

2017

# South Australia Mineral resources regulation report



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**Report Book 2018/00007**

This report is also available on the [Minerals website](#).

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**Cover photos**

Clockwise from top: inspection of rehabilitation at the Jacinth-Ambrosia heavy sands mine (photo 416586); Angaston Quarry (photo 416713); inspection of Gould's Dam (photo 416588); Leigh Creek coal mine (photo 416587).

205042

## FOREWORD

The regulatory oversight of South Australia's mineral resources sector is a significant undertaking with more than 500 mining operations, significant resource projects in the pipeline and more than 600 exploration licences to administer.

Transparency, accountability and benchmarking are key features of South Australia's regulatory system. One of the ways we deliver these three features is through our publicly available annual reports.

The 2017 mineral resources regulation report provides an annual account of the ongoing work administered by the Department for Energy and Mining to ensure that the state's mining laws are upheld.

This document incorporates key compliance information to give the South Australian public an assurance that the mineral resources sector is accountable to regulators, landholders and the community.

It also comprises key indicators on the performance of exploration and mining companies in meeting their compliance obligations to mitigate and manage genuine environmental risks associated with their operations.

My thanks and appreciation are also extended to the specialised regulatory agencies across government who make their own assessments and provide advice that allows the department to carry out its important work.

The Department for Energy and Mining is committed to responsibly unlocking the value and opportunities of our mineral resources in an environmentally and socially sustainable manner.



**Alex Blood**  
Executive Director Mineral Resources

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## DEFINITIONS OF MINING LEASES

An **exploration licence** (EL) is the principal title issued for exploration in South Australia and authorises the licensee, subject to the *Mining Act 1971*, Mining Regulations 2011 and conditions of the licence, to explore for all minerals and/or opal other than [extractive minerals](#).

A **mineral claim** (MC) provides an exclusive right to prospect for minerals within the claim area for 12 months, and to apply for a mining lease over all or a portion of the claim.

A **mining lease** must be obtained before any production of minerals can commence. The mining lease gives the exclusive right to conduct mining operations and sell the minerals specified in conditions attached to the lease. There are two types of mining leases:

- an extractive minerals lease (EML) for most construction materials
- a mineral lease (ML) for other minerals (excluding precious stones – see [opal mining](#)).

A **retention lease** (RL) may be granted for a period of up to 5 years to an applicant for economic reasons, or if sufficient investigation has not yet been carried out to enable the Minister for Energy and Mining to determine the terms and conditions upon which a mining lease should be granted, or the Minister thinks it desirable to defer the granting of a mining lease.

A **miscellaneous purposes licence** (MPL) can be granted as an auxiliary tenement to mining operations for the purpose of carrying on any business that may aid effective conduct of mining operations. Miscellaneous purposes licences are generally used for infrastructure corridors, roads, waste rock dumps, tailings storage facilities or power access.

**Private mine** (PM) – when the Mining Act came into effect in 1971, it provided a process whereby persons divested of the right to minerals could, under certain circumstances (and for a limited time), make an application to retain the rights to the minerals. If an application was successful, the Governor proclaimed the area to be a private mine.

# 2017 Highlights

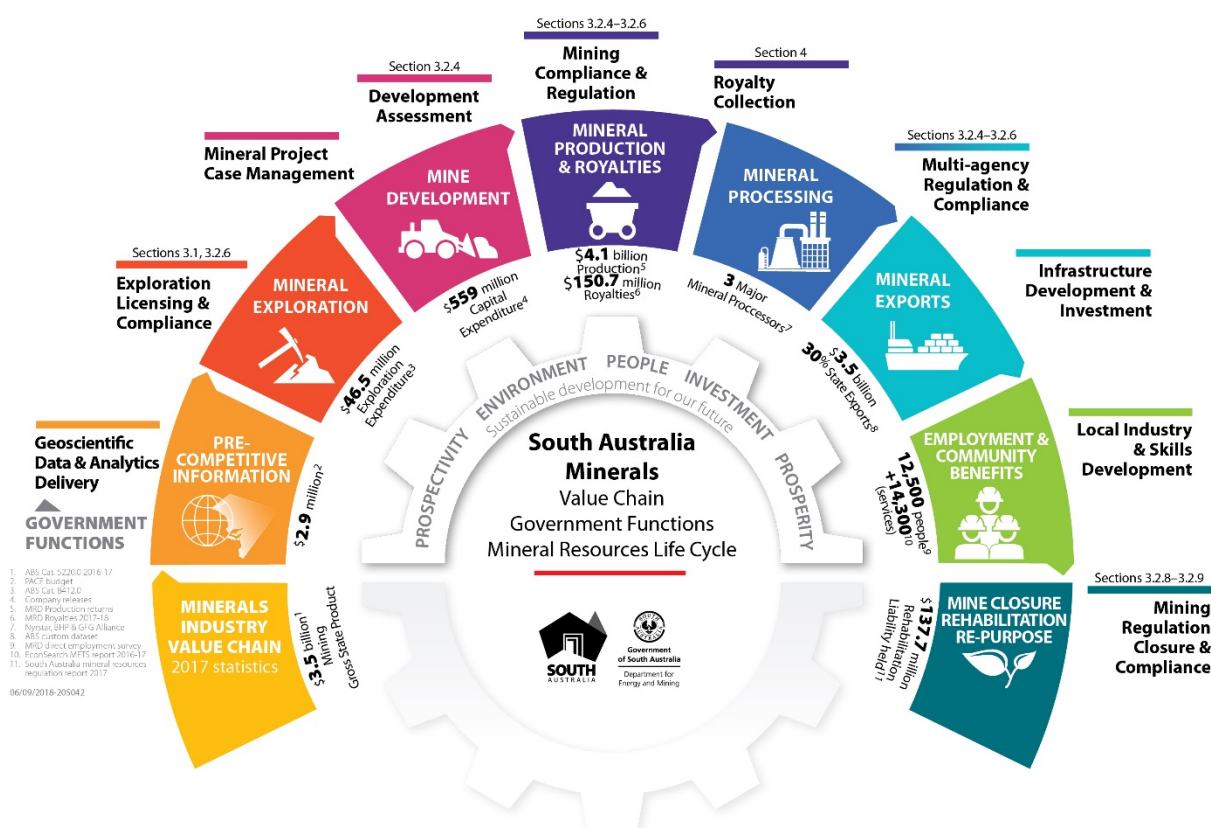


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## SUMMARY

The Department for Energy and Mining, through the Mineral Resources Division (MRD), is the state government agency responsible for the administration, management and regulation of South Australia's mineral resources industry.

To achieve this, MRD is responsible for administering the state's exploration and mining legislation on behalf of the Minister for Energy and Mining. This legislation governs the access to land for, and regulation of, exploration and production activities for mineral and quarrying resources in South Australia, as well as environmental management of the industry. The figure below provides an overview of the mineral resources life cycle and linkages to the functions of MRD.



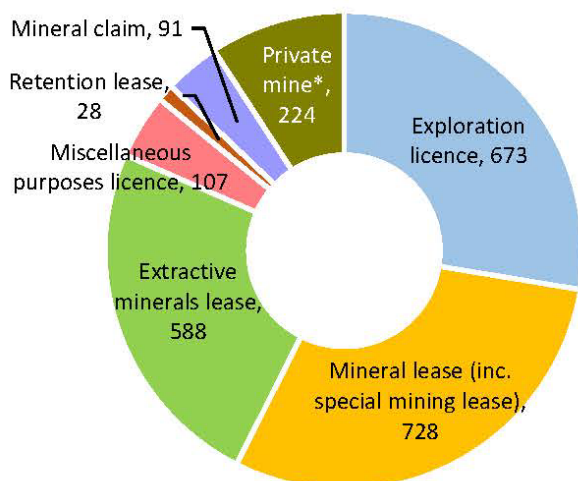
The mineral resources life cycle and related MRD functions (refer to section numbers linking to specific sections of this report).

This annual mineral resources regulation report for 2017 summarises the regulatory performance of the state's mineral exploration, mining and quarrying industries, providing relevant indicators of how companies are meeting their compliance obligations to mitigate and manage genuine risks, and the regulatory, surveillance and compliance activities undertaken by MRD.

The report aligns with the regulatory principles set out in MRD's [Regulating mineral exploration and mining in South Australia: setting the framework for best practice regulation](#) (PDF, 241 kB), and is described in Section 2 of this report.

## Mineral tenements statistics

In 2017, 118 exploration release areas (ERAs) were open for application, approximately 19% less than in 2016. Forty-one ERA applications were received (24% more than in 2016). At 31 December 2017, **2,215** mineral tenements and **224** private mines were held (down from 2,262 and 232 respectively at the end of 2016). See Section 3 for details.

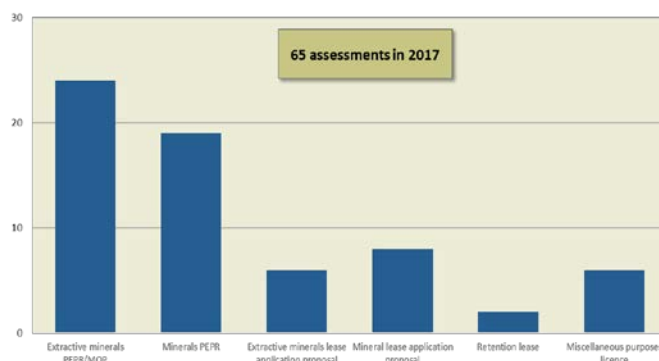


\* Total number of private mines decreasing over time as last private mine tenement was granted in 1975.

*Mineral tenements and private mines, 31 December 2017.*

## Exploration and mining assessments

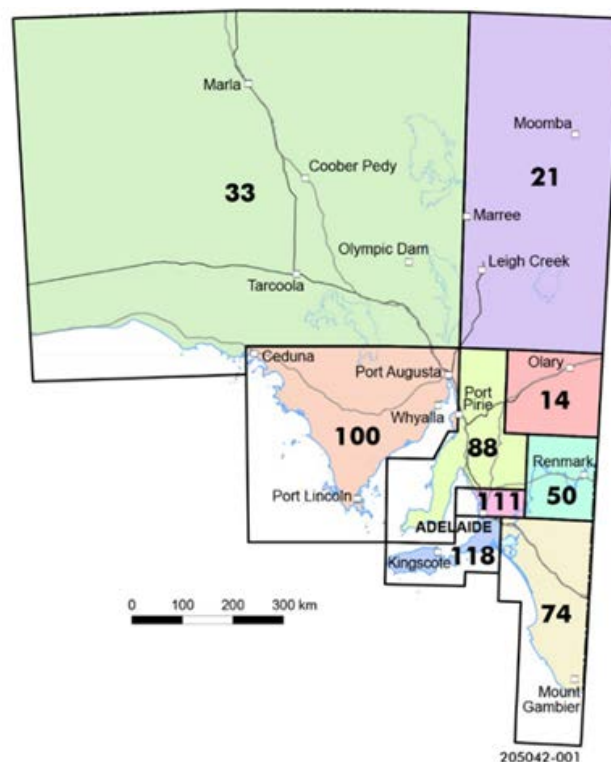
During 2017, 636 exploration-related assessments were completed. The largest volume was attributed to exploration licence assessments (564), followed by exploration work program assessments (72). In 2017, **65** mining assessments were completed, the largest volumes being for operational approvals (i.e. extractive minerals PEPRs, 24; and mineral PEPRs 19). Mineral lease mining proposals (8) and extractive minerals lease mining proposals (6) were a smaller contribution, but in most cases involved more complexity, as the main initial tenement assessment step. Six miscellaneous purposes licence management plans and two retention lease application assessments were also completed. See Sections 3.2.3 and 3.2.4 for details.



*Mining related assessments completed in 2017.*

## Field inspections

A total of **609** exploration and mining inspections were completed in 2017. Of these, 65% were associated with extractive minerals operations (i.e. extractive minerals leases and private mines), which range from metropolitan hard rock quarries to low-risk, small sand mining operations. See Section 3.2.5.2 for details.

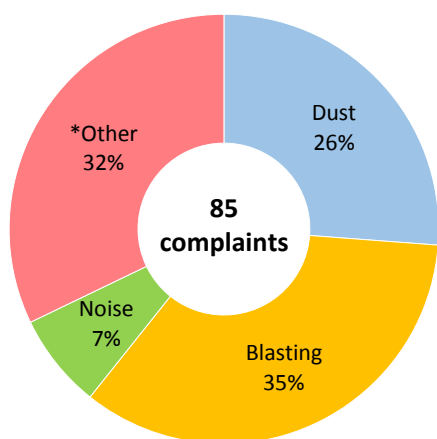


*Mining and exploration inspections conducted by MRD in 2017 shown by region.*



## Complaints and incidents

Of the complaints received by MRD in 2017, blasting (35%), dust (26%) and noise (7%) were the most common complaint types for mining. The most common incident types for mining operations in 2017 were spills (55%), dust (23%) and blasting (9%). See Section 3.2.5.3 for details.

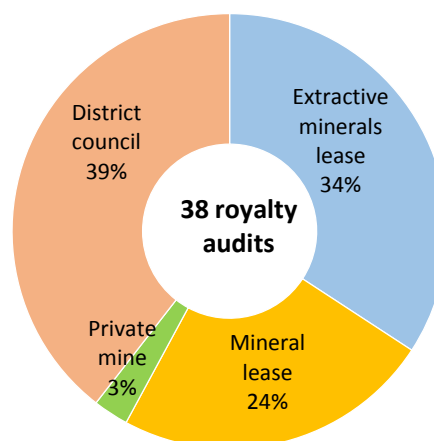


\* Other includes water quality and fauna/flora

Categories of exploration and mining complaints in 2017.

## Resource royalties

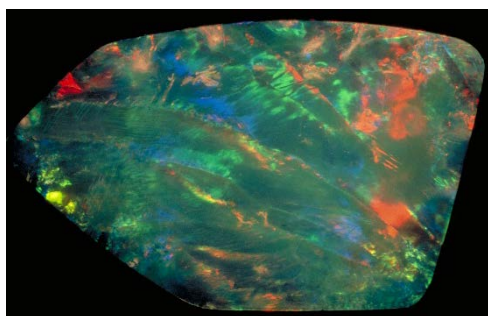
In 2017 mineral production in South Australia was reported by 305 mineral producers, contributing **\$148.2** million of mining royalty revenue. In 2017 the royalty audit compliance program audited 98% of mineral royalty revenue and recovered \$3.5 million in mining royalty revenue. See Section 4 for details.



Royalty audits in 2017.

## Opal mining

At 31 December 2017 there were 456 opal mining tenements within the Coober Pedy, Andamooka, Stuart Creek and Mintabie precious stones fields. This reflects a 16% increase in opal mining tenements from 2016. Revenue from opal mining fees totalled \$145,701 in 2017, an increase of 13.5% from 2016. A total of 505 precious stones prospecting permits were issued in 2017, a 12% increase from 2016. During 2017, **1,129** inspections were carried out across the four opal fields. See Section 3.2.10 for details.



Opal doublet from Andamooka. (Photo 038007)

## Legislation, regulation policy and programs

In 2017, MRD conducted the [Leading Practice Mining Acts Review](#), the most comprehensive review of the Mining Act, Opal Mining Act and Mines and Works Inspection Act ever undertaken. MRD engaged with more than 1,700 stakeholders, including meeting with over 70 organisations and 500 individuals in over 40 regional, community and 'open house' meetings. This resulted in 82 recommendations for changes to the law forwarded to the Minister.

Other major publication releases in 2017 include the inaugural South Australian Multiple Land Use Framework, the first of its kind to be released by an Australian state or territory, and a review of air quality impacts and regulation in the South Australian mining and extractives industry. Section 5 provides further details on these and other legislation, regulatory policy initiatives and programs.

## 1 INTRODUCTION

The Department for Energy and Mining, through the Mineral Resources Division (MRD), is the state government's economic development agency responsible for the administration, management and regulation of South Australia's mineral resources industry.

The Government of South Australia recognises the importance of our mineral resources industry in growing the state's future economic prosperity through increased business investment, regional development and opportunities for employment and skilling, balanced against key environmental and social objectives.

Best practice management of South Australia's mineral assets, including regulation of exploration and mining activities, attracts investment that delivers outcomes of sustainable benefit and prosperity, and protection of the environment and third party intents.

To achieve this, MRD is responsible for the administration of the following legislation on behalf of the Minister for Energy and Mining:

- [\*Mining Act 1971\*](#)
- [\*Mines and Works Inspection Act 1920\*](#)
- [\*Offshore Minerals Act 2000\*](#)
- [\*Roxby Downs \(Indenture Ratification\) Act 1982\*](#)
- [\*Broken Hill Proprietary Company's Indenture Act 1937\*](#)
- [\*Opal Mining Act 1995\*](#)
- [\*Whyalla Steel Works Act 1958\*](#).

The key objectives of our mining legislation, which drives the regulatory approach of MRD, includes:

- providing security of tenure
- protecting the environment and public from risks associated with mineral exploration and mining operations
- ensuring the Crown receives an appropriate return from mineral producers by way of royalty.

The *South Australia mineral resources regulation report 2017* summarises the regulatory performance of the state's mineral exploration, mining and quarrying industries, providing relevant indicators of how companies are meeting their compliance obligations to mitigate and manage genuine risks. The report also continues the government's commitment to provide transparency and accountability of the state's regulatory oversight of the mineral resources industry.

Key information provided in this report for 2017 includes:

- mineral tenement statistics
- summary assessments of industry applications, including lease, licence and program approvals
- compliance-related statistics, including number of inspections, complaints and incidents
- summary of enforcement actions issued by MRD
- MRD's community engagement activities
- overview and status of the Extractives Areas Rehabilitation Fund
- summary of the administration and compliance activities in South Australia's opal fields
- summary of resource royalties compliance
- summary of regulatory policy initiatives by MRD.

South Australia's major mines and resources are shown in Figure 1. As of 31 December 2017 there were 383 operating mines and quarries (defined for the purposes of this report as those mines/quarries for which a royalty return has been submitted to MRD in the past 3 years).

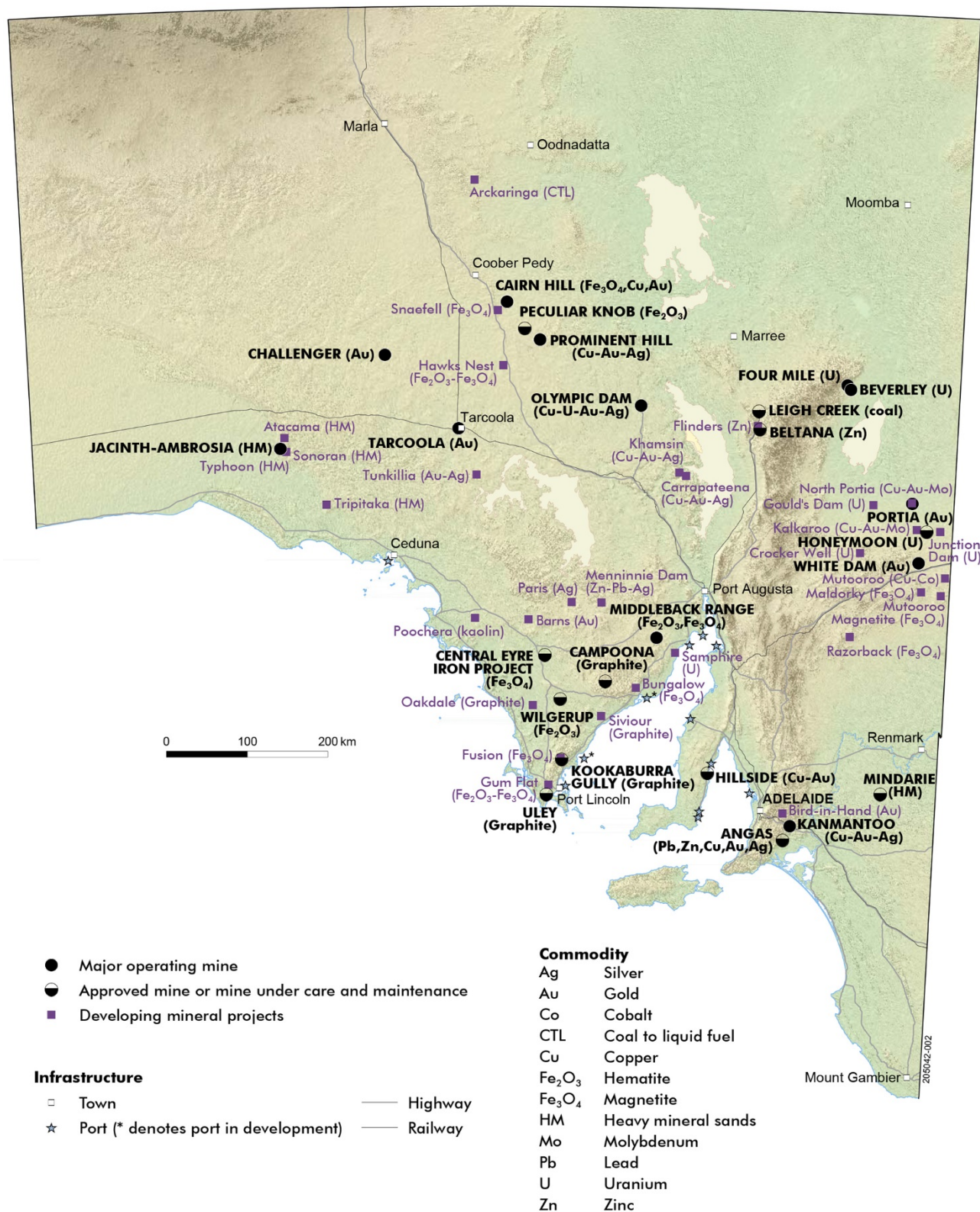


Figure 1 South Australia's major mines and resource projects, December 2017.

