



Queensland Audit Office
better public services

Follow-up of Report 15: 2013–14 Environmental regulation of the resources and waste industries

Report 1: 2017–18



Contact details

The Performance Audit Division of the Queensland Audit Office is the custodian of this report.

All comments and enquiries should be directed to:

Location Level 14, 53 Albert Street, Brisbane Qld 4000

PO Box 15396, City East Qld 4002

Telephone (07) 3149 6000

Email qao@qao.qld.gov.au

Online www.qao.qld.gov.au

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Front cover image is an edited photograph of Queensland Parliament, taken by QAO.

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Reference to comments

In accordance with section 64 of the *Auditor-General Act 2009*, we provided a copy of this report to the Department of Environment and Heritage Protection and the Department of Natural Resources and Mines. In reaching our audit conclusions, we have considered their views and represented them to the extent we deemed relevant and warranted when preparing this report.

Responses were received from the Department of Environment and Heritage Protection and the Department of Natural Resources and Mines. The responses are in Appendix A.

Audit cost

This audit cost \$115 000.

Your ref:
Our ref: 2017-P9160



19 September 2017

The Honourable P Wellington MP
Speaker of the Legislative Assembly
Parliament House
BRISBANE QLD 4000

Dear Mr Speaker

Report to Parliament

This report is prepared under Part 3 Division 3 of the *Auditor-General Act 2009*, and is titled *Follow-up of Report 15: 2013–14 Environmental regulation of the resources and waste industries* (Report 1: 2017–18).

In accordance with s.67 of the Act, would you please arrange for the report to be tabled in the Legislative Assembly.

Yours sincerely

A handwritten signature in black ink, appearing to read 'B. Worrall', is positioned above the typed name.

Brendan Worrall
Auditor-General

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KEY FACTS



220 000 hectares
of disturbed land in
Queensland



\$8.7 billion
estimated
rehabilitation
costs



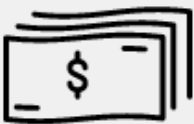
The state currently
holds \$6.8 billion in
financial assurance



Nine per cent of
disturbed land
has been
rehabilitated



By 2021
disturbed land will
be approximately
12 times greater
than areas under
rehabilitation



\$2.2 billion
contribution to
Queensland
economy in
royalties



60 000 people
directly employed
by Queensland
resource industry

Note: Land is disturbed if it has been the subject of human activity that has changed the land's surface.

Audit objective and scope

In this audit, we followed up on our recommendations from Report 15: 2013–14 *Environmental regulation of the resources and waste industries*.

Objective

We assessed whether the Department of Environment and Heritage Protection and the Department of Natural Resources and Mines actioned our recommendations and addressed the data and systems issues that led to the recommendations.

Scope

The Department of Environment and Heritage Protection's processes for environmental regulation and monitoring are the same for both the resources and the waste industries.

In Report 15: 2013–14, we focused on environmental regulation of the resources industry. We also followed up on the progress the department had made in addressing our six recommendations from Report 10: 2011 *Regulating waste: protecting the environment*.

This report therefore focuses on environmental regulation of the resources industry as it relates to the nine recommendations we made in Report 15: 2013–14.

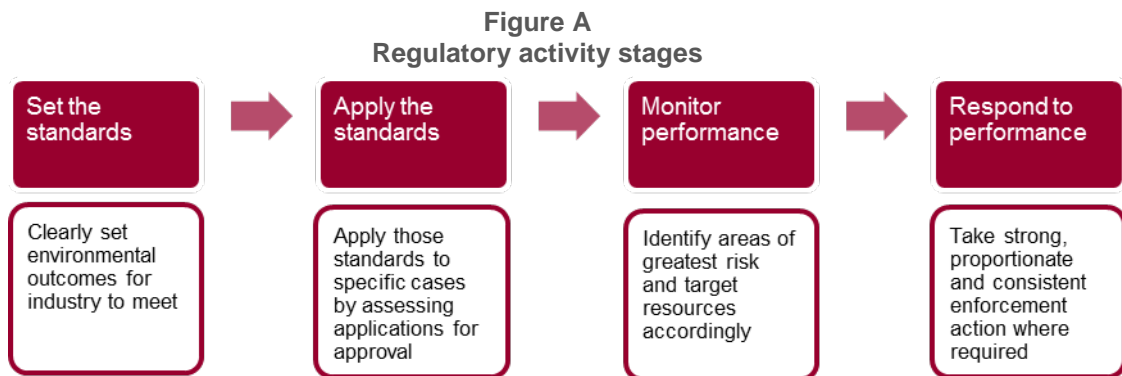
Summary

Queensland’s resources industry adds significant economic and social value to the state through royalties, investment, employment, and community development. In 2016, the resources industry contributed over \$2.2 billion to the state’s economy in royalties received and directly employed over 60 000 people.

However, resource activities can also cause environmental harm that may be irreversible or take years to rectify. By its very nature, exploring and extracting resources disturbs the land. Resource companies must successfully rehabilitate the land as a condition of their licence to operate. Currently, there are more than 220 000 hectares of disturbed land in Queensland. The estimated cost to rehabilitate this land is \$8.7 billion.

In Queensland, the Department of Environment and Heritage Protection regulates most resources and waste operators using ‘environmental authorities’. These authorities detail the conditions imposed on companies to ensure their activities comply with the *Environmental Protection Act 1994*. If a resource company’s activity is likely to cause environmental harm, including disturbing the land, this will be an environmentally relevant activity and the operator must hold an environmental authority.

Figure A shows how the Department of Environment and Heritage Protection regulates and enforces the resources industry’s compliance with the *Environmental Protection Act*.



Source: *The Department of Environment and Heritage Protection Regulatory Strategy*.

The Department of Environment and Heritage Protection obtains financial assurance from environmental authority holders to ensure the state holds sufficient funds to:

- prevent or minimise environmental harm, or rehabilitate or restore the environment
- secure compliance with an environmental authority or small-scale mining tenure.

Similarly, the Department of Natural Resources and Mines regulates the resources industry’s compliance with the *Mineral Resources Act 1989*, the *Petroleum and Gas (Production and Safety) Act 2004*, the *Petroleum Act 1923*, and geothermal and greenhouse gas legislation. The department administers permits for mining, petroleum and gas activities and provides geoscientific and resource information to assist operators with their exploration activities.

The Department of Natural Resources and Mines also manages financial assurance for mining activities, excluding petroleum and gas activities, which the Department of Environment and Heritage Protection administers.

Report 15: 2013–14

In Report 15: 2013–14 *Environmental regulation of the resources and waste industries* we examined the effectiveness of the Department of Environment and Heritage Protection and the Department of Natural Resources and Mines' compliance monitoring, reporting, and enforcement of environmental conditions for resource and waste management activities.

We examined whether they were effective in protecting the state from liability for rehabilitation and the environment from unnecessary harm. Specifically, we examined whether their:

- supervision, monitoring and reporting was risk-based, timely, and effective in ensuring compliance
- enforcement was timely and effective
- financial assurance was effectively used for rehabilitation.

Conclusion

We concluded that the Department of Environment and Heritage Protection was not fully effective in its supervision, monitoring, and enforcement of environmental conditions.

We also concluded that the two departments were not effectively managing financial assurance or mines that were in care and maintenance (mines that were not operating). This unnecessarily exposed the state to liability and the environment to harm.

Findings

We found that the Department of Environment and Heritage Protection's planning and risk assessments were hindered by poor data and inadequate systems. The Department of Natural Resources and Mines and the Department of Environment and Heritage Protection were not coordinating and sharing information.

The Department of Environment and Heritage Protection was often not requesting sufficient financial assurance to meet the rehabilitation costs of mining sites. Both departments were reluctant to take appropriate action where needed to revoke permits and claim financial assurance for the state. They did not have a clear record of financial assurance held by the state, as neither department had a reconciliation process. At times, Department of Environment and Heritage Protection staff did not know whether the Department of Natural Resources and Mines had requested, received or retained the financial assurance required from an environmental authority holder.

Recommendations

We made nine recommendations, all of which the two departments accepted. We recommended the departments improve data sharing and develop clearer guidelines and protocols when dealing with 'care and maintenance' sites. We made recommendations to the Department of Environment and Heritage Protection, to improve planning and reporting on environmental compliance activities, and the recovery of fees and costs, including how financial assurance is calculated and collected. Figure B lists the full recommendations.

Progress made by departments

Our follow-up process provides accountability in identifying agency progress in implementing audit recommendations or undertaking suitable alternative actions.

In this follow-up of Report 15: 2013–14 *Environmental regulation of the resources and waste industries*, we looked at the status of recommendations and whether departments' changes addressed the issues originally raised.

Audit conclusions

Overall, the two departments have gone to considerable effort and implemented most of our recommendations. To a large extent, the two recommendations not implemented have been overtaken by the government's proposed changes to the financial assurance scheme.

The Department of Environment and Heritage Protection has moved from a reactive compliance activity program, mainly responding to complaints and incidents, to more proactively targeting high-risk sites for inspection. They have increased the amount of financial assurance held by the state, addressed data issues, improved compliance with annual returns and reduced outstanding debts. But the recentness and ongoing nature of many of the changes means that it is still too early for us to determine how effective they will be in the long term.

The Department of Environment and Heritage Protection is now better placed to target its strategies, operations and resources to maximise compliance and effectively detect non-compliance. The new systems and processes will continue to mature as the Department of Environment and Heritage Protection and the Department of Natural Resources and Mines improve the way they collect, share and use data.

The departments have further progress to make on our recommendations for improving their calculation, collection, and management of financial assurance. The Department of Environment and Heritage Protection has improved the calculation of financial assurance, resulting in a \$1.85 billion increase in financial assurance held. But there is still a \$1.9 billion shortfall between estimated rehabilitation costs and the amount the departments collect, leaving the government and environment exposed. The government intends to address this risk through proposed changes to the financial assurance model, but there are still many aspects of the proposed model to be decided.

