



Government of **Western Australia**  
Department of **Commerce**  
**Building Commission**

**Building**  
**Commission**

# **Decision Paper**

## **BASIC EMERGENCY PLUMBING WORK IN REMOTE ABORIGINAL COMMUNITIES**

**August 2016**

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# **EMERGENCY PLUMBING REPAIR WORK IN REMOTE ABORIGINAL COMMUNITIES**

## **Decision Paper**

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This Decision Paper has been prepared in compliance with the Western Australian Government's requirement for a regulatory impact assessment and provides details of proposed reforms to the Plumbers Licensing and Plumbing Standards Regulations 2000 for the carrying out of basic plumbing repair work in remote Aboriginal communities in emergency situations.

Public comments and submissions were invited in response to a Discussion Paper released on 23 February 2015.

## EXECUTIVE SUMMARY

The Western Australian Government (the State Government) proposes to make changes to the *Plumbers Licensing and Plumbing Standards Regulations 2000* (the Plumbing Regulations) to reduce the risks to health that arise in cases where plumbing in remote Aboriginal communities is in immediate need of a simple emergency repair but the remote location of the community prevents a licensed plumbing contractor from getting there within a reasonable time to fix it.

In developing the changes, the State Government has sought to balance the need to ensure that all plumbing work in Western Australia is done by appropriately skilled people, and the need to address the specific difficulties posed by the geographical remoteness of many indigenous communities.

Under the changes, a limited range of basic plumbing repair work in specified remote Aboriginal communities will be able to be carried out by suitably skilled Environmental Health Workers (EHWs) in certain situations. The new scheme will not bestow a plumbing licence or permit on EHWs. Rather, EHWs who carry out work under the scheme will be required to hold a specified qualification in Aboriginal environmental health and be employed or engaged by an organisation whose role is to provide environmental health services to remote Aboriginal communities.

To ensure that a high quality of work is maintained, a number of responsibilities will be placed on each service provider whose EHWs perform plumbing work under this scheme. These responsibilities will include ensuring that each EHW performing the work holds the appropriate qualifications and that a register of all work carried out is kept and made available for inspection by a plumbing compliance officer from the Plumbers Licensing Board. The compliance and enforcement powers available to plumbing compliance officers will be as broad and as stringent as those that apply to licensed plumbing contractors.

The State Government believes that the proposed changes strike the right balance between maintaining the high standard of work that is vital to ensuring the integrity of the drinking water supply, and helping to prevent the negative health outcomes and water wastage that can be associated with delays in carrying out simple repairs such as replacing a tap washer.

The proposed scheme also dovetails neatly with the broad aims of the State Government's Roadmap to Regional Services Reform which was launched on 14 July 2016. The reform programme seeks to achieve significantly better outcomes for Aboriginal people and the State of Western Australia by doing business differently and accepting that continuing to deliver services in the historical way is not achieving the change needed.

A key aspect of the reform programme is to create better living conditions by (among other things) ensuring reliable water supply and sewerage treatment services. The proposal outlined in this Decision Paper will go some way towards achieving those much-needed outcomes and will contribute to the overall aim of strengthening remote Aboriginal communities.

That said, it must be acknowledged that this proposal is not universally supported. In particular, the State Government recognises the concerns raised by the main plumbing industry stakeholders who have expressed the view that it is unacceptable to allow less qualified people to do work that is ordinarily within the realm of a licensed plumbing contractor who has completed a full apprenticeship.

However, given the basic nature of the work and the robust processes that will be put in place to ensure appropriate standards are maintained, there is nothing to suggest that an EHW with specified plumbing skills would place the community at any greater risk than is currently the case when there is a delay in getting a licensed plumbing contractor out to do the work.

It must also be stressed that the aim of this scheme is not to replace the role of the licensed plumbing contractor. Rather, the new arrangements will complement the vital and important role of the licensed plumbing contractor by ensuring there is capacity within each remote community to deal with basic and simple emergency repairs until a licensed plumber can attend. Any plumbing beyond the scope of the proposal must only be carried out by a licensed plumber.

To ensure the changes are implemented smoothly and effectively, the Building Commission will undertake a comprehensive public and industry awareness campaign and will liaise closely with the communities and government agencies that will be impacted by the new regime.

A plumbing compliance officer will also be deployed to the northwest of the State – where most of the remote communities covered by the scheme are located – to assist with the implementation of the scheme and work with the parties involved to ensure compliance with the scheme's objectives and requirements.

An evaluation of the operation of the scheme will be undertaken after the scheme has been in place for twelve months.

# 1. INTRODUCTION

Prior to the formation of the Plumbers Licensing Board (when individual Water Boards were responsible for the oversight of plumbing work in their service area), it was generally accepted practice for trained EHWs to carry out minor plumbing repairs in remote Aboriginal communities. The principal aim was to protect public health and living conditions on those communities by limiting the potential for communicable diseases such as gastro-enteritis, skin infections and worms to be spread among the members of the community.

Since the commencement of the Plumbing Regulations on 19 June 2000 (then titled the Water Services Coordination (Plumbers Licensing) Regulations 2000), Western Australia's plumbing laws have required all plumbing repair and maintenance work to be carried out by a licensed plumbing contractor. This applies across the entire state and means that the kind of minor plumbing repair work that used to be done by EHWs in remote Aboriginal communities can now only be done by a licensed plumbing contractor.

Following correspondence from the Karrayili Adult Education Centre Aboriginal Corporation in Fitzroy Crossing in late 2002, the Plumbers Licensing Board gave in-principle agreement to the introduction of a restricted plumbing permit to enable the holders of a Certificate II in Aboriginal Environmental Health Work<sup>1</sup> to carry out minor plumbing work such as unblocking drains, changing tap washers and repairing toilet cisterns. However, the necessary changes were not made to the Plumbing Regulations and in late 2009 the then Chairman of the Government's Aboriginal Affairs Coordinating Committee approached the Department of Commerce with a view to reopening the discussion.

The Building Commission subsequently commenced a round of public consultation to examine ways in which some flexibility could be created around the carrying out of basic plumbing repair work in remote Aboriginal communities across Western Australia.

Meanwhile, the Council of Australian Governments (COAG) had embarked on the implementation of a National Occupational Licensing Scheme (NOLS) for a range of licensed occupations, including plumbing. During discussions on the development of NOLS, consideration was given to the possibility of allowing basic plumbing work to be done by people who have received appropriate training but who may not necessarily hold a full plumber's licence.

