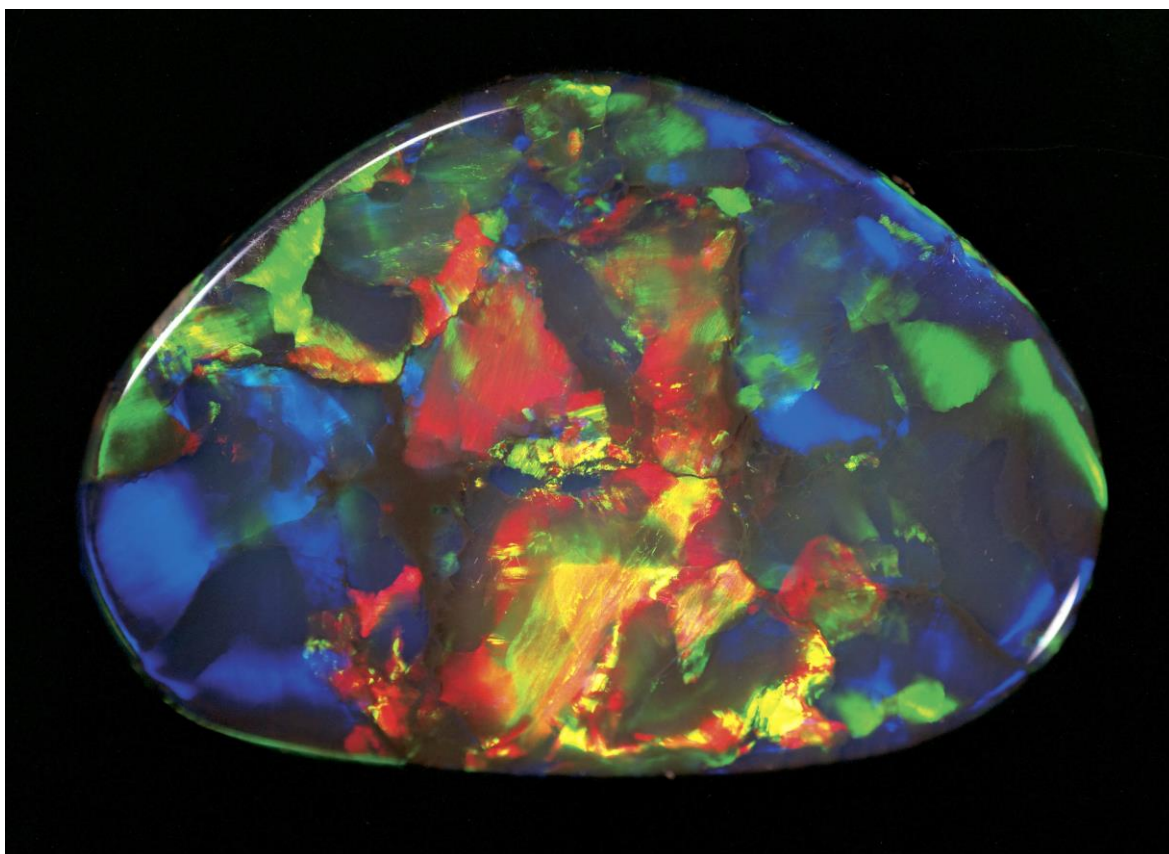


# Independent Review into Statutory Framework for Small-Scale Titles in New South Wales

Issues Paper

15 December 2023



Source: Mining Exploration and Geoscience, Department of Regional NSW, © State of New South Wales

# Contents

Foreword .....	3
Terms of Reference.....	4
1 Introduction and purpose of this paper .....	6
2 The current status of the opal mining industry in NSW .....	6
3 The regulation of opal mining in NSW.....	11
4 The process for obtaining approval to prospect for opal in NSW.....	15
5 The process for obtaining approval to mine for opal in NSW.....	15
6 Mapping issues.....	17
7 Issues with the opal prospecting framework .....	17
8 Issues with the mineral claim framework.....	19
9 Amount of compensation payable to landholders for a mineral claim.....	22
10 Availability of land for opal mining .....	23
11 Rehabilitation of areas affected by opal mining.....	24
12 Preserved fields .....	32
13 Camps on claims .....	33
14 Biosecurity .....	35
15 Competency and training for opal mining.....	36

# Foreword

In June 2023, the NSW Government announced the Independent Review into the current statutory frameworks for administration and regulation of small-scale opal titles (the **Review**). The NSW Government has appointed the Hon. Terry Sheahan AO to lead the Review with assistance from Norton Rose Fulbright Australia.

Following recent key stakeholder engagement, the Review has released this Paper for the purpose of seeking comment from the general public on a range of issues identified with the current administration and regulation of small-scale opal titles.

We wish to thank those stakeholders who have generously provided assistance to the Review at this preliminary stage. We look forward to engaging further with these stakeholders, as well as with those who have not yet had the opportunity to participate.

Submissions are invited not only on the issues raised in this Paper but on any matter within the scope of the Terms of Reference which is set out below.

Submissions to the Review may be provided at any time before **11:59 pm on Wednesday 28 February 2024** via Have Your Say here: <https://www.nsw.gov.au/have-your-say/independent-review-of-small-scale-titles>

# Terms of Reference

On 22 May 2023, the Minister for Natural Resources, the Hon Courtney Houssos MLC, announced the commencement of a small-scale (opal mining) titles validation program to re-determine titles invalidly issued under the *Mining Act 1992* between 1 January 2015 and 13 February 2023.

As part of a broader initiative to investigate the issues associated with the invalidly granted titles, Minister Houssos announced an Independent Review would be conducted into the current statutory framework for administration and regulation of small-scale opal titles.

## *Objective*

The Independent Review will analyse the statutory framework under the *Mining Act 1992* relating to opals and the current state of the opal industry in NSW to make recommendations about the future of the industry.

This will include, among other things, consideration of land access and landholder compensation arrangements as well as the findings and recommendations of the 2011 Lightning Ridge Opal Mining Report by Murray Wilcox AO KC (the Wilcox Report). The focus will be on identifying inefficiencies and inadequacies in the current statutory framework to inform recommendations for proposed legislative and policy reform that will deliver practical, beneficial changes.

## *Scope*

The terms of reference for the Independent Review are to examine, report on and make recommendations as to:

1. The current statutory provisions for small scale titles under the *Mining Act 1992* (the Act) and whether:
  - a. they are fit-for-purpose for the administration and regulation of small-scale title mining;
  - b. they adequately balance the needs and rights of miners and landholders;
  - c. the compensation arrangements for landholders are sufficient, fair and contemporaneous;
  - d. the rehabilitation framework relating to small-scale titles is sufficient to deliver effective rehabilitation outcomes.
2. The effectiveness of the current legislative framework for opal mining in NSW, including an assessment of the 2011 Wilcox Report and subsequent 2015 legislative changes and how NSW compares to other comparable Australian jurisdictions.
3. The current state of the small-scale opal mining industry in New South Wales, including the nature and size of the industry, trends and key economic measures.
4. The future of the industry, including land availability and consideration of the release and limitation of additional areas for prospecting and mining.
5. An appropriate methodology to determine landholder compensation amounts for the White Cliffs and Lightning Ridge mineral claims districts, including proposed amounts.
6. Consideration of landholder issues, including biosecurity and notification requirements, as well as the Lightning Ridge Opal Area Reserve Crown Land Manager.

7. Any other matters relating to improving the regulation of small-scale titles in NSW.

The specific activities undertaken as part of the Independent Review will be determined by the independent reviewer but are expected to include the following as a minimum:

- Targeted consultation with key stakeholders including miners, mining associations, landholders and State and Local Government agencies
- Seeking and considering feedback obtained through open public consultation, including through open forums and a public call for written submissions based on the Terms of Reference
- Review of documents provided by the Department of Regional NSW, including the Wilcox Report, an economic analysis of the industry in the form of a cost benefit analysis and contemporaneous property valuations.
- Review of relevant legislation including the *Mining Act 1992*. There will be some touchpoints for consideration regarding obligations under the *NSW Environmental Planning and Assessment Act (1979)* and the *Commonwealth Native Title Act (1996)*.

