



Western Australian Auditor General's Report

Fitting and Maintaining Safety Devices in Public Housing

Report 7 – August 2010





THE PRESIDENT
LEGISLATIVE COUNCIL

THE SPEAKER
LEGISLATIVE ASSEMBLY

PERFORMANCE AUDIT – FITTING AND MAINTAINING SAFETY DEVICES IN PUBLIC HOUSING

This report has been prepared for submission to Parliament under the provisions of section 25 of the *Auditor General Act 2006*.

Performance audits are an integral part of the overall audit program. They seek to provide Parliament with assessments of the effectiveness and efficiency of public sector programs and activities, and identify opportunities for improved performance.

The information provided through this approach will, I am sure, assist Parliament in better evaluating agency performance and enhance parliamentary decision-making to the benefit of all Western Australians.

A handwritten signature in black ink, appearing to read 'C. Murphy'.

COLIN MURPHY
AUDITOR GENERAL
11 August 2010

Contents

Auditor General's Overview	4
Executive Summary	5
Introduction	5
Audit conclusion	6
Key findings	6
Recommendations	7
Agency response	8
RCDs and smoke alarms are important safety devices and State legislation now requires Western Australian homes to have them	9
The Housing Authority is the largest rental property manager in Western Australia	9
Legislation now requires RCDs and smoke alarms in rental properties as they reduce deaths or injuries from electrocution and fires	9
Housing started fitting RCDs and hard-wired smoke alarms before State legislation made them mandatory	11
Audit focus and approach	12
A lack of coordination and oversight mean that Housing has not managed safety device programs efficiently or effectively	13
Findings	13
Retrofitting safety devices across Housing's property portfolio requires effective coordination and oversight	13
Housing did not effectively coordinate its safety device retrofit and upgrade programs	14
Housing's lack of program oversight has required it to reinspect properties resulting in duplication and inefficiency	15
Housing was slow to identify that the RCD retrofit program had not achieved its objectives and did not take systematic action to identify properties without the required number of RCDs	18
Housing's inspections and maintenance do not ensure its properties have working safety devices	21
Findings	21
Annual and other property inspections do not enable Housing to be sure that missing and broken safety devices are identified	21
The safety device information in Caretaker is unreliable because staff do not regularly update it after inspections or maintenance	23
The replacement or maintenance of safety devices is not always done within appropriate timeframes that minimise the risk to tenants.	24
Housing is currently undertaking organisation-wide change management and transformation which should also improve its maintenance operations	26
Appendix 1: Housing Authority's programs to install and inspect safety devices and our controls testing	27

Auditor General's Overview

The catalyst for this audit was a tragic electrocution incident in September 2009 in a public rental property, and a subsequent request from the then Minister of Housing to review the Housing Authority's (Housing's) management of its program to retrofit Residual Current Devices (RCDs) to all its properties. To assess whether issues with the RCD program were indicative of wider systemic problems we took a broader scope for the audit. We included programs relating to a second safety device (mains powered smoke alarms) and we reviewed how Housing maintains safety devices once they are installed.

The fact that RCDs and mains powered smoke alarms can improve the safety of people and property is reflected in the State having legislation which makes fitting the devices mandatory. Housing took action to bring its properties into line with the legislation before it came into force, indicating that Housing was seeking to provide the safest environment it could for its tenants. Unfortunately, Housing's implementation of its safety device programs has not matched its good intentions.

Housing underestimated the difficulty of making sure over 35 000 properties spread across the State all had the required safety devices, and did not effectively assess the risk of not achieving that objective. Treating the installation of safety devices as a routine maintenance task led to inadequate oversight and monitoring at all levels. This left some houses without the required devices and the status of others unclear. Housing could and should have done more to identify and address these problems earlier.

The audit also highlighted deeper systemic problems. Housing's property information is often unreliable, property inspections are not consistently conducted and maintenance processes are not always effective. These issues undermine Housing's capacity to offer convincing assurance that it is minimising the risks to its tenants and properties.

Housing has taken recent action to address gaps in its residual current device retrofit program, which should provide some reassurance to its tenants. Addressing the underlying systemic issues highlighted in this report will require longer term changes to Housing's organisation, systems and processes.

Executive Summary

Introduction

The Housing Authority (Housing) is the largest rental property manager in Western Australia, owning more than 35 800 properties across the state. As a landlord it is subject to the *Residential Tenancies Act 1987* which requires Housing to make its properties safe.

In addition to the *Residential Tenancies Act*, State legislation requires all landlords to ensure that for rental properties:

- residual current devices (RCDs) are installed on a change in tenancy from August 2009, or if the tenancy does not change then by August 2011
- hard-wired (mains powered) smoke alarms are installed on change of tenancy from October 2009, or if the tenancy does not change then by October 2011.

RCDs and smoke alarms are designed to reduce the chance of death by electrocution or from fire. An RCD detects current leakage, for instance caused by a faulty appliance or someone touching a live wire, and rapidly cuts the supply of electricity. Smoke alarms detect smoke and sound an alarm, giving an early warning of a fire.

Housing has had a number of programs to fit and maintain RCDs and smoke alarms. It started fitting RCDs to newly constructed properties from 1992, and hard-wired smoke alarms from 1997. It started a five-year program in 1997 to retrofit smoke alarms to all existing properties. Housing started retrofitting RCDs to all its properties in 2005 after it received funding of \$7.6 million for the program.

In 2007 and 2008 Housing started three programs to upgrade smoke alarms by fitting tamper proof screws, replacing faulty models, and replacing smoke alarms that had reached their 10-year end-of-life date.

Housing has a policy of inspecting its public rental properties at least annually, and carries out maintenance in response to needs identified by these and other periodic inspections, or if a problem is brought to their attention, for instance, by tenants.

We examined Housing's programs to install and retrofit safety devices in its public rental properties, and their ongoing management and maintenance of the devices. Our two key lines of inquiry were:

- Does Housing plan, manage and monitor its programs to install and retrofit safety devices in its public rental properties?
- Does Housing adequately manage and maintain the safety devices in its public rental properties?

In answering the lines of inquiry we audited programs for RCDs and smoke alarms. In this report we refer to RCDs and smoke alarms collectively as 'safety devices'.

Audit conclusion

Housing's safety device programs have not been managed effectively to minimise the risks to its tenants and properties.