The outcome of those discussions was a decision to incorporate the flexibility for jurisdictions to exclude certain aspects of plumbing work from the licensing regime. Western Australia was considering using that exclusion provision to address the plumbing issues facing remote Aboriginal communities. However, in December 2013 COAG formally abandoned the implementation of NOLS thereby removing that option.

That was followed by the publication in January 2014 of the findings of an independent review of Western Australia's plumbing laws conducted by consulting firm, ACIL Allen Consulting (ACIL Allen).

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<sup>1</sup> Since re-named Certificate II in Indigenous Environmental Health

As part of its review, ACIL Allen considered the issue of basic plumbing work in remote indigenous communities and concluded that:

*“...there is a strong argument in favour of allowing Environmental Health Workers to perform minor plumbing works [in remote communities]. Given the flexibility to enable it, the Government should ensure that they are able to do so legally.” p.56*

Following further representations from the Department of Health and the Department of Housing in mid-2014, on 23 February 2015 the Building Commission published a consultation paper titled, ‘*Basic Plumbing Repairs in Remote Aboriginal Communities*’ seeking feedback on a new proposal to introduce a restricted permit scheme for the carrying out of basic emergency plumbing work in Western Australia’s remote indigenous communities by people other than licensed plumbing contractors. The closing date for feedback was 17 April 2015.

As outlined in the consultation paper, the goal is to reduce the risk of hygiene-related issues that can arise if emergencies are left unattended for a length of time. The aim is not to replace the role of the licensed plumbing contractor but to enable urgent basic plumbing repairs (such as blocked toilets and shower heads or leaking taps) to be carried out safely and in a timely manner by appropriately skilled people based in the community, in circumstances where a licensed plumbing contractor is not readily available to do the work.

In addition to helping to improve health outcomes, there are practical and financial reasons why being able to fix simple problems quickly would be beneficial for these communities. For example, a heavily leaking tap can cause sufficient water damage to an adjacent cupboard or wall that they too need to be replaced. Moreover, leaking taps place a burden on water pumps and contribute to overflowing sewage lagoons or a breach in a sewage lagoon wall.

Increased flow rates caused by a leaking tap could also increase the cost of potable water, and have an adverse effect on its availability. In one example quoted during the consultation phase, a tap leak was measured at two litres every minute. For communities that have a limited supply of water, the impact of such significant water loss can be devastating.



## 2. THE CONSULTATION PROCESS

The consultation paper released on 23 February 2015 sought specific feedback on issues relating to the following elements of the proposed restricted permit scheme:

- the scope of work that should be covered by the scheme;
- the eligibility requirements for people wishing to apply for a restricted permit;
- compliance issues related to the scheme; and
- how the term 'remote' should be defined for the purposes of the scheme.

In total, 26 written submissions were received<sup>2</sup>. Around half of those were from licensed plumbing contractors/plumbing industry associations. The other half came mainly from health service providers, environmental health workers, and Aboriginal corporations and communities.

In addition to the consultation paper, the Building Commission also held consultation sessions and meetings in Broome with stakeholders from the Kimberley and the Pilbara to ascertain the views of community representatives, licensed plumbing contractors and environmental health workers involved with remote communities.

### 2.1 General overview of comments relating to the proposal

As is to be expected in a reform of this nature, the views and opinions expressed in the submissions were contrasting, disparate and passionately held. A flavour of the disparity between the various submissions is outlined in the following extracts.

The Master Plumbers and Gasfitters Association of WA (MPGA) stated that while they agree a problem exists, they were:

***“totally opposed to the options presented in the paper for the following reasons:***

- ***A high standard [of plumbing work] is essential in remote communities***
- ***The risk of deepening the ‘second-class citizen’ mindset for residents of Aboriginal communities***
- ***Practical realities related to community populations***
- ***The potential for confusion about training requirements***
- ***A precedent for the weakening of plumbing regulations***
- ***Compliance costs***
- ***Lack of cost-benefit analysis***
- ***Knowing how to fix ‘basic’ problems is not enough.”***

This feedback is consistent with the comments from other organisations or individuals involved in the plumbing industry.

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<sup>2</sup> Each of the submissions received can be viewed on the Building Commission’s website at: <http://www.commerce.wa.gov.au/building-commission/plumbing-review>

Conversely, the general feedback from representatives of Aboriginal communities or health and other service providers to those communities was either that the proposal was necessary and overdue or that the proposal did not go far enough. For instance, the Kimberley Aboriginal Health Planning Forum stated that:

***“the Forum has been concerned about environmental health conditions in Kimberley communities for several years [and] members would welcome the introduction of a Restricted Plumbing Licence for Aboriginal Environmental Health Workers.”***

Similarly, the Northern and Remote Country Governing Council of the WA Country Health Service stated that they strongly support the introduction of reforms to facilitate appropriately skilled EHWs being legally permitted to perform basic plumbing work in remote and disadvantaged Aboriginal communities. In particular, they stated that the reforms should:

- ***“Provide for urgent or emergency repairs to be carried out by an Environmental Health Worker that would otherwise be detrimental to the hygiene and health of the people living in the property.”***
- ***Promote skill development and competency of Aboriginal people to become qualified to undertake such work within their community on a non-commercial basis.***
- ***Allow for Environmental Health Workers to undertake basic plumbing work in remote and disadvantaged communities where access to timely, affordable plumbing services is not readily available. Distance is not the only factor that affects access to services. Cost, safety concerns, and the workload of local plumbers also have a significant bearing on access to timely services in these communities and EHWs are normally the only resource available that can address issues in a timely manner.”***

A number of alternatives to a restricted permit scheme were put forward in the submissions. As detailed below, those alternatives again illustrate the highly diverging views on this issue.

### **Apprenticeship proposal**

A number of the submissions, including that of the MPGA, proposed that the problem be addressed through the development of a plumbing apprenticeship training scheme for young people in remote Aboriginal communities. The MPGA suggested that such a training scheme would also create opportunities for young people to learn valuable skills and provide them with employment opportunities.

A number of examples of existing apprenticeship programs were quoted in support of this approach, including one administered by NUDJ Plumbing in Western Australia’s Kimberley region.

NUDJ Plumbing is a successful plumbing contracting company formed under a partnership between Cooke & Dowsett Pty Ltd, the Plumbing Trades Employees Union, Nirrumbuk Aboriginal Corporation and the Jarlmadangah Burru Aboriginal Corporation. Its original purpose was to provide employment opportunities for newly-qualified Aboriginal plumbers who had completed their apprenticeships interstate. However, it has since expanded to also offer training contracts to local apprentices who meet basic selection criteria.