#### *Deliverables*

Delivery of a Preliminary Observation report is to be provided after the initial stakeholder engagement process is complete, with a draft Final Report provided within 6 months of commencement of the Independent Review and a Final Report within 3 weeks after the draft report. The final report will be publicly released.

#### *Out of scope*

While specific experiences may be raised as part of the review process, the Independent Review will not make determinations relating to specific claims or conflicts.

Consideration of the *Work Health and Safety (Mines and Petroleum Sites) Act 2013* does not need to be included in the Independent Review.

#### *Governance*

The independent reviewer will be responsible for managing stakeholder engagement activities and reviewing submissions. Administrative support will be provided by Mining, Exploration and Geoscience (Department of Regional NSW) as required, and as specified in the contract with the independent reviewer.

The independent reviewer will also consider information from the Government Envoy appointed to liaise with opal mining stakeholders, the Hon. Stephen Lawrence MLC, on current stakeholder issues.

## 1 Introduction and purpose of this paper

In June 2023 the NSW Government announced the Independent Review into Statutory Framework for Small-Scale Titles in NSW (the **Review**). The NSW Government has appointed the Hon. Terry Sheahan AO to lead the Review with assistance from Norton Rose Fulbright Australia.

As set out in the Terms of Reference, the Review is tasked with examining the legal and policy framework for small-scale opal mining under the *Mining Act 1992* (**Mining Act**) and to make recommendations to Government.

The focus of the Review is identifying inefficiencies and inadequacies in the current statutory framework to inform recommendations for proposed legislative and policy reform that will deliver practical, beneficial changes.

The purpose of this Issues Paper is to invite stakeholder views on the state of the opal mining industry in New South Wales (**NSW**). The paper sets out initial observations on the following themes:

- The current status of the opal mining industry in NSW
- The regulation of opal mining in NSW
- The process for obtaining approval to prospect for opal in NSW
- The process for obtaining approval to mine for opal in NSW
- Mapping issues
- Issues with the opal prospecting framework
- Issues with the mineral claim framework
- Availability of land for opal mining
- Rehabilitation of areas affected by opal mining
- Preserved field
- Camps on claims
- Biosecurity
- Competency training for opal mining
- Other issues

Submissions are invited on the questions raised under each theme or on any other matter of interest or concern to the reader.

## 2 The current status of the opal mining industry in NSW

Opal ( $\text{SiO}_2 \cdot n\text{H}_2\text{O}$ ) is a form of silica chemically similar to quartz but containing a variable amount of water within the mineral structure. Water content varies between 2 and 20%, with precious opal generally containing 6–10%.

Precious opal is composed of small spheres of amorphous silica packed in a regular array. White light is diffracted by these layers and broken up into the colours of the spectrum, causing the characteristic display of colours for which opal is so highly prized.

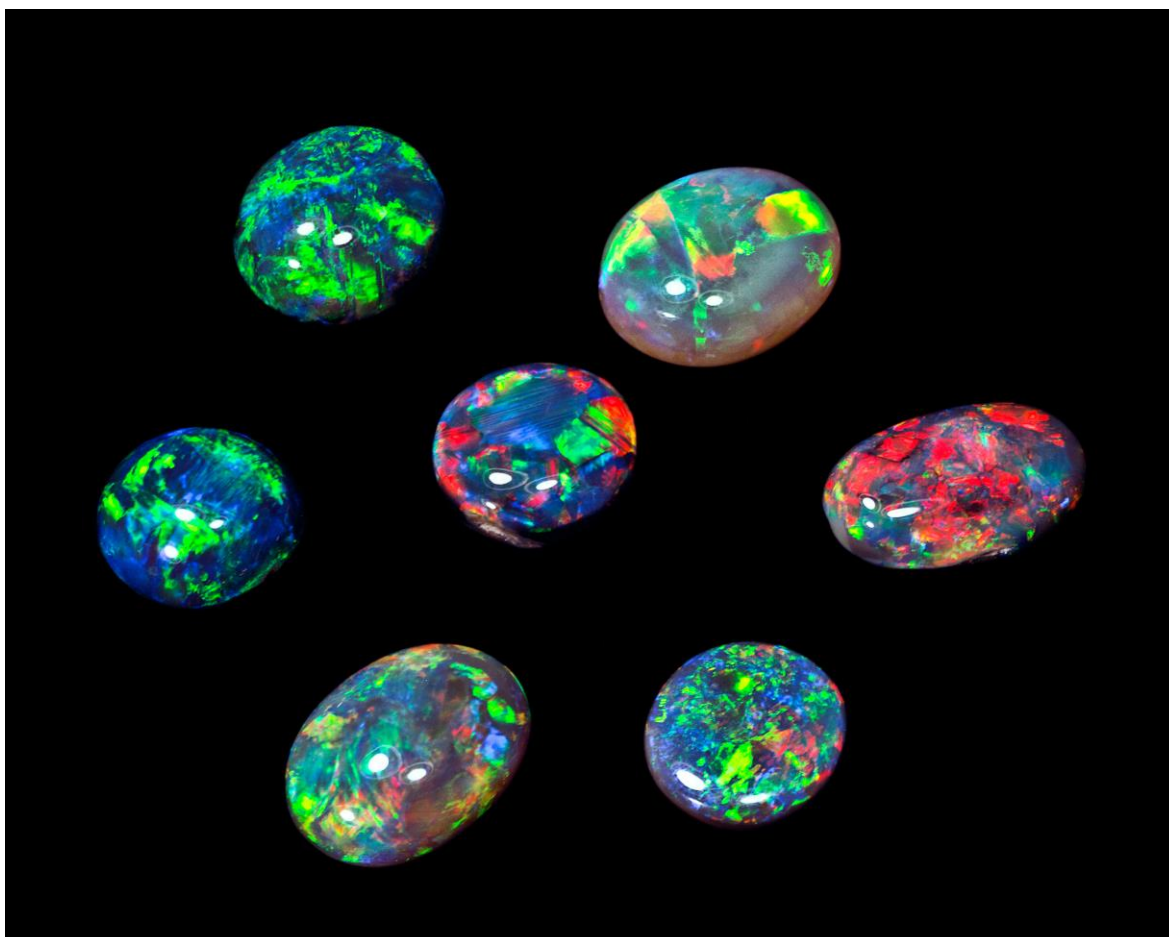
The body colour or background for the diffracted colour play may be milky white, grey, blue, black or colourless. Black opal is the most highly sought after variety as the dark background shows off the colour play best.<sup>1</sup>

The naming of opal types is complex. Colour – this is not to be confused with the body tone of the stone (black/grey/white)– refers to the impressive rainbow hues found in the stone. Red is the rarest of the colours, followed by orange, green, blue, and then purples. There are also “in between” colours, being pinks, yellows and aquas. Thus a Black Opal with red in it would be a rare

<sup>1</sup> ‘Opal’, *Energy & Mining South Australia* (Web Page)  
<<https://www.energymining.sa.gov.au/industry/minerals-and-mining/mineral-commodities/opal>>.

and valuable combination. A Crystal Opal with purple in it would be a common and relatively inexpensive piece.<sup>2</sup>

The Review had the opportunity to examine the types of opal by visiting retailers in Lightning Ridge and White Cliffs. The variety, colour and beauty of the stones was indeed impressive. An example of the colours of opal is shown below.



Source: Geological Survey of New South Wales, *Opals In NSW*, (1983), Geological Survey of New South Wales, © State of New South Wales

The mining of opal has a lengthy history in NSW, commencing in 1891 at White Cliffs and then in 1901 at Lightning Ridge. In 1901, a Royal Commission was established to inquire into the mining of opal at White Cliffs. This inquiry resulted in the NSW Government resuming a number of large mining leases and then subsequently allowing the grant of small-scale mineral claims over areas of 100 square feet.<sup>3</sup>

Since this time, opal mining has continued at White Cliffs and Lightning Ridge in broadly the same manner, with small plots (usually no more than 2,500m<sup>2</sup>) allocated to individuals to mine on a

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<sup>2</sup> See 'A Little Help with Opal Valuation' *Opals Down Under* (Web Page).  
<<https://www.opalsdownunder.com.au/a-little-help-with-opal-valuation/>>.