Finally, we have included in our *Strategic Audit Plan 2017–20* a proposed performance audit, *Monitoring environmental conditions for mining activities*. We have scheduled this audit for 2019–20, by which time many of the changes implemented by the departments will have matured and their effectiveness should be more evident.

Summary of audit findings

Please note this is a summary of the audit findings. More information is available in the following chapters.

Implementation status

The Department of Environment and Heritage Protection and the Department of Natural Resources and Mines have fully implemented the two recommendations made to both departments. The Department of Environment and Heritage Protection has fully implemented a further five recommendations, partially implemented one, and not implemented another. Figure B shows the implementation status of all nine recommendations. It also indicates which chapter contains the detailed findings.

Figure B
Implementation status of Report 15: 2013–14 recommendations

	Recommendation	QAO assessment of status	Chapter
The Department of Environment and Heritage Protection and the Department of Natural Resources and Mines			
1	improve the exchange, coordination, and accessibility of information to achieve better planning and risk assessments to inform their compliance activities.	Recommendation fully implemented	Chapter 3
9	establish clear definitions, guidelines, and formal protocols for dealing with the ongoing management of, and where necessary the transfer of responsibility for 'care and maintenance' sites.	Recommendation fully implemented	Chapter 3
The Department of Environment and Heritage Protection			
2	pursues enforcement action to recover the long-term debt it is owed from annual fees.	Recommendation fully implemented	Chapter 4
3	utilises information provided in annual returns to inform its compliance planning and improves its supervision of the industries it regulates.	Recommendation fully implemented	Chapter 3
4	implements a program to proactively monitor compliance with environmental authorities with standard conditions and variations to standard conditions.	Recommendation fully implemented	Chapter 3
5	captures and recovers the full cost of investigating and prosecuting all non-compliance cases.	Recommendation fully implemented	Chapter 4
6	improves its performance measurement and reporting to demonstrate the effectiveness of its activities in achieving environmental outcomes.	Recommendation fully implemented	Chapter 3
7	assumes responsibility for administering all financial assurance including those currently collected and held by the Department of Natural Resources and Mines.	No substantial action taken	Chapter 2
8	ensures the financial assurance it calculates and collects reflects the estimated cost of environmental rehabilitation.	Recommendation partially implemented	Chapter 2

Source: Queensland Audit Office.

We have provided a summary of the progress made in implementing the recommendations in the following sections.

Managing financial assurance

This section covers recommendations 7 and 8.

The Department of Environment and Heritage Protection has not fully implemented either of the two recommendations to ensure that financial assurance arrangements meet resource companies' rehabilitation obligations. Further progress to fully implement the recommendations is on hold, pending implementation of the proposed Financial Assurance Framework.

Financial Assurance Framework project

A review by Queensland Treasury Corporation in November 2016 proposed a redesigned Queensland Financial Assurance Framework. The framework includes a proposed financial assurance scheme, which involves tailoring the financial assurance to the risk profile of the operator.

Following a global jurisdictional review, Queensland Treasury Corporation considered two financial assurance models in detail. It recommended the proposed financial assurance scheme as better for protecting the state's financial interest. Queensland Treasury Corporation noted that, while the scheme does expose government to potential loss in extreme scenarios, the risk is very low and the exposure is less than the current model. A project to develop and implement the framework is underway, with an expected implementation time frame of 1 July 2018.

While the Department of Environment and Heritage Protection will estimate the cost of rehabilitation, a Queensland Government scheme administrator will determine the type and amount of financial arrangement required from the operator and administer the state's financial assurance. The role of scheme administrator will be determined during the Financial Assurance Framework project.

Responsibility for administering financial assurance

We recommended that the Department of Environment and Heritage Protection assumes responsibility for administering all financial assurance. This has not yet occurred. Initially, this was because poor quality data and system limitations hindered the two departments from having a clear record of financial assurance held by the state.

The two departments have now improved the integrity of their data, but have held off transferring full responsibility for financial assurance pending implementation of the proposed new financial assurance scheme. This includes a proposed central registry for all financial assurance held by the state. In addition, a scheme administrator will administer the state's financial assurance.

Calculating and collecting financial assurance

The progress the Department of Environment and Heritage Protection has made on the recommendation to accurately calculate and collect financial assurances has assisted it in increasing the amount of financial assurance held by the state. It has improved how it calculates the amount of financial assurance required from an operator and the shortfall between the amount held and the amount required has reduced. The state currently holds \$6.807 billion in financial assurance, compared to \$4.957 billion held in 2013.

The amount held is still \$1.9 billion short of the \$8.7 billion needed to cover estimated costs to rehabilitate the environment. This is mainly due to the current practice of giving discounts to environmental authority holders based on environmental and compliance performance. Under the proposed new financial assurance scheme, discounts will no longer be offered in the future.

Monitoring compliance

This section covers five recommendations—numbers 1, 3, 4, 6 and 9.

The Department of Environment and Heritage Protection and the Department of Natural Resources and Mines have fully implemented the five recommendations to improve how they monitor compliance.

Improved data and systems

The Department of Environment and Heritage Protection has improved the way it collects and shares data. As a result, it has timely access to better information and data to plan its strategies, operations, and to target its resources to maximise compliance and detect non-compliance.

These improvements are due to:

- better systems—with the new Connect system progressively replacing the legacy EcoTrack system
- improved and clearer processes and protocols between the two departments that facilitate the collection and sharing of relevant information
- collection of quality data to inform environmental, client, and location risk and better understand financial risk of environmental authority holders.

Risk-based compliance activities

The Department of Environment and Heritage Protection has replaced its annual compliance plan with a risk-based approach to monitoring compliance, reflecting the department's regulatory strategy. It has developed the Compliance and Risk Evaluation workflow tool and the Compliance Prioritisation Model that together enable a proactive and targeted approach to inspection activities.

The Compliance and Risk Evaluation tool collates information about risk and compliance to inform the client and location risk profile. The Compliance Prioritisation Model prioritises sites for compliance activities based on environmental, client and location risks.

These tools assist compliance officers to deal proactively with priority compliance issues—poor performers and high-risk activities. The Department of Environment and Heritage Protection is unable to inspect all high-risk sites so, after determining the high-risk sites, it further prioritises based on other factors, such as prior compliance history, its available resources and seasonal conditions.

Managing care and maintenance sites

Both departments have worked collaboratively to define and document formal protocols on how they manage mines once in care and maintenance.

They now define a mine as being in care and maintenance when the environmental authority holder is no longer operating the site to produce resources, but is maintaining the site, infrastructure, and equipment. Because the site is not producing resources, the operator does not pay royalties to the state but it must pay rent and annual return fees. The risk of environmental harm remains.

The original report also noted the lack of complete records kept by both departments on sites in care and maintenance. This resulted in limited oversight and inappropriate monitoring of these sites. Record keeping has improved but there is still no central record of all sites in care and maintenance. In future, the Department of Environment and Heritage Protection will record information on sites in care and maintenance in the Compliance and Risk Evaluation tool.

Measuring and reporting performance

The Department of Environment and Heritage Protection has improved its performance measurement and reporting on its activities in achieving environmental outcomes.

The Department of Environment and Heritage Protection's external reporting through its service delivery statement now focuses appropriately on outcome performance measures, rather than output measures. These measures report on whether the department is successful in improving industry compliance or protecting the environment, and the reduction in overall risk to the environment.

Regulatory fees and costs

This section covers recommendations 2 and 5.

By implementing the two recommendations, the Department of Environment and Heritage Protection has increased both the recovery of overdue annual return fees, and legal and investigation costs.

Overdue annual fees

As a result of improvements to the department's debt management program, overdue annual fees have almost halved since our original audit. Overdue fees reduced from \$1 624 309 in 2013–14, to \$848 417 in 2015–16. The department has achieved this by using various initiatives, such as frequent and more direct reminders, to encourage on-time payment.

The amount of fees written off has also reduced by 17.4 per cent, from \$513 933 in 2013–14 to \$424 450 in 2015–16. The amount written off in 2015–16 includes a clean-up of historical debt. Given the department's changes to how it manages debt, we would expect the level of debts written off will continue to decrease.

In addition, the department has set a target to ensure that it receives 80 per cent of the annual fees on time. The percentage of annual return fees paid on time increased from 69 per cent in 2013–14 to 79 per cent in 2015–16.

Recovery of legal and investigation costs

In our original audit, we found that the Department of Environment and Heritage Protection knew its external costs, such as the cost of engaging lawyers, but did not capture internal costs such as the cost of investigation.

The department now captures and records both its internal and external costs of investigating and prosecuting all non-compliance cases. Of the 27 prosecution matters finalised in 2016, the department recovered 99.4 per cent of its total legal and investigations costs.

1. Context

This chapter provides the background to the audit and the context relevant to the audit findings and conclusions.

Roles and responsibilities

Department of Environment and Heritage Protection

The Department of Environment and Heritage Protection is the administrator and regulator of the resources and waste industries under the *Environmental Protection Act 1994* (the Act). The objective of the Act is:

...to protect Queensland's environment while allowing for development that improves the total quality of life, both now and in the future, in a way that maintains the ecological processes on which life depends (ecologically sustainable development).

The Act also lists the environmentally relevant activities (which includes mining and petroleum activities) for which environmental authorities are necessary. Companies applying to conduct environmentally relevant activities must be granted an environmental authority before they can start the activities. The environmental authority details the conditions imposed on the company to ensure its activities comply with the *Environmental Protection Act 1994*.

The Department of Environment and Heritage Protection performs its function by:

- assessing and approving applications for environmental authorities
- supervising, monitoring, and enforcing conditions in environmental authorities
- setting, receiving, and reviewing annual returns and associated fees
- administering financial assurances for industry activities it regulates, including waste and petroleum and gas resources activities. The Department of Natural Resources and Mines manages the financial assurance for mining activities.

Department of Natural Resources and Mines

The Department of Natural Resources and Mines is the administrator and regulator of the resources industry under the *Mineral Resources Act 1989* and the *Petroleum and Gas (Production and Safety) Act 2004*.

The objective of the *Mineral Resources Act 1989* is to:

.. provide for the assessment, development and utilisation of mineral resources to the maximum extent practicable consistent with sound economic and land use management.