While the merits of such programs are clear, they take time to establish and require sufficient numbers of licensed plumbing contractors who are willing and able to take on apprentices under a training contract. In addition, there are often cultural and literacy issues that mean a more tailor-made recruitment strategy is required for indigenous apprenticeship schemes.

Although the development of an apprenticeship program is an option, it would not be likely to deliver the required results in the short or medium term. It is also not clear how an apprenticeship scheme could ensure the availability of sufficient numbers of community-based licensed plumbing contractors to adequately service the emergency needs of remote communities in the same way that a scheme for suitably qualified community-based EHWs could.

## Mentoring

A number of submissions advocated for the inclusion of a mentoring program in any proposed scheme.

It was suggested that this could involve funding local licensed plumbing contractors to provide 'hands-on' training to anyone permitted to perform basic plumbing work under the new scheme.

A mentoring scheme such as that proposed has the advantage of being much more flexible than an apprenticeship scheme in terms of coverage and can be limited to suit the particular plumbing needs and systems of each individual community.

However, it is not a solution in itself and could only be implemented as part of a scheme that enables people other than licensed plumbing contractors to carry out certain types of plumbing work.

## Extending exemptions

Some of the respondents queried whether the types of work proposed to be included in the restricted permit scheme should be licensed plumbing work at all. The view put forward by those respondents is captured in the following quote taken from one of the submissions:

***“[the proposal is] indicative of the overly bureaucratic stance taken in Australia. Once a [plumbing] system is installed, simple maintenance and repair is not beyond the capability of a reasonably capable but unqualified person. In many countries, New Zealand in particular, most of the activities on the list [of tasks proposed to be covered by the restricted scheme] can be performed by householders.”***

The issue of whether some types of basic plumbing work should be exempt from requiring a licensed plumbing contractor irrespective of location is an important one that was addressed during the 2013/14 review of plumbing regulation conducted by ACIL Allen. The Building Commission is currently finalising a Consultation Regulatory Impact Statement (CRIS) in the light of the recommendations contained in the final ACIL Allen report and will include a discussion about whether the scope of licensed plumbing work in Western Australia requires amendment to exclude basic repair work carried out by homeowners in their own homes. This CRIS is expected to be published in late 2016.

## Education as an option

A number of the submissions pointed out that a lack of information within remote communities about appropriate processes for dealing with plumbing problems was also an important consideration.

As an example, the Indigenous Plumbing and Sanitation Foundation recommended that rather than implementing a restricted permit scheme, education about hazard identification should be provided to community members. It was argued that this would assist communities to engage licensed plumbing contractors on a more timely basis to carry out plumbing maintenance work. For example, if community members were aware of the consequences of not reporting a dripping tap promptly, the problem might be able to be dealt with – perhaps as part of a maintenance program – before it develops into a more serious leak.

Although better education alone will not address the issue at hand, any communication plan developed as part of implementing a new scheme for basic emergency plumbing repair work in remote Aboriginal communities should certainly include mechanisms for ensuring that community members have improved knowledge of:

- the risks relating to poor plumbing maintenance;
- how to prevent some of the more routine issues such as blocked drains or toilets; and
- when to report plumbing issues and to whom.

## Implementing a proactive maintenance regime and upgrading aging infrastructure

In a paper to the Minister for Commerce dated 8 July 2016, the MPGA put forward the view that the plumbing issues currently faced in remote Aboriginal communities would be better addressed by putting in place a more effective and cost-efficient preventative maintenance system for plumbing installations, combining that with a programme to upgrade the aging plumbing infrastructure that exists in some of those communities, and using “environmental assistants” in an ancillary capacity.

Although the MPGA paper did not define what is meant by ‘ancillary capacity’, it did say that the MPGA supports trained environmental assistants being able to perform basic preventative maintenance duties to enhance and promote a healthy environment for residents in ways that would not contravene the current regulatory requirements. The paper also said that those environmental assistants could serve as the community liaison representative to communicate with the maintenance contractor on plumbing-related issues before, during and after the contractor’s scheduled visits

The MPGA offered to facilitate the delivery of a training programme for environmental assistants to provide them with the necessary skills to perform their ancillary duties.

In considering this alternative proposal, it is worth remembering that the type of basic plumbing work contemplated in the consultation paper is work that qualified EHWs in remote Aboriginal communities used to do before the current plumbing legislation introduced a much broader definition of licensed plumbing work.

During the Building Commission's consultations in 2015 and since, no evidence was presented to demonstrate that those EHWs were not competent in performing that work. Likewise, no evidence was submitted to indicate that the health of residents was adversely affected by having trained EHWs perform basic plumbing work in their communities.

Taking that into account, there is good reason to believe that appropriately trained and supervised EHWs are capable of resuming the sorts of emergency plumbing tasks contemplated in the consultation paper. In addition, as the EHWs would already be located in or close to the community where the emergency arises, the option to train them to carry out those tasks is perhaps more viable, particularly in the short term, than calling in a licensed plumber who may be based some considerable distance away and might have difficulty accessing the community at certain times of the year.

Turning to the MPGA's proposal regarding a preventative plumbing maintenance programme, while this is a good option in principle, it could not deliver the required outcomes in the short term. Additionally, it would be unlikely to prevent all emergency situations arising and therefore does not address the main problem which is lack of ready access to a licensed plumber to deal with those emergencies, particularly for communities that can be isolated for weeks at a time during the wet season.

The final aspect of the alternative proposal put to the Minister for Commerce by the MPGA in July 2016 was to put in place a plan to upgrade the aging plumbing infrastructure that exists in some remote Aboriginal communities. The MPGA argued that the short-term cost of investing in a plan of this nature would be offset by the longer-term benefits of reduced repair and maintenance requirements.

Although no costings were included in the MPGA's submission, it is clear that this is a significant undertaking that would incur significant cost. Moreover, much like with the preventative maintenance proposal, it could not be implemented overnight and would not therefore deliver the required outcomes in the short term.

That said, the State Government has identified in its Roadmap to Regional Services Reform that there is a need to invest in the upgrading of essential and municipal infrastructure in Aboriginal communities and intends to identify up to 10 communities by the end of 2016 with which to work on seeking to deliver those improvements.