Unreliable property information, inadequate monitoring and oversight of retrofit programs, and weaknesses in property inspections and maintenance, mean Housing is unable to provide assurance that all its properties have the number of RCDs required to meet legislation and its own policies. These weaknesses are also evident in recent smoke alarm programs.

Key findings

- Housing was amongst the first Australian state housing authorities in moving to fit RCDs and hard-wired smoke alarms to all its rental properties and its deadline for installing these devices was years ahead of when legislative requirements came into force.
- A lack of planning, coordination and oversight meant that Housing did not manage its safety device programs efficiently or effectively:
 - Housing did not assess the risks of its programs not meeting their objectives, and then manage them accordingly.
 - Implementation plans were not in place for retrofit or upgrade programs.
 - Housing's lack of program oversight meant it did not know if all properties had been fitted with safety devices. This meant it had to reinspect properties resulting in duplication and inefficiency.
- Housing was slow to identify that the RCD retrofit program had not achieved its objectives and did not take systematic action to identify properties without the required number of RCDs.
- Housing does not know how much was spent on safety devices, in part because it did not acquit funds spent on each program.
- Most properties are inspected each year but, because the inspections are not consistently conducted or recorded, Housing can not be sure that missing and broken devices are always identified and fixed.
- The safety device information in Housing's property information system 'Caretaker' is unreliable because Housing staff do not regularly update it after inspections or maintenance.
- Housing's practices for timely repair or replacement of faulty safety devices is inadequate and fails to minimise risks to tenants and properties. In 30 per cent of cases we tested, no action was taken to fix faults found during inspections, and a quarter of the rest took over 30 days. Housing's policy for routine maintenance, its least urgent category of work, is 14 days.
- Housing is currently undertaking organisation-wide change management and transformation which amongst other things is intended to improve its maintenance operations.

Recommendations

The Housing Authority should:

- Formally assess the risks associated with maintaining its rental properties in a safe condition and use this information to manage its properties and set priorities.
- Ensure that all its properties have the required number of RCDs and smoke alarms and that safety device information is accurately recorded in its information systems.
- Review, improve and monitor inspection and testing regimes for safety devices, including setting appropriate timeframes for maintenance of safety devices.
- Ensure all maintenance and property services staff receive induction and ongoing training, so they understand the importance of Housing's procedures to manage safety devices and record property information accurately in Housing's information systems.
- Review its other safety maintenance policies, programs and procedures to ensure they are implemented, managed and monitored according to the level of risk.
- Incorporate lessons learned from its RCD retrofit and verification programs into future safety-related programs.
- Introduce a structured project management and reporting framework for each safety device program:
 - ensure programs are clearly defined and communicated to all relevant staff, including a formal close-out and review at the end of each project
 - establish formal oversight by senior and regional management
 - strengthen financial controls of programs to enable accurate management and acquittal of program funds
 - document programs, including recording corporate decisions on official files.
- Fast-track proposed enhancements to Caretaker and other property information systems so that these systems link, are easier to use and contain the information Housing needs to manage its safety devices.
- Monitor and analyse program expenditure to identify where devices are not installed during a retrofit, replaced unnecessarily, or fail prematurely.

Agency Response

The Housing Authority accepts the key findings of the performance examination undertaken by the Office of the Auditor General.

The Authority acknowledges that while it was amongst the first housing authorities in Australia to install residual current devices and hard-wired smoke alarms, there were deficiencies in project management, and inadequate systems and processes to ensure installation targets were met.

A range of initiatives are now underway within the Authority to provide the systems, structure, and methodologies that will ensure the key recommendations of the OAG are implemented. These include the implementation of new risk and project management frameworks.

The Authority has written directly to each of its tenants asking them to check for the presence of these safety devices and inviting contact if they are uncertain of how to identify the devices, or require further assistance.

To enhance the capture and storage of property maintenance information, a formal project has commenced to replace the Caretaker system in accordance with the recommendation of the OAG. This will provide more timely and accurate information to improve the management of the Authority's assets.

The Authority has a high level of confidence that all its residential properties now have residual current devices installed. This will be confirmed through an increased focus on its annual inspection process over the next twelve months. The recommendations of the report will assist the Authority in further ensuring compliance with legislation requiring residual current devices and hard-wired smoke alarms to be installed in all rental properties before August 2011.

RCDs and smoke alarms are important safety devices and State legislation now requires Western Australian homes to have them

The Housing Authority is the largest rental property manager in Western Australia

The Housing Authority (Housing) owns and manages more than 35 800 public rental properties across Western Australia. It is responsible for maintaining these properties in a reasonable state of repair and meeting legislated safety requirements. Housing manages its properties through a network of regional and branch offices across the state.

Under the *Residential Tenancies Act 1987*, Housing is responsible for making its properties safe for tenants, and for repairs and maintenance. This includes complying with other legislation, for instance to install residual current devices (RCDs). Although under the *Public Works Act 1902* Housing is exempt from the legislative requirement to fit smoke alarms, it has agreed to comply with the intent of this legislation.

Tenants are obliged to keep their rental property clean, and take care to avoid damage. They should notify Housing of any property damage but are not responsible for property maintenance.

Housing has identified some specific areas that contribute to tenant safety, including RCDs and smoke alarms.

Some public housing tenants are more vulnerable to incidents in their home. They may have a disability, are frail or do not speak and read English well. Others are difficult to manage. They do not look after their property and damage it extensively.



For information on RCDs go to EnergySafety's website www.commerce.wa.gov.au

Legislation now requires RCDs and smoke alarms in rental properties as they reduce deaths or injuries from electrocution and fires

All rental property owners are required under state legislation to fit RCDs (*Electricity Regulations 1947*, amended 2009) and hard-wired smoke alarms (*Building Amendment Regulations 2009*) to residential properties. These regulations set out the timeframes by which landlords must install devices.

RCDs protect against electrocution

RCDs cut the supply of electricity milliseconds after detecting a current leakage, generally caused by faulty appliances or contact with live wires. RCDs protect against electrocution. They also reduce the risk of domestic house fires caused by 'electrical tracking'.

RCDs only protect the circuit to which they are fitted. They are usually not fitted to fixed wired circuits with directly connected appliances (no plug and socket) such as ovens and hot plates.

Overseas research indicates that RCDs may fail and that testing them regularly ensures reliability. After a prolonged period of inactivity, RCDs can fail to operate quickly enough. They are more likely to fail in dusty and humid conditions.