<sup>3</sup> *Royal Commission into the Opal-Mining Industry at White Cliffs* (Report of the Commissioners, 24 July 1901)  
<[https://static1.squarespace.com/static/597006f5b8a79ba33f6508fe/t/653624bb1fbc7f67dd4e79bd/1698047168225/Royal\\_Commission\\_into\\_White\\_Cliffs\\_Opal\\_Field\\_1901.pdf](https://static1.squarespace.com/static/597006f5b8a79ba33f6508fe/t/653624bb1fbc7f67dd4e79bd/1698047168225/Royal_Commission_into_White_Cliffs_Opal_Field_1901.pdf)>.



relatively small scale. For some, opal mining is a hobby, for others it is a major business and their primary income source.

The methods of mining opal have changed over time, but for the bulk of mineral claims (the name of the title issued to permit opal mining), mining occurs by way of the digging of a shaft and tunnelling to extract the opal from seams or nodes.

More recently, other forms of larger scale opal mining have developed including the carrying out of trenching operations and the use of open cut methods. Trenching essentially involves open cut operations that are subject to a restriction as to how much of the claim can be open at any time. Trenching operations often occur over multiple adjoining standard claims mined as a single operation.<sup>4</sup> Some of the open cut operations occur over a larger mineral claim of up to two hectares.



Source: Mining Exploration and Geoscience, 2023, © State of New South Wales

The extraction of opal is regulated by New South Wales legislation, principally the *Mining Act 1992*. Other legislation is also relevant, including the *Environmental Planning and Assessment Act 1979*, the *Workplace Health and Safety Act 2011* and the *Biosecurity Act 2015*.

The regulation of opal mining is carried out by the Mining Exploration and Geoscience (**MEG**) unit within the Department of Regional NSW.<sup>5</sup> Within that entity, there is a section known as the Resource Regulator. As its name suggests, this section regulates the opal mining industry through education, monitoring, enforcement and compliance programs.

Australia produces the largest volume and some of the highest quality opal in the world. The opal extracted in NSW is sold both locally and overseas. Some is cut, polished and made into jewellery

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<sup>4</sup> Mining Regulation cl 43(3) requires notification if multiple mineral claims are intended to be mined as a single operation.

<sup>5</sup> This Review uses both the term MEG and Department as it reflects the fact that historically mining was regulated by a 'Department' under various names.



and other products and sold directly to retail customers. The bulk is exported, displayed and sold internationally with the primary market being the USA.<sup>6</sup>

The precise number of persons involved in the opal mining industry in NSW is unclear. In relation to miners, the Review has been advised by MEG that there are approximately 1,600 distinct mining operators. The bulk of mining undertaken by these operators occurs in and around the town of Lightning Ridge, which is located about 75km north of the town of Walgett. At Lightning Ridge, there are currently approximately 3,200 mineral claims, mostly within the following opal fields:

- The Three Mile
- Thorleys Six Mile
- Nobbys (Old Nobby)
- New Nobby (or New Rush)
- Deep Four Mile
- McDonalds Six Mile (or The Six Mile)
- Rouses Six Mile
- Nine Mile
- Nebea Hill
- Shallow Belars
- Hawks Nest
- Bald Hill
- New Chum and Old Chum
- Coocoran
- Sheeppyard
- Grawin
- Glengarry
- Mulga Rush and Wee Warra North
- Carters Rush
- New Angledool (Mehi)

The other location of opal mining is where it began, being the town of White Cliffs. This location is very remote, situated about 95 km north of Wilcannia and 260km north east of Broken Hill. At White Cliffs, the industry is quite modest with around 100 mineral claims currently issued over the Main Field, Barclays Bunker, Gemville plus small locations elsewhere.

The land on which opal mining occurs is varied. Some comprises freehold title, while other areas are Crown Land managed by the Crown Land reserve manager. Considerable mining also occurs on land subject to Western Lands leases. Most of these leases are what is called perpetual leases where there is no fixed term. The leaseholders use the land for a variety of agricultural purposes such as cropping and the growing of sheep, goats and cattle depending on the type of land and the farming operation.

Some mining operators comprise individual miners who work alone or in partnership with other miners. Some operations are quite substantial with up to 10 employees and extensive machinery and equipment including tip trucks, bulldozers, tractors, long arm excavators, blowers, drill rigs, washing agitators, and a range of extensive digging equipment and drilling apparatus. An example of a rig and the blower (being a machine used to extract the opal ore) is below.

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<sup>6</sup> See Australian Opal Exhibition (Web Page) <<https://www.austopalexpo.com.au/>>.



Source: Photo taken by the Review during a site visit to Lightning Ridge

Opal mining is clearly a major industry within the shires of Walgett and Central Darling. The towns of Lightning Ridge and White Cliffs have developed and grown largely due to the presence of opal and the industry which seeks to extract, cut, polish and sell the product.

These towns are a major tourist attractor to these regions where both Australian and international visitors come to view the landscape, explore underground mines, wander across various mining fields, stay at underground dugouts and hotels, visit opal retail shops and also to occasionally 'noodle' for opal. The tourism industry brings additional economic benefits and employment opportunities to the regions from the expenditure of tourists on local suppliers and service providers.

The industry also supports upstream and downstream suppliers. This includes fuel and food providers to miners, support services such as drilling and manufacturing of equipment, and the sale and repair of machinery and equipment. It also includes downstream buyers and intermediaries, cutters, polishers and jewellers, and retail sales outlets for opal products.

The opal mining industry is of course a major consumer of services and other suppliers including food and beverage, health, housing, building and construction, earth moving, fuel, parts and equipment and ancillary services. Miners who live in the towns and opal mining areas also pay rates to the local councils, which form an important source of council revenue.<sup>7</sup>

The Review currently does not have a clear indication of the scale and value of the NSW opal mining industry. Assessing the economic value of the opal mining industry is also made difficult by the lack of data. The mining of opal is the only extractive industry regulated by the Mining Act for which no royalty is paid to the State of NSW for the amount extracted. Thus no records are kept which monitor the amount of opal that is mined and the price that is paid for that opal.

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<sup>7</sup> It was suggested to the Review that the second largest source of revenue for Walgett Shire Council is the payment of rates from dwellings situated on mineral claims.

In addition to these hard to grasp economic benefits, there are also tangible non-economic benefits from opal mining. Opal mining, like grazing, cropping and other agricultural activities, is a work and lifestyle that is highly sought after by those who are attracted to it. It offers physical activity that brings substantial rewards and satisfaction.

Like agriculture, it also offers a means of working well past the usual retirement age of 65. It is clear to the Review that opal mining provides deep joy to many miners. This has a range of health benefits, particularly for the mental well-being of miners.

That said, the Review currently lacks detailed information on the value and benefits of the opal mining industry and what future trends and issues it needs to address in order to have a successful future.

*Questions for submissions:*

- How much opal do you think is extracted and sold annually in NSW?
- How many people do you think are employed, either directly or indirectly, in the opal mining industry in NSW?
- What do you think is the wider value of the opal industry to NSW and how do you calculate that value?
- If that information is not available, how could the Government obtain that information?
- How does the industry support local communities in the areas in which it operates?
- How can the industry attract new and younger entrants?
- What is the scale of the tourist industry in White Cliffs and Lightning Ridge?