## 2.2 Other considerations

### Cost and administrative burden

The consultation paper also discussed the possible compliance and fee structures that might accompany a new restricted permit scheme. In particular, the consultation paper raised the possibility of:

- funding the permit scheme via fees charged to those who make use of the scheme (for example, by imposing a permit application fee); and
- ensuring compliance with the plumbing technical standards by requiring that a register of work done by the permit holder be submitted to the Plumbers Licensing Board at regular intervals for audit and inspection purposes.

Approximately half of the submissions received in response to the consultation paper commented on these specific issues, with the general consensus being that given the overall purpose of the scheme and the relatively minor range of plumbing tasks it was looking to cover, it was important to make the program as cost-effective as possible by minimising the administrative burden. The following quotes taken from four separate submissions serve to illustrate this point.

***“The cost of submitting forms to the PLB [Plumbers Licensing Board] needs to be addressed to ensure not prohibitive to the community health outcome i.e. the agencies performing these tasks are most likely not-for-profit, and will not have the larger jobs to balance costs.”***

***“It is important to reduce the cost of this program to make it cost effective. The majority of the organisations that would be conducting this work are not for profit, and/or government agencies seeking to gain an overall reduction in health risks/improve community health....In [sic] this occasion, we believe that the greater benefit to health should be weighed to ensure that the PLB administrative cost does not over impact on the affordability of conducting this minor plumbing work.”***

***“There will be an increased administrative burden through the requirements of the PLB in permit compliance functions. There will be reduced budget availability for other environmental health projects due to meeting the administrative costs of the PLB.”***

***“There is a case for keeping administration of a restricted permit to a minimum and for the fees imposed on permit holders and/or licensed service providers to be similarly reflective. The greater the impost on reporting of activities and compliance, the greater the fees associated with a restricted permit scheme....Implementation and management of the proposed system should be applied with consideration as to the benefit to this vulnerable population rather than the costs associated with burdensome scrutiny...”***

*“[The reforms should]...minimise the administrative and reporting requirements associated with basic repairs. We recognise the importance of accountability associated with people undertaking plumbing work to ensure a safe and adequate level of workmanship, however given the nature of the work being undertaken, this should involve minimal reporting and oversight....In this instance, we do not believe it would be appropriate or cost effective from a State perspective to charge licence or reporting fees, where the service is being delivered on a non-commercial basis and the cost would flow back to the DoH [Department of Health]. EHWs are employed either directly by the DoH or other non-commercial organisations contracted by the DoH to provide these services on its behalf....any fees associated with the reforms will ultimately be borne by the State plus the unnecessary accounting and administration costs associated with raising and paying such costs between two State Government agencies.”*

## Other factors

Based on information provided by the Department of Aboriginal Affairs<sup>3</sup> the scheme is expected to cover 205 communities, comprising around 3,000 dwellings and 12,000 inhabitants (see Table 1 below).

Some of those who responded to the consultation paper and who took part in the subsequent discussions in Broome argued that putting in place a bespoke permit scheme for such a small number of people and such a limited range of work could be regarded as overly administrative and not the most efficient use of resources.

	<b>Communities</b>	<b>Dwellings</b>	<b>Population</b>
<b>West Kimberley</b>	110	1222	5364
<b>East Kimberley</b>	53	683	2803
<b>Goldfields</b>	18	617	2068
<b>Pilbara</b>	17	345	1492
<b>Midwest</b>	7	120	386
<b>Total</b>	205	2987	12,113

**Table 1:** Permanent, remote Aboriginal communities

<sup>3</sup> Remote Aboriginal Community List – Western Australia dated 5 February 2016

## 2.3 Decision

After considering all of the feedback received, the State Government remains of the view that there needs to be greater flexibility in the plumbing laws to address the unique health risks faced by those remote Aboriginal communities whose isolation means that they do not have ready access to licensed plumbing contractors, particularly in the wet season and during extreme weather events.

In weighing all of the issues and the divergent and contrasting views expressed during the consultation process, the State Government has concluded that while the introduction of a restricted permit scheme is a viable option, a more cost effective and less administratively burdensome solution is required.

Accordingly, the State Government proposes to implement a different arrangement whereby specified plumbing work in qualifying Aboriginal communities carried out by people who hold specified qualifications in environmental health will be treated in the same way as if the work had been done by a licensed plumbing contractor. Provided that all the conditions are met, the effect will be to decriminalise such work and thus prevent those who carry out plumbing work under this scheme from being prosecuted for doing unlicensed work. The scheme will not bestow a licence or permit on any person to carry out plumbing work.

All the usual sanctions will still apply to work that is outside the scheme or to work within the scheme that is not carried out in accordance with the requirements of the scheme. Likewise, the compliance and enforcement framework that already exists for licensed plumbing contractors will be adapted to cover work carried out under this scheme.

As the overall purpose of the scheme is to eliminate, as far as practicable, the health risks and water wastage associated with delays caused by geographical remoteness and/or inaccessibility, one of the main prerequisites envisaged in the consultation paper was that the people carrying out work under the scheme needed to be located in the remote community or attend that community on a frequent basis. It was also felt that where possible and appropriate, the required skills training should be linked to existing qualifications that are held within the community.

After considering those matters, along with the conclusions reached by ACIL Allen and others who have looked at this issue, the State Government has concluded that EHWs are best placed to carry out the type of basic emergency plumbing work that will be covered by the new scheme. EHWs are generally either already based in a remote community or attend the community on a regular basis as part of their work. They also already hold qualifications in Aboriginal environmental health.

To provide additional rigour to the scheme, it will also be a requirement that the EHWs are employed or engaged by organisations whose role is to provide environmental health services to remote Aboriginal communities. In practice, such service providers deliver these services under a contract with the Western Australian Department of Health.

In addition to improving health outcomes in the communities covered by the scheme, it is hoped that other benefits may also accrue over time. For example, there may be scope for the scheme to be dovetailed with the apprenticeship selection criteria used by NUDJ Plumbing and thus provide a pathway for young indigenous EHWs to broaden their skills by going on to complete a plumbing apprenticeship.



## 3 Key elements of the proposed scheme

### 3.1 Scope of work

In the consultation paper it was proposed that the following tasks should form the scope of work to be covered:

1. Replace leaking tap washers, spindles, handles and shower roses.
2. Replace leaking outside hose taps and hose tap vacuum breakers.
3. Replace leaking cistern inlet and outlet washers and valves.
4. Repair or cap a burst water main for emergency purposes.
5. Repair or replace damaged or missing vent pipes and cowl.
6. Clear blocked waste pipes and drains.
7. Repair or replace missing or broken inspection mounds, gully mounds and grates.
8. Repair or replace a section of damaged waste pipe or sanitary drain for emergency purposes.