The Department of Natural Resources and Mines performs its function by:

- providing geoscientific and resource information to enable exploration activities
- administering permits for mining, petroleum (including gas), geothermal and carbon activities
- overseeing the safety and health of workers in Queensland's mining, explosives and petroleum and gas industries
- licensing the use of explosives and gas.

The Department of Natural Resources and Mines also manages financial assurance for mining activities, excluding petroleum and gas activities, which the Department of Environment and Heritage Protection administers.

Regulatory strategy

The Department of Environment and Heritage Protection's regulatory strategy outlines the department's approach to achieving a healthy and resilient environment. The strategy focuses on taking a targeted approach to identifying environmental risks, increasing compliance, and taking strong enforcement action where needed.

The strategy states that the department will achieve its purpose through the following steps:

- setting the standards outlined in the *Environmental Protection Act 1994* that the operator must meet
- applying those standards to specific cases by assessing applications for environmental authorities
- monitoring the performance of activities that have been approved, through desktop audits and onsite inspections
- responding to performance, including taking enforcement action where the department identifies non-compliance.

Compliance framework

In 2013–14, the Department of Environment and Heritage Protection embarked on a three-year program to review and improve the way it monitored and enforced compliance in the resources industry. The program included actions to improve the quality, reliability, and consistency of management information.

The need for review and the introduction of a new compliance framework was in response to the following issues identified by our original audit:

- The collection, management, and sharing of information was carried out poorly.
- Data was hard to collect, difficult to analyse and often not available to inform decisions.
- Inspections were not timely or informed by changing risk considerations.

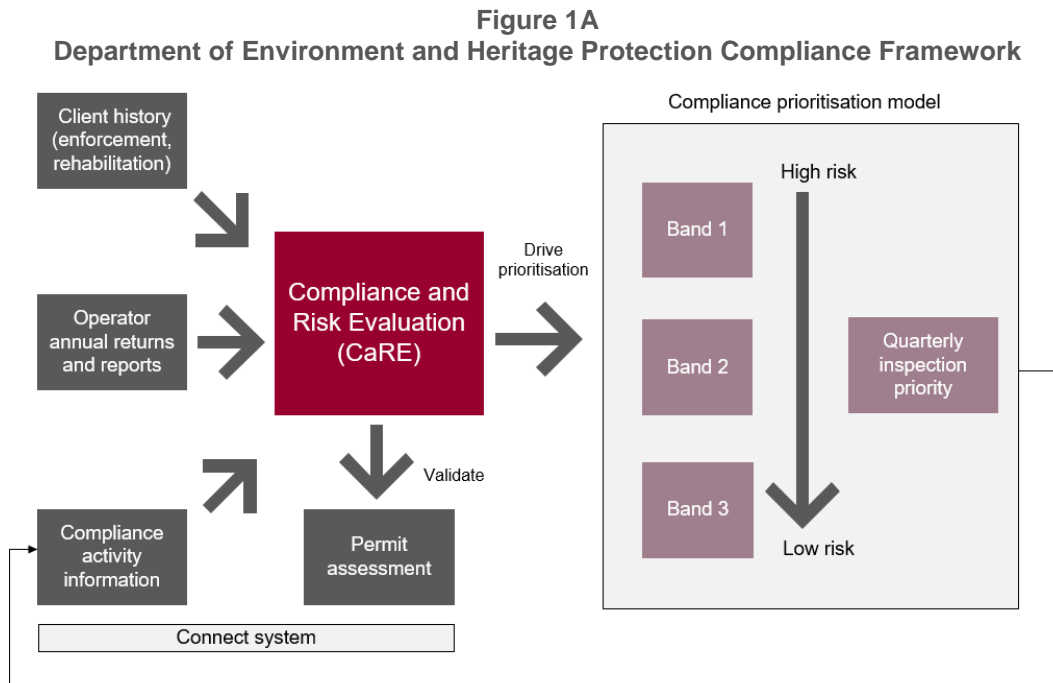
The department's new framework aims to make inspections more accountable and open. It intends to allow greater flexibility to respond to changing risks to the environment. Where the department identifies areas of poor performance it can take immediate action to mitigate environmental harm.

The Department of Environment and Heritage Protection's changes to its compliance framework include developing and implementing:

- Connect—a new information and communication technology system used to store the department's environmental authorities and records of compliance and enforcement activities.
- The Compliance Prioritisation Model—a risk analysis tool to target inspection activities.
- The Compliance and Risk Evaluation tool—a workflow tool to assist officers to collect information about risk and compliance. This information is used to complete a risk profile of the client and the location.

The department has implemented Connect and the Compliance Prioritisation Model. It began a staged rollout of the compliance and enforcement module of the Compliance and Risk Evaluation tool in June 2017.

Figure 1A provides an overview of the compliance framework, showing how the Department of Environment and Heritage Protection collects information and uses it to assess risk and prioritise its compliance activities.



Source: Queensland Audit Office.

Connect

The Department of Environment and Heritage Protection has developed its Connect information and communication technology system to replace at-risk legacy systems including EcoTrack.

EcoTrack was the department’s main system for storing information on environmentally relevant activities and environmental authorities. It also recorded the department’s compliance and enforcement activities. In our original audit, we reported that departmental staff lacked confidence in EcoTrack, and were using other ways to store information. This meant staff were not recording information in a consistent, routine, or accessible way. Information that should have been in EcoTrack was spread across paper files, spreadsheets, and individual computer drives. Connect is the department’s response to these issues and it is progressively replacing EcoTrack.

Compliance Prioritisation Model

The Compliance Prioritisation Model is the way the Department of Environment and Heritage Protection allocates resources to perform compliance inspections. It prioritises sites for compliance activities by assessing risk, based on specific environmental, client and location (site) risks.

Compliance and Risk Evaluation

The Compliance and Risk Evaluation tool is intended to assist officers to collect information about risk and compliance to inform the client and location risk profile. The Compliance and Risk Evaluation tool is an online interactive workflow tool developed within the Connect system. Compliance officers use it to collect information when undertaking inspections.

The Compliance and Risk Evaluation tool guides compliance officers through the completion of compliance activities when they deal with poor performers and high-risk activities. It aims to guide and assist officers with the completion of compliance activities, and reduce administrative effort by being a more efficient system with an integrated reporting function.

The Department of Environment and Heritage Protection implemented the environmental authority application assessment module in December 2016. The department commenced a staged rollout of the compliance and enforcement module for its compliance officers from 26 June 2017. The staged rollout aims to facilitate business familiarisation and user acceptance training.

Financial assurance

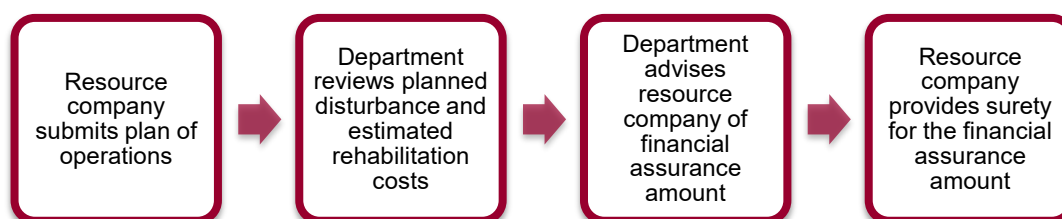
Under section 292 of the *Environmental Protection Act 1994*, the state obtains financial assurance from environmental authority holders to ensure it holds sufficient funds to:

- prevent or minimise environmental harm, or rehabilitate or restore the environment
- secure compliance with an environmental authority.

Environmental authority holders must apply to the Department of Environment and Heritage Protection for a decision about the amount and form of financial assurance it is required to pay. Generally, this is achieved by the holder submitting a plan of operations to the department before starting activities. Its plan must outline how it intends to meet the conditions set out in the environmental authority, including rehabilitation requirements. For those activities where the company is not required to submit a plan of operations, a condition on the environmental authority requires the holder to apply to the Department of Environment and Heritage Protection for a decision about the amount and form of financial assurance.

The resource company estimates the financial assurance required, based on an assessment of the likely costs to the state to rehabilitate existing and planned areas of disturbance. The costs to the state are generally considered to be the costs to engage a third party to undertake the work, not the cost of the resource company undertaking the work themselves. To be accepted, the resource company must use either the Department of Environment and Heritage Protection's financial assurance calculator or an approved industry calculator. Figure 1B shows the current financial assurance process.

Figure 1B
Current financial assurance process



Source: Adapted from the *Queensland Government Financial Assurance Framework reform discussion paper*.

The environmental authority holder must also provide information to support its application for financial assurance. This includes:

- a detailed explanation of disturbance
- a rehabilitation program
- assumptions used to calculate the financial assurance
- information to demonstrate eligibility for a discount, if applicable.

Discounts of up to 30 per cent can be applied based on the resource company's financial health, progressive rehabilitation and certification, and waste management practices. The Department of Environment and Heritage Protection assesses the application and determines the amount of financial assurance environmental authority holders must pay, after applying any discounts.

The Department of Environment and Heritage Protection is responsible for calculating, setting and, where appropriate, revising the amount of financial assurance required from an environmental authority holder. It is also responsible for assessing success in meeting rehabilitation objectives before accepting surrender of an environmental authority and returning financial assurance to an environmental authority holder.

The Department of Environment and Heritage Protection collects and administers the financial assurance for petroleum and gas and waste environmental authorities. In the case of mining environmental authorities, the Department of Natural Resources and Mines is responsible for collecting financial assurance on the Department of Environment and Heritage Protection's behalf. Both departments hold financial assurance as cash, bank guarantees, or a combination of each.

Financial assurance framework reform

In July 2016, the Queensland Government commissioned the Queensland Treasury Corporation to review Queensland's financial assurance arrangements. This was in response to industry and government concerns that the current Financial Assurance Framework:

- acts as a disincentive to industry to invest in the resources sector
- does not address the considerable risk to government associated with mine and petroleum site rehabilitation in the event of company insolvency.