## 2 REGULATORY FRAMEWORK

The principles behind South Australia's regulatory framework are set out in MRD's [Regulating mineral exploration and mining in South Australia: setting the framework for best practice regulation](#). These principles recognise the importance for predictable regulatory processes and best practice to provide confidence for the mineral resources industry and provide community confidence in effective environmental, land and social regulation.

MRD delivers assessment, regulatory and compliance services that aim to provide assurance to the government, industry and community stakeholders that mineral exploration, mining activities and statutory requirements are being adhered to.

Regulatory services are delivered by MRD staff located in Adelaide, Port Augusta, Jamestown and Coober Pedy. Management of the responsibilities of closed mines is carried out by staff located in Adelaide and at the Brunkunga mine site in the Adelaide Hills.

The [Mining Act compliance and enforcement in South Australia](#) policy details the state's regulatory stewardship and describes the compliance approach and principles when making regulatory and enforcement decisions. In 2017 MRD released a [video](#) which provides an overview of South Australia's mineral resources regulatory framework, outlining the compliance systems and tools that hold mineral exploration and mining companies accountable in meeting their regulatory obligations.



[Energy and Mining SA YouTube channel](#)

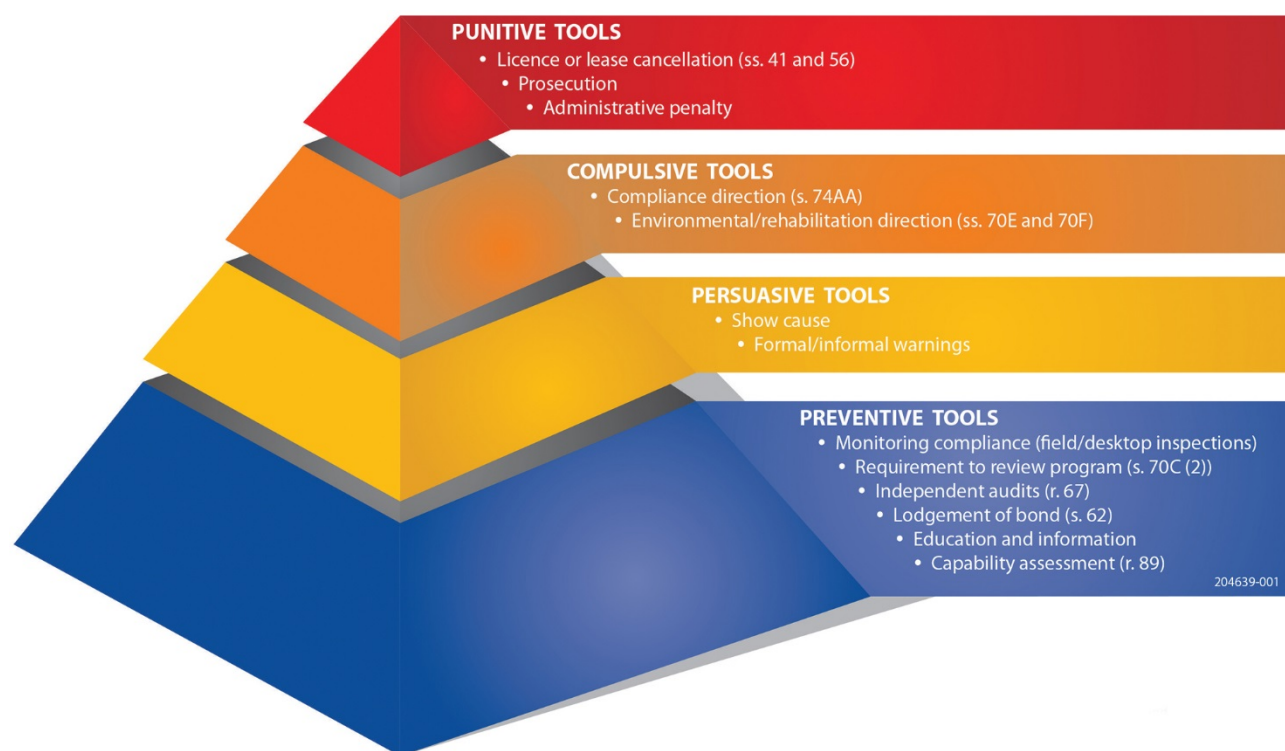
MRD works closely with the Environment Protection Authority South Australia, SafeWork SA and the Department for Environment and Water to co-regulate the mining sector in South Australia.

### 2.1 Compliance model

Figure 2 summarises the tools available to MRD under the Mining Act (and other relevant legislation). The [Mining Act compliance and enforcement in South Australia](#) policy provides a more detailed overview of this model.

In general, MRD applies a risk-based approach to identify risks (such as environmental, financial, technical and operational) relating to the mining operation. The MRD compliance model uses a performance-based regulatory approach which focuses on what should be achieved (outcomes), not how it should be achieved. Mineral exploration and mining companies must demonstrate risks have been mitigated and appropriate environmental outcomes are being met during their activities and operations.





**Figure 2** MRD's mineral compliance and enforcement model for exploration and mining activities under the Mining Act. (Note: The Mining Act contemplates the use of concurrent tools).

## 3 REGULATORY ACTIVITIES AND REPORTING

### 3.1 Mineral tenements

MRD administers mineral tenements in South Australia. This includes:

- maintaining the Mining Register
- registration of mineral claims
- grant of exploration licences and miscellaneous purposes licences
- grant of mining and retention leases
- registration of instruments, including:
  - transfers
  - joint venture agreements
  - caveats
  - surrenders etc.
- receipting fees and Crown rent
- monitoring court matters
- management of private mines and native title mining agreement registrations.

#### 3.1.1 Mineral tenement statistics

In 2017, 318 applications for mineral tenements were received, including 251 exploration licences (a 38% increase from 2016) and 67 for other mining tenements (Table 1).

**Table 1** Receipt statistics for mineral tenement applications in 2017

Application	Received	Granted/ registered	Total area granted	Withdrawn	Refused / Invalid	Outstanding*
<b>Exploration</b>						
Exploration licence	251	170	54,646 km <sup>2</sup>	26	0	231
<b>Mining</b>						
Mineral claim	51	31	2,783.4 ha	7	1	24
Miscellaneous purposes licence	4	4	1,701.9 ha	0	0	9
Mineral lease	4	5	9,518.5 ha	1	0	19
Extractive minerals lease	7	2	89.64 ha	2	0	15
Retention lease	1	1	99.41 ha	0	0	5
<i>Total mining</i>	67	43	14,192.85 ha	10	1	72
<b>Total</b>	<b>318</b>	<b>213</b>	<b>—</b>	<b>36</b>	<b>1</b>	<b>303</b>

\* Outstanding mineral tenement applications are those in progress as at 31 December 2017.

In 2017, 118 exploration release areas (ERAs) were open for application, approximately 19% less than in 2016. A total of 41 ERA applications were received (24% more than in 2016), with 7 ERAs receiving competing applications (Table 2).

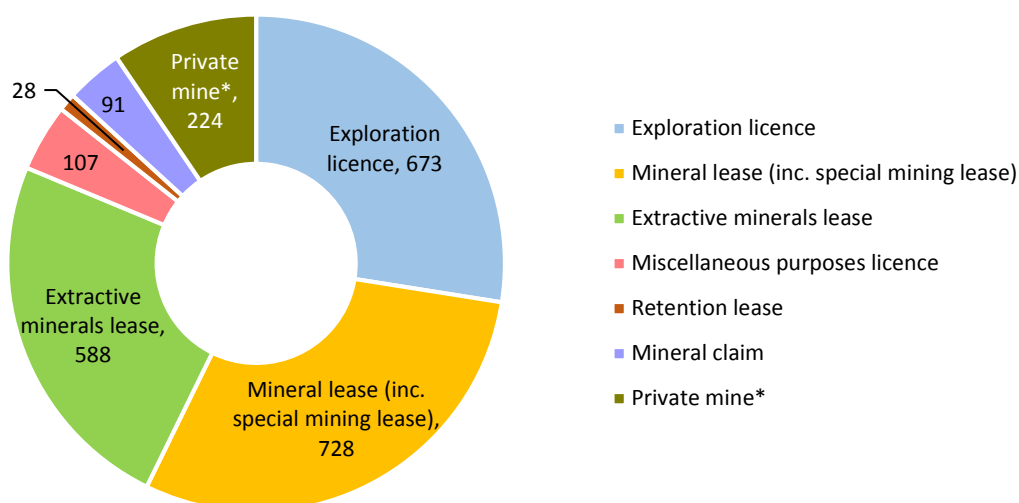
**Table 2** Exploration release areas processed in 2016 and 2017

Exploration release area	2016*	2017
Total open for application	145	<b>118<sup>†</sup></b>
Area open for application (in km <sup>2</sup> )	56,404	<b>42,381</b>
Applications received	33	<b>41</b>
Competing applications	5	<b>7</b>
Total awarded	28	<b>29</b>
Total converted to open ground	115	<b>87</b>

\* Updated data for 2016 in line with current reporting methodology.

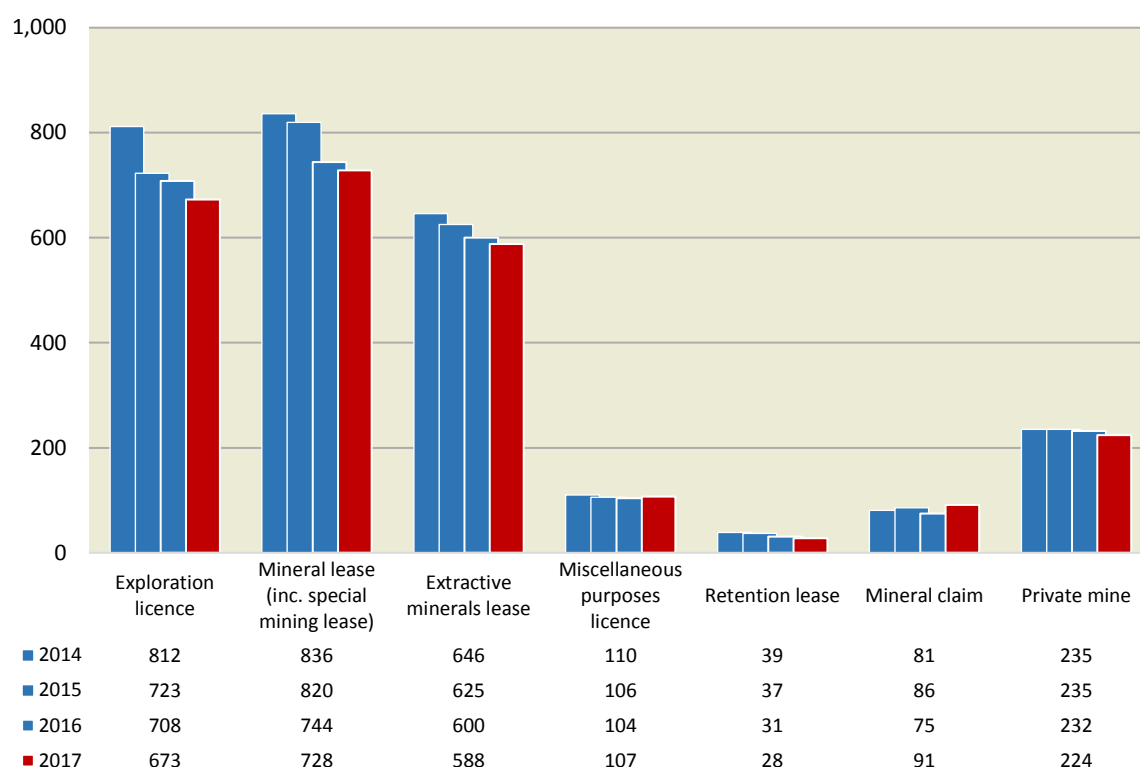
† Equals total ERAs awarded and total converted to open ground minus 2 applications which were carried over to 2018.

A total of 2,215 mineral tenements and 224 private mines were held in South Australia as at 31 December 2017 (Figure 3). The total number of tenements held by type over the past four years is shown in Figure 4.



\* Total number of private mines decreasing over time as last private mine tenement was granted in 1975.

**Figure 3** Mineral tenements and private mines held at 31 December 2017.



Note: These figures exclude opal mining tenements which are summarised in Section 3.2.10.

**Figure 4** Mineral tenements and private mines, 2014 to 2017.

### 3.1.2 Instruments registered in the Mining Register

MRD processed and endorsed 403 applications for mineral tenement transactions in 2017 (Table 3).

**Table 3** Tenement transactions processed and endorsed in 2017\*

APPLICATION TYPE	EXPLORATION	MINING	Mineral leases	Extractive mineral leases	Other lease types	TOTAL
Transfer instruments (full and partial)	16	15	4*	12	0	31
Renewal	149	84	41	32	11	233
Renewal over reduced area	56	0	0	0	0	56
Surrender	37	18	5	7	6	55
Partial surrender	25	3	2	0	1	28
Private mine revocations	—	6	—	—	—	6†
<b>Total</b>	<b>283</b>	<b>126</b>	<b>52</b>	<b>51</b>	<b>18</b>	<b>403</b>

\* This number exclude expiries, which were counted in previous years, hence the lower count from 2016.

† Private mine revocations are not included in final tally.

In 2017, 691 instruments<sup>1</sup> were registered in the Mining Register against mineral tenements in South Australia (Appendix 1).

<sup>1</sup> An instrument is a record in the Mining Register of some type of transaction which has impacted on the status of a tenement since it was granted. Examples would include renewals, transfers, mortgages, some agreements, caveats, court actions and outcomes, and bonds. Instruments are used to demonstrate applicable events that impact a tenement from its grant to finalisation.

### 3.1.3 Searches of the Mining Register

In 2016 a new [Mining Register online search tool](#) was implemented in the publicly accessible online South Australian Resources Information Gateway (SARIG). The tool has been successful and the majority of searches of the Mining Register are now undertaken using this tool. There were 215 Mining Register searches looking for tenement information in 2017, raising \$16,798 in revenue.

### 3.1.4 Court actions

In 2017, 14 court actions were instigated: 3 with the Environment, Resources and Development Court and 11 with the Warden's Court. All court actions in 2017 are listed in Appendix 2.

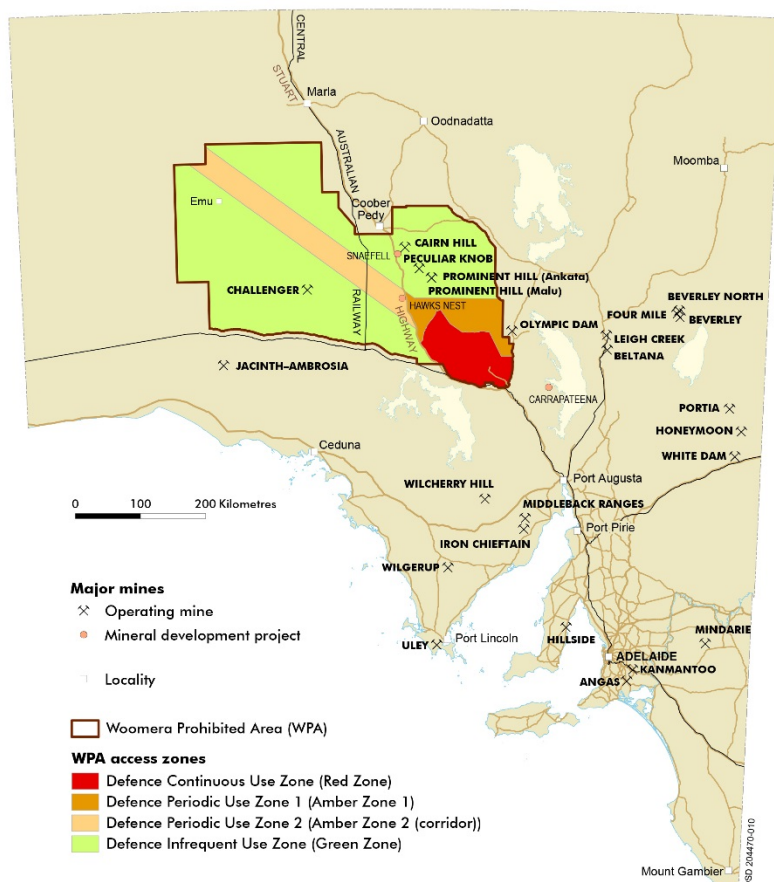
### 3.1.5 Registration of authorisation to conduct operations on native title land

In 2017, 11 authorisations to conduct operations on native title land were registered on the [Mining Native Title Register](#). Authorisations are negotiated and registered in accordance with Part 9B of the Mining Act. They include native title mining agreements, Indigenous land use agreements and Environment, Resources and Development Court determinations (Appendix 3).

### 3.1.6 Special declared areas

#### 3.1.6.1 WOOMERA PROHIBITED AREA

Since 2012, a formal 'time-share' arrangement has been in place in the [Woomera Protected Area \(WPA\)](#), managed by the Department of Defence. Zones have been determined (Red, Amber 1 and 2, and Green zones) within the WPA. On-ground access to these areas by new non-Defence explorers and miners is managed through a series of specified exclusion periods during which non-Defence explorers and/or miners are required to evacuate completely from the WPA. The Red Zone is for continuous Defence use only. These exclusion periods do not apply to pastoralists, previously established mines and traditional owners.



**Figure 5** State map showing the Woomera Prohibited Area.



A full Australian Government review of the existing WPA coexistence scheme will be undertaken in 2018.

Mineral tenements held within the WPA at 31 December 2017 are shown in Table 4.

**Table 4** Mineral tenements held within the WPA at 31 December 2017

Tenement type	Number held
Exploration licence	140
Mineral lease	7
Extractive minerals lease	59
Miscellaneous purposes licence	34
Mineral claim	0
Retention lease	1

### 3.1.7 Public notices

In accordance with sections 25(5), 35A(1), 41BA(1) and 53(2) of the Mining Act, public notices are published regarding mineral tenements in South Australia. Public notices are placed in the [South Australian Government Gazette](#), the *Advertiser* and regional print media which are applicable to the application area. Some applications are also required to be published on the Mineral's website (see [Exploration](#) and [Mining](#) pages). Notices published in 2017 are listed in Table 5.

**Table 5** Public notices published in 2017

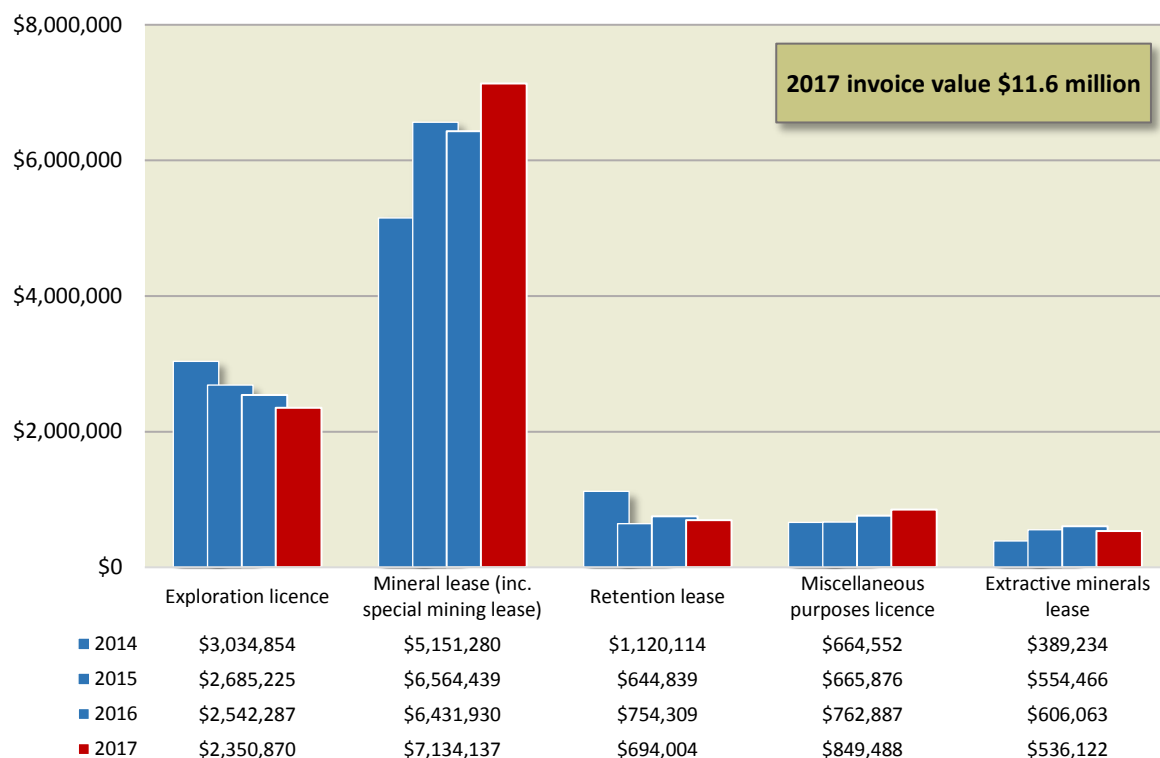
Application type	Number of applications advertised	Number of public notices*
Exploration licence	187	560
Mining lease	6	19
Extractive minerals lease	6	22
Retention lease	2	6
Miscellaneous purposes licence	7	29

\* Multiple notices are made per application.

