categories of licences which are available, as well as licence length and renewal.

There are two key reasons that plumbers (and similar trades) must have licences.

The first is to ensure that they have obtained the skills necessary to perform plumbing work properly. The second is to prevent a person who has been disqualified from being a plumber from continuing to operate as one.

Therefore, the plumbing licencing mechanism needs to have two characteristics:

1. It should ensure that a person who does not have the necessary skills is not granted a licence
2. It should enable the regulator to remove a person's licence in certain circumstances

To work as a plumber in WA you need to be licensed. There is a process underway at the national level towards a system of national licences for plumbers. The details, such as actual set of licenses, have not yet been agreed but the fact that there should be (broadly speaking) one set that applies around Australia has been agreed.

Therefore, the existence of licences is not on the table for discussion. Further, the national process means that any significant deviation in WA from whatever set of national licences emerge should only happen if the WA market is somehow different from markets in other States and Territories.

The main questions for this chapter, therefore, revolve around issues associated with licences, rather than issuing licences per se.

The first question regarding plumber licensing in WA is whether the industry here is different in some way that makes the skills necessary to be a plumber in another place insufficient to be a plumber in WA. The answer to this question is likely to depend on what 'other place' the person comes from. Plumbers from other Australian States are discussed in section 5.1.1. Plumbers from other countries are discussed in section 5.1.2.

A range of other characteristics of a plumber's licence are relevant to the second characteristic. These are discussed in section 5.2, as well as consideration of which sectors of the plumbing industry should require licencing.

5.1.1. Plumbers from other Australian States

As noted above, independently of this review, there are proposals for national licensing of plumbing and other occupations through the National Occupational Licensing Scheme (NOLS).

The key question around the licensing of plumbers is whether a national licence is acceptable in WA. It should be noted that the details of the national licencing system are not finalised, nor are they within the scope of this review. For this review the point is simply that it seems likely that there will soon be a national approach to plumber licencing. This leads to a question about whether WA is sufficiently different from the rest of the country to require different licences for its plumbers. We are aware that current licences are very different.

However, this is a factor of history. The more relevant question is whether, if licensing for plumbers were being considered for the very first time right now, around the country, whether the putative regulatory body would choose to licence plumbers in WA differently from those in other States and Territories.

5.1.2 Plumbers from outside Australia

Plumbers may come to WA from other countries, which raises the question of how to evaluate their training. This is an issue that is being dealt with through National Licencing at the national level, which may leave WA with little 'room to move'. Nonetheless, stakeholders may choose to express views in this area.

Imported plumbing skills could be treated similarly to imported plumbing products.

One option would be to prevent overseas trained plumbers from operating in WA, meaning that only Australian trained plumbers could be allowed to operate in WA.

This would ensure that ill-qualified plumbers do not enter the industry. However, it would come at a considerable cost to the overseas plumber, who would need to re-train. It would also deprive WA of many well qualified plumbers with significant flow-on effects for other industries.

In our preliminary review this approach seems equivalent to throwing out the baby with the bathwater.

The second option could be for the regulator in WA to examine overseas training and compare it to local training as Trades Recognition Australia does at the moment. Where qualification levels and training are similar, licences could be simply transferred. Where they are not, additional training could be required.

This approach has two key problems. In the first instance, it is an expensive proposition for a WA regulator to set about assessing the training regimes of multiple countries, and indeed this may be very difficult to do from WA, as information may be very hard to get (and is likely to be in a language other than English). Perhaps more importantly, the NOLS process has shown that, even between states in Australia, there is a wide variation in qualifications and many trades which are licensed in one state but are not licensed at all (or licensed differently) in another. It may not even be possible to find equivalents to the WA licence in an overseas jurisdiction, which would render the ability to offer a form of mutual recognition meaningless.

The third option would be to give the regulator a degree of flexibility. The regulator would be empowered to assess applications from overseas plumbers on a case-by-case basis and provide them with licences which reflect their particular circumstances. Those licences might be full plumbing licences or may have restrictions.

As with plumbing products, we would advocate that decisions be made in writing and that they be made public.[115] Over time, a 'stockpile' of decisions would build up that would make the process operate more smoothly. For example, the first plumber from France may need to go through a considerable vetting process, but the second could rely on the first decision and enjoy a shorter assessment process accordingly.

Within this discretionary system, there are two sub-options. They are distinguished by who has the onus of proof.

[115] Although it is likely, for privacy reasons, that they would need to refer to "Plumber X from Tanzania" rather than that particular plumber's name.

In the first 'sub-option', the onus would be on the would-be plumber. The default decision of the regulator would be not to allow any kind of licence unless the would-be plumber can convince it that they are appropriately skilled.

In the second 'sub-option' the onus would be on the regulator. The would-be plumber would be entitled to a licence unless the regulator could show why they should not be granted one or why there should be restrictions. The first sub-option errs on the side of safety, making it less likely an ill-qualified person could gain entry to the industry. The second errs on the side of competition, increasing the likelihood of entry with lower levels of checks and balances.

5.2 Other issues

A range of other issues associated with licences could also be considered. We choose to focus on a few key issues. The first of these is around what might be termed "occupational scope". In one sense, plumbing might be thought to include:

- water services
- sanitary plumbing
- roof plumbing
- mechanical services plumbing
- drainage plumbing
- irrigation plumbing
- gas fitting
- fire services plumbing.

In different parts of Australia the licencing requirements for these different areas vary. In WA at the moment only some of these areas of work require a plumbing licence. Some do not require a licence at all. Broadly, we would argue that areas of plumbing where the problems discussed in chapter 3 above might happen should be 'covered' by the licencing regime.

Related to this occupational scope is the issue of ongoing skill preservation. For example, a person may train as a plumber but not trade for some time. When they return to the industry, technology may have moved on. This raises the question of whether a person should be allowed to be 'out' of the industry for an extended time without retraining when they come back 'in'. If they should not, how long is too long?

Another issue is that plumbers may not keep up with technological change even while they are in the industry. Should a plumber need to complete ongoing education? Should they be required to perform practical assessment from time to time to renew their licence? If so, how often and what should be tested?

As distinct from occupational scope is what might be called "locational scope". At present, a licensed plumber is required only when the plumbing system is being connected to a metered water supply. Usually that is the system operated by a water utility such as WaterCorp, Aqwest or the Busselton Water Board.

Plumbing work on unmetered supplies to mining camps and Aboriginal settlements (amongst others) does not require a licensed plumber. However, these communities, particularly mining camps can often be bigger than small towns. As the plumbing in these places is currently unregulated there is a risk that the three problems identified above (and others that may arise) could occur. There could easily be public health concerns if the plumbing system in a mining camp was not properly installed. On the other hand, particularly in remote Aboriginal communities, the communities are sometimes much too

small to support a licensed plumber, and too remote to be easily accessed by a travelling plumber regularly. This may mean that, if a licensed plumber were required for all plumbing work, a situation might emerge where no plumbing work is undertaken for long periods of time. This, in itself, has public health concerns.

The issue of locational boundaries seems difficult to address via inflexible rules (either no licence for unmetered supply or all supply requiring licences), and thus that the same kind of regulatory discretion discussed above for overseas licences might be appropriate. We note that the same points about the 'onus of proof", and the requirement for a regulatory paper trail discussed above would also apply here.

Another issue relates to the type of work for which a plumber requires a licence.

QUESTION 2 LICENCING

a) Is the plumbing industry in WA sufficiently similar to the plumbing industry in other Australian states that a properly trained and skilled plumber from another state could operate safely and appropriately in WA?
   i) If not, why not?
   ii) What is different about the plumbing industry in WA that makes different skills necessary here?
b) What about other countries?
c) Are the concerns limited to plumbers from certain states or are they widespread?
d) For how long should a licence last before needing renewal?
e) How frequently, if ever, should the renewal of a licence involve practical testing?
f) What would be appropriate requirements for ongoing training?
g) How long should a person be allowed to be out of the plumbing industry before their training is considered to have lapsed?
h) What should be done about non-metered supplies? Is regulatory discretion sufficient, meaning only that the regulator would need to be given the power to make a determination, or are more formal rules required? Is so, what ought they to be?
i) Bearing in mind the problems that regulation is intended to prevent (public health, information asymmetry, consumer protection and others that may be identified:
   i) Which 'types' of plumbing listed at 0 above should only be done by a licensed person?
   ii) Which of those activities can reasonably (e.g. safely) be done by an unlicensed person?
   iii) Should the same licence necessarily be required for all of these areas? If not, how should each area be treated?

6 Product standards

The first regulatory instrument is product standards. In this context, product standards mean a set of rules designed to ensure that individual pieces of (installed) plumbing equipment will do the job they are designed to do.

In practice, the performance standards currently in use in Western Australia will soon be replaced by the *Plumbing* Code *of Australia* (the Code). Although WA has not yet adopted the Code, the decision to do so has been made.

The main difference between the Code and existing standards in WA is that the Code is based on performance standards. In other words, the Code gives a description of what a piece of plumbing equipment must be able to do, as opposed to the existing legislation in WA which is more detailed in prescribing exactly what piece of equipment needs to be used, and how it ought to be used.

Our preliminary discussions have identified three issues that arise from this:

1. plumbers may not always be well placed to know whether an installation is appropriate as a performance based solution, though they may be liable for the consequences if it is not
2. this may be particularly true for imported equipment
3. problems may arise if an installation is originally intended to be 'deemed to satisfy' but is changed during installation and assessed as a performance based solution after the fact

6.1 Performance based plumbing standards

The introduction of performance based standards should provide flexibility. Instead of being bound to prescriptive standards for how work should be done, it will be permissible for competent people to find innovative ways to design systems.

However, this may present circumstances to which plumbers could find difficult to adapt. It may have undesired consequences. Using performance based plumbing standards gives rise to the ability to design solutions on a building by building or installation by installation basis but also requires approval on the same individual basis. There will inevitably be cases where plumbers are asked to install systems that do not meet the 'deemed to satisfy requirements. There are a number of reasons why those plumbers may not have enough information to be able to know whether the design would satisfy the performance based standards. For example there may be a number of plumbers each installing part of a larger system but no individual other than the designer who is familiar enough with it to be confident of its performance characteristics.

Plumbers installing work that does not meet the deemed to satisfy requirements might justifiably to feel obliged to satisfy themselves that it is an appropriate performance based system. If they do not, and the system is not appropriate, the plumbers may find themselves liable.

The result of this is that a large amount of time could be spent satisfying plumbers that the systems they are asked to install are appropriate so that they can be confident to install it. It may be more efficient to avoid spending time this way.