The purpose of the review was also to address the government's commitment to the financial assurance recommendations made in Report 15: 2013–14 *Environmental regulation of the resources and waste industries*.

The Queensland Treasury Corporation issued its report in November 2016 and recommended the following reforms:

- redesigning the Financial Assurance Framework
- improving rehabilitation in Queensland
- expanding the range of surety providers
- expanding the Abandoned Mine Land Program
- improving management of sites in care and maintenance
- other reforms (sale of assets, improvement of the rehabilitation framework).

We make further reference to the reform in Chapter 2 of this report.

2. Managing financial assurance

This chapter covers the progress made by the Department of Environment and Heritage Protection in addressing the recommendations about managing financial assurance.

Introduction

The purpose of financial assurance is to ensure the state holds sufficient funds to prevent or minimise environmental harm, or to rehabilitate or restore the environment. It also secures compliance with an environmental authority.

Our original audit found that initiatives by the Department of Environment and Heritage Protection had increased the amount of financial assurance held by the state. However, the financial assurances held were still often insufficient to cover the estimated cost of rehabilitation. In addition, successful environmental rehabilitation was not always occurring and the state remained exposed to unnecessary and unacceptable financial risks.

Where financial assurance held is insufficient, the government is left with three options:

- not rehabilitating the site at all.
- rehabilitating the site only to the extent covered by the amount of financial assurance held.
- fully rehabilitating the site at taxpayers' expense by funding the shortfall.

None of these options provide optimal outcomes for the community.

Our audit also found that there was no clear record of financial assurance held by the state. This was because communication and processes between the Department of Environment and Heritage Protection and the Department of Natural Resources and Mines were inadequate and there was no reconciliation of records between the departments.

We made two recommendations to improve financial assurance management.

Implementation status

The Department of Environment and Heritage Protection has partially implemented the recommendation relating to calculating and collecting financial assurance. It has not implemented the recommendation to assume responsibility for administering all financial assurance.

Figure 2A shows the recommendations examined in this section.

Figure 2A
Recommendations relating to financial assurance

Recommendation		QAO assessment of status
The Department of Environment and Heritage Protection		
7	assumes responsibility for administering all financial assurance including those currently collected and held by the Department of Natural Resources and Mines.	No substantial action taken
8	ensures the financial assurance it calculates and collects reflects the estimated cost of environmental rehabilitation.	Recommendation partially implemented

Source: Queensland Audit Office.

Calculating financial assurance

In 2014, the Department of Environment and Heritage Protection developed a mining and a petroleum and gas financial assurance calculator. However, the unit rates it used in the calculator were about a year out of date, making its calculations inaccurate. The Department of Environment and Heritage Protection has since reviewed the financial assurance calculator and released an updated version on 13 June 2017.

Since 2013, the Department of Environment and Heritage Protection has increased the amount of financial assurance held by \$1.85 billion. It increased from \$4.957 billion in 2013 to \$6.807 billion in 2017. However, the state is short around \$1.9 billion of financial assurance to meet the estimated \$8.7 billion needed to rehabilitate the environment. One reason for the shortfall is that the current financial assurance calculation allows the Department of Environment and Heritage Protection to give environmental authority holders discounts based on environmental and compliance performance.

In other cases, operators are still within their timeframe for payment or they delay the process to pay the full amount calculated. The Department of Environment and Heritage Protection takes enforcement action on outstanding financial assurance. For example, of the 121 site specific mineral resource activities current in May 2017, 14 were subject to internal compliance activity to recover the outstanding amounts. Five cases were referred to the Land Court.

Figure 2B provides examples of two recent cases where there was a shortfall in the financial assurance amount required and amount held. Two mine operators went into liquidation, leaving the state with insufficient financial assurance.

Figure 2B
Examples of shortfall in financial assurance held

Environmental authority holder	Environmental authority holder estimation of rehabilitation cost \$ million*	Financial assurance calculator \$ million	Financial assurance held \$ million	Shortfall \$ million
Mine Operator 1	60–100	29	3.6	56.4–96.4
Mine Operator 2	10	6.9–9.8	2	8

Note: * Estimated rehabilitation cost is the full cost of rehabilitation calculated by the environmental authority holder and submitted to the Department of Environment and Heritage Protection.

Source: Queensland's Financial Assurance Framework and the Department of Environmental Heritage and Protection.

Rehabilitation work has occurred at both mining sites referred to in Figure 2B, but it is incomplete. The work undertaken is more about preventing further environmental harm than rehabilitation of damage. For example, for Mine Operator 1, the Department of Environment and Heritage Protection has used \$220 720 of the financial assurance funds held for a third-party contractor to install a new groundwater monitoring network. The department expects to use all funds held on this contract. Queensland Treasury has provided a further \$32 million to progress rehabilitation at the site over five years. The Department of Environment and Heritage Protection continues to pursue rehabilitation funding from Mine Operator 1 and a related person through legal action.

The Abandoned Mines Unit, within the Department of Natural Resources and Mines, is currently managing and controlling Mine Operator 2's mine site. The total expenditure, as at 30 June 2017, for rehabilitation of the site was \$1 781 865. The Department of Environment and Heritage Protection and the Department of Natural Resources and Mines are currently assessing applications from a separate company to recommence mining and use existing site infrastructure.

The Department of Environment and Heritage Protection is now acting to identify individual operators who pose a high risk to the environment—either because of poor performance or financial risk. The department checks these operators' compliance more frequently. It aims to reduce the risk to the state of increasing rehabilitation costs including when operators become insolvent.

We explain how the department is doing this in Chapter 3.

Administering financial assurance

The Department of Environment and Heritage Protection has not yet assumed responsibility for all financial assurance. Initially, this was because of system limitations and the poor quality and disparate sources of financial assurance records held by both departments.

Since our original audit, the Department of Natural Resources and Mines has made considerable progress in improving current financial assurance data. Both departments confirm they have improved the integrity of the data and the level of communication between departments on the financial assurance process.

Further changes are on hold until the new Financial Assurance Framework has been implemented. The new framework will see a central registry developed for all financial assurance held by the state.

Proposed financial assurance solution

A review by Queensland Treasury Corporation in November 2016 proposed a redesigned Queensland Financial Assurance Framework. The proposed framework includes:

- changes to the governance framework for managing and administering financial assurance
- a financial assurance solution, termed the 'tailored solution', which segments operators based on size and risk
- a pooled rehabilitation fund for the majority of operators, where companies with an acceptable risk profile pay contributions into the fund.

In response to the findings and recommendations identified in the Queensland Treasury Corporation review, the Queensland Government has provided in-principle approval for reform to the Financial Assurance Framework.

Following a global jurisdictional review, Queensland Treasury Corporation considered two financial assurance models in detail. It recommended the proposed financial assurance scheme as better for protecting the state's financial interest. Queensland Treasury Corporation noted that, while the scheme does expose government to potential loss in extreme scenarios, the risk is very low and the exposure is less than the current model.

Under this framework, the Department of Environment and Heritage Protection will estimate the cost of rehabilitation. The scheme administrator (it has not yet been determined who the scheme administrator will be) will determine the type of financial arrangement and amount of financial assurance required from the operator. It will also collect and hold the state's financial assurance.

The recommended solution involves tailoring the financial assurance to the risk profile of the operator. The Department of Environment and Heritage Protection already assesses an operator's overall risk profile by considering environmental, client, and location risk factors. This includes compliance history and performance. The department is doing further work to improve the way it assesses an operator's risk profile by including the company's financial risk in its financial assurance model. For example, the risk of the company going insolvent.

Risk-based model

Under the new financial assurance model, the scheme administrator will classify a resource company under one of four categories, based on the company's risk profile and the estimated rehabilitation cost:

- Representative resource entity—companies that are assessed as an acceptable risk for the pooled rehabilitation fund, based on the company's financial strength and amount of its total rehabilitation liability.
- Significant resource entity—companies that represent five per cent or more of the total rehabilitation liability in Queensland.
- Other resource entities—companies that pose a relatively high risk of default.
- Small operators—companies that have a total rehabilitation cost estimate across all of their environmental authorities of less than \$50 000.

The scheme administrator will then determine a corresponding financial assurance arrangement specific to the risk profile of the company. The classification of a resource company is not static and can change in response to movement in the company's risk profile. The type of financial arrangement may include:

- rehabilitation fund—Resource companies in this category will pay annual contributions to this fund based on their estimated rehabilitation cost, multiplied by a contribution rate that reflects their financial risk. Differentiated contribution rates are proposed, reflecting the risk profiles of the resource company. The rehabilitation fund will pool contributions and, if the Queensland Government is required to take on responsibility to rehabilitate the site of a resource company in this pool, the cost of the work will be claimed from the fund.
- selected partner arrangement—This arrangement will be limited to resource companies with a very low financial risk. Contributions will be calculated consistent with the rehabilitation fund. However, the funds generated will be redirected towards the Queensland Government's resource-related initiatives, including an expanded scope of works under the Abandoned Mine Lands Program.
- third party surety—This is intended for companies with an elevated financial risk and with a very large rehabilitation liability, although surety could also be required for small operators. These companies will be required to provide third party surety for the full estimated rehabilitation amount.
- small operator arrangement—This is generally for small to medium explorers for gems, precious metal, coal, and conventional oil and gas. They will be placed in this category pending review and transition to either the rehabilitation fund or third party surety.

Discounts

Under this financial assurance model, the Department of Environment and Heritage Protection will calculate financial assurance using a government-commissioned calculator, which will no longer offer discounts. The aim is for consistency across the sector and for the financial assurance required to match the estimated rehabilitation cost.

Time frames

The Department of Environment and Heritage Protection began the project to develop and implement the framework in June 2017. It is still to decide on details and specifics of how the financial assurance model will operate. The expected time frame for implementation is 1 July 2018. The Queensland Government is planning a three-year transitional period from that date to allow time for existing operators to transition to the proposed Financial Assurance Framework.