### 3.1.8 Annual rent and fee statistics

In 2017, 966 invoices with a total value of approximately \$11.6 million were raised for annual rent and administration regulation fees across exploration and mining tenements in South Australia (Figure 6).

Under the Mining Act, where land is held in freehold title, the Minister must distribute to the owner(s) of the land 95% of crown rent paid for a mining lease, retention lease or miscellaneous purposes licence granted over the freehold land. In 2017 a total amount of \$1,300,969 was dispersed to freehold owners of the land. Other regulatory fees collected are allocated to state government general revenue.



**Figure 6** Invoices raised across mineral tenements, 2014 to 2017.

## 3.2 Mineral resources regulation

### 3.2.1 Overview

MRD takes the lead role in managing and coordinating the state government assessment processes for all new and ongoing minerals operations using a risk and outcomes based approach. MRD also requires stakeholder engagement to be undertaken by industry when preparing applications for mining tenements and programs for environment protection and rehabilitation (PEPRs).

MRD is responsible for:

- assessment of applications for new tenements, tenement renewals and relinquishments
- assessment of mining operation programs, program variations and approval of statutory work programs covering the full mine life cycle (exploration, mining and mine completion)
- assessment of regulatory, technical data and compliance reports
- assessment of rehabilitation bonds, conduct of compliance assurance activities and regulation of the opal mining industry
- delivery of risk management of the potential liabilities of former and current mines
- administration of the [Extractive Areas Rehabilitation Fund](#)
- engaging with other agencies such as the Environment Protection Authority and the Department for Environment and Water, to ensure their needs are met.

During 2017, MRD regulated activities on 673 exploration licences and 533 mining operations, excluding opal mining (Figure 7). Mining operations vary in size and complexity from small quarries and opal mines to technically complex and capital-intensive metallic and uranium operations.

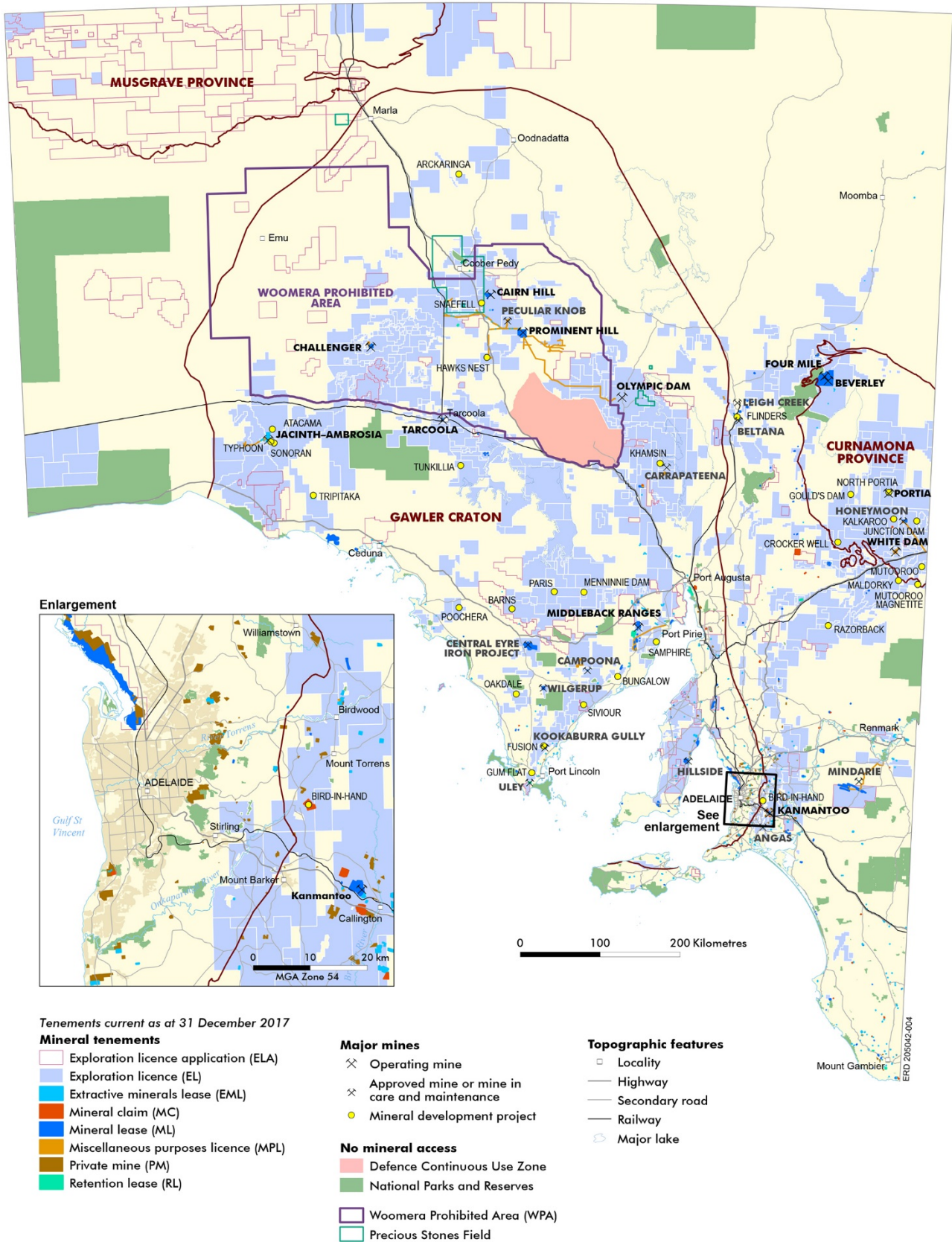


Figure 7 Mineral tenements in South Australia, 31 December 2017.

### 3.2.2 *New exploration and mining*

A core function of MRD is the assessment of new exploration and mining tenement applications which provide a right to explore or mine respectively, and exploration and mining PEPRs which provide a framework for the efficient and effective operations management of exploration and mining activities on these tenements.

#### 3.2.2.1 ASSESSMENT TIMEFRAMES AND TARGETS

MRD has targets for exploration and mining assessment times which align with the national 'Mining approvals scorecard'<sup>2</sup> for the reporting of assessment timeframes across all Australian jurisdictions.

Target timeframes for exploration assessments by government in South Australia are:

- exploration licence applications – 3 months (90 calendar days; including comment/approval from other agencies such as the Environment Protection Authority and Department for Environment and Water)
- Exploration Release Area Panel<sup>3</sup> assessment – 2 months (60 days)
- exploration PEPRs (EPEPRs) – various targets, refer to Table 7.

Target timeframes for mining assessments by government in South Australia are:

- mining lease application – 6 months (183 calendar days; time with MRD only)
- retention lease application – 6 months (183 calendar days; time with MRD only)
- miscellaneous purposes licence application – 6 months (183 calendar days; time with MRD only)
- mining PEPR – 3 months (92 calendar days; time with MRD only).

These targets do not include the time taken for proponents to respond to queries arising from government assessment and are dependent on the complexity of the project, the quality of the proponent documents submitted to MRD, and any additional location-specific legislative/land access requirements to be met (e.g. in a park, reserve or Aboriginal land).

Appendixes 4 and 5 provide additional information about the definitions and calculation of assessment times.

### 3.2.3 *Exploration assessments*

During 2017, 636 company exploration-related assessments were completed (Figure 8; Table 6; Appendix 6). The largest volume was attributed to exploration licence assessments (564), followed by exploration work program assessments (72).

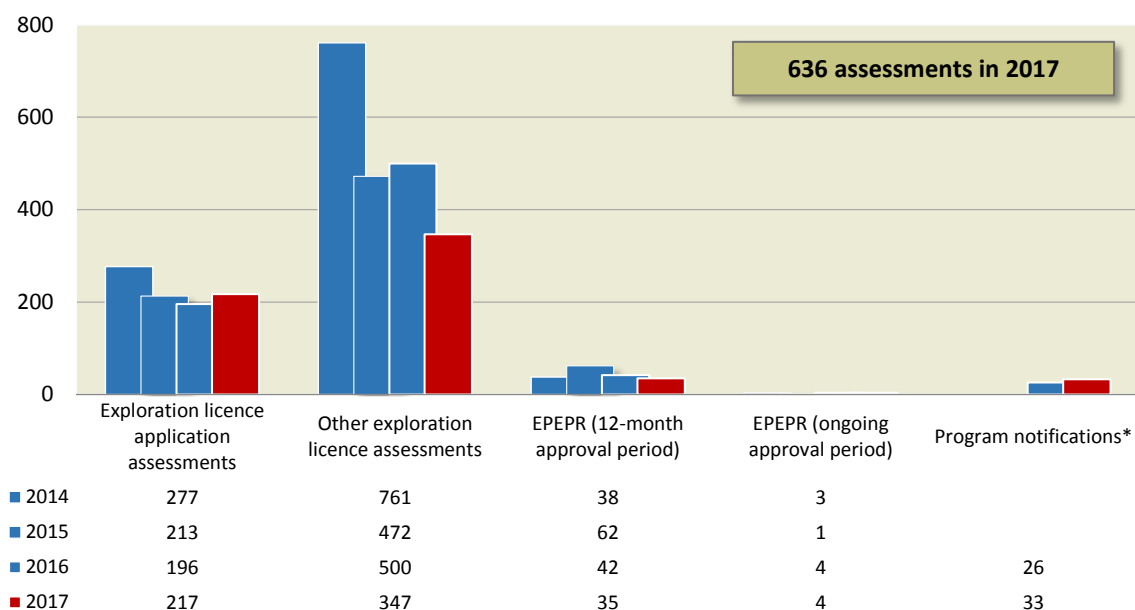
Exploration assessment times and targets are summarised in Table 6, Table 7, Figure 9 and Figure 10. Appendix 6 lists all EPEPR assessments completed by MRD.

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<sup>2</sup> The national 'Mining approvals scorecard' is being developed by the COAG Energy Council Land Access for Resources Working Group.

<sup>3</sup> The Exploration Release Area Panel is an internal panel that assesses competing exploration licences received over the same area.





\*Started recording in 2016. Program notifications are required to be submitted prior to the commencement of each exploration program conducted in accordance with a government approved EPEPR.

Note: See Appendix 4 for definition of a completed assessment.

**Figure 8** Exploration licence and EPEPR assessments conducted, 2014 to 2017.

**Table 6** Exploration licence assessment times in 2017

Assessment type	Number completed	Target timeframe (days)	Average timeframe (days)	Percentage that achieved timeframe (%)	Number within target days
Exploration licence application	216	90 (3 months)	50	82	177
Exploration Release Area Panel	4	60 (2 months)	30	100	4
<b>Total</b>	<b>220</b>				

Note: Exploration licence application assessment time includes MRD technical assessment plus external agency comment/approval.

The Exploration Release Area Panel is used only when competing applications for an exploration release area are received. The technical assessment is conducted by MRD staff. Time is from end of application week to decision on successful applicant.

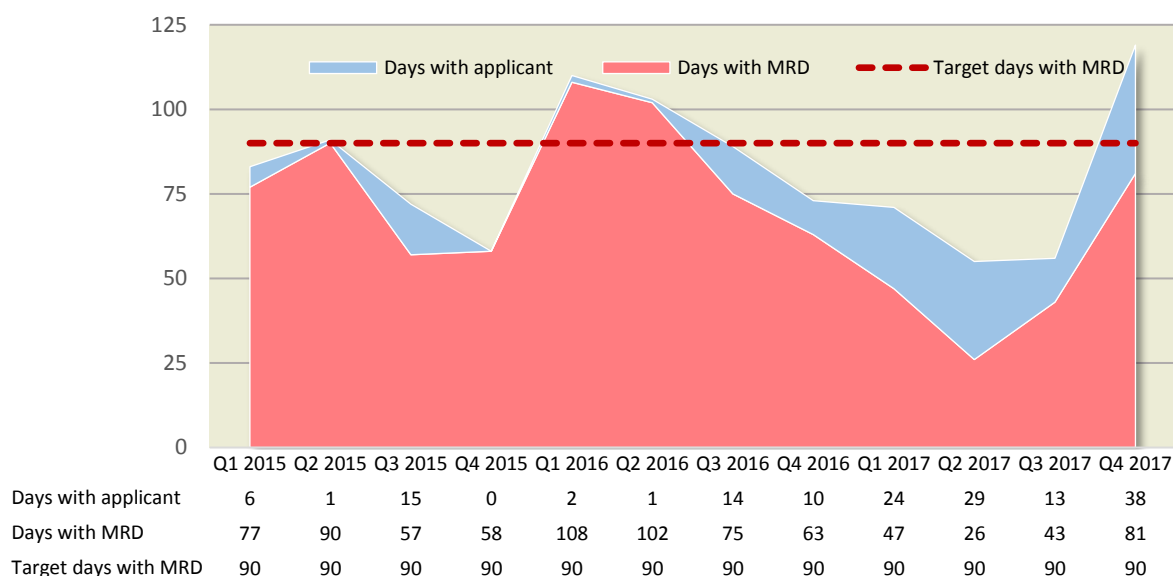
**Table 7** Exploration PEPR assessment times in 2017

Prescribed EPEPR by Land Type	Number completed*	Target timeframe (days)	Average timeframe (days)	Percentage that achieved timeframe (%)
Freehold/pastoral/perpetual lease area	25	25	13	96
Prescribed wells and/or water resource area	8	35	26	88
Jointly proclaimed national park or conservation park	4	85	78	75
Regional reserve	1	50	46	100
Within 5 km of Great Artesian Basin springs	1	40	8	100
Flinders Ranges planning areas Class A and B	2	40	26	100
<b>Total</b>	<b>41</b>			

\* Some applications may contain multiple area types.

Note: Timeframes are in business days. Assessment timeframes are calculated based on the area with the longest target timeframe (second column Table 7).

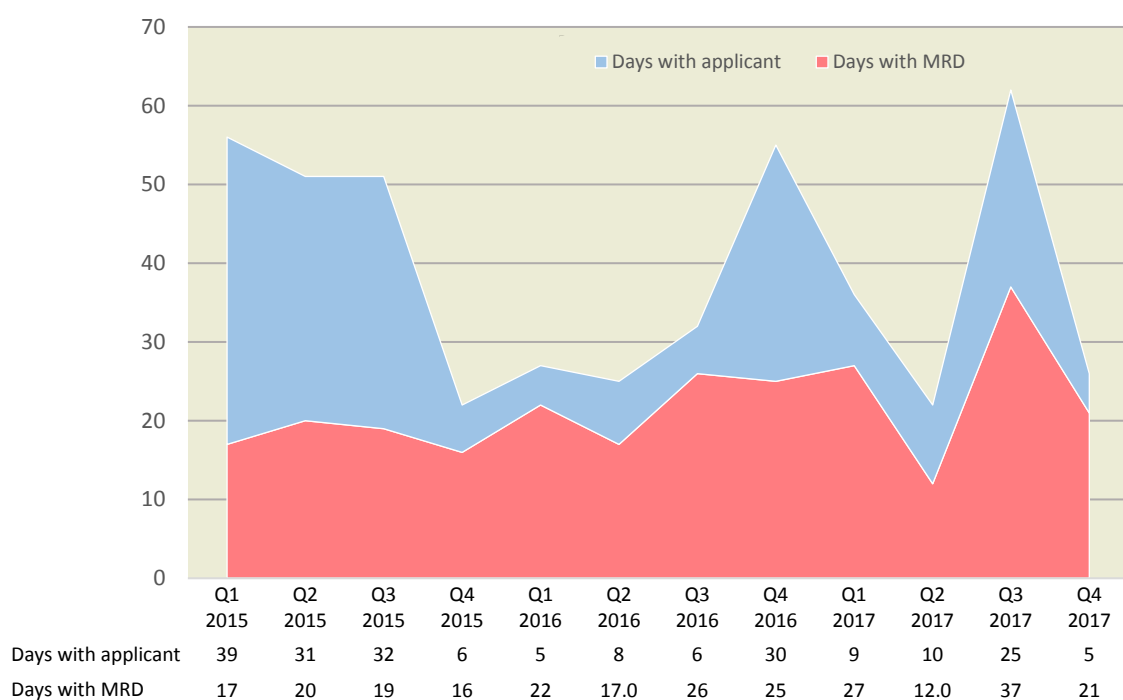
See Appendix 4 for definitions of how assessment times are calculated and Appendix 6 for the complete dataset. In 2017 there were no assessments within protected areas under the *River Murray Act 2003*, Adelaide Dolphin Sanctuary, fossil reserves, conservation reserves, vegetation heritage agreements, state heritage places, marine parks or areas including geological monuments.



Note: Timeframes exclude ELs in Anangu Pitjantjatjara Yankunytjatjara Lands.

**Figure 9** Average assessment times for exploration licence applications shown by quarter, 2015 to 2017.

‘Days with applicant’ and ‘MRD assessment times’ for Q4 2017 increased as a result of additional time spent dealing with noncompliance issues, which ultimately resulted in the non-renewal of three exploration licences (refer to Table 12 in Section 3.2.6.1).



**Figure 10** Average EPEPR assessment times shown by quarter, 2015 to 2017.

Average quarterly exploration assessment timeframes can fluctuate depending on the number of applications received and the environment in which they are located. For example, PEPR applications located in jointly proclaimed parks generally require a longer assessment timeframe due to the legislative requirement for both the Minister for Energy and Mining and the Minister for Environment and Water to

approve. Applications located in other areas, such as regional reserves and prescribed wells areas, can take longer to assess due to the requirement for MRD to consult with the Department for Environment and Water. Further information on expected assessment timeframes can be found in Table 7.

The fluctuations observed during 2017 are primarily due to the assessment and approval of PEPRs located in jointly proclaimed parks, including Lake Gairdner National Park (quarters 1 and 3) and Lake Torrens National Park (quarter 4). Higher than expected assessment times in quarter 1 can also be attributed to an application impacted by a matter heard before the Environment, Resources and Development Court relating to exempt land.



*Inspection of rehabilitation at Goulds Dam exploration site. (Photo 416718)*

### 3.2.4 Mining assessments

During 2017, 65 mining assessments were completed (Figure 11; Table 8), the largest volumes being for operational approvals (i.e. extractive minerals PEPRs, 24; and mineral PEPRs, 19). Mineral lease mining proposals (8) and extractive minerals lease mining proposals (6) were a smaller contribution, but in most cases involved more complexity, as the main initial tenement assessment step. Six miscellaneous purposes licence management plans and two retention lease application assessments were also completed.