Performance based approvals are primarily intended to be applied to particular buildings or installations, without creating a precedent for future projects. A building or installation similar to that previously approved by way of performance, will need to be separately assessed and approved for construction.

This may compound the situation, because plumbers cannot even be confident that something that was appropriate *yesterday* is still appropriate *today*.

One approach to avoiding this would be to allow another party to take responsibility for the performance of the system. For example, it may be unnecessary to hold a plumber liable for installing (properly[116]) a system designed by an appropriately qualified engineer.

This raises the question of who should be able to take this responsibility and what assurance plumbers should be given that the liability for the design does not rest with them. As a starting point we would argue that someone should not be held liable for work they did not do.

6.2 Imported plumbing systems

One characteristic of WA is its high exposure to major projects, particularly in the minerals sector. The equipment for these projects often comes into the State in "kit" form, to be assembled here or pre-assembled only needing to be installed.

This may cause particular problems for the plumber asked to install this equipment.

For example, accommodation units for a mine-site might come into WA with all of their piping and plumbing already attached. The piping and plumbing might satisfy the performance based requirements of the Code, but the individual plumber might have no way to know that this is the case.

As with the performance based solutions mentioned in section 0 plumbers may feel obliged to satisfy themselves that these units meet the code before they install them. At one level this is consistent with the responsibility plumbers take for the work they do. However, in practice it may be inefficient. For example it may be a waste of time if numerous plumbers installing identical equipment at a variety of sites all needed to test that equipment individually.

In this case it may be more efficient for the equipment to be approved as a group and, as with the performance based solutions discussed above, for the plumbers to be excused from liability for the design (that is, not held liable for someone else's work).

This could be done in a number of ways:

1. The first would be to require all plumbing installations used in WA to meet the Code. In some cases this may prevent perfectly adequate imported products from being used for fairly minor reasons. This would appear to be an extreme option.
2. The next option is to accept products in WA that meet the relevant overseas standards. That is, WA could take the approach that "if it's good enough in its home country, its good enough here."

   In some cases this would be an appropriate response as it would allow products to be used where they perform adequately, even if they have not been tested in line with local requirements. Allowing international competition has the very strong advantage of

[116] The situation would be different if the system was well designed but badly installed.

ensuring that Western Australians have access to the most efficient means of production in the world.

However, this approach would raise a "lowest common denominator" problem if products are imported from countries with lower standards than Australia. In an extreme situation Australian product standards may become irrelevant if products can simply be imported to avoid them and the final result may be that significant parts of the plumbing industry are 'exported' to countries with lower product standards rather than those with more efficient production processes.

3. The third option, which may be a suitable 'middle-ground', is to take the position that import of plumbing products should be permitted as long as they are of sufficient quality and allow some regulatory discretion. A system of approval would need to be designed, and preferably be accredited through WaterMark or by another form of 'institutional assessment. We note that the Code allows for this within its performance-based standards and also describes in detail how inspections and so on ought to occur. There is thus no need for legislative change. The question is rather how to make something like this operational. We also note that there is a movement to make the WaterMark system a mandatory part of the code. That is, performance based systems would still need to be constructed from WaterMark products. In practice WA may not have much 'room to move'.

Another issue to consider is the "paper-trail" which is generated. We would argue that any regulator needs some degree of discretion in its activities to incorporate flexibility (the basic idea inherent in the Code), as it is impossible to regulate for every conceivable situation. Indeed, we would argue for something akin to an "80/20 rule". That is, we would expect that 80 per cent of imported products could be approved for use in Western Australia fairly automatically. The 'hard decisions' would only be needed for the remaining 20 per cent.

We would also argue that the regulator needs to keep a record of the decisions it has made and their reasons, including *how* the decisions were made. This record ought to be public. This would allow (would be) importers to benefit from the lessons of the past. For example, if one mining company were successful in importing a set of dongas and having the plumbing approved, the next mining company contracting with the same overseas manufacturer should be able to see that this has happened and rely on receiving the same treatment from the regulator.

6.3 Certification of "alternative solutions" after the fact

A notable characteristic of the change to performance standards is that it requires someone to be responsible for ensuring that the design of the equipment they install is adequate. However, the Code also contains extensive "deemed to satisfy" provisions. In other words, the Code allows the design of a unique solution to a particular job but also sets out ways that are deemed to be suitable.

In many cases WA plumbers will be able to continue to work as they have done in the past, installing "deemed-to-satisfy" solutions, but that alternative solutions could be used in some cases, such as where the particular work site makes it difficult to meet the deemed to satisfy requirements.

It seems, therefore, that the main effect of the Code is to add flexibility.

However, there is also the possibility that a plumber will set out to install a deemed to satisfy installation but, as the job progresses, be unable to do so. The situation might arise where

the question is asked whether a particular installation meets the performance based requirements late in the job or even after completion. This raises a number of issues:

First, if the plumber who installed the system is also able to sign off that it satisfies performance based requirements there is a conflict of interest. No plumber will want to install equipment today and then declare it unsafe tomorrow. However, this might encourage plumbers to 'wave through' work that should not really be approved. The solution to this might be to require plumbers who wish to install performance based solutions to say so in advance, giving the regulator the option of 'checking up' before the work commences.

On the other hand, if a plumber cannot install a performance based solution without having said so in advance they will lose the flexibility to adapt to unforeseen circumstances on a job site in legitimate ways.

QUESTION 3 PERFORMANCE-BASED STANDARDS

a) Given the familiarity in the industry with existing prescriptive standards, in what circumstances will plumbers likely find it difficult to adapt to different standards?
b) Are there cases when a plumber should be able to rely on someone else having designed a performance based system appropriately?
   i) When should this be the case?
   ii) Should the plumber then be free of liability for the design of the system?
c) If the answer to (b) is yes, who should be able to design a system?
   i) What qualifications are necessary?
   ii) Who should be responsible for the design or liable for flaws in the design?
d) What information should the regulator rely on in deciding whether to approve particular plumbing equipment for importation?
e) What information should be published when the decision to approve (or not) is made?
f) How should this information be provided (e.g. formal register of decisions, internet website)?
g) How should non-standard systems be accounted for?
h) When plumbing systems are imported from overseas, what is the best way for a regulator to verify and certify these? What role should the regulator have?
i) Are the existing provisions in the Code sufficient, or could they only work for individual pieces of equipment?
j) What skills sets would a regulator require to undertake inspection and certification work?
k) Should plumbers (or others) be required to give the regulator advance notice of their intention to install:
   i) a 'deemed to comply' system
   ii) a performance based system
l) If the answer to (k) is 'yes':
   i) How long in advance should that notice be given?
   ii) What should happen if the plumber wants to change the way they do the work from deemed to satisfy to performance based?
   iii) What should happen if they want to change the other way (i.e. from performance based to deemed to satisfy)?

7 Compliance and funding

It would be useless to have a series of performance standards and licencing requirements if they were not used in the industry. Similarly, there would be no use in having a licensing regime if it was ignored. Therefore there is a vital role for monitoring and enforcement in the plumbing market. As discussed in section 0 the role of monitoring and enforcement is to try to ensure that *actual* performance in the industry is as it *should be.*

In this chapter we discuss the way that monitoring and enforcement could be applied to the plumbing industry. We use the term 'enforcement and monitoring' to cover all of the interfaces between a regulator and plumbers after they have received their licences, with the exception of licence renewals, and inspecting the work of plumbers to make sure they have installed the right products correctly. . Therefore, it includes:

- inspections of plumbing work
- handling of complaints by consumers about plumbers
- sanctions arising from either of these.

This chapter has two sections. The first, which is brief, focusses on the mechanics of regulation. We do not go into the detail of how inspections occur, what kinds of punishments are meted out and so on, as this level of detail is not appropriate for a high-level review such as this. For example, we do not investigate whether the fine for using the wrong kind of valve ought to be $100 or $150. Rather, we try to identify the broad types of activities that a regulator might need to undertake, the information they might need and the tools available to them.

In section 7.1, we refer to "the regulator" generically. In that section we do not consider who that regulator might be, or whether a single regulator would do everything under a single "roof", or whether there might be more than one.

Section 7.2 addresses the question of who the regulator ought to be. It considers the possibility that there should be a single regulator or more than one. It also considers the possibility that the plumbing regulator stands alone or is 'joined up' with the regulator(s) of other industries.

7.1 Mechanics of monitoring and enforcement

The purpose of monitoring and enforcement is to ensure that performance standards and the licencing regime in an industry 'works' as it is intended to. We assume that in the absence of an appropriate monitoring and enforcement regime there would be a temptation to 'cut corners.' If corners are cut there would be an increased risk of the problems that regulation is intended to prevent (i.e. those discussed in chapter 3 and others that are identified through consultation).

A well designed monitoring and enforcement regime is based on the assumption that most members of an industry will 'do the right thing' but that a minority will tend to 'cut corners.' The regime 'works' by introducing a risk that those who 'cut corners' will be caught and penalised in some way.

Therefore, in a well-designed monitoring and enforcement regime the regulator needs three things:

1. a way to know, or be able to find out, what work has been done, where and by whom
2. a way to identify 'good' work from 'bad'
3. the ability to 'do something' when a problem is found.

A well designed monitoring regime should also be *fair*. Broadly, this means that plumbers should be able to predict the way that the regulator will behave. For example, they should know how the regulator will identify good work from bad and should know what the penalty for 'cutting corners' will be. They should also have the opportunity to participate in the regulatory process including by arguing that the work they did was not 'bad' if they choose to do so.

7.1.1 Regulatory boundaries

One final issue in respect of the mechanics of regulation is what to do at the "border" of the jurisdiction of the plumbing regulator. At present, the jurisdiction of the plumbing regulator stops at the water meter. Beyond the water meter the water supply system is controlled by water utilities, regulated by different government agencies.

In some instances, notably "backflow", the activities of plumbers have impacts "beyond the meter". Current institutional arrangements make it difficult to address these issues and it is not clear what the optimal response ought to be. Expanding the scope of the plumbing regulator beyond the meter would appear to be an excessive response, which leads us to consider that perhaps the most appropriate response might be to provide the regulator with the mechanisms to work with the relevant water utilities as and when issues arise. This is the issue we seek feedback on.

QUESTION 4 WHAT TO DO ABOUT "BEYOND THE METER" ISSUES?

a) How serious are these problems? Is it sufficient to give the regulator power to act in conjunction with the relevant water utility? Are more formal roles and responsibilities required, and if so, what are they?