In May 2017, Queensland Treasury released the Financial Assurance Framework and mine rehabilitation discussion papers for public consultation seeking industry and community feedback on the proposed reforms. Queensland Treasury requested submissions by 15 June 2017, but also stated that it would provide the community with an opportunity for ongoing feedback throughout 2017 and 2018.

3. Monitoring compliance

This chapter covers the progress made by the departments in improving information collection and sharing, and compliance planning and monitoring. It also covers their progress on developing clearer guidelines for dealing with sites in care and maintenance.

Introduction

The Department of Environment and Heritage Protection's regulatory strategy commits it to increasing its monitoring of industry performance and compliance, while reducing the time it spends on assessing applications. Well planned monitoring will help it identify non-compliance and assess the risk of harm to the environment.

Our original audit found that the Department of Environment and Heritage Protection's ability to plan compliance monitoring was hindered by poor systems and unreliable data. This prevented the department from effectively targeting its strategies, operations and resources to maximise compliance and detect non-compliance. While it had improved its compliance planning, we found that planned supervision and monitoring activities were still unlikely either to maximise compliance, or to detect all serious non-compliance within the resources industry.

We found that the Department of Environment and Heritage Protection needed to further strengthen its monitoring program to meet its commitment in its new regulatory strategy. We concluded that, until this occurred, its monitoring activities were unlikely to be an effective deterrent to non-compliance, or improve industry compliance.

Poor data also meant that the Department of Environment and Heritage Protection was unable to demonstrate whether its enforcement activities improved compliance levels with environmental conditions. It did not record, analyse and report its enforcement activities on an industry basis. As a result, actual performance in achieving its regulatory objectives could not be demonstrated.

We made five recommendations to improve environmental compliance activities.

Implementation status

The departments have fully implemented all five recommendations relating to improving compliance monitoring activities.

Figure 3A shows the recommendations examined in this section and our assessment of the implementation status of each.

Figure 3A
Recommendations relating to regulatory compliance

Recommendation		QAO assessment of status
The Department of Environment and Heritage Protection and the Department of Natural Resources and Mines		
1	improve the exchange, coordination, and accessibility of information to achieve better planning and risk assessments to inform their compliance activities.	Recommendation fully implemented
9	establish clear definitions, guidelines, and formal protocols for dealing with the ongoing management of and, where necessary, the transfer of responsibility for 'care and maintenance' sites.	Recommendation fully implemented
The Department of Environment and Heritage Protection		
3	utilises information provided in annual returns to inform its compliance planning and improve its supervision of the industries it regulates.	Recommendation fully implemented
4	implements a program to proactively monitor compliance with environmental authorities with standard conditions and variations to standard conditions.	Recommendation fully implemented
6	improves its performances measurement and reporting to demonstrate the effectiveness of its activities in achieving environmental outcomes.	Recommendation fully implemented

Source: Queensland Audit Office.

Coordinating and sharing information

In our original audit, we found limited information exchange and collaboration between the Department of Environment and Heritage Protection and the Department of Natural Resources and Mines. This hindered the Department of Environment and Heritage Protection's ability to effectively target its strategies, operations, and resources to maximise compliance and detect non-compliance. At the time of the audit, both departments were conducting risk assessments for resources activities. But they did not share or use information about environmental authority holders who failed to comply with safety standards, administrative requirements, financial obligations, or environmental conditions.

The departments' lack of information sharing affected the quality of their risk assessments, planning and resource allocation and their monitoring and reporting. As a result, their decisions and plans were not based on all available information.

Since our original audit, the Department of Environment and Heritage Protection and the Department of Natural Resources and Mines have improved their coordination and information sharing. This means that the Department of Environment and Heritage Protection can more effectively target its resources to maximise compliance and detect non-compliance.

They have addressed this recommendation by:

- working together to produce an updated inter-agency manual, which reflects changes to legislation and provides clarity on inter-departmental protocols and processes
- sharing information that contributes to compliance monitoring risk assessments
- developing intelligence collection plans, and establishing a network of contacts and key data sources and mutually acceptable methods of timely exchange of information.

Inter-agency manual

The departments developed the Environment and Heritage Protection—Natural Resources and Mines Administrative Interactions Manual (Mining) in October 2015 and updated it in May 2016. The manual outlines how the two departments interact to ensure they implement the relevant requirements of the *Environmental Protection Act 1994* and *Mineral Resources Act 1989* for mining activities. It documents interactions between the two departments required by legislation, as well as interactions aimed at ensuring they deliver customer services as effectively and efficiently as possible. The manual covers the:

- roles of both departments
- key areas and units within each department where interaction occurs
- processes that need to happen, who is responsible, and what information should be shared and recorded.

Both the Department of Natural Resources and Mines and the Department of Environment and Heritage Protection's senior management and regional assessment staff confirm that the manual has clarified communication processes and protocols. The manual will need further updates to reflect the introduction of Connect—the new digital platform for online services and transactions—and the continuing changes to improve processes.

Intelligence collection plans

The Department of Environment and Heritage Protection has developed intelligence collection plans. They collect, maintain and use information to better understand financial risk. The business intelligence project began in February 2017 and has an expected completion date of June 2018.

The project's purpose is to improve the Department of Environment and Heritage Protection's understanding of each operators' financial risk. The project will do this primarily by progressively introducing and using more data to improve the financial risk calculation methodology.

Developing intelligence collection plans was phase 1 of the project, and was completed in March 2017. The plans identify and document new sources of information (both internal and external), which can provide indicators of financial, environmental and client risk. External sources include, but are not limited to, the Department of Natural Resources and Mines, Queensland Treasury Corporation, and the Australian Securities and Investments Commission.

The Department of Environment and Heritage Protection's focus on risks relevant to rehabilitation includes:

- considering a range of additional information including debt, operator performance, and environmental values
- using a data analytics and technology strategy to improve data collection and storage
- collecting information to provide indicators of precursors to non-compliance driving higher rehabilitation costs and failure to rehabilitate
- assessing financial risk indicators such as why and when mines go into care and maintenance.

The department assigns a financial risk rating that contributes to each client’s overall risk rating. However, the Department of Environment and Heritage Protection continues to gather and assess information to gain a better understanding of financial risk. The aim is to allow it to intervene earlier for operators in financial distress or who are heading into financial risk. Ideally, as this process matures, it could allow the department to intervene while some resources are still available to rectify any non-compliance. This reduces the risk of increasing rehabilitation costs and ultimately reduces the risk to the state should the operator become insolvent.

Next steps

The Department of Environment and Heritage Protection continues to capture useful information through the business intelligence project to improve its understanding of risk. Having detailed, accurate and timely information will enable the department to continue solving new problems as they emerge.

Proactively monitoring compliance

Our original audit found little evidence to demonstrate that the Department of Environment and Heritage Protection was effective in detecting non-compliance, other than in response to public complaints or industry reported incidents. The department did not undertake periodic or systematic risk assessments or inspections of sites with standard conditions or standard conditions with variations. We found little evidence to demonstrate that the Department of Environment and Heritage Protection’s monitoring was timely, risk-based, or effective in detecting non-compliance. This was largely because of weaknesses in the department’s data management systems, including monitoring data that was incomplete and unreliable.

Since our original audit, the Department of Environment and Heritage Protection has implemented a compliance framework to improve the way it monitors and enforces compliance in the resources industry. The department intends its new framework to give it greater flexibility in responding to changing risks to the environment. It will help it identify areas where the department needs to take immediate action to address poor performance or to mitigate environmental harm.

Compliance framework

The compliance framework includes the development and implementation of the Connect system, the Compliance Prioritisation Model, and the Compliance and Risk Evaluation tool.

Compliance Prioritisation Model

The Department of Environment and Heritage Protection has implemented the Compliance Prioritisation Model—a risk-based approach to monitoring compliance. Features of the model include:

- targeting high-risk sites for inspection across all industries and geographic areas
- a capability to moderate risk across geography and industry type
- a continuous and adaptive approach to assessing risk.

A fundamental change since our original audit is that the Compliance Prioritisation Model assesses all sites with a current environmental authority, including those with standard environmental authorities and those with variations to standard conditions. Our original audit noted that the Department of Environment and Heritage Protection did not do periodic or systematic risk assessments or inspections of sites with standard conditions, unless it received a complaint or incident notification. This meant that it did not know the actual risk posed by most of these sites.

Prioritising sites

The Compliance Prioritisation Model prioritises sites for compliance activities by assessing and scoring 52 risk variables across three categories:

- environmental risk—each location is assigned a score based on the relevant environmental activity undertaken against the permit and baseline information on the environment type and consequence risk values
- client risk—each entity is assigned a score based on data sources such as compliance history and outstanding fees or annual returns
- location risk—each location is assigned a score based on data sources such as compliance level, compliance history, and operational status, such as sites in care and maintenance, to assess the compliance risk at specific locations.

A total risk score is allocated to determine the inspection priority—bands 1–3. The aim of the Compliance Prioritisation Model is to target high-risk sites for inspection, placing sites with higher client, location or environmental risk in Band 1.

Figure 3B shows the number of sites by priority band from July 2016 to March 2017.

Figure 3B
Number of Compliance Prioritisation Model (CPM) sites by priority band

Inspection priority band	CPM v4.4		CPM v4.5		CPM v4.6		CPM v4.7	
	July 2016		September 2016		December 2016		March 2017	
Band 1 High risk	1 729	13.8%	1 858	13.2%	933	8.5%	524	4.9%
Band 2 Medium risk	6 185	49.4%	6 670	47.4%	5 107	46.4%	4 140	38.5%
Band 3 Low risk	4 604	36.8%	5 549	39.4%	4 971	45.1%	6 093	56.6%
Total	12 518	100%	14 077	100%	11 011	100%	10 757	100%

Note: The decrease in the number of Band 1 sites prioritised for inspection, particularly between the September and December 2016 quarters, is mainly due to further refinement of the risk variables and updated compliance data.

Source: Department of Environment and Heritage Protection.