RCDs can be tested simply by pushing the 'test' button. This indicates whether the RCD is working correctly and it moves the contacts so that they are not left inactive long enough for a potential failure to develop. It does not test whether the response time is fast enough, or if the correct circuits are protected.

In 1992, the Australian Wiring Rules (AS 3000) required all newly constructed residential properties or those undergoing electrical upgrades to have an RCD installed. These Wiring Rules are given legislative authority under the *Electricity (Licensing) Regulations 1991*. The Standard was amended in 2000 to become the Australian and New Zealand Wiring Rules (AS/NZS 3000) and to require RCDs on lighting and socket outlet circuits.

Following changes in 2009 to the *Electricity Regulations 1947* two RCDs must be fitted to all existing residential properties before sale, when a new tenancy agreement is signed, or if no tenancy change then by August 2011.



For information on smoke alarms go to FESA's website www.fesa.wa.gov.au

Smoke alarms detect smoke and sound a warning of fire

A smoke alarm can allow occupants more time to escape a fire safely by detecting a fire and giving an early warning. Smoke alarms are either battery powered or can be wired into a property's electrical circuit (hard-wired). Hard-wired alarms are more reliable as they are wired into mains electricity and have a battery backup.

In 1997, the Building Code of Australia (the Code) first required property owners to install hard-wired smoke alarms in new and significantly renovated properties. In Western Australia the Code is given legal effect through the *Building Regulations 1989*.

From October 2009, the *Building Regulations 1989* have been amended to require mains-powered (hard-wired) smoke alarms to be fitted in all existing residential buildings prior to sale and when a new tenancy agreement is signed for rental properties.

Rental properties with no tenancy changes must have hard-wired smoke alarms fitted by 1 October 2011. The legislation requires landlords to maintain smoke alarms in good working order. Pressing the test button, found on all smoke alarms, simulates a fire and is the best way to find out if it is operating correctly.

Since 1997, Housing's policy has been to install hard-wired smoke alarms with a fixed 10-year rechargeable battery backup. The Fire and Emergency Services Authority of Western Australia (FESA) advises that all smoke alarms have a maximum service life of 10 years and should then be replaced, in line with the Australian Standard 3786 Smoke Alarms.

Housing started fitting RCDs and hard-wired smoke alarms before State legislation made them mandatory

State legislation passed in 2009 requires all rental properties to have RCDs fitted on change of tenancy or by August 2011 at the latest. Housing had already run a program to retrofit RCDs to all its properties some four years earlier. Two other State housing authorities of the four we contacted have implemented a program to fit RCDs to all their properties.

Housing was also one of the first housing authorities in Australia to start fitting hard-wired smoke alarms to all its properties. This was in response to changes in the Building Code (1997), but before State legislation was introduced in 2009.

Under Housing's policy, staff inspect these devices during annual and vacated property inspections. In 2008 it also set up a program of Building Condition Assessments (BCA) to inspect properties primarily to develop an asbestos register (in response to a previous Auditor General's report). Housing included safety device checks and tested smoke alarms in these inspections.

RCD retrofit program

Housing fitted RCDs to newly built properties after 1992, in line with the Australian Standard. Between 1992 and 2000 it fitted one RCD to each property and two from 2000. By 2003 it had also fitted RCDs to 3 000 properties built before 1992 during refurbishment programs.

In 2002, a woman and a child were electrocuted in a public housing property without an RCD. In response, Housing sought funding through the budget process to retrofit RCDs to 23 000 properties without an RCD. Its request was declined. Housing decided not to go ahead with the RCD retrofit until it received funding.

During 2004-05 and 2005-06 Housing received \$7.6 million in the budget for an RCD retrofit program. The objective of the program was to install a minimum of three RCDs to all properties by 30 June 2006.

In early September 2009, a child was electrocuted in a public rental property in Roebourne. The property was subsequently found not to have an RCD installed, although Housing's information systems recorded that it did. External agencies and Housing are independently investigating this incident.

Smoke alarm retrofit and upgrade programs

Following changes to the Building Code in 1997, Housing undertook a five-year program to retrofit smoke alarms to all its rental properties.

In 2007, Housing started a program to replace screws in smoke alarms so any tampering would be evident and the device could not be removed or slid off the mounting bracket, rendering it inoperable.

Housing also considered running a program to replace smoke alarms that were past their 10-year design life. It has since decided to manage this through its routine maintenance activity. In 2008, Housing decided to replace one model of smoke alarm because of a possible fault.

These three smoke alarm upgrade programs are not yet complete.

Audit focus and approach

We examined Housing's systems and procedures for planning and implementing programs to install and retrofit safety devices (RCDs and smoke alarms) in its public rental properties, and their ongoing management and maintenance.

Our two key lines of inquiry were whether Housing:

- plans, manages and monitors its programs to install and retrofit safety devices in its public rental properties?
- adequately manages and maintains the safety devices in its public rental properties?

The audit examined (appendix one):

- five programs to install, retrofit or upgrade safety devices
- inspections to check and test installed devices and replace defective items.

In conducting this audit we:

- interviewed head office, maintenance and regional staff
- audited Housing's controls over processes to retrofit and maintain safety devices in four regional offices: Broome, Bunbury, Geraldton and Mirrabooka. These four regions manage over 17 500 properties (47.9 per cent of Housing's public rental stock)
- reviewed policies, files and documents
- assessed the reliability of the safety device data recorded in Caretaker
- consulted with the Building Commission and EnergySafety (divisions of the Department of Commerce) and the Fire and Emergency Services Authority of Western Australia.

We did not:

- audit the 1997-2002 smoke alarm retrofit controls as the program started 13 years ago
- audit remote Aboriginal community housing, government regional officers' housing, joint ventures or urban community housing
- conduct any property inspections
- investigate the 2009 electrocution incident in a public rental property in Roebourne. The specific circumstances and causes of that incident are being investigated by other agencies.

We conducted this examination in accordance with the Australian Auditing Standards.