### **3 The regulation of opal mining in NSW**

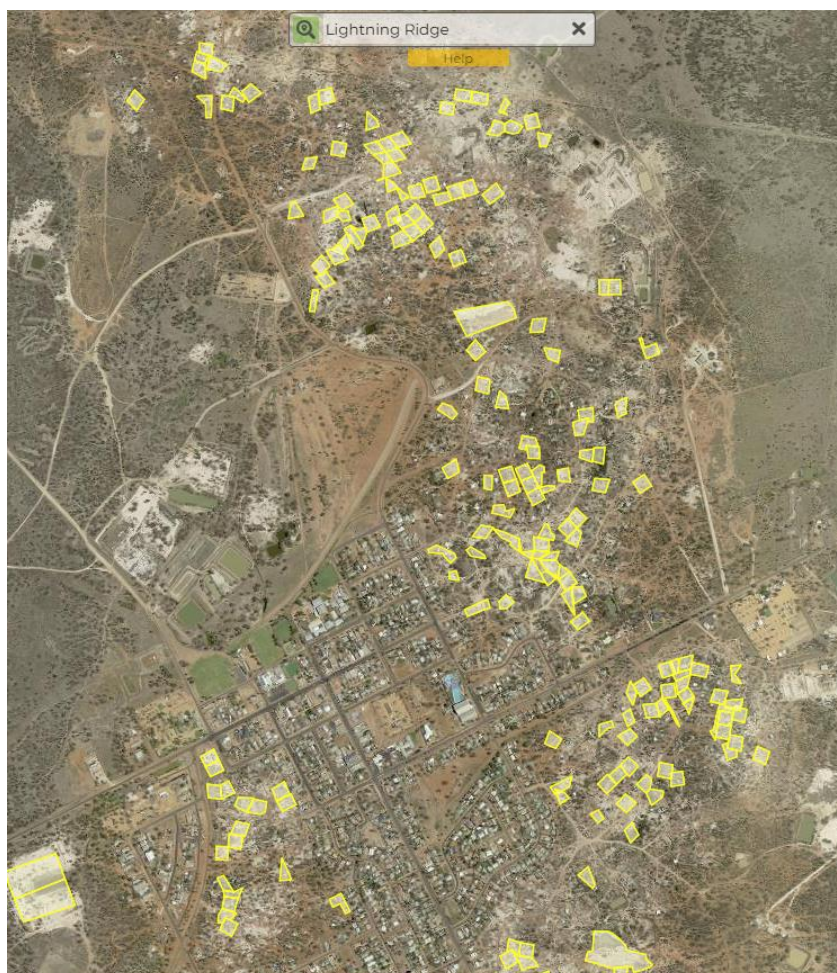
As noted above, opal mining is regulated under the *Mining Act 1992*. This Act is supported by the *Mining Regulation 2016 (Mining Regulations)*. The Mining Regulations are an important element of the NSW scheme and provide further details on how the Mining Act is to be administered. For example, the Mining Regulations set out how one applies for a mineral claim title, the information required in an application and the amount of fees payable for the particular application.

In addition, other instruments have been made that supplement the Mining Act and Regulations. For example, what are called section 173 orders have been made to constitute both the White Cliffs and Lightning Ridge Mineral Claims Districts. These are the areas in which mineral claims may be granted to allow the extraction of opal. In addition, section 175 orders have also been made which specify the conditions which can be imposed on a mineral claim granted within a certain mineral claims district.

One excellent feature of the regulation of opal mining in NSW is a database called MinView. This is a highly detailed and user-friendly mapping and information database with multiple layers of information. It is a publicly available and searchable database that anyone can access and use. Once a user becomes familiar, the scope of information that is available is extensive and easy to collate and use. It has one of the most advanced spatial representations of geological information held by any government in the world.

Maps of the mineral claims districts, the opal mining reserves, the opal prospecting areas and opal prospecting blocks, and indicative areas of individual mineral claims can be examined together with overlays of other spatial information including zoning and cadastral boundaries. This assists miners

to understand the regulatory system and to plan their activities. An extract of MinView below shows the area of Lightning Ridge and mineral claims (in yellow) around the town.

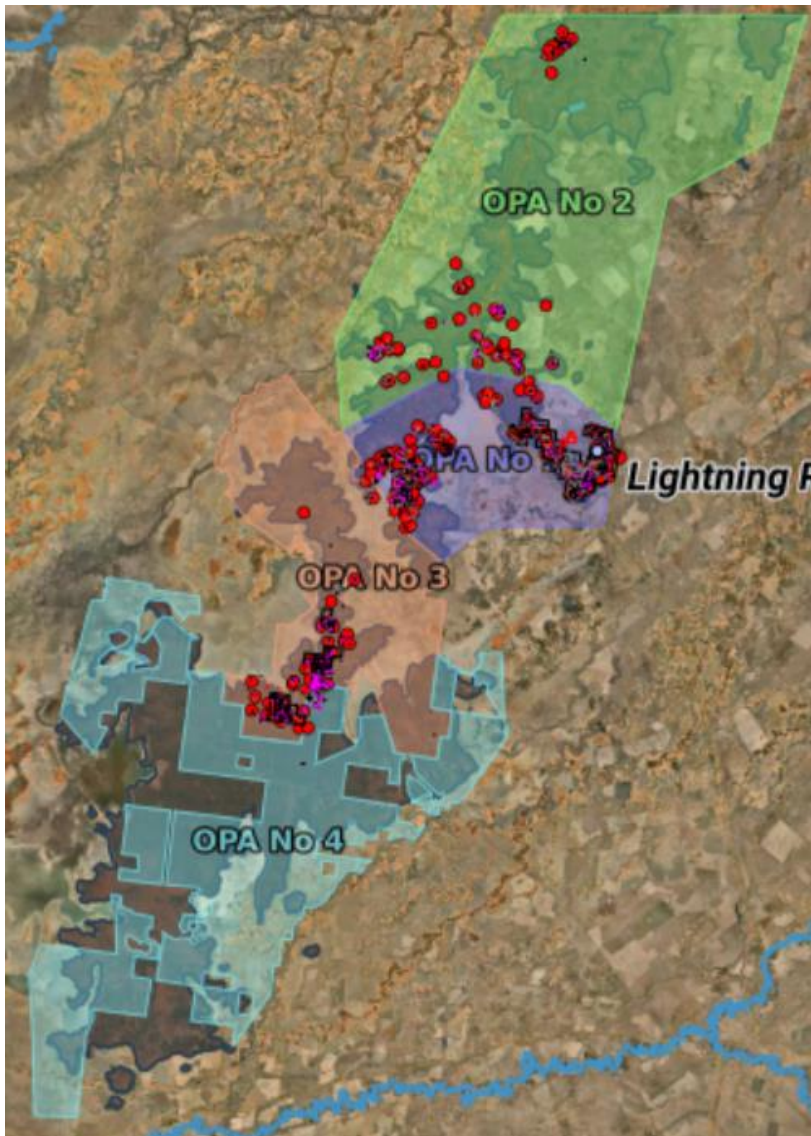


The Mining Act also allows for the making of orders by the Governor under section 367 to constitute what are called Reserves. These are areas where the Governor can direct that specific Mining Act tenures cannot be granted (for example a mining lease, assessment lease or exploration licence).

At Lightning Ridge, the declared Narran-Warrambool Reserve prohibits the grant of an exploration licence, assessment lease or mining lease for the extraction of any minerals. The Narran-Warrambool Reserve boundary mirrors the external boundary of the Lightning Ridge Minerals Claims District, essentially preserving the whole area for small-scale titles only. At White Cliffs, the situation is different. Only three areas of reserves, being reserves 2684, 2685 and 2686, reserve an area for small-scale titles by excluding all other grants of mining licences. These areas are much smaller than the White Cliffs Mineral Claims District.

The Mining Act has a particular regime designed to encourage and support investment in trying to find opal. The Mining Act allows the declaration of what are called opal prospecting areas (**OPAs**). There are four of these at Lightning Ridge and two at White Cliffs.





Within some of these OPAs, MEG has established what are called opal prospecting blocks (**OPBs**). A miner can apply for an opal prospecting licence (**OPL**) for a particular OPB. The term of the OPL is set out on the relevant map for the opal prospecting block and varies from 28 days to three months.

Once granted, the effect of the OPL is that no other mineral claim or OPL can be granted over the same area of land during the term of the OPL. This essentially reserves the right of the OPL holder to apply for a mineral claim over those areas they may find to be prospective. Once the limited term of an OPL has expired, then other miners can apply for OPLs or mineral claims.

A mineral claim is a form of mining title that authorises the extraction of opal. At present, there are approximately 3,300 mineral claims granted under the Mining Act for opal mining. There are some 1,600 mining operators that have been nominated in documents provided to MEG.

At Lightning Ridge, the section 175 Order provides that a miner can apply for a range of mineral claim types (classes A-G) for terms between 1-5 years, depending on the type of mineral claim and the term sought by the miner. In contrast, at White Cliffs, there is only one type of mineral claim and that has a term limited to only 1 year. The regime is therefore inconsistent in how it regulates opal mining in the two mineral claims districts.