7.2 Governing the industry

The next issue to consider is the nature of the regulator. Broadly there are three questions to consider:

1. How the regulator should be structured – for example, it could be:
   a) a statutory Commission
   b) a board
   c) part of a government department
   d) or another structure.
2. Whether the regulator should have responsibility for:
   a) the plumbing industry alone
   b) other similar industries as well.
3. How the regulator should be funded

We are particularly interested to know whether either of these issues 'matter' to the industry. We are aware, of course, of the problems associated with the relationship between the Plumbers Licensing Board and the Building Commission, which were examined by the Auditor General. However, it appears from the Auditor General's report that those problems are more likely to have arisen because of problems in the way this process of change was handled, and in the way different parties interfaced with each other. This does not appear to be a problem with the choice of a legal structure itself.

Regardless of its legal structure, the relevant regulator can be focussed on a particular industry, or it can generalise. As we understand it, most States are moving, or have moved, to a single regulator with responsibility for a range of trades. For example:

- The Office of the Technical Regulator in South Australia has had responsibility for Electrical and gas-fitting trades for some time. It has recently been given responsibility for plumbing as well.
- Victoria, which had a Plumbing Industry Commission with a specific industry focus is to move to a Victorian Building Authority which covers plumbers, builders and architects.
- The ACT and NSW encapsulate the licensing of plumbers within broader occupational licensing authorities that have jurisdiction over a number of trades, including some outside the building industry.
- Queensland has a hybrid system where plumbers are licensed by a Plumbing Industry Council (with gasfitters being separately regulated) but if they wish to contract with the public, they need a contractor licence from the Queensland Building Services Authority.

In our preliminary view the key issue is the skills that the regulator needs. With the obvious exception of the technical skills (i.e. plumbing, gas fitting, building etc.), it appears that a regulator needs essentially the same skills regardless of the industry it regulates. That is, the regulator needs to be able to:

1. locate work
2. assess that work and gather evidence regarding its quality
3. operate a fair, transparent and robust enforcement system

At this stage our starting point view is that the 'head office' functions of the regulator, such as administration and the processing of complaints etc., can be shared between multiple industries. This would save on duplication of resources and likely be more efficient. That 'head office' could then be staffed by people with appropriate technical skills.

The key question in respect of regulatory scope is whether it really matters or not? That is, is there a systematic reason why a regulator focussed on plumbing in particular would perform better than a regulator with responsibility for other trades?

In other words, is the scope of regulation, in terms of whether it is multi-industry or single industry, safety plus business plus plumbing and so on, the sort of thing which can safely be left to the particular policy prerogatives of the government of the day, or whether there is something intrinsic about plumbing which favours a particular form of regulatory governance.

The third issue is funding. Whatever its function and structure, a regulator must be funded. At present, this is done through the (three yearly) licence fee plumbers pay and fees attached to notices of intention and completion and multi entry tickets that plumbers must buy and later return to the Board when work is done.

There are other ways to fund an industry regulator. For example, energy safety regulators in Australia are typically funded by large energy businesses such as electricity generators and energy retailers and network and pipeline operators. Therefore, for example WA electricians do not contribute to funding the safety regulator.

In principle we would argue that the cost of regulating plumbing should be met by those who benefit from it, which takes us back to the problems discussed in section 3.1 and any others that may be identified.

It may be the case that preventing those problems is not of benefit to plumbers but to their customers. This would suggest that it is appropriate for those who buy plumbing services to pay for the regulator, which could be achieved by requiring plumbers to meet the cost upfront and enabling them to pass the cost of doing so on to the customer through market prices.

However, it least in the case of public health, the beneficiaries include customers who *don't* buy plumbing services. In this case the beneficiaries are the people who do not contract water borne illness due to unsafe work that is prevented. In practical terms, this may be the same as saying that society at large benefits from this.

The beneficiaries of plumbing regulation may also vary sector to sector, so the answers relating to 'operational scope (above) will be relevant here as well.

QUESTION 5: MONITORING AND ENFORCEMENT

a) Is there something intrinsic about a single industry regulator which makes it better-suited to the plumbing industry than a more generalist regulator? Is there a need to bring safety and business practices under the same roof as regulation of plumbing practice?

8 Conclusions and next steps

Having examined the different possibilities for each of the three regulatory elements in the previous three chapters (standards, licensing and policing), the final step is to bring the different elements into a cohesive whole, whereby the form of standards matches the type of licensing and the type of policing regime in place. This will be the ultimate task of this review exercise.

We recognise that the construction of a cohesive regulatory framework out of the disparate elements outlined in the previous three chapters is a large task, and that our final question will encourage a wide range of responses. However, we are interested in the views of stakeholders as to how it will all "hang together" as a cohesive regulatory system, which leads us to our final question.

QUESTION 6: HOW WILL IT ALL HANG TOGETHER?

a) What does the right combination of standards, licences and policing look like?
b) What does the right kind of regulator overseeing this look like?
c) Where is flexibility and discretion ideally exercised?
d) What channels are ideally used for ensuring that the results of the use of discretion are widely known in the industry?
e) Is there anything else you would like to add

The next step in our review process will be to conduct a series of workshops around WA. Please see Table 2 for consultation dates, locations and times. Should you wish to attend one of these please contact Tess Metcalf to register your attendance, either by telephone on (08) 9449 9613 or email at t.metcalf@acilallen.com.au. At the same time, we will be inviting submissions on this discussion paper through until Friday 19th July 2013.

Please note that your submissions may be published. If you consider your submission, or any part of it, to be confidential please make that very clear when you make it. If submissions are not clearly marked confidential they will be published.

Table 2 CONSULTATION PROGRAM FOR REVIEW OF WA PLUMBING REGULATIONS

Date	Meeting location	Venue	Meeting time
1st July	Perth	Adina Hotel; 33 Mounts Bay Road, Perth	2pm - 4pm
2nd July	Kalgoorlie	Rydges Resort; 21 Davidson St, Kalgoorlie	9am - 11am
3rd July	Bunbury	Quality Hotel Lord Forrest; 20 Symmons St, Bunbury	9am - 11am
4th July	Geraldton	Master Builders; 4 Walton Cl, Geraldton	10am-12 noon
5th July	Perth	Adina Hotel; 33 Mounts Bay Road, Perth	2pm - 4pm
6th July	Perth	Adina Hotel; 33 Mounts Bay Road, Perth	9:30am - 11:30am
8th July	Albany	Dog Rock Motel; 303 Middleton Rd, Albany	9:30am - 11:30am
9th July	Port Hedland	Ibis Styles Hotel; McGregor St, Port Hedland	12:30pm - 2:30pm
10th July	Broome	Mercure Hotel; Weld St, Broome	8am - 10am

Our intent is that the consultation process in this review be as open as possible. To that end, we would welcome written or oral submissions. Written submissions can be sent to the project manager, Jeremy Tustin, at j.tustin@acilallen.com.au. He can also be contacted by telephone on (03) 8650 6027. Alternatively, if you would like to come in and talk face-to-face to one of the team members, please contact Tess Metcalf in Perth on (08) 9449 9613.

We look forward to seeing you at one of the consultations and hearing your opinions.

Appendix C Regulating gasfitting, electrical work and building services in WA

Regulation of the gasfitting and electrical (electricians) industry in WA is the role of Energy *Safety* WA (Energy*Safety*).

Among other things, Energy *Safety* has the role of supervising gasfitters and electricians and the industry in which they work. Broadly, it has the corresponding functions in relation to those two trades as the PLB and Building Commission have in relation to plumbers and the plumbing industry.[117]

Like the Building Commission, Energy Safety is a division of the Department of Commerce. That division provides support to the Director of Energy Safety (the Director), a position established by s. 5 of the *Energy Coordination Act 1994*.

The regulatory regimes applicable to the gas and electrical trades are similar, though each has its own characteristics. They are described in sections C.1 and C.2 respectively.

The resourcing arrangements for gasfitting and electrical regulation are the same as each other. Staff are appointed or made available to the Director to enable the Director to perform their functions directly. This mechanism is different than the way that staff are made available to the PLB, which requires agreement of the department to which those staff 'belong'.

[117] Energy *Safety* also has functions that are beyond the scope of the PLB and Building Commission, such as those relating to Power Stations and to the heat value of gas. The first of these is, in the context of water, within the ambit of the water services providers. The second is specific to energy.

C.1 Regulating gasfitting in WA

Figure C1 **Overview of WA gasfitting regulation**

<table>
<tr><th>Decision maker</th><th colspan="4">Captured by regulatory regime</th><th>Not captured</th></tr>
<tr><td>n/a</td><td colspan="4">Safeguard persons and the public interest in relation to gasfitting</td><td rowspan="2"></td></tr>
<tr><td>n/a</td><td colspan="4">Installation, removal, demolition, replacement, alteration, maintenance of a gas installation (other than exceptions)</td></tr>
<tr><td rowspan="2"></td><td>Class C gasfitting
(anything not class I, E or P)</td><td>Class I gasfitting
(type B or high pressure)</td><td>Class E gasfitting
(mobile engines)</td><td>Class P gasfitting
(systems for refuelling motor vehicles)</td><td rowspan="2"></td></tr>
<tr><td colspan="4"></td></tr>
<tr><td>National standards administration process?
Director</td><td colspan="5"></td></tr>
<tr><td>Director</td><td></td><td></td><td></td><td></td><td rowspan="2"></td></tr>
<tr><td>Director</td><td colspan="4"></td></tr>
</table>

The regulatory regime applicable to gasfitters is described in the:

- *Gas Standards Act 1972*, particularly ss. 13A to 13I, (WA Gas Act)
- *Gas Standards (Gasfitting and Consumer Gas Installations) Regulations 1999* (WA Gas Regulations).

The WA Gas Act provides, in s.13A(2) that regulations may be made to create a scheme 'for the administration and control of gasfitting'[118] and for the grant, by or on behalf of the Director of Energy Safety, of certificates of competency, permits or authorisations allowing a person to carry out gasfitting work.[119] These things are set out in the WA Gas Regulations.

C.1.1 Objective of gasfitting regulation

The objective of gasfitting regulations is not stated explicitly. However, it is implied by s.13A(3)(l) of the WA Gas Act, which allows the Governor to make regulations:

> for safeguarding persons and the public interest in relation to gasfitting

C.1.2 Key decision makers

In the gasfitting regulatory regime, the key decision maker is the Director.

Unlike plumbing there is no Gasfitters Licencing Board or equivalent body established by law. However, the Director has chosen to establish a committee to provide advice in relation to licencing matters.