Many of the comments relating to the scope of work addressed the merits of the overall scheme rather than the actual scope of work to be covered by the scheme. Views varied from the scheme being “pointless” on the grounds that “any competent person could adequately perform the proposed work”, to the proposal being hazardous because any work performed by non-plumbers would create undue risk.

Specific comments included:

- Any scheme would be overly bureaucratic as the type of work envisaged is work that anyone should be able to perform regardless of training or skill.
- The scope of work should be the same for all homeowners, irrespective of location.
- Poor workmanship can compound over a short period if one poorly skilled worker is left unchecked.
- It is unacceptable for any Australian community to be exposed to the risk of having any type of plumbing work conducted by inappropriately skilled and experienced persons.

Of those who responded specifically on the list of tasks in the proposed scope of work, there was general agreement that the scope was appropriate. However, the following alternative suggestions were also put forward.

## A four-level approach

One respondent proposed a four-level approach that would separate work into:

- two levels of basic work that could be routinely performed by environmental health workers;
- a third level of work that could be performed by environmental health workers in emergency situations only; and
- a fourth level of work that could only be performed by licensed plumbing contractors.

## A more limited approach

By contrast, another respondent commented that the scope of work should be limited just to unblocking waste drains and replacing worn out washers.

## Other feedback

The consultations held in Broome provided further feedback in relation to the types of work that should be covered. At those sessions, there was a much greater level of agreement between the various stakeholders about both the appropriateness of the overall proposal for remote Aboriginal communities and the scope of work that should be covered by such a scheme.

## Further analysis

A risk/reward analysis of the individual tasks in the scope of work proposed in the consultation paper has since been undertaken. This weighed the benefits of ensuring the plumbing emergency is addressed in a timely manner against the risks to health that could potentially arise from having those tasks performed by someone other than a licensed plumbing contractor.

A summary of that analysis is shown in the following table and is based on the risk matrix at **Attachment A**. The list of tasks in the table matches that provided in the initial consultation paper<sup>4</sup>.

Tasks with a risk rating of 'low' or 'very low' are considered appropriate for inclusion in the scheme, provided that the people carrying out those tasks have first received relevant training and have acquired the skills necessary to be able to do the work competently and to the required technical standard.

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<sup>4</sup> This list is reproduced in Section 3.1 of this Decision Paper

Task	Risk	Reward	Recommendation
<p>Replace leaking tap washers, spindles, handles and shower roses.</p>	<p>There is a risk of making the leak worse or causing damage to taps and fittings. However, given that there is already a pre-existing leak, the consequences of such an outcome are considered insignificant and are unlikely to lead to further health problems.</p> <p><b>RISK RATING:</b> <b>VERY LOW</b></p>	<p>Large beneficial health and water conservation outcomes on an individual basis for every successful repair performed while a licensed plumbing contractor is unavailable.</p>	<p>This task should be included in the scope of work that can be performed under the proposed scheme.</p>
<p>Replace leaking hose taps and hose tap vacuum breakers.</p>	<p>There is a small risk of creating cross-contamination with outside sources, in particular in replacing vacuum breakers. If such contamination did occur, the impact on health could be significant.</p> <p><b>RISK RATING: LOW</b></p>	<p>Large beneficial health and water conservation outcomes on an individual basis for every successful repair performed while a licensed plumbing contractor is unavailable.</p> <p>It also offsets the risks of illness from pools of stagnant water.</p>	<p>This task should be included in the scope of work that can be performed under the proposed scheme, subject to specific training being provided in relation to replacing hose tap vacuum breakers.</p>

Task	Risk	Reward	Recommendation
<p>Replace leaking cistern inlet and outlet washers and valves.</p>	<p>This task is unlikely to make the leak worse or damage the cistern. Moreover, the severity of such an outcome is minor given a pre-existing leak and is unlikely to lead to further health problems. However, in the unlikely event of extensive damage, the toilet would be rendered completely unusable as the water would have to be turned off at the stop valve.</p> <p><b>RISK RATING: LOW</b></p>	<p>Large beneficial health outcomes on an individual basis for every successful repair performed while a licensed plumbing contractor is unavailable.</p>	<p>This task should be included in scope of work that can be performed under the proposed scheme.</p>
<p>Repair or cap burst water main for emergency purposes.</p>	<p>Repairing a burst water main creates a moderate likelihood of introducing contamination risks to the water supply. If such contamination did occur, the consequences could be significant.</p> <p><b>RISK RATING: MEDIUM.</b></p> <p>The likelihood of introducing contaminants when capping a water main is considered low and therefore greatly reduces the risk as compared to repairing the water main.</p> <p><b>RISK RATING: LOW</b></p>	<p>The health and water saving benefits in stopping burst water mains are large. Given that there are two options of varying risk (i.e. repair or cap), preference should be given to the lower risk option of capping the burst water main until a licensed plumbing contractor can attend.</p>	<p>The task of capping a burst water main should be included in the scope of work for the proposed scheme.</p> <p>Repairing a burst water main should be excluded from the scope of work under the proposed scheme.</p>

Task	Risk	Reward	Recommendation
<p>Repair or replace damaged or missing vent pipes and cowls.</p>	<p>The replacement of vent cowls is unlikely to increase the risk of public health issues and any such risks would have only minor consequences.</p> <p>RISK RATING: LOW</p>	<p>Ensures appropriate venting for sanitary fixtures.</p>	<p>This should be included in scope of work that can be performed under the proposed scheme.</p>
<p>Clear blocked waste pipes and drains.</p>	<p>Unlikely to create health issues greater than if the blockage is not attended to at all. Likewise, the consequence of any issues is likely to be minor.</p> <p>RISK RATING: LOW</p>	<p>Large beneficial health outcomes. Ensures appropriate functioning of toilets and other fixtures, with numerous associated benefits.</p>	<p>This should be included in scope of work that can be performed under the proposed scheme. However, the method by which blockages are to be cleared should be limited to hand-powered means such as a hand-held plunger or flexible rod. The use of powered machinery to clear blockages should not be permitted under the scheme.</p>
<p>Repair or replace missing or broken inspection mounds, gully mounds and grates.</p>	<p>Unlikely to create health issues and the consequences of such issues would not be significant.</p> <p>RISK RATING: VERY LOW</p>	<p>Protects the integrity of the plumbing system.</p>	<p>This should be included in scope of work that can be performed under the proposed scheme.</p>