At Lightning Ridge, a miner can also apply for what is called a 'puddling claim' and also a mullock stockpiling claim. Puddling is the process whereby a miner washes the ore extracted from a mineral claim to see if the rocks contain opal. A stockpiling claim refers to the use of land for the purpose of bulk stockpiling of the extracted ore (called mullock). An example of a mullock stockpile is below.



Source: Photo taken by the Review during a site visit to Lightning Ridge

The provisions in the Mining Act relating to opal mining are, however, showing their age. For example, one provision in the Mining Regulations requires the lodgement of applications for mineral claims in the White Cliffs region to be either in person (some 700kms away), or by post or facsimile. White Cliffs has only one fax machine. Another regulation requires all applications for a transfer of a Lightning Ridge mineral claim to be lodged in person at the Lightning Ridge office. The words 'online' and 'email' are noticeably absent from these provisions.

Another curious aspect of the opal mining provisions in the Mining Act is that they are situated in various locations and not necessarily in a logical order. The provisions also appear to have been amended and supplemented by new provisions in a continuous process of ad hoc change.

In short, even to those with extensive experience in the industry, the Mining Act, the Mining Regulations and the various orders made under the Act are confusing, cumbersome and difficult to navigate. It is little wonder that many users of this framework are frustrated with how it operates in practice. It would thus appear the opal mining provisions are overdue for a review and improvement.

*Questions for submissions:*

- What features of the opal mining framework do you find most difficult to know and understand?
- Have you found sufficient supporting material to help you understand how the opal framework operates and how it affects miners and landholders?
- Do you have any suggestions as to how MinView can be improved?

- What are the key features of the system that you would like the Review to examine and address?
- Do you support different rules for White Cliffs compared to Lightning Ridge and, if so, why?

#### 4 The process for obtaining approval to prospect for opal in NSW

As noted above, if a person wishes to prospect for opal, opal prospecting may be undertaken with a licence that enables the prospector to prospect on a specific opal prospecting block. Four opal prospecting areas (**OPAs**) have been declared in the Lightning Ridge Mineral Claims District (**LRMCD**) and two within the White Cliffs Mineral Claims District (**WCMCD**).

Some opal prospecting areas are broken down into opal prospecting blocks (**OPBs**). Opal prospecting blocks are areas mapped by MEG, over which a person can apply for an opal prospecting licence (**OPL**). To apply for an OPL, an applicant simply needs to apply to MEG, with reference to the OPB number for which they are applying, and pay the registration fee.<sup>8</sup>

Unlike a mineral claim application, the applicant does not need to notify landholders that they are applying for an opal prospecting licence over the landholder's land.<sup>9</sup> Some landholders have expressed dissatisfaction that they are not notified in the case of applications for opal prospecting licences. Landholders however must be notified of an applicant's intention to exercise rights under an OPL before it is granted.<sup>10</sup>

*Questions for submissions:*

- Is the process for obtaining an opal prospecting licence fit for purpose?
- Should landholders be notified when an applicant applies for an opal prospecting licence?
- Does the system of OPAs and OPBs serve their purpose?
- What other improvements should be made to the opal prospecting system?
- Should new OPBs be declared over more geologically appropriate areas, being areas where opal is more likely to be found, at White Cliffs?

#### 5 The process for obtaining approval to mine for opal in NSW

A mineral claim is a document that enables its holder to lawfully mine for opal in NSW. It is commonly referred to as a 'title', but that description is misleading. Rather it is best described as a permission from the State of NSW to enter land and carry out mining for opal, on certain conditions.

A mineral claim in Lightning Ridge can be granted for a range of one to five years depending on what is sought by the miner. At White Cliffs, a mineral claim can only be granted for one year.

However, a miner may apply to MEG to have the mineral claim renewed. Generally, this is granted without too much difficulty.

On the application of both the holder and the transferee and if approved by MEG, a mineral claim can also be transferred to another person. This is quite common and facilitates the trade between miners of mineral claims.

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<sup>8</sup> Mining Act s 226.

<sup>9</sup> See Mining Act s 177.

<sup>10</sup> Mining Act s 266.



The current provisions in the Mining Act and the Mining Regulations require a person seeking to mine opal in NSW to comply with the following process in order to obtain a mineral claim:

1. The applicant first will need to inspect and identify the land on which they seek to mine. As noted above, this can be carried out via a OPL or a permit to enter.
2. The miner is then required to mark out the area by placing marker posts along the boundaries of the claim area at each point where the boundaries change direction, and then cutting trenches or making stone walls to mark the boundary.<sup>11</sup> A notice is then required to be attached to a marker post, with certain details about the claim.<sup>12</sup>
3. The applicant must complete the notification form (LR21 for Lightning Ridge and WC21 for White Cliffs), and prepare a map, that is at least of a 1:100,000 scale and which clearly indicates the extent and location of that land relative to property boundaries and man-made features such as roads, fences and buildings.<sup>13</sup>
4. The applicant must serve the Form LR21 and map on the landholder by post.
5. The applicant must then submit a completed application form (LR2A Form for Lightning Ridge and the WC2A form for White Cliffs), with all the required information and documentation including the mark out diagram, and also pay the required fee. The application can be lodged in person, by post or by facsimile.
6. The applicant must complete another form (LR23 for Lightning Ridge or WC23 for White Cliffs), which notifies the landholder of their intention to exercise rights under the mineral claim, and serve that notice on the landholder.
7. Upon confirmation of receipt by the landholder of the LR23 or WC23 notice, or seven working days later after it was posted, the applicant must then submit a further form (LR2B for Lightning Ridge and WC2B for White Cliffs). This must be accompanied by:
  - a. evidence by way of a registered post receipt (being a receipt that the notice has been accepted by Australia Post for delivery) that shows the LR23 or WC23 Notice has been mailed under s266(4)(b) and at least seven working days has passed; or
  - b. evidence of a proof of delivery via registered post (this is a proof of delivery issued by Australia Post with signature on delivery and online tracking).
8. MEG then assesses the application, and determines whether or not to grant the mineral claim.

Another curious aspect of the current framework is that the Mining Regulations currently require applications for the mineral claims in Lightning Ridge to be lodged in person at the Lightning Ridge office, whereas applications for White Cliffs may be posted or faxed.<sup>14</sup> Electronic lodgement options are not available.

It would appear to the Review that the whole application process needs to be modernised and simplified.

*Questions for submissions:*

- Should mineral claims be able to be applied for online either via an App or Portal with step-by-step instructions or by lodgement of an editable PDF document?
- How should the application process be simplified?

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<sup>11</sup> Mining Act s 176; Mining Regulation cl 40.

<sup>12</sup> Mining Regulation cl 40.

<sup>13</sup> Mining Regulation, cl 41(2).

<sup>14</sup> Mining Regulation cl 42(4).

- Should notification to landholders occur by email or another means?
- What other measures should be implemented to make it an easier, more accurate and fairer process for both miners and landholders?
- What language or other assistance should be available to miners to assist them with the application process?

## 6 Mapping issues

The Mining Act provides for miners to identify the land over which they intend to apply for a mineral claim. In order to grant the mineral claim, the Department has historically transposed the hand-drawn maps provided by miners onto their geospatial information system.

However, the self-draw method means that miners, who may have little or no experience of surveying, and lack the proper equipment, are tasked with accurately recording the location of a claim. This leaves a lot of room for error in the granting of the claim, and leads to a situation where the records of the Department may not reflect the reality of the claim “on the ground”.

This creates uncertainty for the Department in granting titles and enforcing the conditions of mineral claims, and the landholders who lack knowledge of precisely where such claims are on their land. The uncertainty also provides an opportunity for marked out boundaries to be moved by miners, leading to land use disputes.

To resolve the uncertainty, the Department has recently undertaken to confirm the locations of mineral claims by engaging a registered surveyor to survey the claim boundaries. However, this solution requires periodic updates to accurately record subsequent mineral claims that are granted, and would be required to transition to a user (ie miner) pay basis if implemented over a long term.

One solution proposed by the Department is to replace the system of marking out and mapping a claim by the miner with a surveyed grid system from which miners can select the title(s) for which they wish to apply.