[118] s.13A(2)(a)

[119] s.13A(2)(b)

C.1.3 Definition of the trade

For the purposes of the regulatory regime described here, gasfitting is defined in Regulation 4 of the WA Gas Regulations as any

> operation, work or process in connection with the installation, removal, demolition, replacement, alteration, maintenance of a gas installation.

A gas installation is any appliance, pipes, fittings or other apparatus used for conveying, controlling, supplying or using gas.[120]

However, gasfitting excludes replacing gas cylinders, working on gas engines and working on gas reticulation systems.

Supervising gasfitting work is also defined as being gasfitting work.

However, from a licensing point of view, the trade is narrower. The WA Gas Act provides for different classes of gasfitting to exist and contemplates that a person may hold a licence to carry out gasfitting work of one class but not another.[121] The regulations prescribe four classes of gasfitting as summarised in Table C1. Broadly, classes E and P are gasfitting work associated with motor vehicles and refuelling installations respectively. Class G general gasfitting but excludes gasfitting on high pressure and high use systems, which is class I.

Table C1 **Classes of gasfitting work**

Class	Definition
G	all gasfitting work except gasfitting work classes as Class I, E or P
I	gasfitting work on a consumer's gas installation with a Type B appliance or with an operating pressure of greater than 200kPa
E	gasfitting work associated with a mobile engine
P	gasfitting work associated with systems for refuelling motor vehicles

Source: Schedule 2 to Gas Standards (Gasfitting and Consumer Gas Installations) Regulations

C.1.4 Technical rules

Schedules six and seven to the WA Gas Regulations set out the physical requirements for gas installations.

Schedule seven contains a list of Australian and New Zealand Standards that contain requirements that are to be followed for consumer gas installations. Schedule six is a list of detailed provisions relating to the installation or use of certain equipment.

The two schedules are given effect by Regulation 32 which provides that a consumer's gas installation must meet the requirements of both schedules. Where there is a conflict between the two schedules, Schedule six prevails.

Regulation 32 also allows the Director to alter a requirement of either the standards in Schedule seven or the details in Schedule six. This can be done either for a single installation or a type of installation. It can be done by varying the requirement, removing it or specifying a different requirement.

The arrangements in the regulations relating to standards are supported by section 13D of the WA Gas Act which makes it illegal to sell, hire, advertise for hire or install a gas

[120] s. 4 Gas Standards Act

[121] S.13A(3)(c) & (d)

appliance unless it has been approved by the Director and is marked accordingly. Approvals of this type can be made, for Type A appliances, for either a class of appliances or individual appliances. Type B appliances must be approved individually before they can be used. The penalty for selling, hiring or advertising an unapproved gas appliance, of either Type A or Type B is substantial, up to $250,000. The penalty for installing an unapproved gas appliance is the same.

C.1.5 Licensing

In WA there is no such thing as a gasfitting licence. Rather, gasfitters require either a certificate of competency, permit or authorisation. However, for present purposes the difference between these things is immaterial. Therefore, in this report we refer to a gasfitting licence for simplicity.

The Director has wide discretion over the skills that a candidate must have before they can be given a licence. The WA Gas Act goes no further than to say that the Director should be satisfied that the person's skills and knowledge are adequate before issuing a licence.

The WA Gas Act provides that regulations could be made "as to the examinations and qualifications required of a person" who wishes to obtain a licence, which might limit the Director's discretion in this area.[122,123] However, no such regulations have been made to date.

The Director has more discretion over the nature of gasfitting licences than the PLB has in plumbing. In particular, the Director can choose the period for which a licence has effect (r. 12(3)).

For gasfitters in training the Director has the power to grant a licence to do gasfitting work to a person who would not otherwise be eligible to hold a licence. This type of licence can be issued kind with restrictions or conditions as the Director considers appropriate.

Gasfitters from outside WA can apply to the Director for a permit to operate as a gasfitter in WA. The Director may issue a temporary permit to anyone who is authorised to operate as a gasfitter elsewhere in Australia or has any other qualification that the Director considers to be satisfactory evidence of their competence to work as a gasfitter. The Director can determine the period for which temporary permits are valid and can make them subject to limitations, restrictions or conditions.

C.1.6 Compliance regime

Under the WA Gas Act it is illegal to do any work that is "of the nature of gasfitting" without a licence.[124] However, unlike the regime for plumbing in WA, it is not illegal for a customer to engage an unlicensed person to perform gasfitting work.

On the other hand, the WA Gas Regulations prohibit an unlicensed person from advertising or otherwise offering to do gasfitting work.[125] This prohibition does not exist in the WA plumbing regime.[126]

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[122] S. 13A(3)(d)

[123] Whether any such regulations would limit the Director's discretion would depend on the regulations themselves.

[124] s.13A(2)

[125] R. 38(1)

[126] A licensed plumbing contractor must not advertise without including their licence number, but there is no prohibition against an unlicensed person advertising plumbing services.

Notwithstanding the differences between gasfitting and plumbing, the general prohibition against an unlicensed person doing gasfitting work underpins the need for licensed gasfitters.

When gasfitters perform work they must provide a notice of completion to the customer, the Director and the relevant gas supplier. This notice must be supplied within 48 hours of the completion of the work.

On the notice of completion the gasfitter must certify that the work was completed to a trade finish and that every part of the gas installation on which the work was done or that is affected by the work is safe to use and complies with the applicable standards. This is similar to the obligation on plumbing contractors.

Unlike plumbing contractors, though, gasfitters must report (to the Director) gasfitting work that is defective and therefore unsafe to use.[127]

With one exception gasfitters are not required to wait for the outcome of an inspection as they go about their work.[128] However, if an inspection reveals that a gasfitter has done work that does not comply with the applicable standards, a notice of defect may be issued and the gasfitter may be required to rectify the defect(s) within seven days.

A gasfitter, or a person who employs gasfitters, must also keep records in relation to the work they do themselves or that is done by gasfitters they employ.

Similarly to the WA plumbing regulatory regime, the WA Gas Regulations include a list of disciplinary matters. However, when a disciplinary matter arises the Director has the choice of either taking the matter to SAT or dealing with it summarily within Energy*Safety*. Therefore, the Director has a substantial compliance power in relation to gasfitters that the PLB does not have in relation to plumbers.

The Director has a range of investigative powers to facilitate this process. The WA Gas regulations do not refer to gas inspectors as such, but they allow the Director to conduct inspections and to delegate functions of the Director to staff of the Department. In practice this appears to be the same as designating staff as inspectors.

[127] Regulation 42A

[128] The exception is that a gasfitter must not leave a Type B appliance permanently connected in a consumer's gas installation unless it has been inspected by an inspector who has certified that the appliance complies with the applicable standards

C.2 Regulating electrical work in WA

Figure C2 **Overview of WA electrical regulation**

<table>
<tr><th>Decision maker</th><th colspan="2">Captured by regulatory regime</th><th>Not captured</th></tr>
<tr><td></td><td colspan="2">Ensure the best interests of the West Australian community as a whole without regard for sectional interests</td><td rowspan="2"></td></tr>
<tr><td></td><td colspan="2">Any work on:
1. electrical machines or instruments
2. an electrical installation
3. electrical appliances or equipment.
if electricity is to be supplied to them at more than 50 volts alternating current or 120 volts direct current</td></tr>
<tr><td></td><td colspan="2"></td><td></td></tr>
<tr><td rowspan="4">Director – determine need for licence

ELB – issue licence</td><td colspan="2">Electrical contractor</td><td rowspan="4"></td></tr>
<tr><td>Electrician</td><td>Electrician (restricted)</td></tr>
<tr><td colspan="2">Electrician (training)</td></tr>
<tr><td colspan="2"></td></tr>
<tr><td>Director</td><td colspan="2"></td><td></td></tr>
</table>

The regulatory regime applicable to electricians is described in the *Electricity Act 1972*, particularly ss. 13A to 13I) (WA Electricity Act) and the *Electricity (Licensing) Regulations 1991* (WA Electrical Regulations).

The WA Electricity Act provides, in s.32, that regulations may be made to establish a regulatory regime for the electrical trade but goes no further than this in areas relevant to this report. The WA electrical regulatory regime is set out in the WA Electrical Regulations.

C.2.1 Objective of electrical regulation

The objective of licensing in the electrical industry is set out in Regulation 12(c) of the WA Electrical Regulations. The objective is:

> to ensure the best interests of the West Australian community as a whole without regard for sectional interests.

C.2.2 Key decision makers

For present purposes there are two key decision makers in the electrical trade, the Electrical Licencing Board (ELB) and the Director.

In some ways the ELB is similar to the PLB in plumbing:

- they have similar structures, with both boards comprising a mixture of people including members chosen from nominations made by industry groups
- they have similar functions.

However, the presence of the Director in the WA electrical regulatory model distinguishes it from the WA plumbing regulatory model. The presence of the Director means that the role of the ELB is more limited than that of the PLB.

Broadly, the ELB is responsible for administering the licensing regime applicable to electricians while the Director is responsible for determining the need for a licence and administering the compliance regime. Therefore, in terms of the regulatory framework, the

ELB and the Director are both key decision makers at the licencing layer while the Director is key decision maker at the compliance regime layer.

Another characteristic of the ELB that distinguishes it from the PLB is that, pursuant to Regulation 13(b) the ELB must give effect to directions it is given by the Director. There is no corresponding officer that is able to direct the PLB.[129]

C.2.3 Definition of the trade

The WA Regulatory definition of electrical work is work on any of the following if electricity is to be supplied to them at more than 50 volts alternating current or 120 volts direct current:

1. electrical machines or instruments
2. an electrical installation
3. electrical appliances or equipment.

It is immaterial whether the thing in relation to which the work is done is connected to the distribution network (i.e. the 'grid'). It is also immaterial whether electricity is supplied through a plug socket.

The only exception to this in the WA Electrical Regulations is that the definition of electrical work excludes work on the direct current components of a motor vehicle.

Doing assessments of electrical work to determine its quality is also defined as electrical work.

C.2.4 Technical rules

Part Five of the WA Electrical Regulations sets out the technical rules for electrical work. Regulation 49 requires that electrical work shall be done in accordance with (as amended from time to time):

1. the Australian/ New Zealand Wiring Rules
2. the WA electrical requirements
3. the standards in schedule 2 to the *Electrical (Licensing) Regulations.*

If there is an inconsistency between the Australian/ New Zealand Wiring Rules and the WA electrical requirements, the latter prevails.

Regulation 49(2a) allows the Director, on a case by case basis, to alter the above requirements. The Director can alter a requirement, specify that a requirement does not apply or specify that other requirements apply in addition to those listed above.