Task	Risk	Reward	Recommendation
<p>Cap or replace a section of damaged waste pipe or sanitary drain for emergency purposes.</p>	<p>Repairing or replacing damaged waste pipes or sanitary drains is considered a reasonably complex task with a moderate likelihood of creating significant health issues.</p> <p><b>RISK RATING: MEDIUM</b></p> <p>However, the likelihood of causing such issues when capping waste pipes or sanitary drains is considered low and therefore greatly reduces the risk as compared to the task of replacing sections of pipe or sanitary drains.</p> <p><b>RISK RATING: LOW</b></p>	<p>Health benefits in preventing leaks from waste pipes or sanitary drains are significant.</p>	<p>The task of capping a section of damaged waste pipe or sanitary drain for emergency purposes should be included in the scope of work for the proposed scheme.</p> <p>Replacing a section of damaged waste pipe or sanitary drain for emergency purposes should be excluded from the scope of work for the proposed scheme.</p>

**Table 2:** Risks and rewards associated with the proposed scope of work.

## Conclusion

After considering the feedback received from the public consultation process and the risk/reward analysis in **Table 2**, it is the Government's view that the following amended scope of work should be adopted for the purposes of the proposed scheme:

1. Replace leaking tap washers, spindles, handles and shower roses (provided that no additional plumbing work is required).
2. Replace leaking hose taps and hose tap vacuum breakers.
3. Replace leaking cistern inlet and outlet washers and valves.
4. Cap a burst water main for emergency purposes only.
5. Cap a section of damaged waste pipe or sanitary drain for emergency purposes only.
6. Replacement of general covers (e.g. missing or broken inspection mounds, gully mounds, grates and vent cowls).
7. Clearing blocked waste pipes and drains by the use of plungers, flexible hand rods or hand-held water hoses only.
8. Unblocking toilets and showers by the use of plungers, flexible hand rods or hand-held water hoses only.
9. Replace 'P-Traps' and 'S-Traps' in wastepipes under sinks, basins or troughs in easily accessible locations.

Removing some of the more complex tasks that were included in the initial scope of work proposed in the consultation paper addresses concerns raised in some submissions about the potentially damaging impact of poor workmanship, while at the same time still delivering the overall objective of reducing the risk to health caused by delays in carrying out simple emergency repairs.

## 3.2 Training prerequisites

In the consultation paper, three possible training courses were identified as being suited to ensuring that those carrying out 'restricted plumbing work' are suitably qualified to do so. Those courses were:

1. Certificate II in Indigenous Environmental Health
2. Certificate II in Remote Area Essential Service
3. Certificate II in Water Operations

### Certificate II in Indigenous Environmental Health

Included in the Certificate II in Indigenous Environmental Health qualification are a number of optional units of competency relating to basic plumbing work or the water service. Those units are:

- HLTPOP001 Provide basic repairs and maintenance to health hardware and fixtures
- HLTPOP002 Monitor and maintain sewage systems
- HLTPOP003 Monitor and maintain water supply

### Certificate II in Remote Area Essential Service

As indicated in the consultation paper, the Certificate II in Remote Area Essential Service contains elements that are relevant to the type of work proposed under the scheme but is a qualification that is perhaps more appropriate to plumbing work relating to community water services infrastructure rather than domestic situations.

### Certificate II in Water Operations

The Certificate II in Water Operations also contains a number of units that may be relevant to performing basic plumbing work. However, there are no reports of this qualification being commonly held by service providers operating in such communities.

## Stakeholder comments

A broad range of feedback was received in response to the discussion on this issue in the consultation paper. This is illustrated by the following specific comments taken from the submissions received:

- The recommended training is appropriate but overprotective.
- Some supplementary training may be required.
- Only appropriate if a high degree of hands-on training is included.
- Qualifications are suitable for enabling people to perform work under supervision, not independently.
- Insufficient to meet the minimum benchmark qualifications required to practice in the plumbing industry.



A number of submissions – principally from the plumbing industry – reiterated that completion of an apprenticeship should remain the minimum training requirement for performing plumbing work. They therefore suggested that rather than establishing a special scheme for remote Aboriginal communities, focus should instead be put on developing a program to assist people in those communities to complete a plumbing apprenticeship.

As indicated earlier in this Decision Paper, while this approach has merit, it is a longer term solution and thus would not deliver the immediate response that is required. Moreover, given the basic nature of the work under consideration, coupled with the relative size of many of the remote communities intended to be covered, it is arguable whether a full plumbing apprenticeship would be a cost efficient way of delivering the outcomes sought.

## Conclusion

After considering all of the comments received in response to the various options proposed in the consultation paper, the State Government has concluded that the training prerequisite for the new scheme should be the completion of a Certificate II in Indigenous Environmental Health, supplemented by the plumbing units of competency:

- *HLTPOP001: Provide basic repairs and maintenance to health hardware and fixtures* – to ensure that the EHW is competent in the use of plumbing tools and the procedures for carrying out repairs.
- *HLTPOP002: Monitor and maintain sewage systems* – to ensure that the EHW has some background knowledge about the causes of household plumbing issues that may affect the sewerage system.
- *HLTPOP003: Monitor and maintain water supply* – to ensure that the EHW has some background knowledge about the causes of household plumbing issues that may affect the water supply (e.g. the consequences of failing to report or fix leaking taps).

The core Certificate II qualification provides people with practical skills and knowledge in environmental health principles and the health care skills required to work in a community setting. It is also generally already held by workers engaged to provide environmental health services in remote Aboriginal communities

It is acknowledged that the plumbing unit referred to in the second bullet point above provides knowledge on water supply and sewerage systems rather than household plumbing work. However, it is considered important for EHWs to have some understanding of water services systems, and to have the capacity to ensure that any plumbing work they do does not have the potential to cause downstream problems. It is also important for EHWs to be aware of the background to some of the issues that can affect household plumbing work.

The State Government also considers it important to incorporate provisions requiring EHWs to undertake refresher training at suitable intervals to ensure their knowledge and skills remain up to date. Consultation with stakeholders, including training providers, will be undertaken in relation to this as part of the development of the regulations underpinning the new scheme.

### 3.3 Other prerequisites

As indicated above, it will be a requirement of the scheme that any EHW carrying out work under the scheme must do so as part of an employment arrangement with an organisation providing environmental health services to the remote community.