This proposal would be similar to the existing system of pre-mapped opal mining blocks, but would be on a finer scale to allow for the size of small-scale titles. This would have the advantage of ensuring certainty of the title for all parties. Any such system would naturally be required to account for current mineral claim areas which may not accord with the previously granted mineral claims.

*Questions for submissions:*

- Is the system of marking out and self-mapping by miners fit for purpose?
- Do you have other ideas for improving the system?
- Do you support transitioning to a pre-identified grid system for the grant of mineral claims?

## 7 Issues with the opal prospecting framework

Prospecting is a common feature of most mining activities. It enables a wider area to be drilled and tested to see if there are any minerals worth mining. A truck with a drill rig is shown below.



Source: Mining Exploration and Geoscience, 2023, © State of New South Wales

In relation to opal prospecting, as noted above, there are detailed provisions in Part 10 of the Mining Act allowing for the establishment of opal prospecting areas, opal prospecting blocks and the grant of opal prospecting licences. Despite these provisions applying to both the White Cliffs and Lightning Ridge Mineral Claims Districts, no opal prospecting licences have ever been issued for White Cliffs.

Another strange feature of the current framework is that while opal prospecting is expressly dealt with in Part 10, the grant of a mineral claim can also provide for the prospecting of opal within the mineral claim area. This is expressly permitted by section 195(1). However, the area available for prospecting is limited to that of the mineral claim or claims, which is typically much smaller than an opal prospecting block.

This leads to confusion and uncertainty. For example, section 220 provides for an order published in the gazette to establish opal prospecting areas. These may only be made in relation to prescribed land. That term is defined to include any land held under lease or licence for grazing purposes, under the *Crown Land Management Act 2016*, and other areas of Crown Land set out in the provision.

This has led to questions about whether an OPA continues in force when Crown Land leases have been converted to freehold. It has also led owners of freehold land to believe that no prospecting is permitted on freehold land and therefore no opal mining should occur on freehold land. However, both the mining and prospecting for opal are permitted on freehold land if a mineral claim is granted under Part 9.

Where the Minister proposes to include land in an opal prospecting area, a landholder may, within 28 days of being notified of the proposal, object on the basis that their land is agricultural land.<sup>15</sup>

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<sup>15</sup> Mining Act s 222. Similar restrictions apply to the grant of a mineral claim, see section 187.

This is essentially land that is used for cropping, improved pasture, edible fruits and trees, vines or other perennial crop, shade trees, and land used to produce grass seed, pasture legume seed, hay or silage.<sup>16</sup>

Where a person does not have an opal prospecting licence, they can apply for a permit to enter under section 254 of the Mining Act to inspect land and mark out an area over which they intend to lodge an application for a mineral claim. This does not allow for any prospecting. Schedule 8 of the Mining Regulations contains the form of a permit to enter.

However, no specific time period is set out in the Mining Act or the Mining Regulations for the duration of the permit, although it is commonly understood to be 28 days. The permit to enter process has a range of vague obligations. For example, reasonable notice must be provided to the landholder before entry. This invites a question about what is reasonable notice.

*Questions for submissions:*

- What should the appropriate regime be for opal prospecting?
- What should be the requirements for notification of all opal prospecting activities?
- What amount of bond (if any) should be prescribed for the carrying out of opal prospecting activities, to cover the rehabilitation of the land damaged from prospecting, such as filling of holes, restoration of tracks caused by prospecting, and removing noxious weeds?
- What are the key issues with the permit to enter process?

## **8 Issues with the mineral claim framework**

Under section 195 of the Mining Act, the holder of a mineral claim may, in accordance with the conditions of the claim, prospect for and mine opal.

The holder may also, subject to the conditions of the claim:

- erect any buildings and structures;
- exercise any rights in the nature of easements;
- remove from the claim area any timber, stone or gravel; and
- carry out any ancillary mining activity.

The holder of a mineral claim granted in respect of an ancillary mining activity or activities only may, in accordance with the conditions of the claim, carry out the ancillary mining activity or activities specified in the certificate relating to the claim.

The maximum area of a mineral claim is limited to a maximum of two hectares under the Mining Act, being 20,000m<sup>2</sup>. However, the section 175 order for the WCMCD provides that a mineral claim cannot exceed 2,500m<sup>2</sup>. At Lightning Ridge, the table below sets out the classes or types of mineral claims and criteria that apply to each. This table is contained in the section 175 order for the LRMCD.

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<sup>16</sup> Mining Act Sch 2, cl 1.

<b>CLASS A</b> Standard Mineral Claim	<b>Size:</b>	Claim area must not exceed 2,500m <sup>2</sup> .
	<b>Shape:</b>	Claim should be square in shape with sides 50m x 50m. Claim may be granted over a different shaped area if physical or legal constraints make a square claim area impracticable. In such case no single side is to be greater than 100m in length.
	<b>Permitted Operations*:</b>	Mining – Yes Prospecting – Yes Mining Purposes – Yes but only mining purposes related to mining operations carried out on the claim. Wet processing (opal puddling) is not permitted.
<b>CLASS B</b> A person who is, at the time of lodgement of an application for a mineral claim, the holder of an opal prospecting licence (being a licence having a term of 3 months)	<b>Size:</b>	Claim area must not exceed 2 hectares.
	<b>Shape:</b>	Claim must not have any side being greater than 200m in length. The claim area must be wholly within the boundary of the relevant opal prospecting licence.
	<b>Permitted Operations*:</b>	Mining – Yes Prospecting – Yes Mining Purposes – Yes but only mining purposes related to mining operations carried out on the claim. Wet processing (opal puddling) is not permitted.
<b>CLASS C</b> A person who is, at the time of lodgement of an application for a mineral claim, the holder of an opal prospecting licence (being a licence having a term of 28 days)	<b>Size:</b>	Claim area must not exceed 2 hectares.
	<b>Shape:</b>	Claim must not have any side being greater than 200m in length. The claim area must be wholly within the boundary of the relevant opal prospecting licence.
	<b>Permitted Operations*:</b>	Prospecting – Yes Mining and Mining Purposes not permitted.
<b>CLASS D</b> Mining Purpose – Processing	<b>Size:</b>	Claim area must not exceed 2 hectares.
	<b>Shape:</b>	Claim must not have any side being greater than 200m in length.
	<b>Permitted Operations*:</b>	Mining – No Prospecting – No Mining Purposes – Yes: “processing” only, subject to 5 (c) below.
<b>CLASS E</b> Mining Purpose – Mullock stockpiling	<b>Size:</b>	Claim area must not exceed 2 hectares.
	<b>Shape:</b>	Claim must not have any side being greater than 200m in length.
	<b>Permitted Operations*:</b>	Mining – No Prospecting – No Mining Purposes – Yes: stockpiling or depositing of overburden, ore or tailings only.
<b>CLASS F</b> Prospecting Claim areas within the boundaries of Opal Prospecting Areas 1, 2 & 3, but not within opal prospecting blocks in the Narran-Warrambool mining reserve	<b>Size:</b>	Claim area must not exceed 2 hectares.
	<b>Shape:</b>	Claim must not have any side being greater than 200m in length.
	<b>Permitted Operations*:</b>	Prospecting – Yes Mining and Mining Purposes not permitted.
<b>CLASS G</b>	<b>Size:</b>	Claim area must not exceed 2 hectares.
	<b>Shape:</b>	Claim must not have any side being greater than 200m in length.
	<b>Permitted Operations*:</b>	Mining – Open Cut Mining Operations Prospecting – Only in conjunction with open cut mining operations. Mining Purposes – Yes, but only mining purposes related to mining operations carried out on the claim. Opal Puddling not permitted.

\* subject to claim conditions and special condition 5.

MEG has advised the Review that a number of the above classes of mineral claims for Lightning Ridge are rarely used.