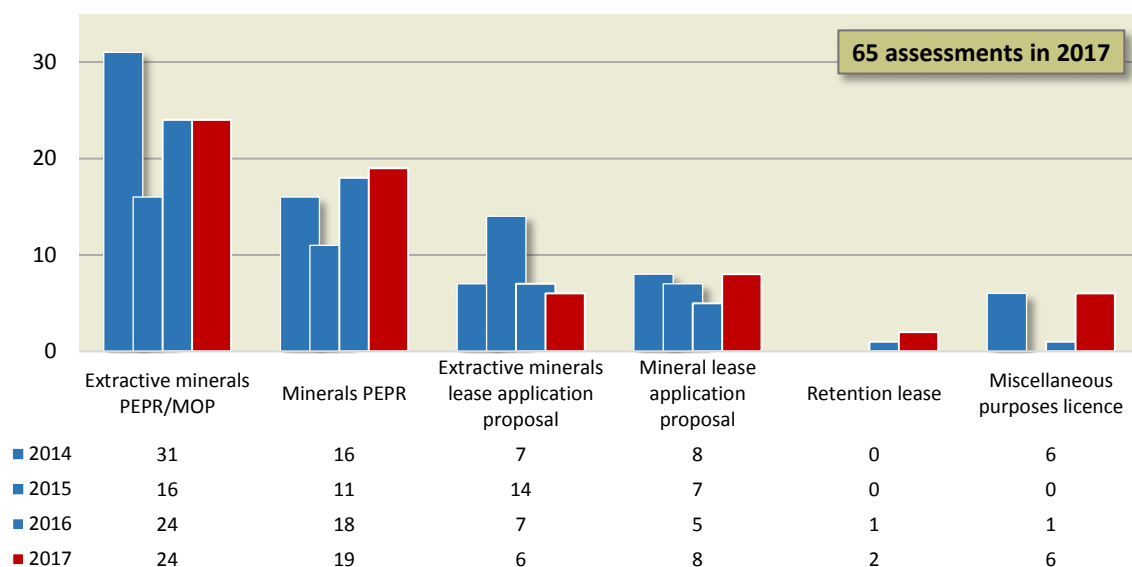
Mining assessment times and targets are summarised in Table 8, Figure 12 and Figure 13. Appendix 7 provides a summary of all mining assessments completed during 2017.

**Table 8** Mining assessment times in 2017

Assessment type	Number completed	Target timeframe (days)	Average timeframe (days)	Percentage that achieved target timeframe (%)
Extractive minerals lease mining proposal	6	6 months (183 days)	169	80%
Mineral lease mining proposal	8	6 months (183 days)	171	60%
Retention lease application	2	6 months (183 days)	200	0%
Miscellaneous purposes licence	6	6 months (183 days)	165	67%
Extractive minerals PEPR/MOP*	24	3 months (92 days)	240	31%
Minerals PEPR	19	3 months (92 days)	144	46%
<b>Total</b>	<b>65</b>	n/a	182	48%

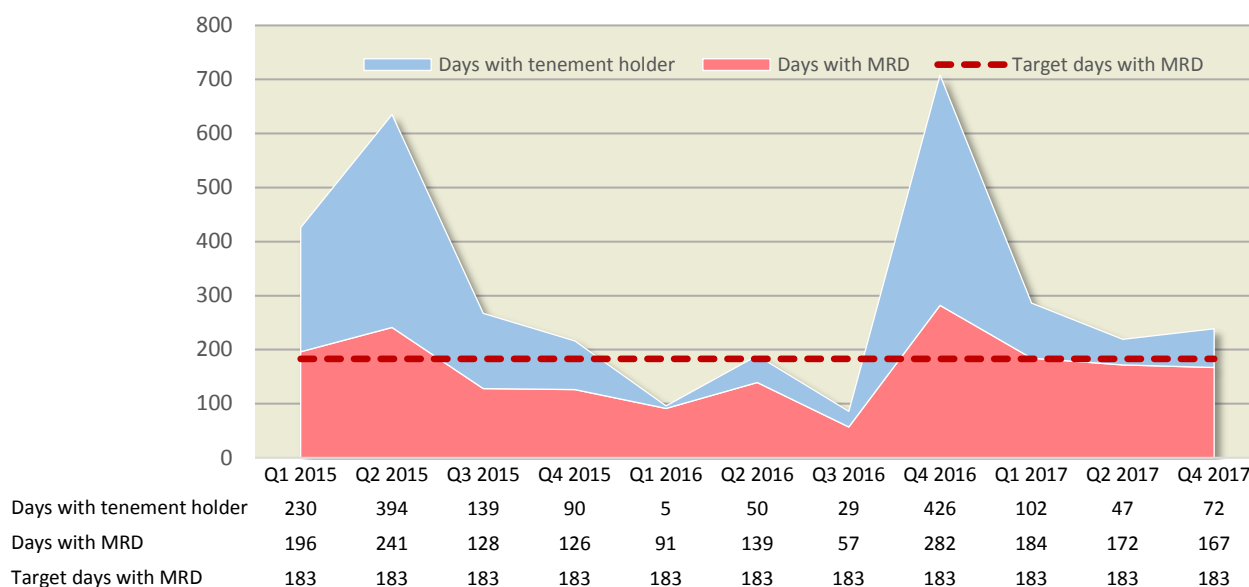
\*MOP = mine operations plan (applies to private mines).

Note: See Appendixes 4 and 5 for definitions of how assessment times/percentages are calculated and Appendix 7 for the complete dataset.



\* MOP mine operations plan (which applies to private mines).  
 Note: See Appendix 4 for definition of a completed assessment.

**Figure 11** Mining assessments completed, 2014 to 2017.

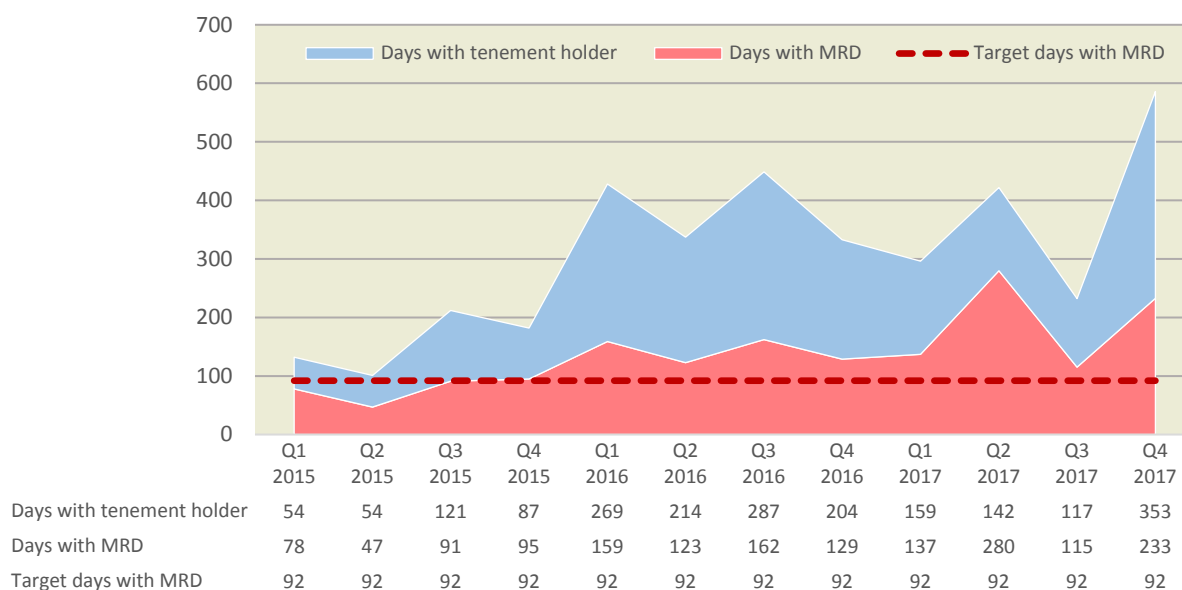


Note: Q3 2017 is omitted as no mining proposals, retention leases or miscellaneous purposes licence applications were approved during this quarter.

**Figure 12** Average assessment times for mining tenement applications shown by quarter, 2015 to 2017.

The average assessment time for mining tenement applications in 2017 was within expectation. This is evidenced by the average assessment times for extractive minerals lease mining proposals, mineral lease mining proposals and miscellaneous purposes licences all below the target timeframe of 183 days. In addition, for extractive mineral lease assessments, 80% (4 out of 5) achieved the target timeframe of 183 days with MRD. The days an application is with the tenement holder can be impacted by the response time to queries made by MRD during the assessment process.





**Figure 13** Average assessment times for Mining operation PEPRs shown by quarter, 2015 to 2017.

The length of time taken for mining PEPRs in 2017 was higher than the target (Table 8):

- For extractive quarry PEPR assessments – 31% (5 out of 16) achieved the target timeframe of 3 months.
- For mineral PEPR assessments – 46% (6 out of 13) achieved the target timeframe of 3 months.

A key factor for this is that a significant number of 2017 PEPR assessments were for the purpose of bringing existing operating mines in line with current legislation, standards and expectations. These PEPR reviews included an environmental impact assessment, which adds significant complexity to the PEPR assessment and has resulted in an increased average assessment time.

During 2017 MRD finalised a number of PEPR assessments involving numerous information requests from the tenement holder resulting in increased assessment times (this is also reflected in Figure 13 which shows a significant amount of time is attributed to ‘days with tenement holder’ for PEPR assessments during 2017.)

#### 3.2.4.1 PUBLIC MINING ASSESSMENT REPORTS

MRD published 5 public assessment reports, available on the [Minerals website](#):

- Rex Minerals Hillside Copper Project staged development assessment – published January 2017
- Iron Road Central Eyre Iron Project Mining Proposal assessment – published May 2017
- Flinders Power Partnerships Leigh Creek Coalfield closure – published October 2017
- Pirie Resources Campoona Graphite Mining Proposal assessment – published December 2017
- OZ Minerals Carrapateena Copper Mining Proposal assessment – document date December 2017 (published January 2018).

#### 3.2.4.2 COMMUNITY ENGAGEMENT AND SOCIAL MANAGEMENT PLANS

During 2017 MRD completed assessment of 2 community engagement plans and 1 social management plan, as required by the project lease conditions for the following projects:

- Iron Road Central Eyre Iron Project (community engagement)
- Australian Graphite Limited Kookaburra Gully Graphite Project (community engagement)
- Rex Minerals Hillside Copper Project (social management)

#### 3.2.4.3 DEVELOPMENT APPLICATION REFERRALS, STRATEGIC REFERRALS AND OTHER INQUIRIES

Six development application assessments and 5 strategic assessments were referred by the Department of Planning, Transport and Infrastructure for assessment by MRD. Four of the development application referrals were statutory referrals under Schedule 8 of the [Development Regulations 2008](#). Three general inquiry referrals were assessed and responded to.

#### 3.2.4.4 SIGNIFICANT ENVIRONMENTAL BENEFIT OFFSET REPORTING

A total of 1,228.57 ha of native vegetation was authorised to be cleared under delegation to MRD from the Native Vegetation Council in 2017. This clearance occurred across 10 mining operations. Significant environmental benefit<sup>4</sup> associated with the authorised clearance will be made up by 6,277.4 ha of land managed for biodiversity conservation and \$186,296.86 paid into the Native Vegetation Fund (managed by the Department for Environment and Water), to be disbursed as grants for on-ground conservation of biodiversity.

#### 3.2.4.5 ENVIRONMENT PROTECTION AND BIODIVERSITY CONSERVATION ACT ASSESSMENT BILATERAL AGREEMENT

The South Australian and Commonwealth governments' [Environment Protection and Biodiversity Conservation Act 1999](#) (EPBC Act) assessment bilateral agreement commenced on 25 October 2014. The following state assessment processes have been accredited by the Commonwealth to assess matters of national environmental significance under the EPBC Act:

- mineral lease application
- retention lease application
- miscellaneous purposes licence application
- exploration PEPR.

EPBC Act referrals are still made to the Commonwealth and if the EPBC Act referral action is determined to be 'controlled' then the Mining Act processes can be used to assess the controlled action. Impacts to matters of national environmental significance are assessed under the South Australian process and recommendations made to the Commonwealth Minister for the Environment and Energy who then makes the decision to approve the EPBC Act referral or otherwise. It is noted that approvals are granted separately by MRD under state legislation, and by the Commonwealth under the EPBC Act.

During 2017 the OZ Minerals' Carrapateena mining application was determined a controlled action by the Commonwealth and this assessment was undertaken in accordance with the EPBC Act administrative arrangement. The state's public assessment report for this application is available on the [Minerals website](#).

#### 3.2.5 Exploration and mining compliance and regulation

At 31 December 2017 there were 673 exploration licences, 1,451 mining leases (mineral leases, extractive minerals leases, miscellaneous purposes licences and retention leases), 91 mineral claims and 224 private mines registered with MRD (Table 9). The 1,451 mining leases equated to 533 mining operations (as a mining operation often consists of multiple leases). A total of 383 of the mining operations were producing operations (defined for the purposes of this report as those mines for which a royalty return has been submitted to MRD in the past 3 years).

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<sup>4</sup> A significant environmental benefit is an action that results a positive impact on the environment that is over and above the negative impact of the clearance. It can be achieved through the establishment (revegetation), management and/or protection of an area of native vegetation or payment into the Native Vegetation Fund.

**Table 9** Summary of mineral tenements and operating mines in 2017

Tenement/mine	Number
Exploration licence	673
Mineral lease	728
Extractive minerals lease	588
Miscellaneous purposes licence	107
Retention lease	28
<i>Total mining leases</i>	<i>1,451</i>
Mineral claim	91
Private mine	224
<b>Total mining operations</b>	<b>533</b>
<b>Total producing operations*</b>	<b>383</b>

\* Defined as those mines for which a royalty return has been submitted to MRD in the past 3 years.

Note: These figures exclude opal mining tenements which are summarised in Section 3.2.10.

The following regulatory mechanisms are in place for exploration and mining operators to report on their compliance activities, as part of ensuring activities meet approved environmental outcomes:

- **Exploration technical and geoscientific reports.** Reports are analysed and registered for compliance. In 2017, 1,050 expenditure and 270 annual technical reports were submitted (Table 10).
- **Exploration compliance reports.** Must be submitted to MRD for all exploration licences upon approval of an EPEPR. These reports are submitted annually until the tenement holder can demonstrate all rehabilitation is complete. In 2017, 134 annual compliance reports were submitted for exploration operations (Table 11).
- **Mining compliance reports.** Must be submitted to MRD for all mineral leases and some extractive minerals leases at a frequency established upon approval of the PEPR for the operation (annual in most cases). These reports (and all reports associated with South Australia's major mines) are publicly available on the Minerals website. In 2017, 19 annual compliance reports were submitted for major operating and approved mines as expected (Table 11).
- **Environmental consultative committees for uranium mines.** South Australia's uranium mines (Olympic Dam, Beverley – Beverley North, Four Mile and Honeymoon) are required to present a compliance update every 6 months to state and Commonwealth regulators. This is to demonstrate compliance with the approval conditions of the relevant mine and ensures the Commonwealth remains routinely informed of the compliance status of South Australia's uranium mines.

**Table 10** Exploration reports reviewed during 2017

Exploration reporting	Number reviewed
Exploration licence 6-monthly summary and expenditure report	1,050
Exploration licence annual technical reports	270
Joint annual technical reports*	69
Surrenders of exploration licences	75
Partial surrenders of exploration licences	82
<b>Total</b>	<b>1,546</b>

\* Reports cover multiple exploration licences (406 in 2017).

### 3.2.5.1 COMPLIANCE MONITORING ACTIVITIES

Whilst it is the tenement holder's responsibility to monitor their own compliance and demonstrate compliance to their stakeholders through public reporting, MRD staff conduct compliance activities to provide assurance to the government, industry, community and other stakeholders that statutory requirements under the relevant Acts and Regulations and conditions of approval are being adhered to and regularly monitored. A

total of 609 inspections of exploration and metallic, uranium, extractive and industrial mining operations were conducted by MRD in 2017 (Figure 14).

In addition, MRD utilised intelligence and information sourced from the general public, landowners, mining operators and other government departments etc., as well as electronic information and satellite imagery to assess compliance.



MRD mining compliance officer reviewing a blast monitor. (Photo 416582)

Compliance-related activities for exploration and mining operations in 2017 are summarised in (Table 11).

**Table 11** Compliance-related activities for mining and exploration operations in 2017

Compliance activity	Exploration	Mining	Total
Site inspection	17	592	609
Reported incident	0	56	56
Reportable uranium/radiation incident	0	0	0
Registered complaint	6	79	85
Formal letter issued	7	128	135
Formal direction issued	0	10	10
Unauthorised mining/exploration investigations	4	4	8
Compliance report received	134	19*	153
Compliance report assessed	136	19	155
Community meetings attended	0	33	33
Change to operations notifications	n/a	32	32

\* Compliance reports recorded for mining operations refer to public reports received for major mines only.

n/a - not applicable.

Note: This data does not include activities conducted for the purposes of opal field compliance (Section 3.2.10) or royalty compliance (Section 4).

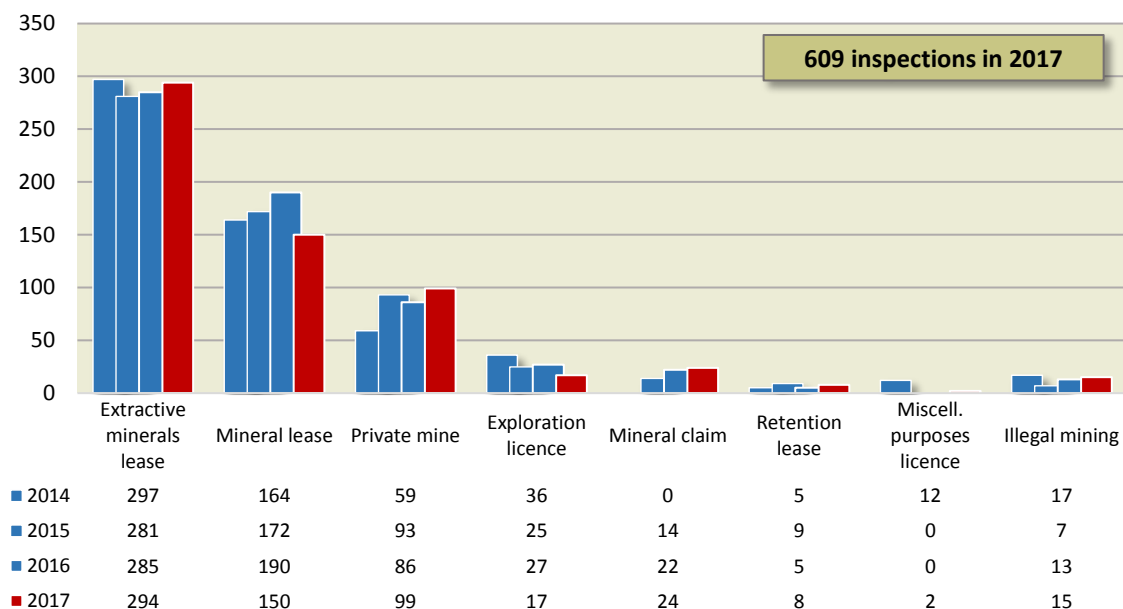
MRD assessed and endorsed 32 change to operations notifications in 2017 (Table 11). These notifications were submitted when a change to existing mining operations was required. An assessment of the proposed change was undertaken to determine if the change is within or out of scope of the approved PEPR, and whether the change is consistent with the mining operations described in the original mining lease application.

### 3.2.5.2 SITE INSPECTIONS

All major mines, and many other mining operations and exploration programs, in South Australia are subject to regular/scheduled site inspections. Major mine inspections generally include quarterly compliance

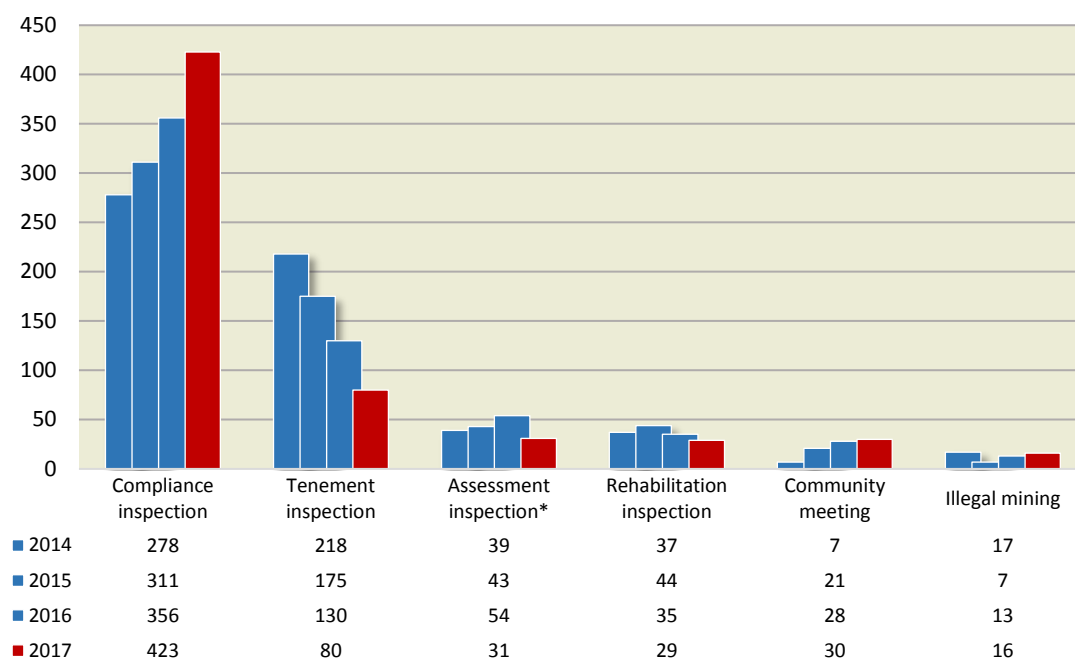
presentations and agendas. In addition, all mining operations and exploration programs in South Australia are subject to ad-hoc inspections which forms a key part of MRD's compliance strategy.