C.2.5 Licensing

In the WA Electrical regulatory regime the licencing function is divided between the ELB and the Director. The need for a licence is determined by the Director, who can determine which kinds of electrical work can be done without needing a licence and, therefore, the kinds of work that can only be done by a licensed person. The Director must consult with the ELB in making this determination, but the determination is the Director's. The determination is given effect when by publishing a notice in the Gazette.[130]

[129] Both ELB and PLB are subject to directions of the Minister.

[130] Regulation 19(2)(k)

However, once the need for a licence has been determined it is the ELB that determines whether a licence should be given to an individual person and, more generally, that determines the qualifications required of licensees.

Several types of licence are contemplated by the *Electricity (Licensing) Regulations*. These are summarised in Table C2 and discussed in more detail below.

Table C2 **Types of electrical licence**

Licence type	Description
Electrical worker – electrician	Perform electrical work without supervision, but not carry on business as an electrical contractor
Electrical worker – training	Perform electrical work under the supervision of a person with an electrician's licence
Electrical worker – restricted	Perform electrical work without supervision, but only of the type specified on the licence
Electrical contractor	Carry on business as an electrical contractor and perform work without supervision (electrician's licence is a pre-requisite for electrical contractor's licence
In house electrical installing work	Employ[a] electrician(s) to perform work in-house

[a] An In house electrical installing licence can only be used if the electrician(s) are employed as employees (employed as a servant). It does not allow electricians to be subcontracted, which would require an electrical contractor's licence.

As shown in Table C2 and Figure C2 the WA Electrical regulations establish a three tiered licencing structure. There are:

1. contractors licences, which authorise the holder to operate a business, but not to perform electrical work (though a contractor's licence can only be given to a person with an electrician's licence)
2. electrician's licences, which authorise a person to perform electrical work unsupervised and certify their own work, but not to operate a business
3. electrician's training licences, which authorise a person to perform electrical work under an electrician's supervision.

A key difference between this structure and the WA plumbing licencing structure is the separation of the ability to run a business from the ability to operate unsupervised and 'sign off on' their own work.

Another key difference between the licensing arrangements for electrical and plumbing in WA is the role of restricted licences.

An electrician's licence authorises its holder to do any work within the WA regulatory definition of electrical work without supervision. By contrast, the holder of a restricted licence can only perform subsets of electrical work.

However, unlike the restricted plumbing licence, the WA electrical regulations do not define the subsets, nor do they limit the way these subsets could be defined. Rather, the regulations compel the ELB to grant a restricted licence to a person who applies for one if they are competent to perform the subset of electrical work that would be described on the restricted licence.

This is evident from Regulation 22(4), which describes the ELB's task in issuing licences. Subsections 22(4) (2) & (3) are phrased as 'shall not issue' clauses. That is, they prevent the ELB from issuing a licence unless the applicant:

1. satisfies the board that the licence relates to the kind of electrical work they intend to do (or are doing)

2. has had the experience and training the Board requires having regard to the kind of work in question
3. has passed, or been exempted from passing, examinations the Board considers appropriate in the kind of electrical work to be carried out.

However, subsection 22(4), which deals with restricted licences is phrased differently. It is a 'shall issue' clause. That is, if the ELB is satisfied that the applicant intends to engage in the type of work that would be described on the restricted licence, has the necessary experience or training to do that work and has passed or been exempted from passing examinations applicable to that type of work the ELB is obliged to issue a restricted licence.

In the WA Plumbing Regulations a restricted licence is expressly limited to certain work related to replacing a hot water system. It is clearly designed to allow electricians to do this without needing to involve a plumber and cannot be varied without changing the regulations themselves.

Therefore, the restricted electrical licence created by the WA electrical regulations is fundamentally different than the restricted plumbing licence. In the electrical trade industry participants can choose the 'breadth' of authorisation they require whereas in plumbing neither the participants nor the board can make this choice.

A similar approach is evident to the treatment of migrant electricians. A person who is licensed to be an electrician interstate or overseas can apply to the ELB for an electrician's licence.[131] When they do, the ELB is required to issue them ('shall issue') with a licence if it is satisfied that they are suitably qualified or experienced. The ELB may put conditions and restrictions on the licence that it considers appropriate if it is not satisfied that the person is suitably qualified or experienced.

Under this arrangement it seems that the ELB has the ability to 'tailor' licences to suit individual applicants. As discussed in section 3.4 this ability is not available to the PLB.

C.2.6 Electrical – compliance mechanism

Like gasfitting and plumbing, it is an offence for a person to carry on business as an electrical contractor without an electrical contractor's licence or to carry out electrical work without an electrician's licence.[132]

Like plumbing, but unlike gasfitting, it is also an offence for a customer to have electrical work carried out otherwise than by a person with an electrical contractor's licence.[133]

Certain work is defined in the regulations as 'notifiable work'. An electrical contractor must notify the relevant network operator before this type of work is commenced. The electrical contractor must also provide the network operator with a notice of completion when the notifiable work is completed and retain a copy of that notice for five years.

The requirement to provide a notice of completion does not apply if the Director has exempted the electrical contractor from it or to certain work carried out at a mine, though in the latter case a record must be kept at the mine.

Electricians are responsible for ensuring that the work they do and the work done by those under their supervision is done in accordance with the technical rules. In addition to this,

131 Regulations 25 and 33

132 Regulation 19

133 Regulation 34

and unlike other trades, they are also responsible for ensuring that it is done safely and completed to a trade finish.

However, also unlike other trades, the regulations transfer responsibility for the design of electrical installations from the person who installed them to the person who designed them. If electrical installation is designed by someone other than the person who installs it, the designer is responsible for ensuring that:

4. it is designed to be safe
5. the design is accompanied by information about the way it is to be installed to ensure that it is safe.

However, notwithstanding this, an electrician must not permit any wiring or equipment to be connected if it is unsafe. Further, an electrician must not allow any wiring or equipment that is connected to remain connected if it is unsafe to do so.

An electrical contractor must complete an electrical safety certificate for all electrical work they carry out, or cause to be carried out. A Copy of the electrical safety certificate must be given to the person for whom the work was done and another copy must be kept by the electrical contractor for five years.

As with plumbing and gas the WA Electrical Regulations set out a list of proper causes for disciplinary action. If one of those causes arises, the Director has the choice of pursuing the matter at SAT or dealing with it internally as is the case with gasfitting.[134] As noted above, this is not possible in the case of plumbing.

[134] The Director cannot deal with a matter internally unless the person who is the subject of disciplinary action chooses to take the matter to SAT.

C.3 Regulating building services in WA

Figure C3 **Overview of WA building services regulation**

<table>
<tr><th>Decision maker</th><th colspan="5">Captured by regulatory regime</th><th>Not captured</th></tr>
<tr><td>n/a</td><td colspan="5"></td><td rowspan="2">Building work < $20,000
Cabinets and joinery
Water tanks, Fire sprinkler systems
Farm buildings, prefabricated buildings, parking areas, outdoor sporting areas
Incidental structures
Painting work < $1,000
Signwriting
Painting of floors, paths, driveways</td></tr>
<tr><td>n/a</td><td colspan="5">Building work | Building surveying | Painting work | Owner-builder work</td></tr>
<tr><td>National standards administration process?
Commissioner</td><td colspan="6">Building Code of Australia (Volumes 1 and 2 of the National Construction Code)
Building Commissioner Code, Building Commissioner Standards.</td></tr>
<tr><td>BSB
Issue licence</td><td>Building contractor
Building practitioner</td><td>Building surveying contractor level 1
Building surveying practitioner level 1</td><td>Building surveying contractor level 2
Building surveying practitioner level 2</td><td>Painting contractor
Painting practitioner</td><td>Owner-builder approval</td><td rowspan="3"></td></tr>
<tr><td>Commissioner</td><td colspan="5">Receive complaints, cause investigations to occur, refer matters to BSB.</td></tr>
<tr><td>BSB</td><td colspan="5">BSB determines the matter themselves with consent of regulated provider or takes action with the State Administrative Tribunal.</td></tr>
</table>

The regulatory regime applicable to building services is described in the:

- *Building Services (Registration) Act 2011* (WA Building Registration Act)
- *Building Services (Registration) Regulations 2011* (WA Building Registration Regulations)
- *Building Services (Complaint Resolution and Administration) Act 2001* (WA Building Complaint Act)
- *Building Services (Compliant Resolution and Administration) Act 2001* (WA Building Complaint Regulations).

C.3.1 Objective of business services regulation

No objectives are provided in the acts or regulations.

C.3.2 Key decision makers

There are two key decision makes for present purposes, being the Building Services Commissioner ('Commissioner') and the Building Services Board ('BSB'). The BSB combines the previous separate Building, painting and surveying regulations.

The Minister must designate an executive officer of the Department as the Building Commissioner, under s 85 of the WA Building Complaints Act. The Commissioner is required to administer the BSB and the operation of registration and approval schemes under the Building Registration Act, as well as dealing with complaints under the act Building Complaints Act. The Commissioner may appoint committees to assist in performing their function.[135]

The BSB is established by s 65 of the WA Building Act. It is comprised of members appointed by the Minister, including a designated chairperson, two members with knowledge and experience representing consumer interests, and two members from each occupation group with experience as a registered building service provider in that class. Those occupation groups are defined in the Building Registration Regulations as builders, building surveyors, and painters.

The Commissioner is required to arrange for staff and resources to support the functions of the BSB.

The Minister may give specific written directions to the BSB, but not in respect of a particular person, application or proceeding.[136]

C.3.3 Definition of the trade

Building services encompasses building, building surveying, and painting works.

Building work is defined in the Building Registration Regulations as work for which a building permit is required, with a value of $20,000 or more carried out in WA. It specifically excludes construction of a farm building, prefabricated building in a manufacturing yard, parking areas, outdoor sporting surfaces, walkways, water tanks not incorporated into another building, incidental structures (*Building Act 2001* s 3), fire sprinklers, partitioning, safety systems, decking or glazing, cabinet making and instillation, and joinery.

Building surveying work is defined in the Building Complaint Regulations as the examination of plans and specifications for a building to assess the safety, accessibility and energy efficiency of a building if the building is built in accordance with the plans and specifications, and the examination of an existing building to assess the safety, accessibility and energy efficiency of the building. Incidental structures are also included.

Painting work is defined in the Building Complaint Regulations as the application of paint, wall paper or a similar substance or material to a building or fixture, excluding paths, floors and driveways, or protective coating if applied at the same time as abrasive blasting or mechanical cleaning.