The Department of Environment and Heritage Protection refreshes the Compliance Prioritisation Model quarterly to create a new list of priority sites for compliance activities. With each version of the model data, sites may move between priority bands, reflecting the results of inspections and compliance activity. Movements, whether down to a lower priority band or up to a higher priority band, can occur where there has been a change in one or several risk factors. Examples of changes to risk factors may include:

- financial factors that affect an operator's overall risk, for example the accumulation of outstanding fees
- enforcement actions including prosecutions undertaken against an operator
- identification of additional environmental risks at location
- outcome of the most recent compliance inspection at a location and the overall compliance level of a site.

The Department of Environment and Heritage Protection uses the change in total risk score between versions of the Compliance Prioritisation Model to measure the percentage of sites that show a reduction in overall risk to the environment. We provide further information on this in the section on performance measurement and reporting.

Compliance activities

The Department of Environment and Heritage Protection has three compliance regions—North, Central, and South Queensland. Each region is responsible for scheduling quarterly inspections within its region. They develop their quarterly inspection plans using tools and information including:

- Band 1 sites identified in the Compliance Prioritisation Model
- complaints and incident notifications
- compliance officers' knowledge of events in their region
- available resources.

They may also select sites from Bands 2 and 3 for other compliance activities such as:

- environmental problem-solving requiring a new approach
- a targeted compliance project to address priority compliance issues. This may have an industry or geographic focus
- unplanned compliance events responding to complaints, incidents and notifications.

Not all Band 1 sites identified are inspected in a quarter. The actual number of inspections the regions complete depends on a range of factors, including:

- scale and complexity of the nominated sites
- logistics of travel arrangements
- regional compliance staff knowledge of site risks.

Competing priorities may also prevent the department from completing all compliance activities. For example, natural disasters may require redirection of resources.

The regions apply the following business rules when determining which Compliance Prioritisation Model Band 1 sites they will include in the quarterly inspection:

- For sites inspected and deemed compliant in the last six months, the department does not schedule a further inspection in that quarter. This is unless the department has received information indicating that a site warrants inspection, or there is compliance activity underway that requires a site inspection.
- For sites where the department is unclear whether the operator is carrying out compliance activities, the compliance centre conducts a desktop review to determine the need for a site inspection.
- The department may reschedule a site inspection to a later quarter where necessary. For example, it may not be sensible to travel to certain remote locations during the wet season.

The department schedules the remaining Band 1 sites for compliance activity, either through a site inspection or a desktop review.

A desktop review involves environmental officers evaluating compliance with the regulating legislation to establish any environmental non-compliance, without attending the site. Officers do this by using information provided by the operators in their annual return, or by requesting and assessing monitoring information and reports on the requirements of an environmental authority. An environmental authority holder may be required to maintain records on monitoring activities such as noise emissions, and air and water quality. Officers also consider whether a suitably qualified person prepared the reports.

The department uses this information to assess whether:

- the operator has complied with the conditions of an environmental authority
- rehabilitation activities have occurred to reduce environmental harm.

The department's officers also use daily satellite imagery to scrutinise rehabilitation activities at resource sites as part of desktop reviews.

The compliance centre may schedule a site inspection if it has concerns in a desktop review, or where insufficient information is provided.

Figure 3C shows how many of the Band 1 sites prioritised for compliance activity had either a desktop review or site inspection in the quarter.

Figure 3C
Number of Band 1 sites subject to compliance activity

	CPM v4.5 Oct–Dec 2016	CPM v4.6 Jan–Mar 2017	CPM v4.7 Apr–Jun 2017
Band 1 sites prioritised for inspection	1 858	933	524
Number of Band 1 sites inspected or subject to desktop review	395	321	165
Percentage of Band 1 sites inspected or subject to desktop review	21.2 %	34.4%	31.5%
Total number of inspections and desktop reviews, both reactive and proactive	2298	2091	1708
Number of Band 1 sites as percentage of total inspections and desktop reviews	17.2%	15.3%	9.6%

Note 1: The decrease in the number of Band 1 sites prioritised for inspection, particularly between the September and December 2016 quarters, is mainly due to further refinement of the risk variables and updated compliance data.

Note 2: The 1 708 total inspections and desktop reviews in the June 2017 quarter includes 228 sites as part of a Targeted Compliance Project in response to ex-Tropical Cyclone Debbie. This included a number of Band 2 and Band 3 sites whose site risk was elevated because of the weather event and water inundation.

Source: *Department of Environment and Heritage Protection.*

The purpose of compliance activities is to improve an operator's adherence with their environmental obligations. Combined with available statutory tools, such as infringement notices and enforcement, the Department of Environment and Heritage Protection aims to return sites to a compliant state. The reduction in the number of Band 1 sites prioritised for inspection in the last six months may indicate an improvement in compliance.

Model maturity

The effectiveness of the Compliance Prioritisation Model relies on the quality of the data used in the risk assessments and the department's ability to undertake appropriate compliance activities (inspections and desktop reviews). The model continues to mature as the Department of Environment and Heritage Protection improves its collection and use of data. It will achieve this by using new systems and tools to better use the compliance information it has, and by collecting more information on financial risk.

The department implemented the first phase of the Compliance Prioritisation Model in September 2014. It progressively improved and expanded the model throughout 2015. This included expanding base data and introducing more risk variables. The department released Version 4 of the Compliance Prioritisation Model in February 2016 after a comprehensive review to identify changes and additional sources to improve risk assessment.

The department also periodically analyses sites in Band 1 to determine whether the higher overall risk rating is consistent with higher client, location and/or environmental risk scores.

The department's analysis of the clients identified as Band 1 by the Compliance Prioritisation Model in the September 2016 quarter showed:

- The majority of locations have an environmental risk of moderate or higher.
- Sixty-five per cent of clients in Band 1 are subject to a current statutory enforcement action, with a notable number currently subject to investigation or having been prosecuted in the last 10 years.
- Over half the clients have outstanding fees, ranging from \$118 to \$166 148.
- Almost all sites in the Band 1 priority lists have a very high or high location risk rating based on non-compliance issues identified at the last inspection, a current statutory order in place, or enforcement action taken at that location in last 12 months.
- Only five per cent of Band 1 sites were assessed as being compliant at their last inspection.

The department's review found that sites it had not inspected in the last 12 months and those with non-compliant clients had moved into higher bands. Those clients who made positive changes moved into lower bands.

The department plans to do further analysis and review of the Compliance Prioritisation Model. It is prudent to extend the analysis to a sample of Band 2 and 3 sites to confirm the model has also correctly assessed them.

Compliance and Risk Evaluation tool

Integral to the Compliance Prioritisation Model is the Compliance and Risk Evaluation workflow tool within the Connect database. The Compliance and Risk Evaluation tool will collate compliance activity information collected by compliance officers across the state. It supports the transition from an annual compliance plan to risk-based decision-making reflecting the regulatory strategy. The Compliance and Risk Evaluation tool:

- targets risk and increases compliance action
- facilitates an intelligence-driven and risk-targeted compliance framework
- collects data about risk that compliance officers can easily access and use for analysis.

The tool has two main components:

- an assessment module to develop risk profiles for the sites and activities the Department of Environment and Heritage Protection regulates. The department implemented this in December 2016
- a compliance and enforcement module that compliance officers use to capture information when undertaking compliance inspections. It allows compliance officers to check the risks identified and assessed during compliance inspections and identify where conditions imposed are inadequate to manage observed risks. A staged rollout of the module commenced on 26 June 2017.

The Compliance and Risk Evaluation tool assists officers to collect information about risk and compliance to inform the client and location risk profile. It enables a compliance officer to deal proactively with poor performers and high-risk activities. It guides officers with the completion of compliance activities, and reduces administrative effort by being a more efficient system with an integrated reporting function.

Next steps

The Department of Environment and Heritage Protection continues to improve its compliance methodology through further development of the Compliance and Risk Evaluation tool. In future, it plans to collect more compliance activity and risk information and provide a tool to support compliance officers undertaking compliance activities. The department expects that further development of the Compliance and Risk Evaluation tool will improve the performance of the Compliance Prioritisation Model.

Using annual return data

Holders of environmental authorities are required to provide an annual return declaring their compliance with environmental regulations and to include relevant supporting information.

Our original audit found that, while the Department of Environment and Heritage Protection had reduced the number of overdue annual returns, there were still close to 500 overdue returns in the 2012 calendar year. Consequently, the Department of Environment and Heritage Protection did not have all the information available to guide monitoring and compliance-planning decisions. Failure by an operator to comply with the requirement to submit an annual return was not used to reassess the risk profile of the holder and site.

The Department of Environment and Heritage Protection did not assess annual returns routinely to determine the accuracy of the information provided. The risk was that operators were simply ticking the compliance box on annual returns.

Since December 2016, the Department of Environment and Heritage Protection's customers have been able to complete and lodge their annual returns online in the Connect system. This has improved the accuracy and completion of collected information. Because the system forces customers to provide certain minimum information before they can submit their annual return, the number of entities submitting incomplete annual returns has reduced.

The Department of Environment and Heritage Protection now incorporates information from annual returns into its Compliance Prioritisation Model, which it uses to select and plan compliance visits. Currently, the Department of Environment and Heritage Protection uses annual return information to inform its compliance planning in two ways. Outstanding annual returns contribute to a higher client risk rating in the Compliance Prioritisation Model. Compliance officers also use other qualitative information contained in the annual returns when conducting desktop reviews or site inspections.

In our original audit, we noted that the number of outstanding annual returns reduced from 10 per cent of all environmental authorities in 2010 to six per cent in 2012. Figure 3D shows the number of outstanding returns from 2010 to 2016. While there has been a slight increase in the last two years, overall there has been a significant decrease since 2010.

Figure 3D
Number of outstanding annual returns 2010 to 2016

Calendar year	Number of overdue annual returns	Total number of permits	Percentage of annual returns overdue
2010	630	9 368	7%
2011	533	7 992	7%
2012	470	7 765	6%
2013	19	6 594	0.29%
2014	15	5 772	0.26%
2015	45	5 106	0.88%
2016	91	4 626	1.97%

Source: Department of Environment and Heritage Protection.