For White Cliffs, there is a different legal regime. The section 175 order provides for only one type of mineral claim. No bond is required to be lodged for the grant of a mineral claim. In addition, there are other issues with the section 175 order such as:

- (1) Paragraph 4 of the Order refers to the written approval of the Mining Warden for certain activities. Yet, the 2008 amendments to the Mining Act from the *Courts and Crimes Legislation Further Amendment Act 2008* removed the Office of Mining Wardens and placed all former warden functions with the NSW Land and Environment Court;
- (2) Paragraph 5 duplicates the rehabilitation security condition powers contained in section 261B;
- (3) Paragraph 6 is missing altogether; and
- (4) Paragraphs 7 and 8 duplicate the condition making powers of section 198 and cl 7 and 8 of Sch 1B to the Mining Act.

Because there are two different section 175 orders, opal mining in the two regions is not a level playing field. The orders impose different rights and responsibilities on the miner. This appears to be poor regulatory practice given the nature of the opal mining activities in both regions is largely the same.

In addition to the above, the section 175 orders for both regions provide that a person may apply for and hold only two mineral claims. Despite this, it is clear from material provided to the Review that this restriction does not limit opal mining operations.

For example, an opal miner may have two mineral claims, but other members of his or her family can apply and hold a further two mineral claims each – holding them effectively on behalf of the miner. Alternatively, miners establish small companies where they are the sole director and shareholder and use these separate legal entities to hold additional mineral claims.

Using these mechanisms, the Review has been advised by miners and MEG that some miners have a large number of mineral claims. For example, MEG has advised the Review that 21 miners hold a total of 330 mineral claims.

Accordingly, the legislative intention that an opal miner is restricted to mining small areas is easily circumvented, and the notion that opal mining is being restricted to small-scale titles is simply a fallacy.

The above features of the regulatory framework appear to have arisen through ad hoc amendments to the Mining Act over many decades. This can also be seen from the myriad of strangely located provisions in various part of the Mining Act and the extent of historical amendments.

*Questions for submissions:*

- Should the restriction on holding no more than two mineral claims be removed, given it is not preventing miners from having control over large numbers of mineral claims, but may be acting as a disincentive to new entrants to the industry?
- If it is to remain, what amendments are necessary to ensure mining operations occur on only two mineral claims as originally intended?
- Should the current classes of mineral claims be reduced and simplified?

- Should there be new classes of mineral claims that incentivise the growth of investment and employment in the industry?
- Should the same rights and responsibilities in section 175 orders apply to opal mining in both White Cliffs and Lightning Ridge?
- Should the classes of mineral claims permit mining in a wider area, provided significant bonds are lodged to cover the risks associated with rehabilitation of mineral claims?
- Should the amount of bond required be increased to ensure that if a mineral claim area is not rehabilitated, there are sufficient funds available for MEG or landholders to effect rehabilitation?

## 9 Amount of compensation payable to landholders for a mineral claim

The Mining Act requires an applicant for a mineral claim to pay compensation to a landholder for 'any compensable loss suffered, or likely to be suffered, by the landholder as a result of the rights conferred by the small-scale title.'<sup>17</sup> A mineral claim may not be granted unless the Secretary is satisfied compensation has been paid.<sup>18</sup>

Compensation may take two forms. The first is 'standard compensation' which is an amount determined by the Secretary.<sup>19</sup> Standard compensation has only been determined for the Lightning Ridge Mineral Claims District and is \$100 per annum for any mineral claim, indexed to the Consumer Price Index, meaning as at the date of writing, it is \$119 per annum.<sup>20</sup> There is no standard compensation amount determined for the White Cliffs Mineral Claims District. It is not clear why this is the case.

The amount of standard compensation has not been subject to any significant review for well over a decade. In addition, the same compensation amount applies regardless of the size of the mineral claim. As noted above, some mineral claims for open cut operations can be granted for areas of two hectares.

In both mineral claims districts there is also the option of the landholder and miner negotiating an agreement for an alternative amount.<sup>21</sup> We understand this option is rarely used at Lightning Ridge, given the standard compensation that has been determined. We also understand some miners and landholders at White Cliffs have agreed on compensation matters while others have not.

In the absence of agreement, a miner or landholder may lodge an application to the NSW Land and Environment Court to have it determine compensation.<sup>22</sup> We are not aware of any application to the Land and Environment Court to adjudicate on compensation payable to a landholder for a small-scale title.

The drafting of section 266 is less than ideal. To the non-lawyer, the provision may appear very confusing. First, subsection (1) provides that compensation is to be determined under this section and not by assessing 'compensable loss'.<sup>23</sup>

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<sup>17</sup> Mining Act s 266(1).

<sup>18</sup> Mining Act s 266(4).

<sup>19</sup> Mining Act s 266(2)-(3).

<sup>20</sup> *New South Wales Government Gazette*, No 129, 24 December 2014, 4741.

<sup>21</sup> Mining Act s 266(4).

<sup>22</sup> Mining Act s 266(6).

<sup>23</sup> This term is defined in section 262 by reference to six categories including damage to the surface of the land, crops, trees, grasses, deprivation of the use of surface of the land, severance, surface rights of way, destruction, injury or interference or disturbance to stock, and consequential loss.



Subject to the 'exceptional circumstances' situation (discussed below), compensation is either the standard compensation amount determined by the Minister or that determined by the Land and Environment Court. The Court can only determine compensation where there is no standard compensation and the parties have not agreed on compensation.

Given there is a standard compensation amount (currently \$119) for the LRMCD, the right to apply to the Land and Environment Court to assess compensation only applies to the WCMCD. However, at White Cliffs, the term of a mineral claim has historically been for one year only. Further, in assessing compensation for a mineral claim at White Cliffs, the Land and Environment Court is required to have regard to, among other matters, the amount of standard compensation determined for Lightning Ridge, being \$119. The relevant test is not, however, compensable loss.

Thus it would seem that if a landholder or miner applied to have the Land and Environment Court assess compensation for a mineral claim at White Cliffs, it is unlikely to be any higher than \$119.

This begs the question as to why any miner or landholder would spend the money, time and stress of going to Court for such a nominal amount of compensation.

Then subsection (8) provides that the Land and Environment Court may, in exceptional circumstances, and despite subsection (1), award the landholder compensation for the 'compensable loss' suffered or likely to be suffered by the landholder as a result of the exercise of rights under the mineral claim.

The Mining Act provides no guidance as to what would qualify as 'exceptional circumstances'.

*Questions for submissions:*

- Is the amount of standard compensation amount for Lightning Ridge sufficient, given it has not been reviewed for a decade? If not, by what methodology should the amount be determined?
- Should there be different amounts of standard compensation for the different classes of mineral claims and the rights permitted under each, such as shaft and tunnel, trenching, open cut, mullock stockpiling and puddling activities?
- Should a standard compensation amount be declared for the White Cliffs Mineral Claims District and what methodology should apply to determine the amount?
- If standard compensation is declared for both mineral claim districts, is there any benefit to retain provisions for the Land and Environment Court to determine compensation for compensable loss in exceptional circumstances?

## **10 Availability of land for opal mining**

The mineral claims district of Lightning Ridge covers an area of 5,605.83km<sup>2</sup>, of which 1,785.64km<sup>2</sup> is exposed Cretaceous ridge land. The minerals claims district of White Cliffs covers an area of 971.69km<sup>2</sup>.

At Lightning Ridge, the total area that has been or is being mined<sup>24</sup> for opal is 68.91km<sup>2</sup>, being approximately 1.23 per cent of the total mineral claims district. We note the total area of the Cretaceous ridge land that has been or is being mined is 22.68km<sup>2</sup>, thus being 1.27 per cent of the ridge land across the total mineral claims district.

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<sup>24</sup> This includes ancillary mining activities such as puddling and mullock sites.

At White Cliffs, the total area that has been or is being mined for opal is 0.62km<sup>2</sup> being 0.62 per cent of the total minerals claim district. In addition, of the two major mining reserves, MEG has advised that the following areas have been subject to opal mining:

<b>Mining Reserve 2686</b>	<b>Km2</b>	<b>%</b>
Total area	8.12	
Current claim footprint	0.01	0.18
Historic claim footprint	0.02	0.25
<b>Mining Reserve 2684</b>	<b>Km2</b>	<b>%</b>
Total area	17.24	
Current claim footprint	0.29	1.70
Historic claim footprint	0.34	1.98

These numbers do not reflect the percentage of areas that are actually available for opal mining. This is because certain areas are excluded from mining such as agricultural land as defined by the Mining Act, areas within specified distances of significant improvements (without the consent of the owner), and land within any national park or nature reserve.