A lack of coordination and oversight mean that Housing has not managed safety device programs efficiently or effectively

Findings

- Safety device retrofit and upgrade programs were not efficiently or effectively coordinated because:
 - Housing did not assess the risks of its programs not meeting their objectives, and manage them accordingly
 - there were no implementation plans for retrofit and upgrade programs
 - planning, managing, and monitoring programs was limited by unreliable property information.
- Housing's lack of program oversight has required it to reinspect properties resulting in duplication and inefficiency:
 - Housing did not monitor the RCD retrofit program effectively and current smoke alarm programs show similar weaknesses
 - there are no procedures to formally review programs to learn and identify gaps
 - Housing does not know how much was spent on safety devices, in part because it did not acquit funds spent on each program.
- Housing was slow to identify that the RCD retrofit program had not achieved its objectives and did not take systematic action to identify properties without the required number of RCDs.
- Housing has not been using its expenditure data to track how many properties are still being fitted with RCDs. The data shows a rising trend since 2007-08 and a doubling of activity in 2009-10.

Retrofitting safety devices across Housing's property portfolio requires effective coordination and oversight

Retrofitting or upgrading safety devices effectively across all of Housing's 35 800 properties needs significant planning, management and monitoring. As these devices are designed to save lives, the management of programs to fit them should be rigorous and include appropriate risk assessment and planning, effective program oversight and efficient implementation. Getting planning and management right depends on having reliable property information from information systems.

We expected that, at the end of a retrofit program, Housing would know how many and which properties had been fitted with the required safety devices and be able to provide assurance that all their properties have the required devices and that the program was complete.

Having sound systems and procedures to ensure all properties are fitted with the required devices reduces the need to reinspect properties after program completion. Reinspecting and repeating work not done properly is an inefficient use of staff resources and increases costs.

Housing did not effectively coordinate its safety device retrofit and upgrade programs

Housing did not assess the risks of its programs not meeting their objectives, and manage them accordingly

Housing did not assess the risks to its tenants and properties if it failed to fit all the required safety devices or replace defective ones. This was despite previous incidents in which tenants had been electrocuted, or died in house fires. As a result, the programs were not given an appropriate level of priority, management resources or monitoring. Instead the safety device programs were managed as if they were routine maintenance.

Housing did not have an active whole-of-organisation risk register nor did it do a risk assessment of the RCD or smoke alarm programs before it started. We also found that none of the four regions we visited had assessed the risks of the safety device programs or developed a risk register.

Without a clear and explicit identification and prioritisation of key risks, there was always a strong likelihood of Housing's safety related programs being lost among other competing demands on staff time.

During the audit, Housing advised us that it would restart its corporate risk management process. We have confirmed that it recommenced in April 2010.

There were no implementation plans for retrofit and upgrade programs

Housing did not prepare state-wide or regional plans that defined how the RCD and smoke alarm programs would be implemented and the best way to effectively run these programs. Without a clear implementation plan, Housing's capacity to monitor progress and assure itself of completion of such large, state-wide programs was limited.

There was no formal management framework for the RCD retrofit program or consideration of the management resources needed. For instance, Housing delegated the management of the metropolitan retrofit (more than 24 000 properties) to a junior officer as an additional responsibility, and did not establish executive and management oversight. The rural regions then ran their programs independently, using the contract documents provided.

Housing did not formally assess its procurement options for the RCD retrofit program. Instead, it used a similar process to its 1997 smoke alarm program and tendered out the installation to contractors. Good practice would have been to assess the comparative cost-effectiveness and oversight and control benefits of putting the installation out to one state-wide tender, or to regional tenders or through zone contractors.

Planning, managing and monitoring programs was limited by unreliable property information

Housing's capacity to plan the safety device retrofit and replacement programs was limited because Caretaker does not provide an accurate or current picture of the status of safety devices in properties. Because the system had not been consistently updated to reflect work done, Housing could not track progress on the RCD program or the status of current programs. Information that is often missing includes the required number of devices and the type and installation date of RCDs and smoke alarms in each property.

Property lists from Caretaker form the basis of the retrofit or replacement programs, in effect defining the scope of the program. However, the unreliability of the information from Caretaker can lead to unnecessary work being done, or properties being missed altogether. For instance:

- Without information on the type of device installed, such as brand and model, Housing cannot target its replacement programs or identify where potentially faulty devices have been installed.
- If Housing does not know which devices have already been replaced then it cannot target its program, leading to duplication and unnecessary expenditure.
- Contractors undertaking the 2005-07 RCD retrofit program and the BCAs reported that some of the properties listed for device installation had been sold or demolished or could not be found as the address provided to them was incomplete.

Housing's lack of program oversight has required it to reinspect properties resulting in duplication and inefficiency

Housing did not monitor the RCD retrofit program effectively and current smoke alarm programs show similar weaknesses

Housing's RCD retrofit program lacked regular monitoring, progress reporting and formal sign off at completion. In the absence of such reporting, senior management did not know when or if all its properties had the required safety devices installed or if the programs were delayed and why. A similar situation is now evident in the current smoke alarm programs.

The RCD retrofit program was scheduled for completion on 30 June 2006. The lack of proper reporting meant that executive management was unaware that the program had not been completed by the scheduled date and that at least one of its 10 regions was still retrofitting RCDs in 2008. The lack of effective reporting was also evident in the regions. None of the regional managers in the four regions we visited received regular reports on their part of the RCD program.

The lack of monitoring and reporting in the RCD retrofit program is also evident in the three smoke alarm upgrade programs. We have found that the status of the three programs is not effectively monitored and that it is unclear when they will be completed:

- Ten-year replacement program – smoke alarms installed in the original retrofit started to reach the end of their 10-year design life in 2007. Housing decided to replace these through routine maintenance. In April 2010, Caretaker showed over 6 500 properties with at least one smoke alarm overdue for replacement. However, the unreliability of Caretaker property appliance data means that this may not be the actual number of smoke alarms that have reached the end of their 10-year service life. Senior regional staff we spoke to were unaware that smoke alarms have a 10-year design life and need to be replaced.
- Tamper proof screw replacement program – Housing's inspection of a number of houses in 2007 revealed that the tamper proof locking screws had been removed from the smoke alarms, which can render them inactive. Housing therefore decided to replace these screws with a different colour tamper proof screw that makes it easier to detect if the smoke alarm has been tampered with. Housing has not monitored progress on its tamper proof screw replacement program and, even though it was planned to be completed by June 2009, it could not confirm when it expects to complete this program.
- Faulty model replacement program – the replacement of a faulty model of smoke alarm began as a 12 month program in 2008. It is not yet complete. Some regional staff were unaware of the need to replace this model. Despite a maintenance circular instructing staff that the model of smoke alarm should be replaced, two regions we visited were still installing it. Caretaker records showed the faulty model was still being installed in properties in 2009.