Of the 609 exploration and mining inspections completed in 2017, 65% were associated with extractive minerals operations (i.e. extractive minerals leases and private mines) which range from metropolitan hard rock quarries to low-risk, small sand mining operations (Figure 14).



**Figure 14** Exploration and mining inspections by primary tenement type, 2014 to 2017.

A breakdown of the types of inspections carried out is shown in Figure 15. In relation to mining operations, general compliance inspections (scheduled compliance inspections, responding to complaints, incidents etc.) accounted for 69%, and inspections associated with tenement administration (i.e. tenement transfers, renewals, surrenders and expiries) accounted for 13%.

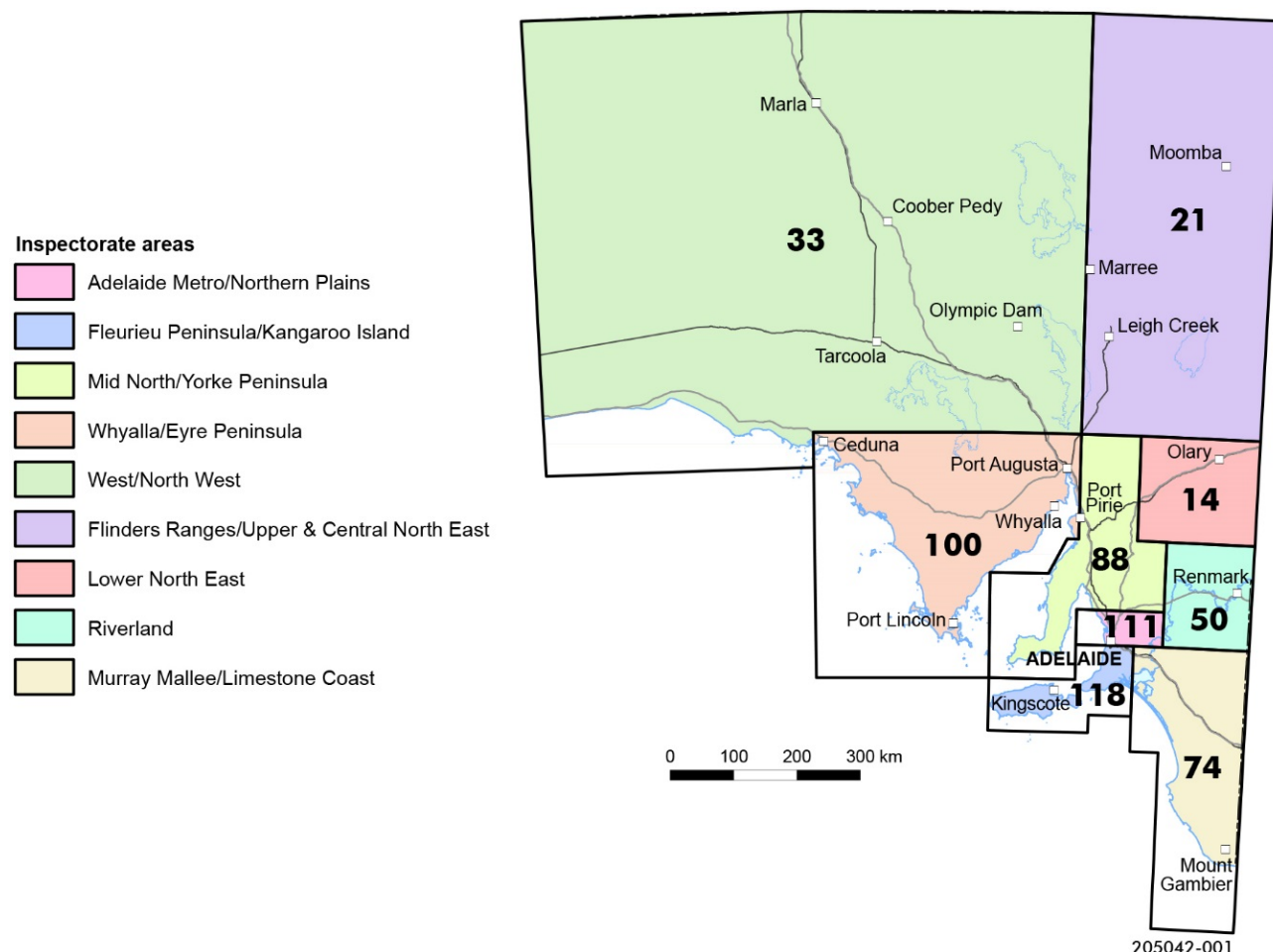


\* Assessment inspections include inspections associated with mining lease variations, new lease applications, PEPR/MOP assessments and bond reviews.

**Figure 15** Exploration and mining inspections by inspection type, 2014 to 2017.



MRD maintains a strong regional presence in South Australia. Figure 16 provides a regional overview of mining and exploration inspections completed by MRD in 2017. Meetings with landowners, other stakeholders and community meetings are often held in conjunction with site inspections. Many inspections are conducted in collaboration with other government agencies including officers from the [Environment Protection Authority South Australia](#), [SafeWork SA](#) and the [Department for Environment and Water](#).

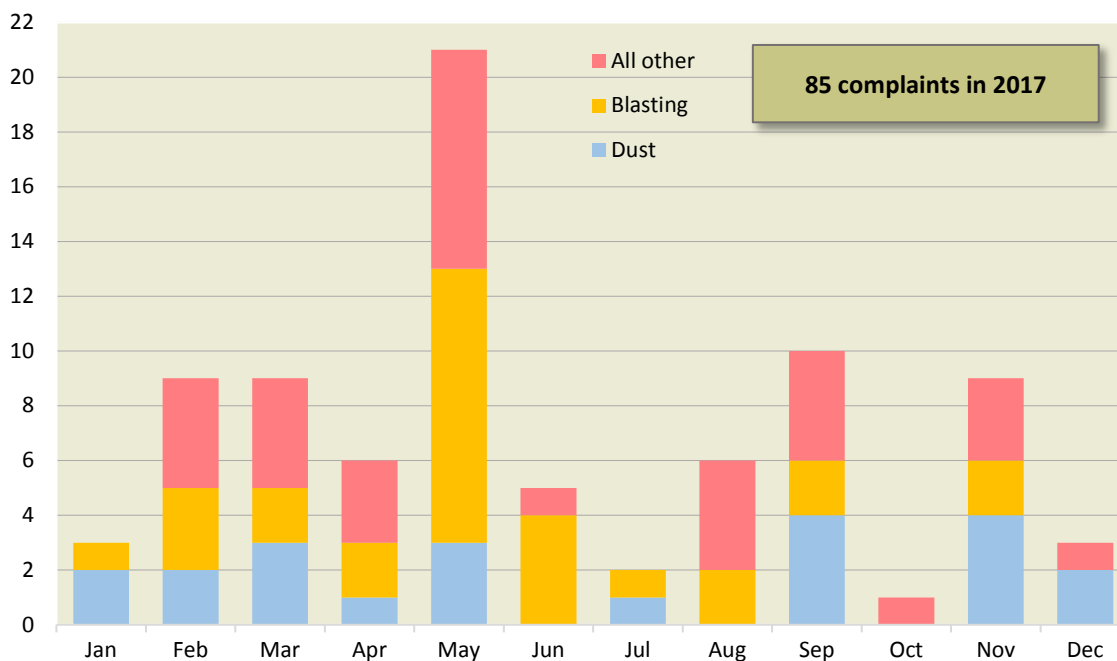


**Figure 16** Mining and exploration inspections conducted by MRD in 2017 shown by region.

### 3.2.5.3 COMPLAINTS AND INCIDENTS

Ensuring the timely resolution of complaints and incidents is an important role of MRD regulators. In all cases, MRD staff proactively engage with operators and respective stakeholders to ensure that complaints and incidents are investigated and issues are resolved in a timely matter and, where applicable, ensure that management strategies are implemented to rectify any noncompliance. For example, 135 formal letters were issued in 2017 (Table 11), of which the majority were related to the resolution of complaints and incidents. Figure 17 highlights the monthly breakdown of complaints that were reported to MRD in 2017.

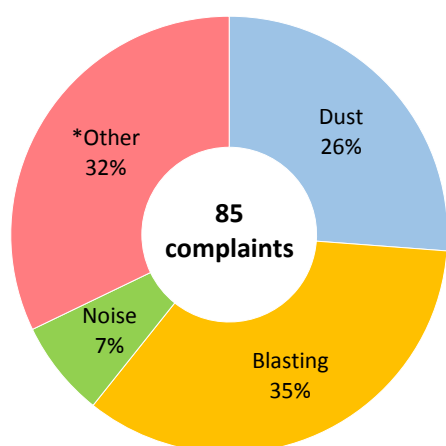
All reportable incidents under the Mining Act (defined in r. 87 of the Mining Regulations) must be reported to MRD. In 2017, zero incidents were reported on exploration tenements and 56 were reported on mining tenements, of which zero were uranium or radiation related incidents (Table 11).



**Figure 17** Exploration and mining complaints registered with MRD in 2017.

A breakdown of the complaint categories received in 2017 is shown in Figure 18 and highlights that blasting (35%), dust (26%) and noise (7%) were the most common complaint types for mining.

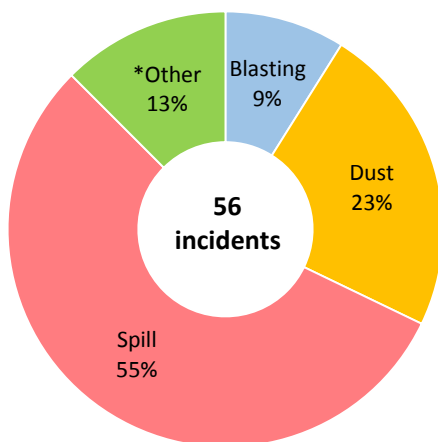
Blasting and dust complaints are typically received from mining operations located adjacent to residential areas. These operations are expected to continuously focus on minimising external impacts, with many adopting real-time technologies to monitor blasting and dust events, trigger and response plans and transparent reporting systems. Many of these operations also have well established community engagement programs to ensure the local communities are informed of developments and regulatory performance (refer to Section 3.2.7).



\*Other includes water quality, fauna/ flora, noncompliance with lease conditions, illegal mining, rehabilitation, spills, traffic and drag-out.

**Figure 18** Categories of exploration and mining complaints in 2017.

A breakdown of the incident categories registered for mining operations in 2017 is shown in Figure 19 and highlights that spills (55%), dust (23%), and blasting (9%) were the most common incident types. Reported spills were generally contained within disturbed areas and include processing solutions, fuels and raw water.



\*Other includes water quality and fauna/flora

**Figure 19** Categories of mining incidents in 2017.

### 3.2.6 Exploration and mining investigations and enforcement

The Mining Act provides powers to issue penalties and undertake various enforcement actions for noncompliance with and breaches of the Mining Act and Mining Regulations.

In 2017 MRD completed a number of exploration and mining investigations of varying complexity. Most of the potential breaches of the Mining Act resulted in MRD implementing regulatory tools outlined in the bottom half of the compliance pyramid (Figure 2).

## 3.2.6.1 EXPLORATION LICENCES – PENALTIES AND ENFORCEMENT ACTIONS

Table 12 provides a summary of the penalties and enforcement actions made in 2017 and imposed on exploration licences under the relevant provisions of the Mining Act.

**Table 12** Penalties and enforcement actions issued for exploration licences, 2015 to 2017

Compliance instrument	Tenement holder	Tenement number	Noncompliance	Outcome
Administrative penalty ss. 32(2) & 77B(1)	UXA Resources Ltd	EL 4971	Noncompliance with EL reporting requirements under subsections 32(2) and 77B(1) of the Mining Act and standard licence conditions.	Fine*
Non-renewal of EL s. 30A	Thornton Metals Pty Ltd	ELs 5609, 5610, 5611	Noncompliance with the following: <ul style="list-style-type: none"> <li>EL reporting requirements under subsections 32(2) and 77B(1) of the Mining Act.</li> <li>Requirements under Part 9 of the Mining Act and regulation 60(4) of the Mining Regulations in accessing land for exploration activities.</li> <li>Requirements under subsection 30A(4a)(b) of the Mining Act to provide documentary evidence, as requested, to verify actual exploration costs incurred by the tenement holder to ensure compliance with the EL expenditure condition.</li> </ul>	Loss of tenement
50% area reduction by MRD at renewal s. 30A(6a)	Kingsbluff Minerals Pty Ltd	EL 5301	Noncompliance with EL expenditure condition.	Loss of 50% of tenement
Administrative penalty ss. 32(2) and 77B(1)	Mawson Gold NL	EL 4772	Noncompliance with EL reporting requirements under subsections 32(2) and 77B(1) of the Mining Act and standard licence conditions.	Fine*
Administrative penalty ss. 32(2) and 77B(1)	Mintech Resources Pty Ltd	EL 4773	Noncompliance with EL reporting requirements under subsections 32(2) and 77B(1) of the Mining Act and standard licence conditions.	Fine*
Administrative penalty ss. 32(2) and 77B(1)	Goldus Pty Ltd	EL 4774	Noncompliance with EL reporting requirements under subsections 32(2) and 77B(1) of the Mining Act and standard licence conditions.	Fine*

EL exploration licence.

Note: As this is the first time exploration licence penalty and enforcement actions have been published in this report, all actions taken from 2015 are included. Subsequent reports will only report on actions in the reporting year unless not closed out.

\* Fines are imposed through s32(2) of the Mining Act and 'Schedule 3 – Administrative Penalties' of the Mining Regulations.

## 3.2.6.2 MINING OPERATIONS – ENFORCEMENT ACTIONS

Table 13 provides a summary of the enforcement actions issued to mining operations in 2017, and a status of actions from previous years that remained outstanding.

**Table 13** Enforcement actions issued, outstanding or closed for mining operations in 2017

Compliance instrument	Date issued	Tenement holder/operator	Noncompliance	Outcome
Environmental direction	27/03/13	OneSteel Manufacturing Pty Limited	Tailings storage facility impacted on native vegetation at Iron Duke mine.	Ongoing, long-term (5-year) management plan
Compliance order (private mine)	01/08/16	Neil Mullard	Discharge of polluted water (silt), and overburden outside of the private mine boundary.	Ongoing rectification
Compliance direction	02/08/16	Jim Alvanos	Failure to submit a PEPR.	Complete
Compliance direction	29/11/16	Kym Simons	Removal of unauthorised waste from site.	Complete (refer to Rehabilitation Direction issued on 29/9/17)
Compliance direction	12/05/17	Gawler Craton Resources Pty Ltd	Unauthorised mining.	Ongoing rectification
Compliance direction	12/05/17	Ian Filsell, Mark Filsell	Unauthorised mining.	Ongoing rectification
Compliance direction	20/07/17	Kevin Leenders	Unauthorised mining.	Complete
Compliance direction	22/08/17	Ian Frost	Unauthorised mining.	Complete
Compliance direction	22/08/17	Donald Avery	Unauthorised mining.	Complete
Rehabilitation direction	29/09/17	Kym Simons	Removal of unauthorised waste from site (replaces compliance direction issued on 29/11/16).	Ongoing rectification
Compliance order (private mine)	17/10/17	Kym Schubert	Contamination to land resulting from hydrocarbon spills.	Ongoing rectification
Environmental direction	14/11/17	Mark Hardy	Contamination to land resulting from hydrocarbon spills.	Ongoing rectification
Compliance direction	14/11/17	Mark Hardy	Unauthorised native vegetation clearance, operating outside of the tenement boundary and operating outside of the scope of the PEPR.	Ongoing rectification
Compliance direction	17/11/17	Harvey Betts	Unauthorised mining.	Ongoing rectification

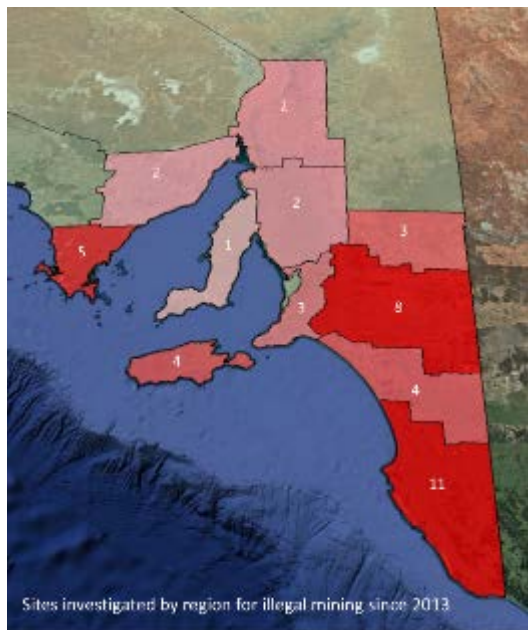
Note: Includes outstanding directions issued prior to 2016 that were completed or remained outstanding at 31 December 2017.

In 2017 MRD increased its focus on illegal mining in South Australia, resulting in 6 compliance directions for unauthorised mining being issued (Table 13). To support this initiative, the Mined Areas Detection Process (MAD Pro) project was initiated in 2017. This project incorporated the use of satellite imagery and GIS technology to conduct a desktop review of the entire state. The project (summarised in case study 1), has identified a number of potential illegal mining operations, with implementation and a public communications strategy planned during 2018.



## Case study 1: Identifying illegal mining in South Australia

Mining for a commercial purpose in South Australia requires a mining lease under the Mining Act 1971. MRD receives several complaints each year alleging illegal mining from numerous sources in the community. In response, MRD has conducted 63 inspections investigating potential illegal mining at 45 sites across the state since 2013.



### The development of MAD Pro

To proactively seek and address illegal mining, MRD has utilised aerial and satellite imagery to identify potential illegal mining operations. In 2017, MRD developed the Mined Areas Detection Process (MAD Pro). This is systematic process that can rapidly scan regional satellite imagery and identify areas that reflect an identical colour signature to known mines and quarries in the area.

The areas identified can include a range of non-mining land uses, which may include roads, driveways, sand dunes and dams for example. To eliminate these 'false-positives' a range of automated buffering processes are applied using GIS.

Sites of interest are subsequently risk ranked based on a number of factors, including location, disturbed area, native vegetation clearance etc.

### Project progress and results

In 2017 MAD Pro was applied to satellite imagery covering several regions including Kangaroo Island, the Fleurieu Peninsula and Coorong, Adelaide Hills and Plains, and the Riverland.

The process has uncovered a number of unknown operations that are not registered as mining operations under the Mining Act.

### Example of illegal mining operation

While the most recent aerial imagery showed that no operations had recently occurred at this rehabilitated council quarry, the results from MAD Pro showed a disturbance signature at the site.



Top: The most recent aerial image of the rehabilitated council pit. Bottom: MAD Pro results showing a disturbance signature in the area.

### Next steps

MRD is finalising an implementation plan to investigate sites identified by the MAD Pro project in 2018. This will include the use of surveillance tools such as cameras and drones, and a public communications strategy to provide transparency of the project results.



Surveillance drone. (Photo 416583)

### 3.2.7 Community engagement

MRD maintains an active community engagement program. In 2017 MRD staff attended 33 community meetings, met with landowners and other community groups, and engaged in a number of activities including post-mine land use working groups, community events and field days.

There are a number of active community consultative committees established for mining (and proposed mining) operations which are located in populated areas. In some cases, these committees are a requirement of a lease condition for an approved mining operation. Committee meetings are usually independently facilitated and provide a collaborative forum for mining operators and their stakeholders to engage on matters relating to proposed or approved mining operations. Table 14 provides a summary of the active community consultative committees attended by MRD staff.

**Table 14** Status of ongoing community consultative committees in 2017

Mining operation	Community committee	Meeting frequency
Angas Mine	Strathalbyn Community Consultative Committee	Quarterly
Golden Grove Extractives Industry Zone	Golden Grove Community Working Group	As required
Kanmantoo Mine	Kanmantoo–Callington Community Consultative Committee	Quarterly
Linwood Quarry	Linwood Residents Joint Working Group	Quarterly
Penrice Mine (Angaston Quarry)	Penrice Community Consultative Committee	6 monthly
Hillside Mine*	Hillside Mine Community Voice	Monthly
Glenshera Sand Mine	Glenshera Community Consultative Committee	6 monthly
Bird in Hand*	Woodside Community Consultative Committee	As required

\* Developing project.



Strathalbyn Community Consultative Committee site inspection, November 2017. (Photo 416584)

### 3.2.8 Rehabilitation liability and bonds

Section 62 of the Mining Act authorises the Minister to require an applicant, or holder of, a mineral tenement to enter into a financial bond for a specified amount, and under terms and conditions to ensure any civil and statutory liabilities, and all present and future rehabilitation obligations, are satisfactorily met.