C.3.4 Technical rules

The industry is subject to the Building Code of Australia – Volumes 1 and 2 of the National Construction Code published by the Australian Building Codes Board, and the

[135] WA Building Complaints Act s 89.

[136] WA Building Act s 73

Commissioner may make additional codes and standards in relation to building services and technical aspects of construction and demolition of buildings.

C.3.5 Licensing

The BSB is responsible for granting registration (not practically different from a licence) for building services work. People may seek registration under multiple classes of building services, or a single class. The principle rules are set out in ss11-20 of the Building Registration Act, and the definitions of the classes are provided in the Building Registration Regulations.

Registration is either as a building service practitioner, or a building service contractor. Only natural persons may be registered as a building service practitioner. Registration as a building service contractor is wider, meaning companies can be registered as contractors.

The BSB must consider whether the applicant has the qualifications and experience for each class of building service practitioner/contractor covered by the application.[137] The registration includes a fit and proper person test, and registration as a contractor also requires financial and insurance requirements being met.

After the BSB determines that the applicant meets the criteria, they must register the applicant. In determining whether the applicant meets the requirements, the Building Registration regulations set out the qualifications and experience required for each class; the BSB has the power to conduct examinations to aid its determination. A certificate of registration must be granted under s 20 of the Building Registration Act. The Commissioner is required to keep a register of registered practitioners and contractors.

The BSB is able to place conditions on registrations.

The classes of registration available are:

Table C3 **Classes of building registrations**

Class		
Building work	Building practitioner	Building contractor
Building surveying work	Building surveying practitioner	Building surveying contractor
Painting work	Painting practitioner	Painting contractor

Each contractor registration is available as an individual registration, or in a partnership or company structure. Registration is for a maximum period of 3 years.

Registration allows the registered practitioner or contractor to use the title. Only registration as a contractor allows the person or body to carry out the prescribed building service, however employees of contractors may carry out work for the contractor. Contractors must have a 'nominated supervisor' for each class of building service contractor the contractor is registered for, who must be a registered building practitioner. They cannot carry out work in that area without one.

Importantly, individuals who do not wish to contract directly with others to provide building work valued over $20,000 or who will not be seeking a building permit do not need to be registered.

[137] Building Registration Act s 13

People that were previously registered under the *Builders' Registration Act 1939* have the choice at the time of renewing whether to maintain dual registration, or choose to be either a registered practitioner or contractor.

Additionally, individuals may apply to the BSB for owner-building approval under s 40 of the Building Registration Act to undertake building work for which a building permit is required.[138] The regulations prescribe the 'owner-builder work' which may be undertaken, subject to a range of conditions. Owner-builder work may only be undertaken on detached houses, class 10 buildings or small commercial buildings as defined.

C.3.6 Compliance regime

Section 7 of the Building Registration Act makes it an offence for someone to carry out a prescribed building service unless they are a building service contractor. A building service practitioner may is exempted where acting as an employee of the contractor.

It is an offence for a person to use a title or claim to be registered (including advertising, or impliedly) unless the person is registered. Only building service contractors can advertise to carry out prescribed building services. An additional range of offences are created in s 53 of the Building Regulation Act, including failing to supervise the work.

Complaints may be made under the Building Complaints Act to the Commissioner about a regulated building service not being carried out in a proper and proficient manner of being faulty or unsatisfactory.

The Commissioner is responsible accepting or refusing complaints. Once accepting a complaint, the Commissioner must cause an authorised person to carry out an investigation. The Commissioner may forward complaints to the BSB for consideration. The BSB then either proceeds to the State Administrative Tribunal, or determines the matter itself with the consent of the regulated provider.

The BSB may also require the Commissioner to make an interim disciplinary order.

[138] Building permits are granted under the *Building Act 2001* or the *Local Government (Miscellaneous Provisions) Act 1960* s 374.

Appendix D Regulating plumbing in other States

D.1 Victoria

The Victorian Building Authority commenced Monday 1 July 2013. It replaced the Building Commission and Plumbing Industry Commission. At the time of writing this report that VBA had recently commenced, though the available operational detail was limited. The discussion presented here is focussed on the structural aspects of the Victorian regime with some discussion of the historical operational aspects. The operational aspects of the Victorian regime are subject to change.

The regime as it currently stands is summarised in Figure D1 and discussed below.

Figure D1 **Overview of Victorian plumbing regulation**

<table>
<tr><th>Decision maker</th><th colspan="8">Captured by regulatory regime</th><th>Not captured</th></tr>
<tr><td>n/a</td><td colspan="8">Regulate plumbing work with the aim of ensuring that it is carried out safely and competently.</td><td rowspan="2"></td></tr>
<tr><td>n/a</td><td>Water supply</td><td>Gasfitting</td><td>Sanitary</td><td>Roofing</td><td>Drainage</td><td>Mechanical services</td><td>Fire protection</td><td>Irrigation</td><td>Work <$750 in value or for which a compliance certificate is not required.</td></tr>
<tr><td>Minister</td><td colspan="9">Plumbing Code of Australia as modified by regulations</td></tr>
<tr><td>VBA</td><td colspan="8">Licences can be issued for one or more categories
Registration can be granted in one or more categories</td><td rowspan="2"></td></tr>
<tr><td>VBA</td><td colspan="8">Audits
Investigations leading to:
▪ Disciplinary action against plumbers
▪ Prosecutions of non-plumbers</td></tr>
</table>

D.1.1 Statement of objective

Victoria's plumbing regulatory system was established under Part 12A of the *Building Act 1993* (Vic Building Act). The objective of part 12A of the Vic Building Act is to:

> regulate plumbing work with the aim of ensuring that it is carried out safely and competently.

The Vic Building Act has seven specified objectives. Insofar as these relate directly to plumbing they are:

> (c) to promote plumbing practices which protect the safety and health of people and the integrity of water supply and waste water systems
>
> (d) facilitate the adoption and efficient application of …national plumbing standards
>
> (e) to facilitate the cost effective construction and maintenance of buildings and plumbing systems
>
> …
>
> (g) to aid the achievement of an efficient and competitive building and plumbing industry.

D.1.2 Key decision makers

The key decision maker in the Victorian Plumbing regulatory system is, as of 1 July 2013, the Victorian Building Authority (VBA). Before 1 July 2013 it was the Plumbing Industry Commission. The powers of that Commission have been transferred to the VBA.[139]

D.1.3 Definition of the trade

The Victorian regulatory definition specifies the following eight classes of plumbing work:

1. **water supply**, which is work, including design work, on a hot or cold water service from the point of connection to the water supply to the points of discharge of the service whether the water is drinking water, non-drinking water or rainwater and work on any hot water service in or on a caravan or boat
2. **gasfitting**, which is work on various items that are involved with supplying or using gas and are downstream of a customer's billing meter or gas storage container including work on any gas appliance in a caravan or boat and incidental design work. It excludes specialised gasfitting work
3. **sanitary**, which is work on an above ground sanitary plumbing system to connect it to a disposal system or below ground sanitary drainage system. It includes work on appliances on caravans or boats and incidental design work
4. **roofing (stormwater)**, which is work on roof coverings (other than certain specified coverings) or flashing or any other part of a roof drainage system involved in the collection of stormwater which connects to the ground level
5. **drainage**, which is work on a below ground drainage system from the point where it connects to the above ground system to the point where it connects to the disposal system. Drainage includes both sanitary and stormwater drainage systems
6. **mechanical services**, which is work on a mechanical heating, ventilation and cooling system in a building except for gasfitting work or work on a cooling tower drift eliminator
7. **fire protection**, which is work on any part of a water service used for fire fighting regardless of the type of water used
8. **irrigation (non-agricultural)**, which is work on the pressurised portion of an irrigation system but excludes a system used for agriculture

There are also six specialised classes of plumbing work for which a specific endorsement is required.

D.1.4 Technical rules

Victoria has adopted the Plumbing Code of Australia. Therefore, the technical rules applicable in Victoria are those set out in the PCA with exceptions as specified in the *Plumbing Regulations 2008* (Vic), notably that Victoria has not adopted the following parts of the PCA:

- part D2 of the PCA, which deals with surface and subsurface drainage systems, to the extent that it relates to certain work specified in the *Plumbing Regulations 2008* (Vic)
- parts F1 and F2 of the PCA, which deal with on-site wastewater management systems.

Further, the *Plumbing Regulations 2008* (Vic) and the VIC Building Act contain technical rules that plumbers must be aware of in relation to plumbing in Victoria.[140]

[139] some powers were discontinued.

D.1.5 Licensing

In Victoria a two tiered licencing system is in place. Broadly:

- a licenced plumber is permitted to carry out work without supervision
- a registered plumber is permitted to carry out plumbing work, but usually require the supervision of a licenced plumber to do so.

More specifically, most plumbing work in Victoria must be accompanied by a compliance certificate. Registered plumbers cannot issue certificates of compliance. Therefore, they must be supervised by a licence plumber whenever they carry out this type of work.

The Victorian arrangement is similar to the contractor/ plumber arrangement in WA with the exception that no licence (or registration) is required to operate a plumbing business. In Victoria, anybody who chooses to operate a plumbing business may do so. This means that plumbing businesses can be operated by companies as well as natural persons.

However, notwithstanding that a plumbing business can be operated by any person, doing plumbing work in Victoria requires either a licence or registration. The fact that no licence or registration is required to operate a plumbing business means that plumbing businesses can be operated by either individuals or companies.

Until 1 July 2013, plumbing licences were issued by the Plumbing Industry Commission. However, from that date, they are issued by the VBA, which has been established to bring together regulation of various trades as a 'one stop shop'.

According to the (then) Plumbing Industry Commission, the 'usual way' for a person to become a plumber in Victoria is to complete an apprenticeship. However, this is not the only path. Plumbers can be given a licence or registered in one or more of the eight classes of plumbing based on their experience and qualifications. Plumbers with at least four years experience (two years for drainage) may apply for either a licence or registration. They will be given a licence if they can satisfy the Qualifications and Experience Review Committee, through an interview and assessment process, that they are competent to carry out work in the class for which they have applied.[141]

A substantial difference between the licencing requirements in Victoria and elsewhere is the requirement for insurance. In Victoria a plumber cannot be licenced or registered unless they carry public liability and indemnity insurance. The minimum levels of cover that are required are set down in Ministerial orders, though plumbers are free to take more insurance if they wish.