Housing's information systems do not effectively support program monitoring. Staff often do not update safety device information in Caretaker so data is not useful for monitoring retrofit programs.

There are no procedures to formally review programs to learn what went well or where they could improve

Housing did not conduct a review of its safety device implementation programs following their completion and has no policy to require such a review. This means that it misses the valuable opportunity to learn and inform later programs about what does or does not work. For instance, such reviews could have been done following the 1997-2002 smoke alarm retrofit program or the 2005-07 RCD retrofit program.

However, in response to the electrocution incident in 2009, Housing is reviewing its conduct of the RCD retrofit program. Its findings and recommendations could also apply to Housing's other programs, particularly for smoke alarms.

Housing does not know how much was spent on safety devices, in part because it did not adequately track or acquit funds spent

Housing does not know what its actual expenditure on its RCD retrofit and various smoke alarm programs has been. Housing did not acquit programs on completion, nor did they establish accounts for the specific purpose of tracking expenditure on a program. This contributes to Housing not being fully aware of program progress and completion.

In 2003-04, Housing sought funding of \$7.6 million to meet the estimated cost of the RCD retrofit. However, its request was rejected and the program did not proceed. Twelve months later Housing increased its request to \$15 million, but received \$7.6 million. Despite receiving the lesser amount, Housing then decided to fit a minimum of three RCDs to each property, instead of two as originally planned.

Expanding the program without extra funds increased the risk that the budget would be insufficient. The program should have been closely monitored to determine the adequacy of the funding and whether there was a need to divert funds from the maintenance budget. However, this did not happen.

Housing's finance system shows \$9.5 million spent on RCDs between 2005 and April 2010. In allocating this expenditure to its accounts, Housing has not distinguished between costs for retrofitting existing properties or replacing devices. As a result, it is not possible to determine how much of the \$7.6 million budget has been spent on the retrofit program and if the funds were sufficient.

Housing estimated that the 1997-2002 smoke alarm retrofit program would cost \$5.3 million. As there was no documentation on the program files, we requested an acquittal of these funds from Housing. This showed Housing spent \$2.5 million on this program.

Housing requested \$1.4 million from government in 2007-08 to install tamper proof screws in its smoke alarms. As there is no specific account for this, Housing is unable to tell us whether the funds were spent as intended and if they were sufficient to complete the program (Table 1).

Program	Funds allocated	Funding source	Funds spent
Smoke alarm retrofit 1997-2002	\$5.3m	Internal	\$2.5m
RCD retrofit 2005-07 (Intended completion – 2006)	\$7.6m	Budget	\$8.9m
10-year smoke alarm replacement (commenced 2007)	Under routine maintenance	Internal	Not known
Tamper proof screw (commenced 2007)	\$1.4m	Budget	Not known
Replacement of faulty smoke alarm model (commenced 2008)	Under routine maintenance	Internal	Not known

Table 1: Program by funding allocation, source and expenditure

Safety device program funding and expenditure to 30 June 2009. Housing did not acquit program expenditure even if they received specific funding to conduct the program.

We noted a significant variation between regions in the average cost per property of fitting RCDs. Some variations are so significant that it raises doubt about the reliability of the information behind the invoicing and, consequently, Housing’s RCD data. For instance, the average installation cost per property in the Pilbara was \$1 014 compared to the cost in the Kimberley of \$233 (Table 2). Housing has not analysed the reasons for such significant variations in the average cost per property throughout the State and between comparable regions.

Region	Average cost per property (\$)
North Metropolitan	223
South Metropolitan	260
South East Metropolitan	192
Southern	470
South West	75
Central	268
Midwest Gascoyne	380
Pilbara	1014
Kimberley	233
Wheatbelt	177
Total	263

Table 2: Average cost per property of RCD installation by region
The table shows significant variations between regions in the average cost per property for the installation of RCDs ranging from \$75 in the South West to \$1 014 in the Pilbara.

Housing was slow to identify that the RCD retrofit program had not achieved its objectives and did not take systematic action to identify properties without the required number of RCDs

The RCD retrofit program that started in 2005 was intended to ensure that all Housing properties had three RCDs by end of June 2006. It did not achieve this objective and properties were left without the required number of RCDs. The lack of effective monitoring and reliable information on the RCD program meant that Housing could not systematically identify properties that had been missed. Action to find and rectify these gaps was ad hoc, leading to delays. It is possible there are properties that still do not have RCDs fitted, but which Housing has not yet identified.

Housing did not systematically review its property information at the end of the RCD retrofit program in 2007 to identify properties that had been missed. We found examples where Housing did not know until well after the RCD retrofit program was completed that properties had been missed, and we found no evidence of a systematic response by Housing when it did know:

- In early 2009, two years after it thought it had completed the program, one region discovered that the contractor had not installed RCDs in all 40 properties in one town. It then found that job orders had not been issued for properties in other towns in the region where contractors had been unable to gain access to fit an RCD.
- Between November 2008 and July 2009, Housing's BCA inspections identified 211 properties where it was uncertain if RCDs were fitted – though we were unable to substantiate this from Housing's records. This should have alerted senior management to the problem with its retrofit program and led to a strategy for resolution. However, we found no evidence of this.
- At the end of the metropolitan retrofit in 2006, Housing was aware of 84 properties without an RCD due to its contractors being unable to do the installation. The metropolitan regions were instructed to issue job orders and report back when the work was done. However the regions did not do so. Twenty-one job orders were not issued until September 2009 and three were not issued until we raised questions in 2010.

Despite these clear indications of a potentially widespread problem, Housing did not systematically review its property information to find all properties without the required number of RCDs until after an electrocution incident in Roebourne in September 2009.

Following this incident, Housing checked its Caretaker system for properties recorded as not having RCDs and found 15 000 properties. Housing did not believe this number was accurate and conducted physical RCD verification inspections of 7 488 properties. In selecting the 7 488, Housing excluded properties that had already been inspected under the BCA program, and those built after 1992 when one RCD was installed as standard during construction. The RCD verification inspections found 60 properties did not have an RCD installed.

Housing also inspected the 211 properties where the BCAs had raised uncertainty as to whether RCDs were fitted or not. These checks found that 29 of the 211 properties did not have an RCD.