Rehabilitation liability is assessed by estimating the cost for a third party to plan, manage and undertake closure works and any post-closure maintenance and monitoring requirements.

At 31 December 2017, \$139.6 million in rehabilitation liability was held by MRD for exploration tenements and operating mines in South Australia (Table 15).

**Table 15** Summary of bond type and amount held by MRD for mineral tenements at 31 December 2017

Bond type	Exploration (\$)	Mining (\$)
Bank guarantee	1,237,000	133,058,497
Currency	686,000	4,646,763
<b>Total</b>	<b>1,923,000</b>	<b>137,705,260</b>

Note: Due to historical mining approvals or indenture agreements, section 62 of the Mining Act does not apply to all mining operations in South Australia, therefore some mining operations do not have a bond lodged with MRD that accurately reflects the potential rehabilitation liability for the mine. For example, the Olympic Dam mining operation (South Australia's largest mine) and many Middleback Range iron ore mines do not have bonds lodged with MRD. However, these operations are all required to conduct rehabilitation activities in accordance with their operational approvals.

### 3.2.9 Extractive Areas Rehabilitation Fund

The South Australian Extractive Areas Rehabilitation Fund (EARF) was established in 1971 to fund the rehabilitation of extractive mining operations and has supported over 1,000 projects since its inception. The EARF is funded by the government's reallocation of royalty monies.

The EARF provides surety to government that an extractive mining operation can be rehabilitated where a current or former site is causing real or potential environmental harm. Funding from the EARF is allocated by government in accordance with [Extractive Areas Rehabilitation Fund: Guidelines for operation](#).

The fund is administered by MRD on behalf of the Minister for Energy and Mining in accordance with section 63 of the Mining Act. Section 63 authorises the Minister to allocate monies from the EARF for the purpose of funding regulatory resources to ensure that extractive mining operations are rehabilitated. Specifically, section 63(4) of the Mining Act states:

The total expenditure in a single financial year of costs associated with ensuring that the land referred to in subsection (3)(a) is rehabilitated in accordance with the requirements under this Act must not exceed an amount equal to 7c per tonne for each tonne of extractive minerals on which royalty is payable into the fund for the financial year preceding that year.

Four EARF projects were approved in 2017 with a total value of \$31,390 (Table 16) and 7 projects were completed (Table 17).

**Table 16** Projects approved for funding from EARF in 2017

Project approved	Applicant	Approved	Value (\$ including GST)
EML 4337	K Oswald-Jacobs & A Walsh	13/4/17	6,352.50
EML 5060	MRD, Lake Philipson	25/7/17	1,715.00
EML 5554, MPL 56	Stoneleigh Nominees Pty Ltd	18/9/17	10,600.00
EML 4337	K Oswald-Jacobs & A Walsh	19/12/17	12,722.16
		<b>Total</b>	<b>31,389.66</b>

EML extractive minerals lease; MPL miscellaneous purposes licence.

**Table 17** Status of EARF funded projects in 2017

Active project approved prior to 31/12/16	Original approval	Original value (\$)	Project completed in 2017	Residual value at 31/12/17 (\$)
EML 4786, Whillas	19/10/15	16,221.26	21/09/17	00.00
EML 5942, Clay Mineral Sales	29/04/15	52,982.50	10/03/17	4,895.90
EML 6393, Stoney Pinch	11/08/15	23,245.20	10/03/17	00.00
EML 3203, 3245, Chilman	20/08/15	139,150.00	23/03/17	12,650.00
EML 5831, Schlein	14/09/15	54,895.77	28/03/17	2,640.00
EML 3395, D Pitt	18/04/16	83,600.00	Ongoing	18,100.00
PM 140, P Lines	14/09/16	372,989.40	Ongoing	372,989.40
Emerald Quarry*, District Council of Mount Barker	28/10/16	89,227.60	Ongoing	89,227.60
EML 4337, K Oswald-Jacobs & A Walsh	13/04/17	6,352.50	24/07/17	00.00
EML 5060	25/07/17	1,715.00	21/09/17	00.00
			<b>Total</b>	<b>500,502.90</b>

\* No active tenement applies.

PM private mine; EML extractive minerals lease.

Note: Residual money remaining at project completion is returned to EARF.

The net balance of EARF is provided in Table 18. The closing balance at 31 December 2017 was \$24,663,562.

**Table 18** Balance of EARF, 2012–13 to 31 December 2017

Period (financial year)	Balance (\$)	Value of committed funds (\$)	Net balance (\$)
2012–13	17,371,474	1,518,412	15,853,062
2013–14	19,051,823	1,447,263	17,604,560
2014–15	19,760,159	645,473	19,114,686
2015–16	21,834,190	566,542	21,277,648
2016–17	23,685,467	477,378	23,208,089
July–December 2017	25,109,861	446,299	24,663,562

Note: Reported figures are in financial years.

MRD employs 28 regulatory officers who undertake mining compliance, assessment of lease applications and mining programs (e.g. PEPRs) and EARF management. EARF funding is sourced for 4.5 of these positions:

- 2 mining compliance officers who undertake compliance activities exclusively on extractive minerals leases
- 2 mining assessment officers who assess mineral lease applications and PEPRs for extractive operations to ensure applicants commit to clear obligations for management of environmental risk and progressive rehabilitation
- EARF and mine completion manager (partially funded by the EARF).

The EARF is regularly reviewed by government to ensure adequate reserves are held to assure potential rehabilitation liabilities may be funded if required by government. The most recent review (2015) resulted in a reduction in the allocation from royalty payments to the EARF from 25c to 22c per tonne. The next review will be conducted in 2018, which will assess the adequacy of the fund and the treasurer's allocation from royalty payments to the EARF.

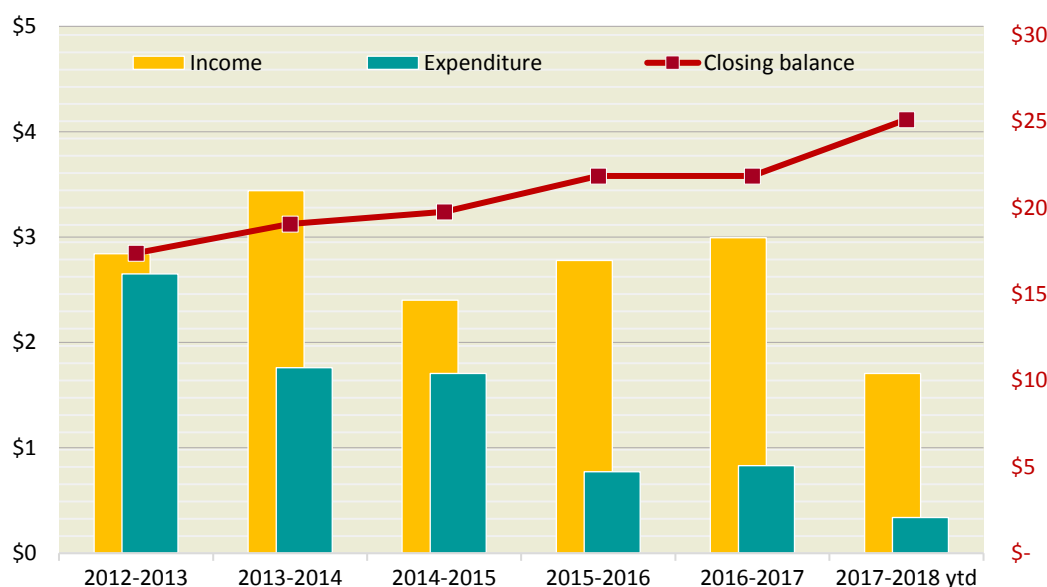


Table 19 provides a summary of EARF income, expenses, permitted regulatory support income and actual regulatory support expenditure since 2012–13. EARF income, expenditure and closing balance since 2012–13 is shown in Figure 20.

**Table 19** Summary of EARF and regulatory income and expenditure, 2012–13 to 31 December 2017

Period (financial year)	EARF income (\$)	EARF expense (\$)	Regulatory support income (\$)	Actual regulatory support expenditure (\$)
2012–13	2,840,489	2,652,091	499,229	284,419
2013–14	3,440,112	1,759,763	451,290	445,857
2014–15	2,400,110	1,706,319	558,000	558,000
2015–16	2,779,466	705,130	386,000	450,035
2016–17	2,994,440	830,289	444,714	444,714
July 2017 – December 2017	1,706,037	339,073	254,899	157,241

Note: The actual regulatory support expenditure for 2016–17 includes state funding.



ytd = year to date

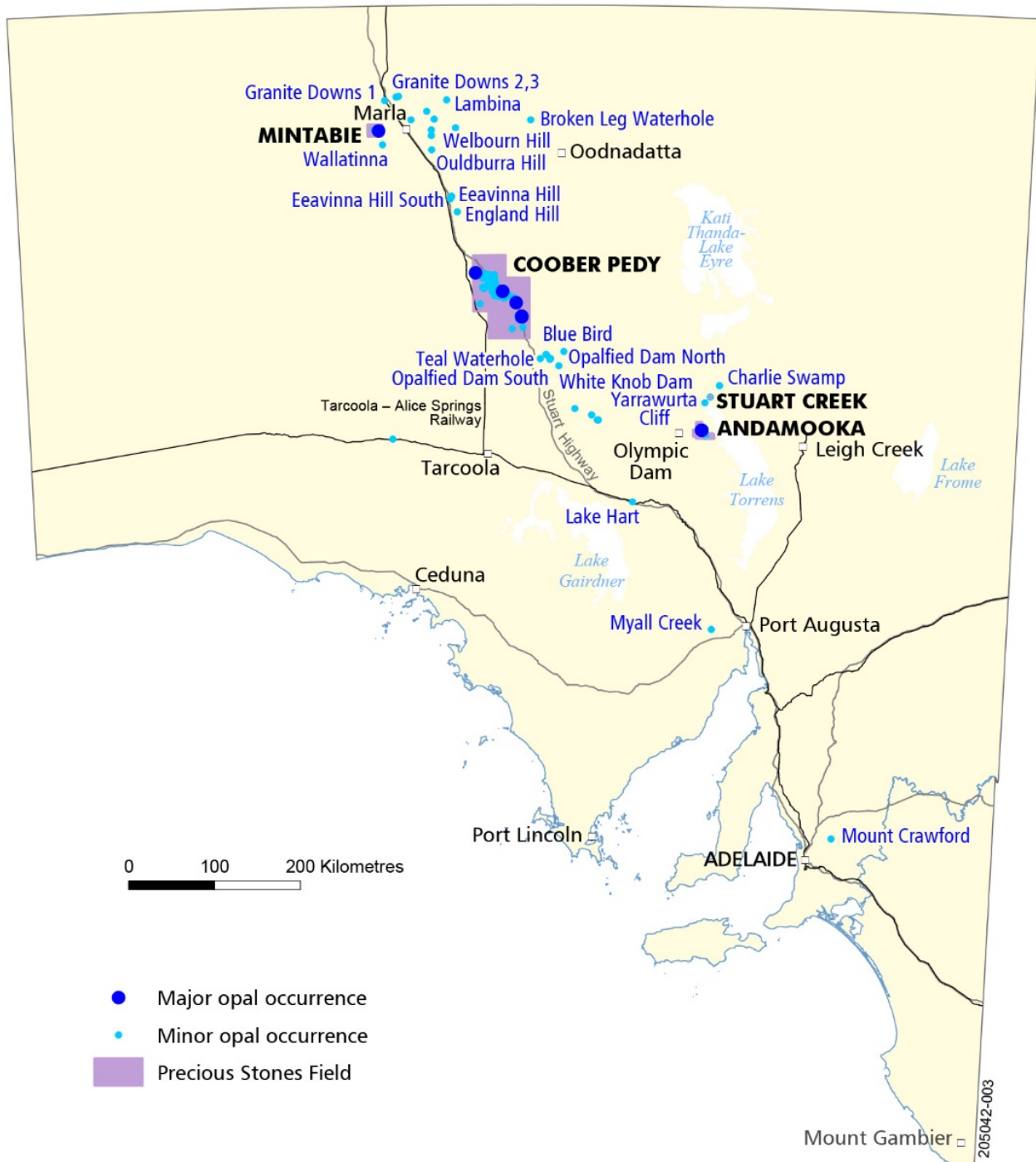
**Figure 20** EARF income, expenditure and closing balance (2012–13 to 31 December 2017).

### 3.2.10 Opal mining

Opal mining in South Australia is administered by MRD in accordance with the *Opal Mining Act 1995* and *Mines and Works Inspection Act 1920*. The MRD Opal Fields Program is based in Coober Pedy, with regional services provided to Andamooka and Mintabie.

At 31 December 2017 there were 456 opal mining tenements within the Coober Pedy, Andamooka, Stuart Creek and Mintabie precious stones fields (Figure 21). This reflects a 16% increase in opal mining tenements from 2016. Revenue from opal mining fees totalled \$145,701 in 2017 (Table 20), an increase of 13.5% from 2016. The increase was a direct result of the Shell Patch land release, which is discussed in the case study provided after Section 3.2.10.3.





**Figure 21** South Australia's precious stones fields.

**Table 20** Revenue raised from opal mining in 2017

	Coober Pedy	Lambina	Mintabie	Andamooka	Total
Precious stones claims and tenements (\$)	116,338.07	0	6,420.25	17,317.90	140,076.22
Administration fees (\$)	5,624.66	0	0	0	5,624.66
<b>Total (\$)</b>	<b>121,962.73</b>	<b>0</b>	<b>6,420.25</b>	<b>17,317.90</b>	<b>145,700.88</b>

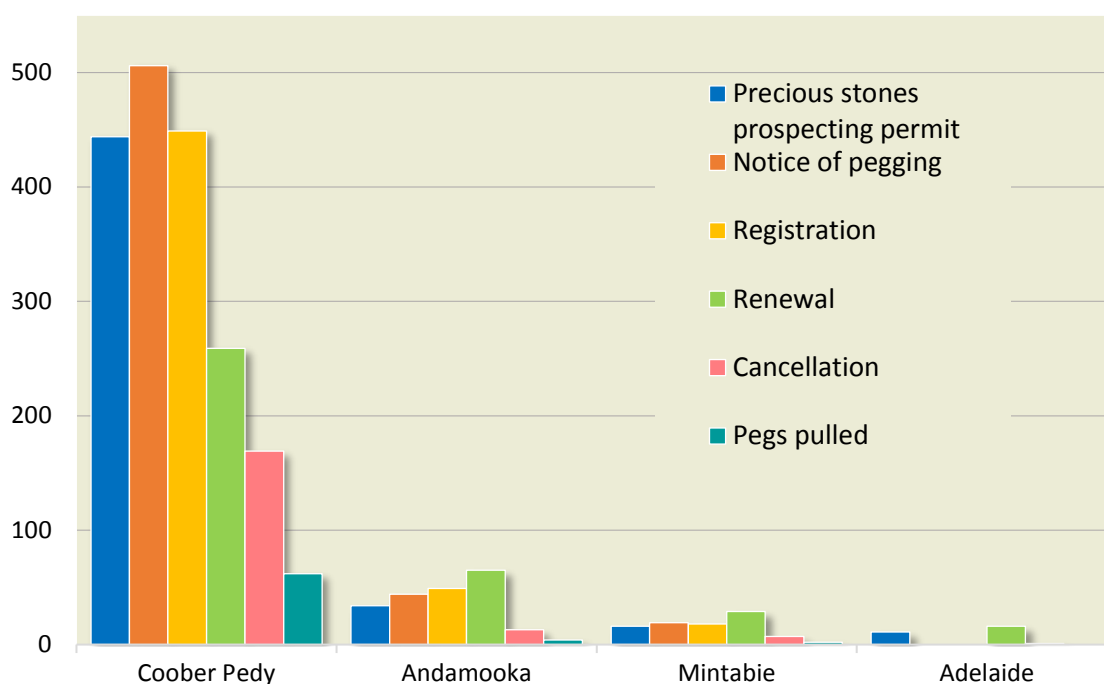
MRD also administers the Mintabie Town Lease and has delegations under the [Anangu Pitjantjatjara Yankunytjatjara Land Rights Act 1981](#) and Mintabie Township Lease Agreement.

A review of Mintabie Township Lease was conducted in 2017 to identify issues related to the future of Mintabie Township. The review was conducted in accordance with the terms of the Mintabie Lease agreement. Based on the review findings, in February 2018 the state government decided to terminate the lease of the Mintabie Township, with the management of the area reverting to the Anangu Pitjantjatjara Yankunytjatjara. To give residents time to make alternative arrangements, the date for termination of the lease is 30 June 2019. More information can be found on the [Mineral's website](#).

MRD collects campsite fees annually and passes them on to the Anangu Pitjantjatjara Yankunytjatjara. A total of \$36,373 in campsite fees was collected in 2017, of which MRD retained \$5,624 in administration fees.

### 3.2.10.1 TENEMENT STATISTICS

MRD manages applications for precious stones prospecting permits (new and renewal), precious stones claims (new, renewal and surrender) and the rehabilitation of claims. Administrative tasks completed in 2017 are summarised in Figure 22.



**Figure 22** Categories of opal field administrative tasks undertaken in 2017 shown by region.

A total of 505 precious stones prospecting permits were issued in 2017, a 12% increase from 2016. There were 569 notice of peggings received, resulting in the registration of 68 extra-large claims (200 x 100 m), 308 large claims (100 x 50 m), 127 small claims (50 x 50 m) and 13 irregular shaped claims. A total of 369 registration renewals and 190 cancellations of unwanted claims were processed.

The Indigenous land use agreement for opal mining on the Coober Pedy Proclaimed Precious Stones Field was registered in February 2015. As of 31 December 2017, 913 Coober Pedy opal miners had signed the acceptance deed.

Negotiations on a new Indigenous land use agreement over the Andamooka precious stones field continued during 2017, and it is expected to be completed in 2018.

### 3.2.10.2 SUMMARY OF COURT ACTIONS

Matters of noncompliance with the [Opal Mining Regulations 2012](#) are handled by the Opal Mining Registrar who initiates Warden's Court actions. These matters are managed via telephone on a weekly basis and by sittings of the Warden's Court in Marla, Coober Pedy and Andamooka twice per year. Opal miners can also initiate their own actions in the Warden's Court. These matters are usually related to suspension of working conditions, amalgamation of tenements or partnership disputes.

During 2017, 5 actions were raised by MRD, 2 tenements were forfeited and 3 complaints were dismissed. Fourteen actions (plaints) between miners were also heard.

### 3.2.10.3 OPAL REGULATORY COMPLIANCE

MRD conducts compliance activities to provide assurance to the government, opal miners and community stakeholders that opal mining activities are complying with the appropriate Acts and Regulations. Noncompliances identified through surveillance, complaints, incidents and alleged breaches are investigated. For example:

- Alleged breaches of the Opal Mining Act and [Explosives Acts 1936](#) are investigated and appropriate enforcement actions recommended.
- Instructions, directions and orders are issued to mining operators and/or mine owners to rectify noncompliance and followed up as required.
- Cooperative resolutions to compliance issues are negotiated with opal miners during site visits.
- Warden's Court actions are initiated, written reports to the Opal Mining Registrar detailing breaches of the Opal Mining Act prepared, and evidence presented in court as required.

A rostered inspection program is used to assess compliance with the Opal Mining Act including the monitoring of issues such as the dimensions of claims, amalgamation of claims, rehabilitation and placement of new departmental field pegs, as required by either miners or the Warden's Court.

During 2017, 1,129 inspections were carried out across the four opal fields (Table 21) identifying 123 noncompliances, including improperly pegged tenements and working conditions not being adhered to.

**Table 21** Compliance summary for opal field activities in 2017

Inspection	Coober Pedy	Mintabie	Lambina	Andamooka	Total
Compliant (1st round)	732	55	0	110	897
Noncompliant (1st round)	104	6	0	8	118
Compliant (2nd round)	96	5	0	8	109
Noncompliant (2nd round)	5	0	0	0	5
<b>Total</b>	937	66	0	126	1,129

Note: A first inspection is undertaken to check for compliance against the Opal Mining Act and Opal Mining Regulations. A second inspection is carried out to ensure rectifications have been implemented if the first inspection deems the operation as noncompliant.





*Miner displaying recovered opal, Dora Gully, Coober Pedy. (Photo 416719)*



*Aerial view of the Dora Gully, Coober Pedy, captured by MRD surveillance drone. (Photo 416720)*



## Case study 2: Opal rush for Coober Pedy land release

Opal is Australia's national gemstone and South Australia's state gemstone, with 95% of all of the world's opal produced in this country. South Australia is internationally recognised as one of the world's best opal producers of high-grade, gem quality opal. Coober Pedy in the Far North is home to Australia's largest precious stones field (4,954 km<sup>2</sup>). It is also known as the opal capital of the world and the source of the world's most beautiful opal, the [Virgin Rainbow](#).