The reduction is mainly due to the online lodgement of annual returns and the Department of Environment and Heritage Protection reminding operators when annual returns and fees are due. The department should investigate the reasons for the slight increase in the last two years to determine whether further improvements are needed.

Next steps

The Department of Environment and Heritage Protection's future release of the Connect system should enable it to capture additional compliance data from annual returns. This is part of the Compliance and Risk Evaluation (CaRE) tool development, enabling more effective targeting of entities by evaluating environmental risks and performance.

Managing care and maintenance sites

A resource operation is in care and maintenance when production ceases and the site is managed to enable operations to commence later. Care and maintenance is not a defined term in any act that the Department of Environment and Heritage Protection and the Department of Natural Resources and Mines administer. Further, there is no formal requirement for operators to advise the departments when the rights granted by the state to extract the resources are not being exercised.

While genuine operational issues may cause a site to go into care and maintenance—such as a temporary fall in commodity price making the operation uneconomical—it can also be a mechanism for operators to defer rehabilitation costs. Because the site is not producing resources, the operator does not pay royalties to the state but is required to pay rent and annual return fees.

Sites in care and maintenance present a higher risk to the state, with fewer operator personnel on site to maintain vital infrastructure and monitor performance. Progressive rehabilitation activities may cease and the Department of Environment and Heritage Protection and the Department of Natural Resources and Mines may have less visibility of the site.

At the time of our original audit, neither the Department of Environment and Heritage Protection nor the Department of Natural Resources and Mines had a definition, processes, or guidelines to manage care and maintenance sites. A lack of protocols about the management of these sites resulted in some sites remaining in care and maintenance while the departments disputed the administrative and regulatory responsibility.

Since our original audit, the departments have worked together to define and set formal protocols on how these mines are to be managed once in care and maintenance. They have documented these in the inter-agency manual, which is in place between the Department of Environment and Heritage Protection and the Department of Natural Resources and Mines.

The protocols require the two departments to communicate as early as possible to access and share information to effectively plan and assess risks. Each department will take the lead for responsibilities under its respective legislation.

Our original report also noted the lack of complete records kept by both departments on sites in care and maintenance. This resulted in limited oversight and monitoring of these sites. While record keeping has improved, the departments do not maintain a central record of all sites in care and maintenance. In future, the Department of Environment and Heritage Protection's Compliance and Risk Evaluation tool will record information on all sites in care and maintenance.

Next steps

The Department of Environment and Heritage Protection is piloting the Mines at Risk assessment tool. The tool is expected to assist in targeting mines that are high risk, such as those in care and maintenance. It is intended to provide the Department of Environment and Heritage Protection with a more targeted compliance plan, which will ensure that mines with high risk ratings are given the appropriate level of attention.

The Queensland Treasury Corporation's review of Queensland's financial assurance arrangements also identified the need to clarify how sites in care and maintenance are managed. As part of the financial assurance reforms, the Department of Natural Resources and Mines is leading a discussion paper on this matter.

Measuring and reporting performance

Our original audit found that the Department of Environment and Heritage Protection did not report on environmental outcomes. It was therefore unable to demonstrate that its enforcement activities improved compliance levels with environmental conditions. Specifically, the Department of Environment and Heritage Protection did not report on:

- improvements in industry compliance
- protection of the environment or addressing environmental harm.

The Department of Environment and Heritage Protection reported the percentage of facilities assessed as compliant during follow up inspection. But it did not report on the number or proportion of high-risk facilities inspected for compliance, nor the percentage increase in compliant facilities during initial routine inspections.

At the time of our original audit, the Department of Environment and Heritage Protection reported output performance measures including:

- the timeliness of prosecutions
- actions on penalty infringement notices
- quantity of enforcement.

However, it did not report on the quality of enforcement actions.

Since our original audit, the Department of Environment and Heritage Protection has improved its performance measurement and reporting on its activities in achieving environmental outcomes.

The Department of Environment and Heritage Protection's external reporting through its service delivery statement now focuses appropriately on outcome performance measures, rather than output measures. These measures report on whether the department is successful in improving industry compliance or protecting the environment, and the reduction in overall risk to the environment.

Figure 3E shows the three key service delivery statement measures that relate to improvements in industry compliance and how the department demonstrates the effectiveness of its activities in achieving environmental outcomes.

Figure 3E
Service delivery statement measures relating to improved industry compliance

Measures	Target	Year end 30 June 2016	Quarter ending September 2016	Quarter ending December 2016	Quarter ending March 2017
Percentage of identified unlicensed operators who have become licenced or enforcement action taken within 60 days	70%	63%	85%	55%	71%
Percentage of sites that show a reduction in overall risk to the environment as a result of site inspections	70%	61%	61%	46%	78%
Proportion of monitored licensed operators returned to compliance with their environmental obligations	70%	66%	78%	81%	79%

Source: Department of Environment and Heritage Protection, Environmental Services and Regulation Service Delivery Statement report and Annual Report.

The department's improved performance measures are in part due to improved systems and data collection. For example, the measure on 'percentage of sites that show a reduction in overall risk to the environment as a result of site inspections' is calculated by the changing Compliance Prioritisation Model risk values for locations after inspections are undertaken.

All three measures were first reported in the 2015–16 financial year, both internally and externally. While actual performance has fluctuated across the last three quarters, the Department of Environment and Heritage Protection anticipates meeting, by the end of quarter four, the overall targets. Fluctuations are due to factors such as lag time between when an inspection occurs and when the site risk is reduced.

The Department of Environment and Heritage Protection has also improved its internal reporting through better data collection. Its internal reporting includes monthly and quarterly reporting against the service delivery statement measures. It also has detailed management reporting, which includes regional data and trends over time. The department now links its inspections data with its enforcement data to identify the percentage of inspections where non-compliance is found.

Next steps

The Department of Environment and Heritage Protection's ongoing work to improve systems, processes and tools is likely to result in further improvements to data quality, breadth, and accessibility.

The Compliance and Risk Evaluation tool, when fully implemented, will enable the Department of Environment and Heritage Protection to collect consistent, real time information about a site and an operator's risk. The compliance and enforcement module commenced a staged rollout on 26 June 2017. It will provide the department with further and/or replacement data for performance measurement and reporting.

4. Regulatory fees and costs

This chapter covers the progress made by the Department of Environment and Heritage Protection in addressing the recommendations about the recovery of fees and costs.

Introduction

In Report 15: 2013–14 *Environmental regulation of the resources and waste industries* we examined two areas relating to regulatory fees and costs:

- annual fees paid by environmental authority holders
- calculation and recovery of the full costs of prosecutions.

We found that the Department of Environment and Heritage Protection’s oversight of annual fees was not effective. At 31 January 2014, the Department of Environment and Heritage Protection was owed \$6.6 million in overdue fees from holders of environmental authorities. It had also written off more than \$447 000 in the prior 12 months. While the department had made considerable effort to reduce outstanding fee debt, it was unsuccessful largely due to some holders’ refusal to pay.

We also found that where the Department of Environment and Heritage Protection took prosecution action against non-compliance it did not know the full costs of those prosecutions. It captured external costs but not internal costs. As a result, the Department of Environment and Heritage Protection could not recover the full cost of prosecutions through the courts.

We made two recommendations to improve the recovery of fees and costs and reduce debt.

Implementation status

The Department of Environment and Heritage Protection has fully implemented the two recommendations relating to regulatory fees and costs.

Figure 4A shows the recommendations examined in this section.

Figure 4A
Recommendations relating to recovery of fees and costs

Recommendation		QAO assessment of status
The Department of Environment and Heritage Protection		
2	pursues enforcement action to recover the long-term debt it is owed from annual fees.	Recommendation fully implemented
5	captures and recovers the full cost of investigating and prosecuting all non-compliance cases.	Recommendation fully implemented

Source: Queensland Audit Office.

Recovering debt

The *Environmental Protection Act 1994* requires environmental authority holders to pay an annual fee based on the activities the authority has authorised. We raised the issue of overdue annual fees in Report 15: 2013–14—*Environmental regulation of the resources and waste industries*. Our audit found that, while the remaining overall debt had reduced slightly, the value of debts due over 90 days had increased, from \$5.96 million in October 2012 to \$6.12 million in January 2014. This was despite the department writing off \$447 695 in overdue debts in 2013. The 90-day overdue fees equated to 92 per cent of the total overdue fees.

The main issues the Department of Environment and Heritage Protection faced in recovering overdue debts were that debtors:

- were no longer operating
- refused to pay because they disagreed with the annual fee amount.

During our original audit, the department was investigating ways to identify and remove false debt due to incorrectly invoicing holders that had ceased operations.

Since our original audit, the Department of Environment and Heritage Protection has made a significant effort to either recover the historical overdue debts or write those debts off. As at March 2017, \$2.99 million was outstanding in annual returns fees compared to \$6.12 million in January 2014.

The reduced debt balance reflects the department's improved debt management processes. It has also resulted in an increase in the number of annual return fees paid on time.

Figure 4B shows that the percentage of overdue fees and written off debts has reduced progressively since 2010–11. This reduction is consistent despite the increase in total annual fees due.

Figure 4B
Annual return fees overdue and written off—2010–11 to 2015–16

Financial year due	Overdue fees	% of total fees overdue	Fees written off	% of total fees written off	Total fees
2010–11	\$2 291 490	13%	\$798 744	4%	\$18 224 679
2011–12	\$3 229 661	10%	\$823 751	3%	\$30 998 252
2012–13	\$2 215 070	7%	\$953 283	3%	\$29 924 079
2013–14	\$1 624 309	5%	\$513 933	2%	\$32 894 239
2014–15	\$1 720 631	4%	\$209 442	1%	\$39 595 779
2015–16	\$848 417	2%	\$424 450	1%	\$45 192 011

Note: Overdue fees—fees paid 90 days or later.

Source: Department of Environment and Heritage Protection.