This is similar to the employment relationship envisaged under the business permit option discussed in the consultation paper. Under that option it was proposed that one of the key eligibility requirements for a business permit should be that the business has systems in place to ensure that all work done under the scheme is appropriately supervised and complies with the plumbing standards in the Plumbing Regulations.

The consultation paper also listed the following additional requirements that could be incorporated into a restricted permit model:

1. The business must ensure that any person carrying out the work has appropriate tools and is informed of appropriate processes (including occupational safety and health requirements) to carry out the work safely.
2. The business must ensure that records are kept of the work done under the scheme and that employees are aware of the requirement to document the work they carry out and are provided with the necessary means to comply with those record-keeping requirements.

### Stakeholder Comments

A range of views was provided on this issue in response to the consultation paper. A flavour of the comments that were submitted is provided below.

1. The person permitted to carry out basic plumbing repairs should be a licensed plumbing contractor with relevant insurances and demonstrated auditing processes.
2. If the works are to be supervised by a service provider then the main requirement for them getting licensed and doing plumbing works should be to employ a licensed plumbing contractor. This should ensure quality work and training of workers, as well as better compliance with less risk.
3. A business permit approach will assist in ensuring accountability and will provide support for the individual workers who perform the work under the permit.
4. To ensure personal accountability, only a 'natural person' should hold a licence.

### Conclusion

Although it has been decided not to implement a permit scheme, some of the elements suggested for inclusion in such a scheme are also applicable to the proposed model. As was highlighted in the comments received in response to the consultation paper, the issues of accountability and support for the individual EHWs carrying out the work are particularly important.

The State Government will therefore put in place the following additional requirements as part of the scheme:

The employing organisation must ensure that:

- any person carrying out basic plumbing repair work has appropriate tools and is informed of appropriate processes (including occupational safety and health requirements) to carry out the work safely; and
- a record is kept of all work carried out under the scheme, and that the record is made available for inspection on request by a plumbing compliance officer from the PLB (this is discussed in more detail in section 3.3. below).

It will also be the responsibility of the employing body to ensure that all EHWs carrying out work under the scheme hold the required qualifications (see section 3.2 above) and undertake the necessary refresher training.

### 3.4 Record Keeping and Compliance

Under the arrangements in place for licensed plumbing contractors, all minor plumbing work such as that contemplated under this scheme has to be recorded on what is known as a 'multi-entry certificate'. A copy of that certificate must be forwarded to the Plumbers Licensing Board by the licensed plumbing contractor on a monthly basis.

The consultation paper discussed whether a similar system – possibly supplemented by a requirement that a licensed plumbing contractor must inspect any work within a suitable period of time – should be introduced for the new scheme.

It should be noted that since the publication of the consultation paper, consideration has been given to changing the current record-keeping arrangements for licensed plumbing contractors by removing the requirement for them to submit their completed multi-entry certificates to the Plumbers Licensing Board. A decision on this is expected to be made in late 2016 as part of the development of an electronic notification system for all plumbing notices.

#### Stakeholder Comments

The requirement to keep some form of register of work performed was widely supported, albeit with qualification in some instances. For example, one submission said it is only necessary for the more technical repairs (e.g. capping a burst water main). Another submission said that administrative and reporting requirements should be kept to a bare minimum.

Views on ensuring adequate inspections of any work performed under the restricted permit scheme were much more divergent. These included views that:

1. Inspections should be carried out by the Plumbers Licensing Board.
2. There should be regular periods of certification by licensed plumbing contractors. This could be quarterly or annually.
3. Inspection requirements should only apply to certain tasks.
4. No inspections are necessary due to the basic nature of the work.

#### Conclusion

A key consideration in developing the proposed scheme is how to strike the right balance between ensuring compliance on the one hand, and minimising administrative requirements – and associated costs – on the other.

The positives and negatives of each of the elements discussed in the consultation paper as possible options to comprise a compliance program are set out in the following table.

	Activity	Positives	Negatives
1.	Maintain a record of each job performed and by whom and make it available for inspection by the Plumbers Licensing Board upon request	<p>Allows auditing to ensure:</p> <ul style="list-style-type: none"> <li>• only appropriately skilled persons are performing the work;</li> <li>• the work is within the permitted scope; and</li> <li>• the work is being carried out correctly.</li> </ul> <p>Provides a basis for evaluating the scheme.</p>	Imposes compliance requirements which, in turn, imposes costs.
2.	Maintain a record of each job performed and by whom and submit that record to the Plumbers Licensing Board at specified intervals	<p>Allows auditing to ensure:</p> <ul style="list-style-type: none"> <li>• only appropriately skilled persons are performing the work;</li> <li>• the work is within scope; and</li> <li>• the work is being carried out correctly.</li> </ul> <p>Provides a basis for evaluating the scheme.</p>	The requirement to submit the record to the Plumbers Licensing Board at regular intervals imposes more compliance requirements than option 1 and therefore imposes greater costs.
3.	Require engagement of a licensed plumbing contractor to inspect the work within a specified period after its completion	Provides a checking mechanism to prevent any instances of substandard plumbing work developing into larger issues.	Depending on the period within which the inspection must take place, this could add more cost for the users of the scheme. However, those costs are still likely to be less than if a licensed plumbing contractor has to attend each time a minor issue eventuates, particularly if the inspection can be done as part of the contractor's scheduled maintenance program.
4.	Physical audits by plumbing compliance officers	<p>Provides a visible element to the compliance regime.</p> <p>Enables the collection of evidence on issues resulting from the implementation of the scheme.</p>	As there are currently no plumbing compliance officers based in the north west of the State, this would impose costs.

**Table 3:** Positives and negatives associated with notification requirements for work performed under the scheme.

Having weighed the issue in the light of the feedback from the consultation process, it is the State Government's view that a combination of Options 1 and 4 in the above table would provide a sufficiently robust and cost-effective compliance framework for this scheme. It is therefore proposed to require each employing organisation covered by the proposed scheme to:

- a) ensure that a record is kept of all work performed under the scheme by their EHWs;
- b) make the record available to the Plumbers Licensing Board on request for auditing purposes;
- c) make the record available for inspection by a plumbing compliance officer from the Plumbers Licensing Board who may visit the community to ensure compliance with the plumbing technical standards; and
- d) make the record available to any licensed plumbing contractor who attends the community to carry out plumbing work or plumbing maintenance inspections under a service agreement between that plumber and the community.