On 15 March 2017, three previously reserved areas on Mount Clarence Station, known as the 'Shellpatch', 'Sputnik' and 'Stuart Range No.7' water reserves, were returned to the Coober Pedy Precious Stones Field as part of the negotiation of the Indigenous land use agreement over the area in April 2015.

This release of the 165 ha of highly prospective opal-bearing ground generated great interest. A ballot was organised by MRD to ensure a fair and equitable process for determining which of the registered miners would be eligible to peg claims on the prospective

ground. There was a 25% increase in registered precious stones prospecting permits in the weeks preceding the ballot, bringing the total number of registered miners to 221 at the ballot. It was conducted on 16 March 2017 at the Shellpatch site, about 35 km north of Coober Pedy.

The new activity on these three sites has led to one of the largest caches of machinery to be imported into Coober Pedy in decades and has reinvigorated activity in mining of opal, new areas of virgin ground and older areas being increasingly prospected and mined.

The increased exploration and the chances of new discoveries have triggered renewed economic activity in Coober Pedy, and enhanced its reputation as the world's opal capital.

International interest in opal mining was sparked by the highly rated 2017 Discovery Channel production, *Outback Opal Hunters*, which televised the Shell Patch land release to millions of viewers around the world.



Ballot on the Shellpatch release area, about 35 km north of Coober Pedy, 16 March 2017. (Photo 416585)



Filming Outback Opal Hunters in 2017. (Photo 416715)



Opal mining, Coober Pedy. (Photo 416714)



## 4 RESOURCE ROYALTIES

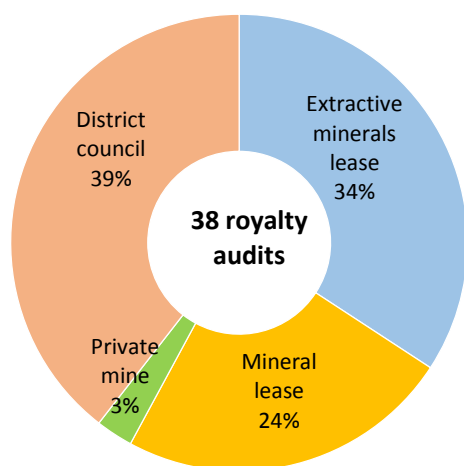
MRD administers policy, collection and reporting of all royalties sourced from South Australian producers of minerals and petroleum.

All tenement holders, holders of private mines and councils that pay royalty on minerals are subject to MRD royalty audits. MRD officers conduct interviews, sample supporting records and make relevant inquiries to establish compliance with the legislation. The frequency of audit varies, but is largely dependent on the royalty revenue at risk, history of noncompliance (if any) and an assessment of the effectiveness of the royalty payer's systems to quantify and calculate the royalty payable. Significant mineral producers are audited regularly, depending on risk, while other mineral producers are audited over a 5-year period.

In 2017 mineral production in South Australia was reported by 305 mineral producers, contributing \$148.2 million of mining royalty revenue.

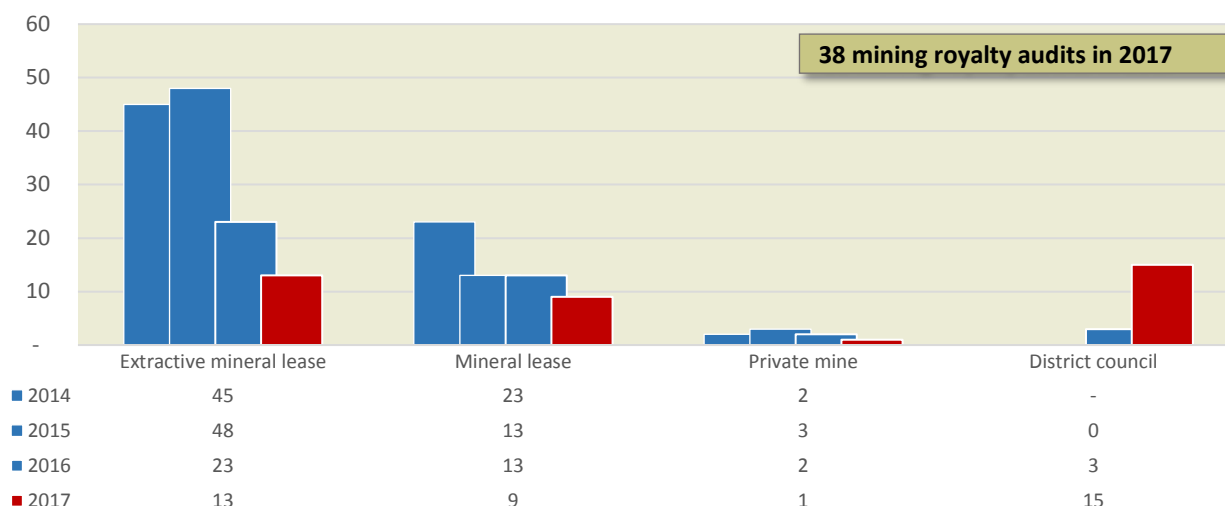
In 2017 the MRD royalty audit compliance program:

- audited 98% of mineral royalty revenue
- subjected 38 mineral producers to a comprehensive audit (Figure 23)
- recovered \$3.5 million in mining royalty revenue
- focused on large high-risk mineral producers involving more complex audits, with one audit being conducted by an independent auditor
- audited mining operations in the Riverland and Mid North regions
- increased the review and monitoring of royalty payments from borrow pits and mining leases operated by district councils.



**Figure 23** 2017 royalty audits.

The top 20 royalty payers make up 98% of total annual royalty paid. MRD has completed 268 mineral royalty audits since the royalty compliance and audit program commenced in November 2012, with total recoveries from audit activities of \$5.8 million. Figure 24 shows the 2014 to 2017 number of audits by primary tenement type or operation.



**Figure 24** Mining royalty audits, 2014 to 2017.

MRD has an ongoing commitment to implement identified improvements to the Tenement Return e-lodgement system (TReL) and to proactively engage with mineral producers to increase uptake of this more cost-effective and user-friendly lodgement option. In 2017 notable improvements to TReL included:

- automated password resetting and forgotten username functions
- optional feedback survey upon conclusion to help identify areas to improve TReL.

As MRD is approaching the end of its initial 5-year audit plan target of auditing all 300 mineral producers, many royalty payers are now being audited for the second or third time. The overall level of royalty compliance has improved significantly since 2012. The audits have generally progressed well with positive and proactive interactions with the state's mineral producers. In response to the increased voluntary compliance and engagement with MRD, more audits are being conducted via desktop systems only.

2018 planned actions will be to:

- continue royalty audits of major mineral producers, and mineral producers in regional locations
- encourage voluntary compliance
- apply enforcement where appropriate
- prioritise royalty audits based on updated risk profiles.

## 5 LEGISLATION, REGULATORY POLICY INITIATIVES AND PROGRAMS

MRD is committed to the development and implementation of policies and legislation that ensure South Australia has a strategically focused, coordinated and transparent approach to mine regulation, land access and the impact of mining on land uses such as planning, conservation, Aboriginal heritage, native title, Defence, agriculture and renewable energy.

### 5.1 Mining Acts Review

On 27 September 2016 the then Minister for Resources and Energy announced the [Leading Practice Mining Acts Review](#). As part of the review, MRD engaged with more than 1,700 stakeholders, including meeting with over 70 organisations and 500 individuals in over 40 regional, community and 'open house' meetings.

In September 2017, 82 recommendations for changes to the law were forwarded to the Minister, and a Bill reflecting these recommendations was introduced in to Parliament in October 2017. That Bill lapsed at the

end of the 2017 parliamentary sitting year. Following the 2018 election, the new government committed to review the proposed amendments and stakeholder feedback received during the 2017 consultation process. On 2 August 2018 the Statutes Amendment (Mineral Resources) Bill 2018 was introduced into Parliament. More information can be found on the [Mineral's website](#).

## 5.2 Stronger Partners Stronger Futures

Part 9B of the Mining Act sets out procedures to be followed before exploration or mining activities can be carried out on native title land (land in respect of which native title exists, or might exist). Part 9B is an approved alternative to the 'right to negotiate scheme' in the Commonwealth [Native Title Act 1993](#).

Feedback from explorers and native title holders has indicated there are practical challenges within the Part 9B system. In recognition of the need to facilitate improvement in exploration and mining practice, MRD developed the [Stronger Partners Stronger Futures](#) program in September 2016 to engage with native title holders and mineral explorers.

On 17 and 18 October 2017, MRD held the 'Co-designing the Future Workshop' in Port Augusta with representatives from native title groups, exploration and mining companies and government. The purpose was to discuss the future of the native title system for mineral exploration in South Australia as a collective, and commitment was reached from all participants to work together to progress the following key issues:

- Part 9B and the Commonwealth Native Title Act 'right to negotiate'
- early engagement (with native title groups by explorers)
- early ('low impact') exploration
- cultural heritage management.

Discussions on the key issues will continue in 2018 to be informed by a joint forum of all the parties on possible recommendations for legislative change. See [Co-designing the Future Working Paper - Moving Ahead](#) (PDF 4.6 MB) and the [Minerals website](#) for latest information.

## 5.3 South Australian Multiple Land Use Framework

On 15 June 2017 the then Premier released the inaugural South Australian Multiple Land Use Framework, the first of its kind to be released by an Australian state or territory. The release delivers on a key commitment from all state and territories to the COAG Energy Council.

It acts as a guide to decision-makers, industry and stakeholders about the South Australian government's expectations in respect of best practice engagement for land use and land use change, and encourages the consideration of co-existent, collaborative or sequential land uses at an early stage in any project. Collaborative and shared land use are key to sustaining and diversifying metropolitan, rural and regional economies. The framework seeks to increase transparency and consistency in decision-making to enable more effective targeted engagement with communities on sequential land use and land use change.

The framework, information booklet and case studies can be downloaded from the [yourSAy website](#).

## 5.4 Air quality benchmarking review

In February 2017, MRD publicly released a report titled *A review of air quality impacts and regulation – South Australian mining and extractives industry*. This report is the first stage of a collaborative project with the Environment Protection Authority to develop an air quality regulatory guideline specifically for the South Australian mineral resources industry. Regulatory approaches adopted across Australia and internationally

are under review and a wide range of topics relating to regulation of air quality in the mining and extractives industry are being considered.

The review findings will be utilised to inform the development of the collaborative Environment Protection Authority – MRD regulatory guideline, which will be developed with input from industry, community and a technical advisory group of air quality experts. This guideline will be developed in 2018.



*Air quality monitoring stations at the Angaston Quarry (left) and the Carrapateena Mine (right). (Photos 416717, 416716)*

## 5.5 Mining proposals and PEPRs workshops

During March and April 2017, six government workshops were delivered to the mining industry providing guidance on the preparation of mining proposals and PEPRs for metallic and industrial minerals. Completion of the workshops fulfils a key target commitment by MRD. A total of 65 members of industry attended the workshops and positive feedback was received.

## 5.6 Reducing exploration licence renewal times

During 2017 a project to review, re-engineer and move from paper-based processing to a fully electronic workflow for the exploration licence renewal process was implemented. The new workflow system and new streamlined process commenced in September. Results from commencement until the end of 2017 (25 renewals) show an average processing time from application receipt until process finalisation of 21 days. This is as compared to 87 days under the old process, a 76% reduction in processing timeframes.

External clients with money to invest in exploration often wait on the renewal of exploration licences to purchase, transfer, or farm in to exploration projects in the state. Given the large number of renewal applications processed by MRD annually (152 during 2017), these improvements and reduced processing timeframes facilitate and accelerate investment transactions and provide more tenure certainty to licence holders and potential investors.

The project has also allowed better tracking and monitoring of applications, and allows MRD to retain more detailed and accurate information, which can be provided to customers to keep them informed of the status of their renewal applications.

This project was designed to inform future planning of a similar electronic workflow process for larger and more complex exploration licence application assessment process. If timeframes are reduced, this has the potential to get explorers on the ground sooner, resulting in increased exploration investment, and acceleration of new mineral discoveries in the state.

### 5.7 Open file release of company exploration reports and associated data

The open file release program involves the assemblage, evaluation and delivery of surrender and partial surrender mineral exploration reports and associated data. Datasets and products are managed for release ensuring compliance with the Mining Act and Mining Regulations. A total of 22.17 GB of data was uploaded to MRD databases and publicly released via [SARIG](#) in 2017 comprising:

- 75 surrender datasets
- 82 partial surrender datasets.

### 5.8 Sunset data release program

In accordance with the provisions of section 77D of the Mining Act and regulation 88 of the Mining Regulations, data/information that has been held by MRD for at least 5 years is publicly released. In 2017 there were 114 sunset data releases comprising 306 exploration licences for a total of 9.31 GB uploaded to MRD databases.

This includes:

- digitising, verification and compilation of company exploration reports and associated data
- promotion and publication of comprehensive and accurate mineral exploration information and data releases online through the *MESA Journal* and other MRD publications
- delivery of accurate and relevant mineral resources information to stakeholders, while acting impartially to all exploration tenement holders.

### 5.9 Other publications

The following documents were completed/updated in 2017 and are available via [SARIG](#) and the [Minerals website](#):

- [Aboriginal heritage guidelines for resource projects in South Australia](#) (PDF, 5.8 MB)
- [Determination for a mining proposal for the Bird-in-Hand Gold Project](#) (PDF, 0.4 MB)
- [Establishing and registering a mineral claim in South Australia](#) (PDF, 2.6 MB)
- [Mineral exploration reporting guidelines for South Australia](#) (PDF, 1.1 MB).

Updated to include new requirements for an 'Annual expenditure report on mineral exploration licence' to replace the previous 6-monthly 'Summary report', effective 1 July 2017.



## APPENDIX 1 REGISTERED AND ENDORSED INSTRUMENTS

*Registered and endorsed instruments in the Mining Register in 2017*

Instrument	Total registered
Agent – appointment	37
Agent – revocation of appointment	2
Agreement	10
Amendment of the Register	1
Bond – current	26
Bond – returned letter	20
Caveat	1
Caveat – lapsed	1
Caveat – withdrawn	2
Change of address	26
Change of name	12
Court action	7
Court action – withdrawn	5
Court determination	8
Deed	1
Deed of amendment	1
Deed of assignment and assumption	2
Direction – compliance	3
Direction – requirements met	1
Direction – environmental	1
Discharge of mortgage	4
Duplicate lease	6
Duplicate licence	2
Farm in / joint venture	3
Heads of agreement	1
Instrument	Total registered
Memorandum of exemption	3
Memorandum of variation	5
Mining native title agreement	5
Mortgage	4
Native title mining agreement – additional tenements	1
Notice – Form 27	13
Notice of acquisition	6
Partial surrender	28
Relevant event	8
Renewal	233
Renewal – partial surrender	56
Renewal – refused	3
Revocation of private mine	5
Sale agreement	2
Sub-lease agreement	1
Surrender	55
Termination of agreement	1
Transfer	28

Instrument	Total registered
Transfer of interest	3
Transmission	7
Waiver of exemption	40
Withdrawal from joint venture / farm in	1
<b>Total</b>	<b>691</b>

## APPENDIX 2 COURT ACTIONS

*Court actions initiated in relation to mineral tenements in 2017*

Court	Action number	Action	Plaintiff/applicant	Versus	Tenement	Outcome
Warden's	DCCIV-17-57	Application for partial revocation of private mine	Syracuse Development Pty Ltd		PM 108	The Senior Mining Warden found the proper grounds existed for the partial revocation of PM 108. A recommendation was prepared for the Governor, and the private mine was partially revoked on 24 October 2017.
Warden's	DCCIV-17-379	Objection to renewal of a mining lease	Jeffrey Hull	Quantum Graphite Limited	MLs 5561 and 5562	Discontinued
Warden's	DCCIV-17-57	Application for forfeiture of a mining lease	Jeffrey Hull	Quantum Graphite Limited	MLs 5561 and 5562	Discontinued
Warden's	DCCIV-17-581	Application for revocation of private mine	Holcim (Australia) Pty Ltd		PM 147	The Senior Mining Warden found the proper grounds existed for the revocation of PM 147. A recommendation was prepared for the Governor, and the private mine was revoked on 24 October 2017.
Warden's	DCCIV-17-713	Application for partial revocation of private mines	Boral Resources (SA) Limited		PMs 6, 7	Ongoing
ERD	ERD-17-147	Objection to s.74AA compliance direction	Gawler Craton Resources Pty Ltd	Minister for Mineral Resources and Energy	MPL 62	Ongoing
ERD	ERD-17-148	Objection to s.74AA compliance direction	Mark Andrew Filsell and Ian Robert Filsell	Minister for Mineral Resources and Energy	ML 5885	Ongoing
Warden's	DCCIV-17-983	Bias and impropriety – refusal of MLA	Patrick Gundersen	Department of State Development	MC 4400 (expired)	The Senior Mining Warden noted that MC 4400 had expired, and dismissed the Plaintiff.
Warden's	DCCIV-17-991	Application for revocation of private mine	Peter Paech		PMs 295, 296, 297, 298	The Senior Mining Warden found the proper grounds existed for the revocation of PMs. A recommendation was prepared for the Governor, and the private mines were revoked on 24 October 2017.
Warden's	DCCIV-17-1017	Application for revocation of private mine	John Ronald Hahn		PM 285	Ongoing
Warden's	DCCIV-17-1308	Application for revocation of private mine	Boral Resources (SA) Limited		PM 2	The Senior Mining Warden found in 2017 the proper grounds existed for the revocation of PM 2. A recommendation was prepared for the Governor, and the private mine was partially revoked on 30 January 2018.
ERD	ERD-17-227	Application for summary determination authorising mining operations	Kelaray Pty Ltd		ELs 5937, 5945	Ongoing
Warden's	DCCIV-17-1382	Application for revocation of private mine	Sibelco Australia Ltd		PM 73	The Senior Mining Warden found in 2017 the proper grounds existed for the revocation of PM 73. A recommendation was prepared for the Governor, and the private mine was revoked on 30 January 2018.
Warden's	DCCIV-17-1569	Objection to 'Notice of entry'	Fleur Tiver	Razorback Iron Pty Ltd	ELs 5432, 5180, 5240	Action was withdrawn; Razorback gave an undertaking that it will not rely on the 'Notice of entry' or 'Notice of declared equipment' referred to in these proceedings.

EL exploration licence; MC mineral claim; ML mineral lease; MLA mineral lease application; MPL miscellaneous purposes licence; PM private mine.

## APPENDIX 3 MINING NATIVE TITLE REGISTRATIONS

*Native title mining agreements, Indigenous land use agreements and Environment, Resources and Development Court determinations registered in 2017*

Agreement	Parties	Mineral tenement	Date registered
NTMA for exploration	Gawler Resources Pty Ltd and Kokatha Aboriginal Corporation RNTBC	ELs 5704, 5705, 5706, 5738	06/03/17
ERD Court determination	Kelaray Pty Ltd and Straits Exploration (Australia) Pty Ltd	EL 5614	08/06/17
ERD Court determination	Tamas Kapitany and Kokatha Aboriginal Corporation RNTBC	MC 3443	24/04/17
NTMA for exploration	Golden Cross Operations Pty Ltd and AMYAC	EL 5594	27/04/17
NTMA for exploration	Golden Cross Operations Pty Ltd and Arabana Aboriginal Corporation RNTBC	EL 5594	27/04/17
Deed of assignment and assumption	FMG Resources Pty Ltd and Trafford Resources Pty Ltd	EL 5032	23/05/17
ILUA – ALMAC acceptance document	BMV Properties Pty Ltd	ELs 5869, 5911	07/07/17
Exchange of letters – additional tenements	FMG Resources Pty Ltd and Arabana Aboriginal Corporation RNTBC	EL 5912	19/07/17
Exchange of letters – additional tenements	FMG Resources Pty Ltd and Kokatha Aboriginal Corporation RNTBC	ELs 5854, 5884, 5912	25/08/17
NTMA for production	OZ Minerals Carrapateena Pty Ltd, OZM Carrapateena Pty Ltd and Kokatha Aboriginal Corporation RNTBC	Applicable to tenements associated with the Carrapateena Project Area	25/08/17
Deed of assignment and assumption	Teck Australia Pty Ltd and Northernx Pty Ltd	ELs 5982, 5983	14/12/17

ALMAC Antakirinja Land Management Corporation; AMYAC Antakirinja Matu-Yankunytjatjara Aboriginal Corporation; EL exploration licence; EML extractive minerals lease; ERD Court Environment, Resources and Development Court; ILUA Indigenous land use agreement; MC mineral claim; ML mineral lease; MPL miscellaneous purposes licence; NTMA native title mining agreement.; RNTBC Registered Native Title Bodies Corporate.