Debt management initiatives

As part of its debt management plan, the Department of Environment and Heritage Protection has introduced various initiatives to encourage on-time payment. These include:

- issuing operators with a revised annual notice that clearly states when the annual fee and annual return are due
- trialling the use of text messaging (SMS) and emails as reminders when fees are due or overdue
- using reminder phone calls to operators with annual fees over \$40 000
- using reminders on letters notifying operators that fees are overdue
- improving the clarity and directness of letters on what amount needs to be paid when.

Figure 4C shows that the percentage of annual return fees paid on time increased from 50 per cent in 2010–11 to 79 per cent in 2015–16.

Figure 4C
Annual return fees paid on time 2010–11 to 2015–16

Financial Year Due	Fees paid on time	Total fees	% of total fees paid on time
2010–11	\$9 073 017	\$18 224 679	50%
2011–12	\$17 535 977	\$30 998 252	57%
2012–13	\$19 492 420	\$29 924 079	65%
2013–14	\$22 745 598	\$32 894 239	69%
2014–15	\$28 955 871	\$39 595 779	73%
2015–16	\$35 812 859	\$45 192 011	79%

Source: Department of Environment and Heritage Protection.

The Department of Environment and Heritage Protection's enforcement data shows a noticeable increase in the number of actions it has taken on overdue debts. It has increased its use of legal action, including the use of the statutory demand process under the Commonwealth *Corporations Act 2001*. Since 2013, the department has taken legal action against eight debtors with outstanding annual fees. Of these:

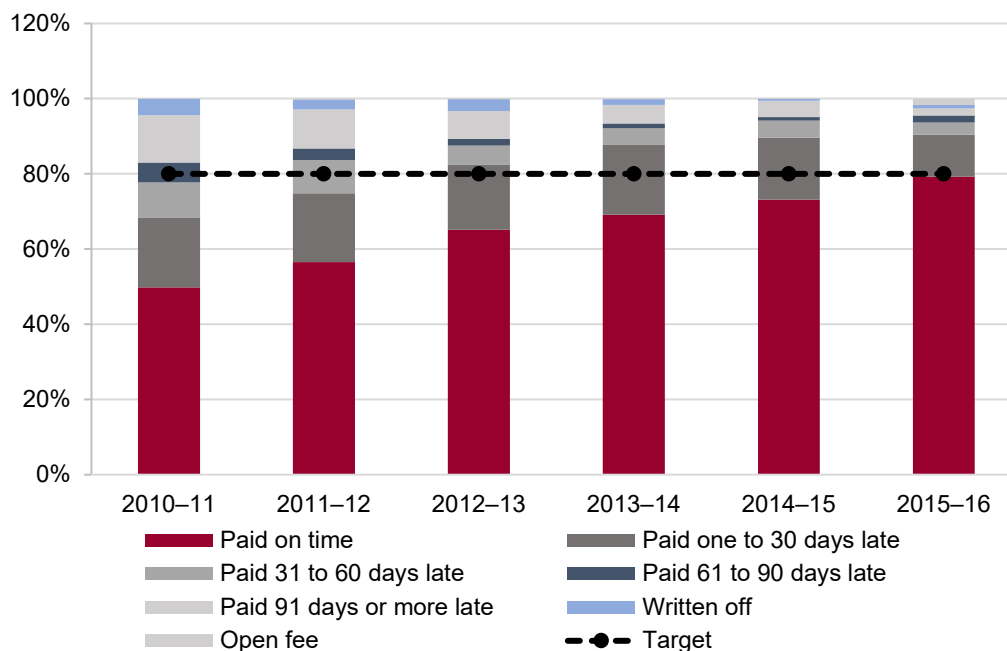
- three resulted in full settlement leading to recovery of \$152 696 of overdue debt
- one resulted in the winding up of the company
- three resulted in judgements against the company
- one is ongoing.

The Department of Environment and Heritage Protection has continued to suspend environmental authorities where the holder has failed to pay outstanding fees. The department has issued approximately 238 suspension notices in the first nine months of the 2016–17 financial year. For the 2015–16 financial year, the department issued approximately 249 suspension notices. The department's continued focus on enforcement actions has contributed to the increase in the collection of overdue debts.

Performance measures

The Department of Environment and Heritage Protection has introduced targets and performance measures to monitor and report the effectiveness of the debt management process and the status of overdue debts. Figure 4D shows that the Department of Environment and Heritage Protection was close to meeting its 80 per cent target of on time payment in 2015–16.

Figure 4D
Annual return fee payments compared to target



Source: Department of Environment and Heritage Protection.

Capturing investigation and prosecution costs

The Department of Environment and Heritage Protection takes prosecution action where:

- other enforcement actions have been unsuccessful in achieving compliance
- the non-compliance or environmental harm is so significant that lesser enforcement actions are not appropriate.

The Department of Environment and Heritage Protection’s litigation unit directs the prosecution of non-compliance matters. In our original audit, we found that the department knew its external costs, such as the cost of engaging lawyers, but did not capture internal costs, such as the cost of investigation.

The Department of Environment and Heritage Protection now captures both its internal and external investigation and prosecution costs. Guidance and templates are available to ensure completeness and consistency on how costs are captured and recorded.

Figure 4E shows a breakdown of costs captured and recovered for the 27 prosecution matters finalised in 2016. As well as capturing all costs, the department is also recovering the majority, if not all, of its legal and investigations costs.

The department is less effective in working with the State Penalties Enforcement Registry to recover payment of fines ordered by court. It relies on the State Penalties Enforcement Registry to recover the fines instead of using its ability to suspend environmental authorities until operators pay.

Figure 4E
Recovery of legal and investigation costs of 2016 finalised matters by the
Department of Environment and Heritage Protection

Types of prosecution matters	Cost incurred to prosecute \$	Amount recovered \$	%
Fines ordered by court	1 200 420	57 395	4.78
Legal cost ordered	32 275	39 515	122.43*
Investigations ordered	99 035	91 042	91.92
Total	1 331 730	187 952	14.11

Note: *The percentage recovered for legal and investigations costs is calculated on costs recovered in the year—some may therefore relate to costs ordered in a prior year and therefore amount to more than 100 per cent.

Source: *Department of Environment and Heritage Protection.*

Appendices

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Appendix A—Full responses from agencies

As mandated in Section 64 of the *Auditor-General Act 2009*, the Queensland Audit Office gave a copy of this report with a request for comments to the Department of Environment and Heritage Protection and the Department of Natural Resource and Mines.

The head of these agencies are responsible for the accuracy, fairness and balance of their comments.

This appendix contains their responses to our audit.

Comments received from Director-General, Department of Environment and Heritage Protection



Ref CTS 23340/17

- 7 SEP 2017

Mr Brendan Worrall
Auditor-General
Queensland Audit Office
PO Box 15396
CITY EAST QLD 4002



Dear Mr Worrall

Thank you for your letter dated 23 August 2017 concerning the Follow up Report 15: 2013-14 – Environmental regulation of the resources and waste industries.

The department appreciates the opportunity to review and comment on the proposed report and has no further comments.

Should your staff have any further enquiries, please ask them to contact Ms Kath Sherman, Director Strategic Compliance of the department on telephone

Yours sincerely



Jim Reeves
Director-General

Page 1 of 1

Level 32
1 William Street Brisbane
GPO Box 2454 Brisbane
Queensland 4001 Australia
Telephone + 61 7 3330 6297
Website www.ehp.qld.gov.au
ABN 46 640 294 485

Comments received from Director-General, Department of Natural Resources and Mines

Your Ref 9160P
Our Ref CTS 23371/17



Department of
Natural Resources and Mines

Mr Brendan Worrall
Auditor-General
Queensland Audit office
PO Box 15396
CITY EAST QLD 4002

Dear Mr Worrall

Thank you for your letter of 23 August 2017 offering the opportunity to provide comments on the proposed report to Parliament relating to the 'Follow up Report 15: 2013-14 – Environmental regulation of the resources and waste industries' (the report).

The Department of Natural Resources and Mines (DNRM) has reviewed the report and has no additional comments to make regarding the DNRM-related recommendations.

Should you have any further enquiries, please contact Ms Lana Bartholomew, Executive Director, Mining and Petroleum Operations, Department of Natural Resources and Mines on telephone

Yours sincerely,

A handwritten signature in black ink, appearing to read "James Purtil".

James Purtil
Director-General

1 William Street Brisbane
PO Box 15216 City East
Queensland 4002 Australia
Telephone +61 7 3199 8287
Website www.dnrm.qld.gov.au
ABN 59 020 847 551

Appendix B—Audit objective and methods

The objective of the audit was to assess the status and effectiveness of the implementation of recommendations resulting from Report 15: 2013–14 *Environmental regulation of the resources and waste industries*.

We addressed the objective through the following sub-objectives and lines of inquiry.

Figure B1
Audit sub-objectives and lines of inquiry

Sub-objectives		Lines of inquiry	
1	The departments have actioned the recommendations.	1.1	The departments have implemented the recommendations in accordance with their response or have taken appropriate alternative actions.
		1.2	The departments have implemented the recommendations in a timely manner.
2	The departments have addressed the data or systems issues, which led to the recommendations.	2.1	The departments have addressed the issues that led to the recommendations.
		2.2	The departments' actions have resulted in improvements in reporting and coordination.

Source: Queensland Audit Office.

Entities subject to this audit

The following entities are subject to the follow-up audit:

- Department of Environment and Heritage Protection
- Department of Natural Resource and Mines.

Audit process

In February 2016, as part of our 2016 strategic audit planning process, we asked each department to self-assess its progress against the following criteria:

- F—Recommendation fully implemented
- P—Recommendation partially implemented
- AA—Alternate action undertaken
- NA—No substantial action taken.

In their responses, the departments provided us with information on actions taken in implementing the recommendations. Our review process included:

- ensuring the responses addressed the intent of the recommendation, and subsequent effectiveness and outcomes of the recommendations
- testing documentation for evidence consistent with the departments' responses
- conducting interviews to clarify responses.

Auditor-General reports to parliament

Reports tabled in 2017–18

Number	Title	Date tabled in Legislative Assembly
1.	Follow-up of Report 15: 2013–14 Environmental regulation of the resources and waste industries	September 2017

Contact the Queensland Audit Office