To assist in ensuring compliance with the proposed scheme – and to provide educational support during the early stages of the operation of the scheme – a full-time plumbing compliance officer will be deployed in the north west. In the first two years of operation, this position will be funded in large part by the State Government's Regional Services Reform Unit as part of its reform programme under the Roadmap to Regional Services Reform.

The plumbing compliance officer will have the power to issue rectification orders to the employing organisation in cases where they find that work performed under the scheme has not been carried out in accordance with the plumbing technical standards. Such orders may require the organisation to arrange for the rectification to be carried out by a licensed plumbing contractor. Sanctions will also be available in cases where the employing organisation is found to be in breach of any other elements of the scheme. For example, where an EHW has carried out work without holding the appropriate qualification or where the record of work has not been maintained.

Given the basic nature and scope of the work to be covered under the proposed scheme, it is not considered necessary for organisations to put in place an arrangement whereby a licensed plumbing contractor must inspect the plumbing work of EHWs within a suitable period of time after the work has been completed.

## Fees

As the scheme will not require the submission of compliance notices to the Plumbers Licensing Board, fees will not be raised to cover the compliance costs incurred by the Building Commission. Consequently, the Building Commission (supported in the early stages by the Regional Services Reform Unit) will absorb the cost of administering the new scheme.

### 3.5 Definition of remote

Finding an appropriate definition of 'remote' is important for two reasons.

First, it is generally agreed that plumbing work should always be performed by licensed plumbing contractors and that tasks, however basic, should only fall to qualified non-plumbers when the community is so remote and/or inaccessible that a licensed plumbing contractor cannot get there soon enough.

Second, there is a concern that if the term 'remote' is defined too loosely, it might lead to situations where qualified non-plumbers do work in locations where a licensed plumbing contractor is readily available and should be performing the work in preference to the non-plumber.

In the consultation paper, two possible options for determining remoteness were suggested. The first was to list in the Plumbing Regulations the names of each community where the restricted scheme applies. The second was a more flexible approach whereby communities would apply to be registered as a location where the restricted scheme applies.

#### Stakeholder Comments

During the course of the public consultation process a range of potential definitions for remote were provided. Those included:

1. Communities that are not on town water supply but have their own supply.
2. Communities whose water supply is not metered.
3. Communities on a common meter.
4. Communities more than 50 kms from a regional centre, or with a lack of access to competitively priced plumbing services.

Other suggestions focussed on looking at remote from a business/cost perspective. The rationale was that businesses will charge a travelling component for works carried out outside of town sites in rural areas and so any communities more than 100km from a town site are likely to experience increased costs in having plumbing repair work carried out by licensed plumbing contractors based outside of those communities.

Another suggestion was that each land council in conjunction with each Aboriginal Health Planning Forum could specify the locations covered by the restricted scheme and review that list on a regular basis (say every three years).

While each of the suggestions put forward has merit, none seem to adequately address the fundamental principle that the scheme should only apply to areas where delays in accessing plumbing services create potential health issues.

## Conclusion

Having weighed all of the options and stakeholder comment on this issue, the State Government has concluded that the most appropriate solution is to adopt the Department of Aboriginal Affairs' "Remote Aboriginal Community List – Western Australia" (the Community List) as the main determinant of whether a particular community can be a qualifying community, and build in the flexibility for other communities to be considered for inclusion in the scheme on a case-by-case basis. Such determinations will be made by the Building Commissioner.

Under this approach, a community administrator or a relevant government agency seeking the inclusion of a community that is not on the Community List would be required to make an application to the Building Commissioner and provide evidence of the remoteness and accessibility issues for that community. Evidence may include:

- providing information on climate and geography that make the community inaccessible at certain times of the year; or
- providing examples of delays in licensed plumbing contractors visiting the community following a request to attend.

Guidance on the criteria that will be used by the Building Commissioner in assessing such applications will be developed to assist applicant organisations.

For transparency, notice of each approval given by the Building Commissioner will be published in the Western Australian Government Gazette. In addition, a public register will be maintained by the Building Commission. This will be reviewed at regular intervals to ensure that the eligibility criteria continue to be met by each community listed on the register.

As at the date of publication of this Decision Paper, the "Remote Aboriginal Community List – Western Australia" contained 205 communities spread across the following areas of the State of Western Australia:

West Kimberley	110 communities
East Kimberley	53 communities
Goldfields	18 communities
Pilbara	17 communities
Midwest	7 communities

As the "Remote Aboriginal Community List – Western Australia" excludes all 37 town-based reserves in Western Australia, the scheme set out in this Decision Paper will not apply to those reserves. Consequently, all plumbing work in town-based reserves must be done by a licensed plumbing contractor in all circumstances.



## Attachment A: Risk matrix

		CONSEQUENCE				
		Insignificant	Minor	Significant	Major	Severe
LIKELIHOOD	Almost certain	Medium	High	Very High	Extreme	Extreme
	Likely	Medium	Medium	High	Very high	Extreme
	Moderate	Low	Medium	Medium	High	Very High
	Unlikely	Very low	Low	Medium	Medium	High
	Rare	Very low	Very low	Low	Medium	Medium

**Likelihood** (NB: All likelihoods are based on the work of a trained non-plumber over the course of a year. Due to insufficient data, percentages are a rough guide only.)

**Almost certain**: It is almost certain that the performance of this task by a trained non-plumber will lead to a plumbing installation not in accordance with WA’s plumbing standards.

**Likely**: There is a 60-80 per cent chance that the performance of this task by a trained non-plumber will lead to a plumbing installation not in accordance with WA’s plumbing standards.

**Moderate**: There is a 40-60 per cent chance that the performance of this task by a trained non-plumber will lead to a plumbing installation not in accordance with WA’s plumbing standards.

**Unlikely**: There is a 20-40 per cent chance that the performance of this task by a trained non-plumber will lead to a plumbing installation not in accordance with WA’s plumbing standards.

**Rare**: There is a less than 20 per cent chance that the performance of this task by a trained non-plumber will lead to a plumbing installation not in accordance with WA’s plumbing standards.

**Consequence** (NB: Consequence is based on the potential negative health impacts compared to if the emergency work is not performed.)

**Insignificant**: There are no additional health issues associated with any substandard plumbing work performed or any additional health issues will not require treatment.

**Minor**: Additional health issues associated with any substandard plumbing may require basic treatment.

**Significant**: The impact of any substandard plumbing work performed may require medical attention.

**Major**: The impact of any substandard plumbing work performed may require hospitalisation.

**Severe**: The impact of any substandard plumbing work performed may result in ongoing health problems or death.

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