## APPENDIX 4 EXPLORATION AND MINING ASSESSMENT DEFINITIONS

Term	Definition
<b>Exploration licence or mining lease application</b>	
Completed assessment	When the government assessment report has been completed and has been supported by the Minister's delegate. This definition excludes the following steps in the application process which occur subsequent to this: <ul style="list-style-type: none"> <li>regulation 40/50 notification of proposed terms and conditions of the lease (mining) or licence (miscellaneous purposes licence)</li> <li>grant of the tenement.</li> </ul>
Supported	The stage in the mining assessment process when the Minister's delegate supports the government assessment report. This does not include the grant of the tenement which will occur subsequent to this.
Granted	When the Minister (or delegate) has granted the application.
Refused	When the Minister (or delegate) has refused the application.
Withdrawn	When an applicant chooses to withdraw their application for a tenement which triggers the end of the assessment.
Not available	The system for calculating mining assessment times was developed in 2015. For pre-2015 assessments, time cannot be reported as there is potentially insufficient data to accurately calculate assessment times, particularly in relation to 'time with MRD' and 'time with applicant'.
<b>Time</b>	
<i>Total time</i>	
Mining lease application	The total time from the receipt of the lease application to the time the government assessment report is 'supported' by the Minister's delegate. This time excludes any additional time required to grant the tenement application subsequent to the 'supported' milestone.
PEPR	The total time for an assessment from the receipt of the PEPR to the time the PEPR is approved by the Minister's delegate.
<i>Time with applicant</i>	
Mining lease application	Calculated as any time during the assessment where the: <ul style="list-style-type: none"> <li>applicant is responding to a government information request in relation to the application</li> <li>applicant is preparing a response document following statutory public consultation</li> <li>applicant has requested that the assessment be placed on 'hold'.</li> </ul> Note, time for statutory public consultation is not included as 'time with applicant'.
PEPR	Calculated as any time during the assessment where: <ul style="list-style-type: none"> <li>applicant is responding to a government information request in relation to the PEPR</li> <li>applicant has requested that the assessment be placed on 'hold'.</li> </ul>
<i>Time with MRD</i>	
Exploration licence or mining lease application; PEPR	Any other time that is not with the applicant or company. For a mining lease application, time for statutory public consultation is included as 'time with MRD'.
<i>Average timeframe</i>	
Exploration or mining licence/lease application; PEPR	Average of all assessment times within the stated timeframe (e.g. the 2017 calendar year). Assessments where data is 'not available', 'withdrawn' or 'invalid' are excluded from the calculation.
<i>Target timeframe</i>	
Exploration licence, mining lease application; PEPR	MRD's target timeframe for completing the assessment of an exploration licence application, mining lease application, exploration PEPR or mining PEPR. This timeframe is for 'time with MRD' only. (See definition of 'completed assessment'). The target timeframes are: <ul style="list-style-type: none"> <li>exploration licence application – 3 months (90 calendar days)</li> <li>Exploration Release Area Panel – 2 months (60 calendar days)</li> <li>EPEPR – various targets, see Table 7</li> <li>mining lease application – 6 months (183 calendar days)</li> <li>retention lease application – 6 months (183 calendar days)</li> <li>miscellaneous purposes licence application – 6 months (183 calendar days)</li> <li>mining PEPR – 3 months (92 calendar days).</li> </ul> These times include consultation time with other government departments.

## APPENDIX 5 MINING ASSESSMENT CALCULATIONS

### Completed assessments and assessment times for mining in 2017

Assessment type	Number completed	Target timeframe (days)	Average timeframe (days)	Percentage that achieved target timeframe (%)	Subset used for percentage calculation
Extractive minerals lease mining proposal	6	183 (6 months)	169	80%	4 out of 5
Mineral lease mining proposal	8	183 (6 months)	171	60%	3 out of 5
Retention lease application	2	183 (6 months)	200	0%	0 out of 1
Miscellaneous purposes licence	6	183 (6 months)	165	67%	4 out of 6
Extractive minerals PEPR/MOP	24	92 (3 months)	240	31%	5 out of 16
Minerals PEPR	19	92 (3 months)	144	46%	6 out of 13
<b>Total</b>	<b>65</b>				

#### Notes

Six-month target timeframe for the assessment of mineral lease applications is for 'time with MRD' only; 183 days is calculated from 6 months multiplied by 30.5 days per month.

Three-month target timeframe for the assessment of PEPRs is for 'time with MRD' only; 92 days is calculated from 3 months multiplied by 30.5 days per month.

Percentage that achieved target timeframe is calculated from a subset of the total 'number completed'. The calculation is based on the data in Appendix 7. For example, for extractive minerals lease mining proposal assessments, there are only 5 out of 6 assessments that have available data to perform the 'percentage that achieved target timeframe' calculation. From the 5 extractive minerals lease mining proposal assessments with data available, 4 of these assessments achieved the target timeframe of 183 days. Hence, the 'percentage that achieved target timeframe' is calculated as '4 out of 5' assessments which equates to 80%.



## APPENDIX 6 EPEPR ASSESSMENTS

### Completed assessments and assessment times for EPEPRs in 2017

EPEPR	Tenement	Holder/operator	Approval type	Approval date	Target achieved	Total time (days)	Time with applicant (days)	Time with MRD (days)
2016_1123	EL 5832	Marmota Limited	12-month PEPR	25/01/17	No	117	28	89
2016_1182	EL 4954	Daktyloi Metals Pty Ltd	12-month PEPR	02/02/17	Yes	23	3	20
2017-079	EL 5183, 5732	Challenger Gold Operations Pty Ltd	12-month PEPR	17/02/17	Yes	7	3	4
2016-064	EL 5636	Terrace Mining Pty Ltd	12-month PEPR	17/02/17	Yes	4	0	4
2017_1195	ELs 5089, 5744, 5747	SeeSaw Resources Pty Ltd	12-month PEPR	08/03/17	Yes	26	13	13
2017_1191	EL 5360	Variscan Mines Limited	12-month PEPR	22/03/17	Yes	41	13	28
2017_1197	EL 5719	South Australian Coal Pty Ltd	12-month PEPR	28/03/17	Yes	32	6	26
2017-004	EL 5372	Red Tiger Resources Limited	12-month PEPR	28/03/17	Yes	6	0	6
2017-003	MC 4405	Hanson Construction Materials Pty Ltd	12-month PEPR	30/03/17	Yes	19	0	19
2016-066	ELs 5652, 5653, 5654, 5655, 5656, 5657, 5658, 5659	Cartwheel Minerals Pty Ltd	Ongoing PEPR	31/03/17	Yes	89	24	65
2017_1213	EL 5433	SA Exploration Pty Ltd	12-month PEPR	03/04/17	Yes	13	6	7
2017_1213	EL 5769	SA Exploration Pty Ltd	12-month PEPR	03/04/17	Yes	13	6	7
2017_1213	EL 5794	SA Exploration Pty Ltd	12-month PEPR	03/04/17	Yes	13	0	13
2017_1216	EL 5926	S Uranium Pty Ltd	12-month PEPR	05/04/17	Yes	22	4	18
2017-006	EL 5299	Alliance Craton Explorer Pty Ltd	12-month PEPR	10/04/17	Yes	11	0	11
2017_1230	EL 5220	NiCul Minerals Limited	12-month PEPR	14/04/17	Yes	23	8	15
2016_1153	EL 5302	GBE Exploration Pty Ltd	12-month PEPR	09/05/17	Yes	87	79	8
2017-007	EL 5901	Tunkillia Gold Pty Ltd	12-month PEPR	26/05/17	Yes	36	0	36
2016-051	ELs 5732, 5661, 5183	Challenger Gold Operations Pty Ltd	PEPR review	31/05/17	Yes	2	0	2
2016_1118	EL 5589	Marmota Limited	12-month PEPR	06/06/17	Yes	6	0	6
2016_1066	EL 5705	Gawler Resources Pty Ltd	12-month PEPR	08/06/17	Yes	43	21	22
2016_1118	EL 5589	Marmota Limited	12-month PEPR	22/06/17	Yes	1	0	1
2017_1262	EL 5580	Reedy Lagoon Corporation Limited	12-month PEPR	07/07/17	Yes	27	3	24
2016-018	ELs 5652, 5653, 5654, 5655, 5656, 5657, 5658, 5659	Cartwheel Minerals Pty Ltd	12-month PEPR	26/07/17	No	267	97	170

EPEPR	Tenement	Holder/operator	Approval type	Approval date	Target achieved	Total time (days)	Time with applicant (days)	Time with MRD (days)
2017_1275	ELs 4995, 5060, 5087, 5088, 5195, 5377, 5527, 5589, 5684, 5759, 5799, 5830, 5861, 5914, 5930	Marmota Limited	Ongoing PEPR	28/07/17	Yes	9	0	9
2017-077	EL 5594	Golden Cross Operations Pty Ltd	12-month PEPR	22/08/17	No	142	90	52
2016-046	ELs 5732, 5183	Challenger Gold Operations Pty Ltd	PEPR Review	22/08/17	Yes	15	0	15
2017-011	ELs 5164, 5299, 5590	Alliance Craton Explorer Pty Ltd	12-month PEPR	14/09/17	Yes	6	3	3
2017_1303	EL 5119	Heathgate Resources Pty Ltd	12-month PEPR	27/09/17	Yes	20	0	20
2016-038	EL 5120	Peninsula Resources Limited	PEPR review	27/09/17	Yes	10	5	5
2017-012	EL 5953	Peninsula Resources Limited	12-month PEPR	10/10/17	Yes	6	0	6
2016_1162	EL 5589	Marmota Limited	12-month PEPR	25/10/17	Yes	2	0	2
2017_1332	ELs 5215, 5621	Boss Uranium Pty Ltd	Ongoing PEPR	31/10/17	Yes	4	1	3
2017_1305	EL 5916	Quasar Resources Pty Ltd	12-month PEPR	02/11/17	Yes	46	15	31
2017-014	EL 5998	Challenger Gold Operations Pty Ltd	12-month PEPR	08/11/17	Yes	6	0	6
2017_1341	MO 6536.006, EL 5367	Perilya Freehold Mining Pty Ltd	12-month PEPR	16/11/17	Yes	10	0	10
2017-009	EL 5614	Kelaray Pty Ltd	Ongoing PEPR	22/11/17	Yes	96	23	73
2017_1316	ELs 5077, 5199, 5200	Western Areas Limited	12-month PEPR	30/11/17	Yes	52	6	46
2017-015	EL 5618	Ausmin Development Pty Ltd	12-month PEPR	22/12/17	Yes	9	0	9

EL exploration licence; EPEPR exploration program for environment protection and rehabilitation; MC mineral claim

## APPENDIX 7 MINING ASSESSMENTS

*Completed assessments and assessment times for mining lease applications, retention leases and miscellaneous purposes licences in 2017*

Tenement	Applicant / company	Project	Assessment outcome	Total time (days)	Time with applicant (days)	Time with MRD (days)	Target achieved
ML 6467	IRD Mining Operations Pty Ltd	Central Eyre Iron Project	Supported	405	196	209	No
MC 4139	Craig Edward Marshall	Marshall Gypsum Mine	Assessment complete but not granted	n/a	n/a	n/a	n/a
EML 6468	Limerock Holdings Pty Ltd	Limerock Quarry	Supported	166	7	159	Yes
MC 4400	P Gundersen and DP Smith	Entia Gems Mine	Invalid application	Invalid	Invalid	Invalid	Invalid
MC 4406	Quasar Resources Pty Ltd	Four Mile Gravel Pit	Assessment complete – application on hold	200	41	159	Yes
EML 6469	Pintavale Pty Ltd	Larapinta Quarry	Supported	279	89	190	No
MPL 149	OZ Minerals Carrapateena Pty Ltd	Carrapateena Project Airstrip MPL	Supported	178	10	168	Yes
RL 130	Destiny Stone Australia Pty Ltd	Destiny Stone	Supported	n/a	n/a	n/a	n/a
ML 6470	Pirie Resources Pty Ltd	Campoona Graphite Project	Supported	366	93	273	No
MPL 150	Pirie Resources Pty Ltd	Campoona Graphite Project	Supported	366	93	273	No
MPL 151	Pirie Resources Pty Ltd	Campoona Graphite Project	Supported	366	93	273	No
RL 131	Hanson Construction Materials Pty Ltd	Ross Road	Supported	200	0	200	No
EML 6474	Clay & Mineral Sales Pty Ltd	White Sand Pit - Alford	Supported	189	31	158	Yes
EML 6475	Mineral Holding Pty Ltd	Haydons Sand Pit	Supported	239	60	179	Yes
ML 6471	OZ Minerals Carrapateena Pty Ltd	Carrapateena Project	Supported	201	110	91	Yes
MPL 152	OZ Minerals Carrapateena Pty Ltd	Carrapateena Project	Supported	201	110	91	Yes
MPL 153	OZ Minerals Carrapateena Pty Ltd	Carrapateena Project	Supported	201	110	91	Yes
MPL 154	OZ Minerals Carrapateena Pty Ltd	Carrapateena Project	Supported	201	110	91	Yes
ML 6472	OneSteel Manufacturing Pty Limited	Iron Sultan & Iron Warrior	Supported	171	29	142	Yes
ML 6473	OneSteel Manufacturing Pty Limited	Iron Sultan & Iron Warrior	Supported	171	29	142	Yes
EML 6477	Acquista Investments Pty Ltd and Veolia Environmental Services (Australia) Pty Ltd	Integrated Waste Services	Supported	n/a	n/a	n/a	n/a
MC 4307	Polymetals (White Dam) Pty Ltd	White Dam North Gold Mine	Withdrawn by applicant	n/a	n/a	n/a	n/a

EML extractive minerals lease; MC mineral claim; ML mineral lease; MPL miscellaneous purposes licence; RL retention lease.

*Completed assessments and assessment times for mining PEPRs in 2017*

Tenement	Company	Project name	Assessment outcome	Total time (days)	Time with company (days)	Time with MRD (days)	Target achieved
MLs 6103, 6457; MPLs 63, 65, 66	Challenger Gold Operations Pty Ltd	Challenger Mine	Approved	36	5	31	Yes
EML 5792	Clinton Quarries Pty Ltd	Clinton Sand Pit	Approved	565	414	151	No
EML 6459	Cave Quarries Pty Ltd	Tumby Bay Limestone Deposit	Approved	126	95	31	Yes
ML 4572	Saltbush Flat Mine Nominees Pty Ltd	Saltbush Flat Gold Mine	Approved	n/a	n/a	n/a	n/a
EML 5793	AustralAsian Granite Pty Ltd	Harlequin Dimension Stone Quarry	Withdrawn	n/a	n/a	n/a	n/a
ML 6314 + others	Southern Iron Pty Ltd	Peculiar Knob	Approved	456	122	334	No
MLs 234–235, 237, 357–359 + others	Buckland Dry Creek Pty Ltd	Dry Creek Salt Fields	Approved	159	77	82	Yes
MLs 6226, 6220; MPLs 140, 80	Murray Zircon Pty Ltd	Mindarie Zircon - Mindarie C / A2	Approved	782	273	509	No
MLs 517, 382, 658, 134, 453	Olsson Industries Pty Ltd	Olsson Saltfield	Withdrawn	n/a	n/a	n/a	n/a
ML 4762 + others	OneSteel Manufacturing Pty Limited	Iron Knob, Iron Princess, Iron Monarch	Approved	41	0	41	Yes
EML 4805 + others	Bowjen Nominees Pty Ltd	Rosedale Slate, Limestone and Sand Quarries	Approved	540	177	363	No
EML 5702	Wiltunga Nominees Pty Ltd	Wiltunga Quarry (Bute)	Approved	718	221	497	No
EML 4832	Stephen Zealand	Macgillivray Sand Pit	Withdrawn	n/a	n/a	n/a	n/a
EML 5823	Stuart Malcolm Paterson	Skinner Sand Pit	Approved	200	7	193	No
EML 6468	Limerock Holdings Pty Ltd	Limerock Quarry	Approved	17	7	10	Yes
EMLs 5775, PM 117	Anthony Raymond Moss	Bastians Quarry/Willunga Slate	Approved	921	377	544	No
EMLs 3200–3202	Paul Elliott Musolino	Anstey Hill Shale Quarry	Approved	n/a	n/a	n/a	n/a
EML 6161	Gambier Earth Movers Pty Ltd	Hackett Hill Sand Pit	Approved	749	399	350	No
EMLs 2860, 2869, 2940, 2962, 2963	Mineral Holding Pty Ltd	Pt Gawler Shell Grit Pit	Approved	n/a	n/a	n/a	n/a
EMLs 6148, 6149	Ronald Kevin Johnson	Majors Quarry	Approved	n/a	n/a	n/a	n/a
EML 5588	Scotran Pty Ltd	Sugarloaf Hill	Approved	n/a	n/a	n/a	n/a
ML 6464; EML 6443	Stoney Pinch Pty Ltd	Stoney Pinch Quarry	Approved	194	96	98	No
PM 127	Eric A Nitschke	Symonds South Quarry	Approved	43	0	43	Yes

Tenement	Company	Project name	Assessment outcome	Total time (days)	Time with company (days)	Time with MRD (days)	Target achieved
ML 6109; MPLs 14, 15, 64, 92	Boss Uranium Pty Ltd	Honeymoon Uranium Mine	Approved	97	9	88	Yes
EML 5851	Nutt Bros Nominees Pty Ltd	Nutt Bros Sand Deposit	Withdrawn	n/a	n/a	n/a	n/a
EML 6463	Growden Excavations Pty Ltd	Corunna Quarry	Approved	24	0	24	Yes
MLs 6321, 6036, 6387; MPL 57-58	Heathgate Resources Pty Ltd	Beverley & Beverley North Uranium Mine	Approved	28	0	28	Yes
ML 6229	Terramin Australia Limited	Angas Zinc mine	Approved	208	22	186	No
EMLs 5111, 5479, 5480; PM 181	DK Quarries Pty Ltd	Port Lincoln Quarry	Approved	n/a	n/a	n/a	n/a
EMLs 4885, 5182, 5183, 5184, 5186	Santos Ltd	Santos Rubble Pits	Approved	205	92	113	No
EML 5610	Jim Alvanos	Santos Readymix Rubble Pit	Approved	740	554	186	No
Olympic Dam Indenture	BHP	Olympic Dam	Approved	n/a	n/a	n/a	n/a
MPL 149	OZ Minerals Carrapateena Pty Ltd	Carrapateena	Approved	29	0	29	Yes
ML 6303	Cu-River Mining Australia Pty Limited	Cairn Hill Mine	Approved	248	91	157	No
Leigh Creek Coalfield perpetual leases	Flinders Power Partnership	Leigh Creek Coal Mine	Approved	n/a	n/a	n/a	n/a
ML 6402	Quasar Resources Pty Ltd	Beverley Four Mile Uranium Mine	Withdrawn	n/a	n/a	n/a	n/a
EML 6200	Barry Francis Mulligan	St Mary's Limestone Quarry	Approved	792	306	486	No
EML 6019	Avenglen Pty Ltd	Inkerman Quarry (Port Wakefield Rubble Pit)	Approved	937	886	51	Yes
EMLs 3611, 4376	PGH Bricks & Pavers Pty Limited	PGH Clay Pit (Birdwood Clay Mine)	Approved	220	77	143	No
MLs 5704, 5812, 5813	Rotten Lake Gypsum Pty Ltd	Rotten Lake Gypsum Mine	Approved	660	510	150	No
MLs 3510, 5715	Marcus Garry Van Riet	Carraill Quarry	Approved	n/a	n/a	n/a	n/a
EML 6263	Gambier Earth Movers Pty Ltd	Port MacDonnell Sandpit	Approved	991	488	503	No
ML 2912 + others	Adelaide Brighton Cement Ltd	Klein Point Quarry	Approved	260	116	144	No

EML extractive minerals lease; ML mineral lease; MPL miscellaneous purposes licence; n/a not applicable; PM private mine



## SHORTENED FORMS

ALMAC	Antakirinja Land Management Corporation
AMYAC	Antakirinja Matu-Yankunytjatjara Aboriginal Corporation
EARF	Extractive Areas Rehabilitation Fund
EL	exploration licence
EML	extractive minerals lease
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (Cth)
EPEPR	exploration program for environment protection and rehabilitation
ERA	exploration release area
ERD Court	Environment, Resources and Development Court
ILUA	Indigenous land use agreement
MC	mineral claim
ML	mineral lease
MLA	mineral lease application
MOP	mine operations plan (applies to private mines)
MPL	miscellaneous purposes licence
NTMA	native title mining agreement
PEPR	program for environment protection and rehabilitation
PM	private mine
RL	retention lease
RNTBC	Registered Native Title Bodies Corporate
SARIG	South Australian Resources Information Gateway
TReL	Tenement Return e-Lodgement system
WPA	Woomera Prohibited Area