This made a total of 89 properties that had been identified as not having an RCD. Both the BCAs and RCD verification inspections only provided information on properties with no RCDs. They did not provide a picture of how many properties may not have the three RCDs that should have been installed during the retrofit to meet Housing's policy. Housing does not know how many properties do not have the three RCDs required under its policy.

We checked the RCD information in Caretaker in February 2010; it still showed 45 per cent of properties (15 000) did not have an RCD. This information was clearly wrong. The inaccuracies reflect gross inadequacies in Housing's procedures for updating property records after the 2005-07 retrofit program and subsequently from its annual, vacated, BCA and RCD verification inspections. We also noted that the Roebourne property where the electrocution incident occurred was recorded in Caretaker as having an RCD when it did not.

We reviewed expenditure data on RCDs to see if the level of activity in fitting these devices reflected the number of properties Housing had estimated were without RCDs.

As noted above, Housing's various inspections identified 89 properties without an RCD. However, this number of properties does not reconcile to the expenditure data in Housing's maintenance system which shows that 1 729 RCDs have been fitted between July 2009 and mid April 2010, with a significant increase in activity after September 2009 (Figure 1). This could equate to between 510 and 1 700 properties – depending upon the number of RCDs installed. Housing reviewed a small sample of these job orders to understand the reasons for the spike in RCD job order installations in 2009-10. It advised many of these installations were related to tenant maintenance issues. Our review of the sample showed that while some of these RCD installations were for common areas and some were replacement and additional RCDs to existing installations, some were to properties found not to have an RCD.

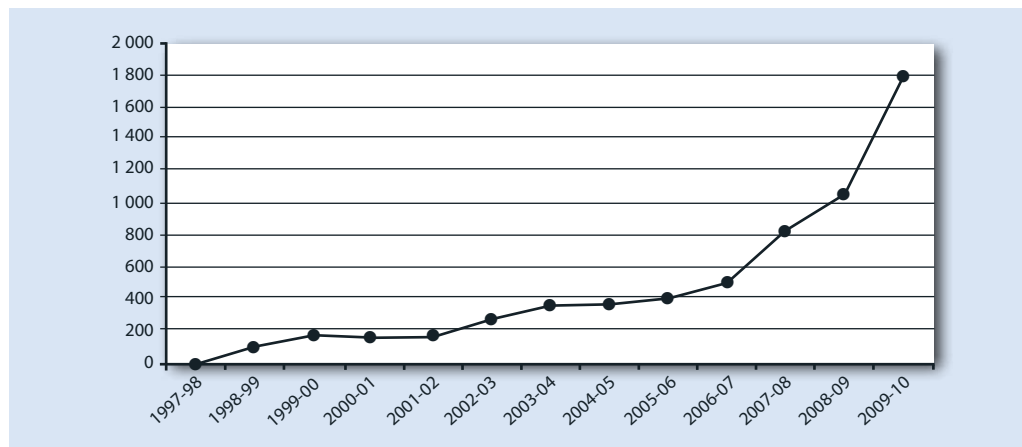


Figure 1: Number of RCDs fitted by job order to public rental properties by year

Housing's maintenance system shows a significant number of RCDs were installed after retrofit contracts were completed. This indicates that the retrofit program did not achieve its objective to install RCDs in all properties.

Housing's inspections and maintenance do not ensure its properties have working safety devices

Findings

- Annual and other property inspections do not enable Housing to be sure that missing and broken safety devices are identified, because:
 - Housing inspects over 90 per cent of its properties each year, but some may not be inspected for two years or more
 - staff do not always conduct or document property inspections consistently
 - none of Housing's three property information systems, provide complete information about the safety devices fitted in properties
 - Housing is not effectively testing its safety devices.
- Housing's practices for timely repair or replacement of faulty safety devices is inadequate and fails to minimise risks to tenants and properties. In 30 per cent of the 236 cases we tested, no action was taken to fix faults found during inspections, and a quarter of the rest took over 30 days. Housing's policy for routine maintenance for its least urgent category is 14 days.
- The safety device information in Caretaker is unreliable because Housing staff do not regularly update it after inspections or maintenance.
- Change management and organisational transformation within Housing is intended to improve program and maintenance management.

Annual and other property inspections do not enable Housing to be sure that missing and broken safety devices are identified

Ideally, every safety device in every property would be working all the time. In reality this is very unlikely given factors such as the number of properties, potential tenant interference and device failure. It is also impractical to expect Housing to know whether all devices are working all of the time.

To manage this risk to tenants and properties, Housing needs to conduct inspections that are regular, which reliably identify properties where safety devices are missing or faulty, and have maintenance systems that ensure devices are fitted or fixed in a timely way.

Housing inspects over 90 per cent of its properties each year, but some may not be inspected for two years or more

Housing's policy of inspecting all its properties annually is a key control for ensuring they have the required, working safety devices. Housing has not met its target of inspecting 100 per cent of properties annually in the four years from 2006 to 2009. In these four years, data provided by Housing, based on Personal Data Assistant (PDA) recorded inspections only, showed between six per cent (2 100) and 14 per cent (5 000) of properties were not inspected annually.

To make sure properties do not spend prolonged periods without safety devices, Housing need to know when the last inspection was done. However, its monitoring system is not reporting this information and there is a risk that some properties will not be inspected for two years or more.

Housing also inspects a property when the tenant vacates. In each of the last four years it carried out vacated inspections on 12 to 14 per cent of its properties. These inspections might cover properties which may have missed annual inspections, but their occurrence depends on tenancy changes which are not predictable or necessarily frequent.

Housing is not effectively testing RCDs and smoke alarms during inspections

Property inspections are a key opportunity for Housing to test and confirm that safety devices are working. Housing issued a new maintenance policy in November 2009 which requires that staff test both RCDs and smoke alarms annually. However, staff are not complying with the policy, particularly in regard to RCDs. The policy also does not match the RCD testing recommended by *EnergySafety*.

Current legislation and standards do not specify how often RCDs and smoke alarms should be tested. However, *EnergySafety* recommends testing RCDs, by pressing the test button, every three months and that landlords remind tenants to do this. FESA recommends that smoke alarms be tested every month.

Before November 2009, Housing's maintenance policy manual did not include RCD testing. The current manual states that RCDs should be tested annually but does not say who should do the test or how it should be done.