D.1.6 Compliance regime

The need for a plumbing licence or registration in Victoria is underpinned by a range of offence provisions. In summary, it is illegal in Victoria to carry out plumbing work or to use titles similar to 'plumber' without a plumbing licence. However, this does not stop an unlicensed person from operating a plumbing business and advertising that business as long as the work is to be done by people with the appropriate licence or registration.

The plumbing industry compliance regime in gives the VBA (and the PIC before it) the power to take:

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[140] The Gas Safety Act 1997 is also referenced by the PCA but, as it relates to gasfitting, is beyond the scope of this review.

[141] summarised from http://www.pic.vic.gov.au/practitioners-and-industry/licensing-and-registration2/applying-to-become-registered-andor-licensed, accessed 21 August 2013.

1. disciplinary action against licensed or registered plumbers when certain disciplinary matters arise
2. prosecutions against non-plumbers performing plumbing work illegally.

When a disciplinary matter concerning a licensed or registered plumber arises the VBA can commence an inquiry. It can do so either at its own volition or in response to a complaint.

If the VBA completes an inquiry and is satisfied that there is proper cause to do so it can take a range of disciplinary actions against the plumber in question. Those actions are similar to the actions that the Director can take against electricians or gasfitters in WA except that the VBA can also suspend or cancel the plumber's licence or registration.

If the VBA becomes aware that an unlicensed person is purporting to be a plumber or has done plumbing work the VBA can prosecute that person in the magistrates Court.

In 2011/12 the (then) PIC conducted 27 prosecutions and 58 disciplinary hearings.

The VBA also audits plumbing work and reports on the results of those audits in its Annual Report.[142]

In 2011/12 the PIC set itself the target of auditing five per cent of plumbing work. In that year 20,463 inspections were conducted, which represents approximately 5.6 per cent of the 367,401 compliance certificates that were lodged. The PIC discovered that 1,193, or 5.8 per cent, of the plumbing installations it inspected did not comply with the applicable technical rules.

In 2011/12 the PIC also audited of 5.6 per cent of below ground sanitary drains that were 'offered for inspection' (almost 2,500 audits) and 100 per cent of recycled water installations notified to the PIC. Approximately 3 per cent of the below ground drainage installations that were inspected were non compliant. The number of recycled water installations that were not compliant was not reported.

D.2 South Australia

D.2.1 Statement of objective

There is no explicit statement of the objective of plumbing regulation in South Australia

D.2.2 Definition of the trade

The SA regulatory definition of plumbing is that plumbing comprises:[143]

1. water plumbing, which is "the installation, alteration, repair, maintenance or disconnection of pipes or equipment (including water heaters) to be connected directly or indirectly to a public water supply system…
2. sanitary plumbing, which is "the installation, alteration, repair, maintenance or disconnection of pipes or equipment to receive and convey wastewater to sanitary drains (including associated plumbing ventilation equipment)…"
3. draining, which is "the installation, alteration, repair, maintenance or disconnection of sanitary drains or stormwater drains…"

[142] Plumbing Industry Commission, "2011-12 Plumbing Industry Commission Annual Report", available from http://www.pic.vic.gov.au/publications/publications-a-z/a-c, accessed 21 August 2013.

[143] The definitions are in s. 3 of the SA Plumbing Act. In each case they go on to include 'work of a class prescribed by regulations.'

This definition is structured similarly to, but broader than, the corresponding definition in WA.

In particular there is no reference to a meter assembly, which, if in place in WA, would immediately broaden the scope of the regulatory definition of plumbing to include work on unmetered systems such as those found in mining camps, indigenous settlements and other places.

Another difference is the explicit inclusion of stormwater drains. However, in South Australia, as in WA, work on pipes and equipment intended to capture stormwater and convey it to a drain is outside the regulatory definition of plumbing.

D.2.3 Key decision makers

In South Australia the plumbing regulatory regime is split between two organisations supported by different Government departments. The licencing layer is administered by the Commissioner of Consumer Affairs under the *Plumbers, Gas Fitters and Electricians Act 1995* (SA Plumbing Act). The Commissioner for Consumer Affairs also has the ability to take disciplinary action against licenced plumbers. However, in practice the compliance regime is administered by the Office of the Technical Regulator, which is analogous to Energy*Safety* in WA.[144]

D.2.4 Technical rules

South Australia has adopted the PCA. Therefore, the technical rules applicable to plumbing in South Australia are those contained in the following parts of the PCA:

- Section A General Provisions, Parts AO, A1 and A2
- Section B Water Services, Parts B1, B2, B3 and B4
- Section C Sanitary Plumbing and Drainage Systems, Parts C1 and C2
- Section F On-Site Wastewater Systems Part F2
- Section G Materials and Products Certification and Authorisation Part G1
- the variations and additions described for South Australian in Appendix A to the PCA.

The exception to this is that the PCA does not apply in South Australia insofar as it applies to stormwater drainage.

The Technical Regulator can grant exemptions from these requirements as the Technical Regulator considers appropriate.

D.2.5 Licensing

South Australia has a two tiered system for plumbing licencing split between:

- contractors, who operate plumbing businesses
- workers, who perform plumbing work.[145]

Either kind of licence can be issued for the full range of plumbing work (within the SA regulatory definition) or for any subset of it the Commissioner determines to be appropriate. Limitations may be imposed when a licence is issued and can be varied or revoked.[146]

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[144] South Australia's Technical Regulator is equivalent to WA's Director of Energy Safety.

[145] Strictly speaking contractors are licenced while workers are registered. As with the WA gas arrangements the difference is immaterial here.

Similarly to the WA electrical licensing arrangements a person is "entitled to be granted" either kind of licence if they have the necessary qualifications and experience required for the kind of work required by the licence.[147]

A body corporate is entitled to a contractor's licence, but not for registration as a worker, subject to similar conditions as those that apply for a natural person.

D.3 New South Wales

From 1st July 2012, NSW Office of Fair Trading (part of the NSW Department of Commerce) became the State's plumbing and drainage regulator. Prior to this there were over 100 separate regulators in NSW, including the NSW Government-owned water corporations, local councils and special-purpose county councils. Each of these had the ability to impose their own technical rules.

The regime as it currently stands is summarised in Figure D2 and discussed below.

Figure D2 **Overview of NSW plumbing regulation**

<table>
<tr><th>Decision maker</th><th colspan="4">Captured by regulatory regime</th><th colspan="5">Not captured</th></tr>
<tr><td>n/a</td><td colspan="4">Ensure that any plumbing and drainage work carried out does not threaten public health or safety,</td><td colspan="5"></td></tr>
<tr><td>n/a</td><td>Water supply</td><td>Water supply – residential building work</td><td>Sanitary plumbing</td><td>Sanitary drainage (upstream)</td><td>Stormwater piper</td><td>Roof plumbing</td><td>Fire suppression systems</td><td>Network utility operator, council water or stormwater mains, sewers</td><td>Exempt owner/ occupier work</td></tr>
<tr><td>Minister</td><td colspan="9">Plumbing Code of Australia and any other standards prescribed by the regulations.</td></tr>
<tr><td>Fair Trading</td><td colspan="4">Contractor's licence, supervisor certificate or tradesperson certificate</td><td colspan="5" rowspan="2"></td></tr>
<tr><td>Fair trading</td><td colspan="4">▪ Investigations leading to:
◆ Directions to plumbers to repair, make code compliant, or disconnect work
◆ Issuing a penalty notice</td></tr>
</table>

Note: the licencing regime diagram is indicative. Additional plumbing areas may fall outside of the *Plumbing and Drainage Act 2011* but may be regulated and require a licence under the *Home Building Act 1989*.

D.3.1 Statement of objective

The plumbing regulator, under part 3 of the *Plumbing and Drainage Act 2011,* has the functions of "ensuring that any plumbing and drainage work carried out does not threaten public health or safety" as well as monitoring compliance and any other functions conferred or imposed by the Act.

[146] If the licensee applies they can be varied or revoked at any time. If not, they can only be varied or revoked following disciplinary action.

[147] Other criteria apply for a contractor's licence relating to the person's financial standing.

D.3.2 Key decision makers

The Act defines the plumbing regulator as either the Commissioner for Fair Trading, Department of Finance and Service, or if no such position exists then the Director-General of the Department.

As part of the plumbing regulatory framework, Fair Trading licenses plumbers and drainers under the *Home Building Act 1989*.

D.3.3 Definition of the trade

Under the *Plumbing and Drainage Act 2011*, plumbing and drainage work is defined as the construction of, or work on, a plumbing installation that connects, directly or indirectly, with a network utility operator's water supply system, downstream from the point of connection to a network utility operator's water supply system. It also includes any other water supply system, if the construction or work is residential building work within the meaning of the *Home building Act 1989*.

Aside from plumbing installation it covers work on sanitary plumbing systems and sanitary drainage systems upstream from its point of connection to either i) a system for the disposal of sewerage, or ii) a system for the re-use of sewerage or other wastewater, or iii) an on-site wastewater management or treatment system. or iv) a network utility operator's sewerage system.

It does not include the construction of, or work on stormwater pipes, fire suppression systems or network utility operator, local council or county council water or stormwater mains, sewers or sewerage systems. It does not include roof plumbing work[148] and exempts certain owner/occupier work[149].

D.3.4 Technical rules

The inception of NSW Fair Trading as the single regulatory body for plumbing and drainage has seen the adoption of the Plumbing Code of Australia as the single code of practise for all plumbers across the State. This replaced the NSW Code of Practice for Plumbing and Drainage as the technical standard.

D.3.5 Licensing

A person may not conduct plumbing and drainage work without either holding an endorsed contract licence or supervisor certificate, conducting the work under the immediate supervision of such a licence or certificate holder, or conducting work under the general supervision of such a licence or certificate holder if the person holds a tradesperson certificate.

The holder of the contractor licence or supervisor certificate is the responsible person who must issue a compliance certificate to the plumbing regulator, including where the work is conducted by a licenced tradesperson under their supervision.

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[148] As declared by the regulations under the *Home Building Act 1989* to be roof plumbing work

[149] Involving the repair of a tap or showerhead or the instillation of water-restricting or flow-regulating devices to tap end fittings in a dwelling

D.3.6 Compliance regime

All plumbing and drainage work must be completed by a person who holds a licence, qualified supervisor certificate or tradesperson certificate.

Interestingly, with respect to owner/occupier work, the exemption includes work carried out by the owner or occupier of the dwelling, or a person authorised to carry out the work by the owner or occupier of the dwelling who does not receive payment or other consideration for carrying out the work.

Before carrying out plumbing and drainage work, the responsible person conducting the work must notify the regulator, except in the case of emergency work.

After completing the work, the responsible person must issue the regulator a certificate of compliance and copy of the plans.

The plumbing regulator may conduct inspections of plumbing and drainage work and has the power by written notice to direct the responsible person for the work to repair, make code compliant, or where a risking public health, disconnect water supply or sanitary plumbing or drainage. This direction is only effective within 2 years of the work being completed.

The plumbing regulator may appoint a member of the Government service, local or county council or an investigator under the *Fair Trading Act 1987* as an inspector and enforcement officer.

Enforcement officers may issue a penalty notice for offences against the Act prescribed in the regulations as penalty notice offences.

D.4 Queensland

Since March 2010, the Plumbing Industry Council (PIC) has been the key organisation regulating the plumbing and drainage industry in Queensland. The PIC replaced the Plumbers and Drainers Board. The Qld plumbing regulatory regime is described in the Plumbing and Drainage Act 2002 (Qld Plumbing Act) and the Plumbing and Drainage Regulation 2003 and the Standard Plumbing and Drainage Regulation 2003 (Qld Plumbing regulation and Qld standard plumbing regulation respectively) and summarised in Figure D3.

Figure D3 **Overview of Queensland plumbing regulation**

<table>
<tr><th>Decision maker</th><th colspan="8">Captured by regulatory regime</th><th>Not captured</th></tr>
<tr><td>n/a</td><td colspan="8">No stated objective</td><td rowspan="2">Unregulated work</td></tr>
<tr><td>n/a</td><td colspan="8">Installing, changing, extending, disconnecting, taking away and maintaining plumbing, drainage or on-site sewerage work</td></tr>
<tr><td>Minister</td><td colspan="9">Parts A, B (not B-4), C and G of PCA and Schedule 2 of Qld Standard Plumbing Regulation</td></tr>
<tr><td rowspan="3">PIC</td><td colspan="7">Plumbers licence</td><td>Drainers licence</td><td rowspan="3"></td></tr>
<tr><td colspan="7">Provisional plumbers licence</td><td>Provisional drainers licence</td></tr>
<tr><td>Gas hot water</td><td>Electric hot water</td><td>irrigation</td><td>Fire protection (reels and hydrants)</td><td>Fire protection (commercial)</td><td>Fire protection (domestic)</td><td>Water and sanitary plumbing</td><td>Onsite sewerage draining</td></tr>
<tr><td>PIC</td><td colspan="8">▪</td></tr>
</table>

D.4.1 Statement of objective

There is no formal statement of objective in the Qld Plumbing Act or the Qld Plumbing regulations. The nearest thing is the stated vision of the PIC, which is to achieve "community confidence that licenced plumbing trades protect public health, safety and the environment". The PIC describes its role as being "to promote, enforce and enhance occupational licencing of plumbers and drainers through the administration of licencing functions under the *Plumbing and Drainage Act 2002*".[150]

D.4.2 Key decision makers

The key decision maker in the Queensland plumbing regulatory regime is the PIC, which is established under s5 of the *Qld Plumbing Act*. The PIC's functions are to:[151]

a) Administer the licensing system
b) Monitor the operation of the licensing system and, if necessary, recommend changes
c) Promote acceptable standards of competence
d) Receive and investigate complaints about work for which a licence is required
e) Approve audit programs and audit licensees to monitor and enforce compliance
f) Confer on national policy development and implementation
g) Report to the Minister on and issues referred to it by the Minister or any issues it considers the Minister should know about
h) Perform other functions given to it under the *Plumbing and Drainage Act 2002* or another Act.

Council members are appointed by the Minister, and the Minister decides the number of members. However, the PIC must have representatives of:

[150] PIC Strategic Plan 2010-2013

[151] Qld Plumbing Act s6.

1. consumers
2. the departments that administer the following legislation:
   a) the Qld Plumbing Act is administered
   b) the *Vocational Education, Training and Employment Act 2000 (Qld)*
   c) *Hospital and Health Boards Act 2011 (Qld)*
3. the Local Government Association of Queensland
4. the Master Plumbers' Association of Queensland
5. the Queensland branch of the Communications, Electrical and Plumbing Union, Plumbing Division, Queensland Branch.

Therefore, there must be at least seven members of the PIC, though this is not an exclusive list. At the time of writing the PIC has 11 members and one deputy member.

D.4.3 Definition of the trade

The Queensland regulatory definition of plumbing is in Schedule 3 to the Qld Plumbing Act. Broadly, plumbing and drainage work are defined as performing certain tasks on plumbing or drainage installations,[152] though some specified tasks, referred to as unregulated work are not are 'carved out' from the definition.

Plumbing and drainage installations are defined as follows:

1. Plumbing is:
   a) for water – an apparatus, fitting or pipe for supplying water from a service provider's infrastructure or a water storage tank and for carrying water within premises
   b) for sewerage – an apparatus, fitting, fixture or pipe, above ground level, that carries sewage on premises to drainage
   c) a greywater treatment plant or greywater diversion device.
2. Drainage is:
   a) an apparatus, fitting or pipe, either above or below ground level, that carries:
      i) sewage to a sewer, or to, within or from an on site sewerage facility; or
      ii) an on-site sewerage facility.
   b) an on-site sewerage facility

Plumbing and drainage work are defined as installing, changing, extending, disconnecting, taking away and maintaining plumbing, drainage as the case may be.[153] .

3. The unregulated work that is carved out of the regulatory regime is: For sanitary plumbing and sanitary drainage
   a) Cleaning or maintaining ground level grates to traps on sanitary drains
   b) Replacing caps to ground level inspection openings on sanitary drains
   c) Maintaining an above or below ground irrigation system for the disposal of effluent from an on-site sewerage facility or greywater use facility
4. For water plumbing

[152] The Act refers to plumbing and drainage rather than plumbing installations or drainage installations. The word installation is added here for ease of reading.

[153] Drainage includes on site sewerage work.

a) 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
b) Replacing a jumper valve or washer in a tap
c) Changing a shower head
d) Replacing, in a water closet (WC) cistern, a drop valve washer, float valve washer or suction cup rubber
e) Replacing a domestic water filter cartridge

There is no drainage work that is defined as unregulated work.

D.4.4 Technical rules

The Queensland plumbing technical rules are described in Part 2 of the Qld Standard Plumbing Regulation and the Queensland Plumbing and Drainage Code.

Queensland has adopted the PCA insofar as it relates to water services, sanitary plumbing and drainage and on-site wastewater systems. Therefore, Queensland has adopted Parts A, B C and G of the PCA, but not part B-4.

Queensland has not adopted the PCA insofar as it applies to stormwater, heating, ventilation and cooling or fire fighting water services, which are regulated under the *Building Act 1975 (Qld).*

D.4.5 Licensing

The PIC can issue plumbing licences and drainage licences. These are separate so an individual person could be issued one or both of them. Both are issued for a period chosen by the PIC, but not for more than five years.

A plumbing or drainage licence authorises its holder to perform plumbing or drainage work without supervision but not to operate a plumbing or drainage business, which requires a contractor's licence.

Contractors licences are administered by the Building Services Authority, Generally, a plumbing and drainage contractor must hold a plumbing and/ or drainage licence and an appropriate managerial qualification and meet certain financial criteria.

The PIC can apply conditions to licences in either class. This restricted allows the PIC to limit individual plumbers or drainers to work for which they are appropriately trained either permanently or until they upskill. For example, a plumber who has qualifications in water plumbing but not other branches of the trade could be issued a licence with conditions limiting them only to water plumbing. Those conditions could be altered later if the plumber undertook further training.

The PIC can also use conditions as a form of disciplinary action.

The PIC can issue provisional licences to plumbers or drainers who it considers need more practical experience before they can be given a licence. Provisional licences are routinely given on completion of an apprenticeship to allow new plumbers to acquire the 12 months practical experience considered necessary for a licence.

Provisional licensees must only work under the supervision of a person with a licence to do the specific work being done.

Finally the PIC can issue restricted licences as described in the Qld plumbing regulation. At the time of writing the regulation allowed for the eight types of restricted licence summarised in Table D1.

Table D1 **Restricted plumbing and draining licences in Queensland**

Restricted licence	Scope of work
Water plumber – gas	Disconnect and connect water plumbing associated with replacing a gas hot water heater
Water plumber – electrical	Disconnect and connect water plumbing associated with replacing an electric resistance hot water heater
Water plumber – irrigation	Water plumbing work restricted to irrigation
Water plumber fire protection (hydrants and hose reels)	Water plumbing work that is installing, maintaining and testing fire hydrants and hose reels
Water plumber fire protection (commercial and industrial)	Water plumbing work that is installing, maintaining and testing commercial and industrial fire sprinkler systems
Water plumber fire protection (domestic and residential)	Water plumbing work that is installing, maintaining and testing domestic and residential fire sprinkler systems
Water plumber – water and sanitary	Water plumbing work and sanitary plumbing work
Drainer – on-site sewerage facility	a) Maintaining on-site sewerage facilities; or b) Maintaining on-site sewerage facilities and on-site sewage treatment plant installation work

Source: Schedule 2, Qld Plumbing Regulation

D.4.6 Compliance regime

The Qld plumbing compliance regime is underpinned by Regulation 4 of the Qld plumbing regulation, which makes it illegal for a person to do plumbing or drainage work without a licence to do so.

Further, it is an offence for a licence holder to direct or supervise work for which they are not licenced or for which the person being directed or supervised is not licenced.[154].

With respect to advertising, a person must not advertise their availability to perform licenced plumbing or drainage work in Queensland unless they hold an appropriate licence.

Before November 2012 local Government approval was required for plumbing work such as bathroom or kitchen renovations. This was costly and caused delays that were considered unnecessary. Therefore, since November 2012 most plumbing work to be done in existing homes has been categorised 'notifiable work.' The system for notifiable work is similar to the certificate of compliance system in place in other jurisdictions. Broadly, plumbers are permitted to perform the work and notify the PIC after the fact.

Notifiable work is subject to audit by the PIC and/ or local Governments.

The PIC can also conduct investigations into disciplinary matters involving licensees. The mechanism is similar to the mechanism in electricity and gas in WA. That is, the PIC itself can take certain disciplinary action or, for more severe matters, it can proceed in the Queensland Civil and Administrative Tribunal.

[154] Exemptions from this include work of an unskilled nature and if the person being supervised is an apprentice.

Appendix E Sample regulatory publications

- Regulation Roundup, Issue 31, February 2013 (Department for Manufacturing, Innovation, Trade Resources and Energy, South Australia)
- Energy Bulletin, Issue 63, July 2013 (Energy*Safety*/Department of Commerce, Western Australia)