Staff told us during our regional visits that they do not test RCDs and gave several reasons for this including:

- concerns that the power surge after testing an RCD could damage tenants' appliances
- they were not trained to test RCDs and were unclear whether they could test them, in part because Housing's RCD fact sheet states that only a qualified electrician can test RCDs.

As a consequence of the Roebourne electrocution in September 2009, Housing developed and placed a training video on its intranet site to help familiarise staff with RCDs and their operation. However, some staff we spoke to during our regional visits were unaware of the video. Some regions had also recently appointed a staff member to conduct localised training to complement the training video.

Housing's policy on smoke alarms is that staff should test them annually and tenants must test them every three months. Housing also provides tenants with a fact sheet which recommends that tenants should test their smoke alarm every month. We noted that:

- staff do not always test smoke alarms, for instance, if the noise would upset the tenant or their children
- staff rarely test smoke alarms with the power off. This means that faulty batteries, which are a backup in the event of electrical failure, are not identified. Testing of smoke alarms with the power off during BCA inspections of pre 1990 houses (2008-10) found that almost 15 per cent of smoke alarms were faulty.

In our view, all tenants should be regularly reminded of their responsibilities in formats that are easy for them to understand.

The safety device information in Caretaker is unreliable because staff do not regularly update it after inspections or maintenance

Property information in Caretaker is not routinely and reliably updated after inspections and maintenance meaning that the information on safety devices installed in a property is often inaccurate. Property information is spread across Caretaker and two other systems, none of which individually provide complete information about the safety devices installed in a property.

Part of the reason that staff do not consistently update Caretaker is the poor usability of the system. The process of updating information is time consuming, with information on each device (number installed, brand and installation date) having to be manually entered for each property. The lack of user friendliness and management oversight was clearly evident. For example:

- three out of four regions we visited had not entered RCD and smoke alarm information for every new property
- the safety device information in Caretaker had not been updated in 51 per cent of 167 actioned job orders we tested.

The system also lacks controls to prevent the entering of some types of false data, such as an installation date in the future. Such controls are critical to a system like Caretaker.

Housing's ability to provide complete, accurate and timely information about the condition of its properties is restricted by its practice of recording the results of its different types of inspection on different information systems and by the absence of automatic electronic links between the systems.

Caretaker is reliant on uploaded information from two other systems:

- MDrover – which records the results from the annual and vacated property inspections. The updating of data to Caretaker is not automatic and relies on staff uploading the new data. This is not consistently happening.
- BCA system – which records the results of inspection of properties built before 1990. These inspections are focused on the condition of any asbestos products in the property but usually also involve other checks including safety devices. The BCA system does not link electronically to Caretaker so new information from a BCA inspection form has to be manually uploaded. This is time consuming, inefficient, subject to error and is not always done. The BCA system is also not updated to reflect completion of maintenance and so the property information on the BCA system can become dated quickly.

To improve the reliability of its property information, Housing has implemented new online training modules via its intranet. However, there is no formal training structure in the regions to ensure staff access these modules and change their work practices.

The replacement or maintenance of safety devices is not always done within appropriate timeframes that minimise the risk to tenants

Our testing showed that Housing's practices for timely repair or replacement of faulty safety devices are inadequate and fail to minimise the risk to tenants and properties.

Of the 236 inspection reports we reviewed where work was required to fix or replace safety devices, 30 per cent resulted in no action. Of the remainder, 25 per cent took longer than 30 days for the work to be completed. Housing's target for routine maintenance, its least urgent category of work, is 14 days (refer Box 1). In our sample of inspection reports we found it took an average of 114 days for maintenance work under the BCA to be finalised, 13 days for maintenance arising from the annual and vacated inspections and eight days for maintenance that arose out of the September 2009 RCD verification program.

Box 1 Housing's policy on maintenance times

Emergency maintenance is carried out within **3 hours** and is required when the utmost urgency is needed to protect the tenants' health, safety or security or the property from further damage. For instance, no power or lights in house, electric shocks/sparks, or stove not working.

Priority maintenance is carried out within **48 hours** and includes situations where there is impaired use of the dwelling and/or where a delay in repair could result in further damage and increased repair costs. For instance, security, no hot water or when two parts or more of a stove are not working.

Routine maintenance is carried out within **14 days** and is required when components are not working and where the safety, health and security of the tenants is not at risk or the property is not at risk of sustaining further damage.

In **remote areas**, where it is impracticable to meet the timeframes stipulated for emergency, priority and routine maintenance, the Department will attend to maintenance work as close to the stipulated timeframes as possible.

Source: Housing Authority

Figure 2 shows the time to issue job orders and time to complete jobs. The failure to promptly issue job orders for required maintenance is the main cause of delay with over 20 per cent taking more than 30 days to issue. Other causes are:

- contractors sometimes take months to do the work
- Housing does not adequately monitor and manage the timely completion of job orders
- Housing does not have a specific policy for response timeframes for maintenance on RCDs and smoke alarms though Housing recently informed regional maintenance staff that they should replace and repair smoke alarms within the three hour emergency response time.

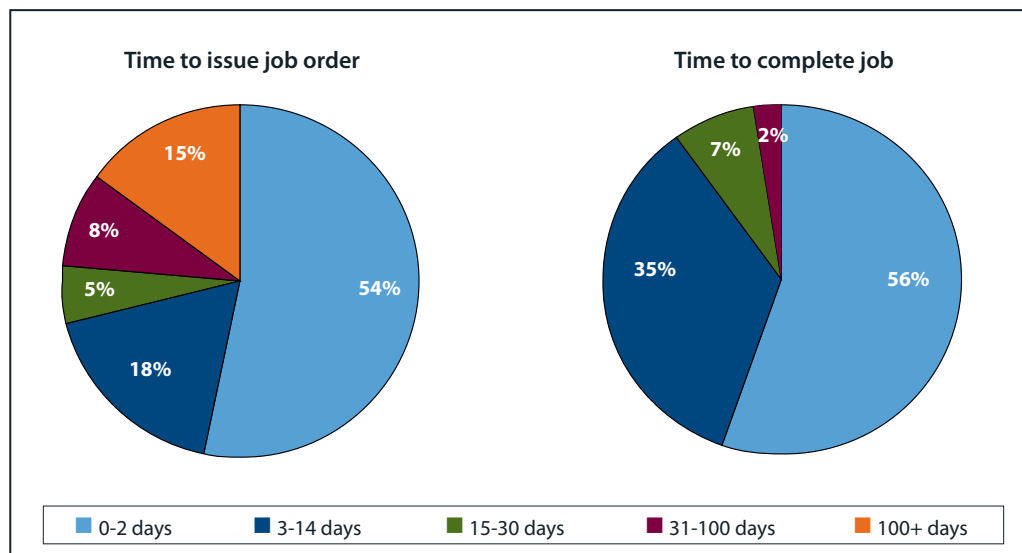


Figure 2: A breakdown of the timeliness of safety maintenance following property inspections into time taken by Housing to issue a job order and the time taken by a contractor to complete the job

A significant proportion of job orders in our sample are not being issued promptly ultimately impacting on the time to repair or replace the safety device. Some contractors are taking too long to complete jobs.

We also noted through review of job orders that some properties were still being fitted with a model of smoke alarm that has proved faulty and which Housing had identified as needing to be replaced. However, we found that some regions were unaware of this and that the construction specifications for some new houses still require this model. This indicates a lack of adequate communication which Housing needs to address in order to minimise the risk to tenants and properties.

Housing is currently undertaking organisation-wide change management and transformation which should also improve its maintenance operations

Housing is undergoing significant change to improve its performance and operations, including an organisational restructure. It considers some of these changes will impact on the systemic problems with program and maintenance management identified in this report. Housing expects it will take three to five years to fully put these changes in place.

Planned organisation-wide improvements include:

- changes to corporate governance including customer complaints and feedback
- improved project management, contract management and more effective corporate and project reporting
- business process improvement to review procedures such as property inspections.

Housing has advised that it is planning, or has started to put in place, service delivery initiatives that will also improve its management of safety related programs and maintenance. These include:

- a strategic risk management committee with service delivery representation
- a new performance and implementation branch with a quality assurance and business improvement team
- dedicated officers will independently visit each region at least twice a year to review regions' performance on safety and other tenancy management measures
- a new knowledge management unit will provide targeted training locally on new operational procedures before they are implemented. It will also deliver induction training to service delivery staff. A best practice unit will be responsible for overseeing the face to face and online training. It will also investigate best practice nationally and internationally to inform how Housing conducts its business.

Appendix 1: Housing Authority's programs to install and inspect safety devices and our controls testing

Program	Timeframe	Device	Program type	Processes tested during controls audit
RCD retrofit	2005-07	RCD	Installation: retrofit to all properties so each has a minimum of three RCDs	Contractor advises devices not installed. Housing follows up to ensure devices installed – either by contract or job order Caretaker updated on installation
Ten-year replacement	Started 2007	Smoke alarm	Installation: replace smoke alarms past their 10-year design life	N/A
Tamper proof screw	Started 2007	Smoke alarm	Installation (upgrade): insert coloured screw to prevent interference	N/A
Replacement of faulty model of smoke alarm	Started 2008	Smoke alarm	Installation: fault rectification	N/A
Construction/spot purchase	Ongoing	RCD Smoke alarm	Installation: ensure all new properties have required devices	Information on RCDs and smoke alarms loaded into Caretaker once a property has been built (purchased) and is ready for tenancy
Annual and vacated property inspections	Ongoing	RCD Smoke alarm	Maintenance: identify properties with no safety devices or the devices need repair or replacement	Housing staff find safety devices not fitted or need repair Job order issued and work done within timeframes Contractor advises devices installed and claims payment Housing updates Caretaker
Building Condition Assessment (BCA)	2008 onwards	RCD Smoke alarm	Maintenance: identify properties with no safety devices or the devices need repair or replacement	Housing staff find safety devices not fitted or need repair Job order issued and work done within timeframes Contractor advises devices installed and claims payment Housing updates Caretaker
September 2009 RCD verification inspections	September to November 2009	RCD Smoke alarm	Maintenance: identify properties with no safety devices or the devices need repair or replacement	Housing staff find safety devices not fitted or need repair Job order issued and work done within timeframes Contractor advises devices installed and claims payment Housing updates Caretaker

Auditor General's Report

REPORT NUMBER	2010 REPORTS	DATE TABLED
6	Energy Smart Government	30 June 2010
5	Fiona Stanley Hospital Project	23 June 2010
4	Audit Results Report: Annual Assurance Audits completed since 2 November 2009, including universities and public colleges; and Compliance Audits: Managing attractive assets; Managing salary payment errors	5 May 2010
3	Public Sector Performance Report 2010 – Opinions on three 'Ministerial Notifications' – ministerial decisions to not provide information to Parliament – Registration of Medical Practitioners	5 May 2010
2	Information Systems Audit Report	24 March 2010
1	The Planning and Management of Perth Arena	10 March 2010

	2009 REPORTS	
13	Audit Results Report: 2008-09 Assurance Audits	11 November 2009
12	Fourth Public Sector Performance Report 2009 – Preliminary Examination of the Royalties for Regions Program – Accountability for Government Grants – Management of Government Purchasing Cards	11 November 2009
11	Third Public Sector Performance Report 2009 – Regulation of Firearms – Follow-up – Managing Staff Attendance in the Public Sector – Evaluation in Government	21 October 2009
10	Adult Community Mental Health Teams: Availability, Accessibility and Effectiveness of Services	14 October 2009
9	Every Day Counts: Managing Student Attendance in Western Australian Public Schools	19 August 2009
8	Opinion on Ministerial Notification: Ministerial Decision to not Provide Information to Parliament – Country Age Pension Fuel Card	19 August 2009
7	Second Public Sector Performance Report – Dangerous Goods Safety – Compliance in Western Australia's Commercial and Recreational Fisheries	25 June 2009
6	Maintaining the State Road Network	17 June 2009
5	Rich and Rare: Conservation of Threatened Species	10 June 2009
4	Coming, Ready or Not: Preparing for Large-scale Emergencies	20 May 2009
3	Audit Results Report – 31 December 2008 Assurance Audits and other audits completed since 3 November 2008	6 May 2009
2	Information Systems Audit Report	8 April 2009
1	Public Sector Performance Report 2009 – Management of Water Resources in Western Australia – Follow-up – Administration of the Metropolitan Region Scheme by the Department for Planning and Infrastructure – Management of Fringe Benefits Tax	1 April 2009

The above reports can be accessed on the Office of the Auditor General's website at www.audit.wa.gov.au

On request these reports may be made available in an alternative format for those with visual impairment.