The Review also understands that MEG will not issue mineral claims over the black soil plains at Lightning Ridge or other areas of high ecological and environmental value without appropriate applicant information to MEG's satisfaction. Certain areas within OPA4 have been identified as not being appropriate for opal mining without significant environmental impact and safety studies being undertaken.

In addition, the Review understands that the geological information on MinView suggests there are areas within each mineral claims district that have less chance of opal being present.

However, at a high level, these numbers appear to indicate the current mineral claim districts contains very large areas of land which are available for the continuation of the opal mining industry.

The Review was told that the larger operators may decide to invest in prospecting and if they find opal they then lodge applications for mineral claims in those areas. Then in practice, many small operators quickly follow suit and 'peg' claims nearby. In this fashion, the industry itself becomes centralised on locations thought to contain opal. This process appears to have developed over time with the effect that mining for opal is not widespread across each mineral claims district.

*Questions for submissions:*

- What is the factual basis for claims that opal mining is running out of available land?
- What areas should remain open?
- What areas should be closed to opal mining?

## **11 Rehabilitation of areas affected by opal mining**

It is clear to anybody who visits the areas of White Cliffs or Lightning Ridge that in nearly all the major areas in which opal mining has occurred there are areas which have not been properly rehabilitated. Some of these areas pose substantial safety and other risks.

Falls into historic and recent shafts are not uncommon, and occasionally prove fatal to miners. One such incident in 2016 led to a workplace health and safety prosecution which resulted in a conviction and a fine of \$70,000 for the owner of the hoist that failed and killed the miner. Another death occurred in 2020.

More recently, a miner died on 28 April 2023 from a fall into a mine shaft. On 30 October 2023, another miner broke both ankles when he fell down a shaft. This was reported in the media.



It is not only miners who are exposed to considerable risk from mine shafts. At Coober Pedy in 2014 an opal fossicker fell down a shaft and died.



While we are not aware of any incidents to date, our observations of numerous uncovered shafts at areas visited by tourists suggests that uncovered shafts pose a serious risk to tourist safety.

We have been provided with copies of photographs which show stock that have fallen into unprotected mine shafts.

On 16 December 2017 a resident at Lightning Ridge living near an unused shaft fell about 6 metres down the shaft. More than 24 hours passed before the resident was found and rescued.

The Review examined historical open cut areas such as the infamous Lunatic Hill at Lightning Ridge where extraordinarily large pit areas have dangerous faces with potential for collapse.

We also saw poorly remediated open cut operations that had not been properly filled and were exposed to erosion and collapse. This includes open cut areas on Western Lands pastoral leases as well as land situated on the Crown Reserve. An example of a former open cut area that has not been properly remediated is shown below.





Source: Photo taken by the Review during a site visit to Lightning Ridge

The Review also saw extensive areas of land where unfilled shafts had no protection or clearly inadequate protection. Some examples are shown below.



Source: Photo taken by the Review during a site visit to Lightning Ridge





Source: Photo taken by the Review during a site visit to White Cliffs

The Review saw large areas affected by mullock dumps. Some of these stockpiles are small and are contained within the mineral claim while others are quite large. At Lightning Ridge, the Review was advised that the mullock has a very high salt content which has the effect of preventing the regrowth of vegetation. The lack of vegetation and ground cover then promotes erosion and the degradation of the land.



Source: Photo taken by the Review at Lightning Ridge.

At White Cliffs, the nature of the mullock is different and appears to not prevent the revegetation of old opal mining areas. A photograph of the Main Field is below showing the partial revegetation of historically mined areas.



Source: Photo taken by the Review during a site visit to White Cliffs

At Lightning Ridge, specific issues arise in relation to large scale mullock stockpiling. Some of these stockpiles have been created under the authority of a mineral claim granted for an area of 2ha while others have been created on the Crown reserve seemingly without a mineral claim.

These sites, if not properly managed, raise the risk of mullock collapses and storage of mullock beyond a properly constructed bund or boundary wall.

A photograph of one such mullock stockpile site which has had a collapse is below. This is situated in the Grawin, Glengarry, Sheeppyard area.

Questions have arisen as to what can be done over the long term with these large mullock stockpiles and whether the sale of mullock should be permitted.





Source: Photo taken by the Review during a site visit to Lightning Ridge

For those communal mullock stockpile sites over which no mineral claims or other titles have been issued under the Mining Act, there are additional risks. The lack of legal control means that there is no obligation on users to remediate or make safe the land on which the dumps are situated.

Puddling sites are areas where mullock is washed in what are called agitators (old cement truck mixers) to reveal potch and potentially opal. The tailings from the washing of the ore are tipped into an area contained by a bund. These areas appear permanently affected by opal mining. Some of these puddling claims are held and operated by the Lightning Ridge Miners Association.

A photograph of a puddling mineral claim is below.



Source: Photo taken by the Review during a site visit to Lightning Ridge

Another issue that arises is abandoned equipment and machinery. The Review found this problem much more widespread at Lightning Ridge. The potential cost of removing and disposing of abandoned machinery across the entire mineral claims district is not known.



An example of an abandoned machine on the Crown Land reserve at Lightning Ridge is shown below.



Source: Photo taken by the Review during a site visit to Lightning Ridge

For preserved fields, the current rehabilitation standard conditions provide that open shafts can remain provided there is some measures undertaken to make the site safe. A fact sheet has been developed which identifies what measures should be in place when mining ceases. This fact sheet suggests a minimum of erecting star pickets around the hole with four strands of barbed wire aimed at preventing people from falling into the hole. However, there are clear issues with the longevity of these measures. The Review has seen dozens of opal shafts with inadequate protections. Many have inadequate caps over the hole or the wind has blown away the pickets, wire and other protective measures. Some are not capped and just have a few strands of wire on pickets remaining to protect landholders, tourists, miners and others from falling down the hole. An example is shown below.





Source: Photo taken by the Review during a site visit to Lightning Ridge

Other former shafts are well-protected. An example of a shaft protected by chain wire fencing and posts firmly set into the ground is shown below. This example still allows visitors to see the mined areas and the shafts and it suggests that some miners consider the minimum standards to be less than satisfactory.



Source: Photo taken by the Review during a site visit to Lightning Ridge

The Mining Act itself does not require the holders of opal prospecting licences or mineral claims to remediate their titles, upon the completion of activities, as a matter of course. Currently remediation is dealt with through conditions placed on the grant of most mineral claims, requiring the holder to remediate their mining activities prior to the end of the term of the mineral claim.

One of the issues with enforcing the remediation of the impacts of opal mining is that the Secretary may only issue notices directing a person to remediate environmental impacts caused by mining if that person caused the impacts without title or is the current holder of the title under which the impacts occurred.<sup>25</sup>

This provision means that the Secretary's power is limited to the issuing of notices on the current mineral claim holder to remediate disturbance caused by mining over their claim area, even when they are actively benefiting from that disturbance (ie the use of existing, unrehabilitated shafts or mullock stockpiles). This has led to a situation where historical impacts from opal mining remain unremediated.

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<sup>25</sup> Mining Act s 240.

To address the potential risk of a mineral claim holder not remediating their mineral claim at the end of the term, the Mining Act provides the Secretary with discretion to require security bonds to be lodged.<sup>26</sup>

Security bonds assist with the costs of remediation should the miner not comply with the obligations of their mineral claim. In the LRMCD, the minimum security bond amount for a mineral claim is \$200.<sup>27</sup> In practice, the security bonds are higher and depend on the class of mineral claim granted. The standard mineral claims in Lightning Ridge (class A) attract a security bond of \$700. No security deposit is required to be paid for the granting of a claim in the WCMCD.

The payment of security bonds is not for the purpose of remediating the historical impacts of opal mining. Rather they are meant to cover the costs of remediation of the current mineral claim.

As to what the likely actual costs of remediation of a mineral claim, from information provided by the Crown Land Manager at Lightning Ridge, the costs can range from \$14,000 to \$80,000.

The nature of the existing practice is clearly imposing significant costs on others, which in environmental economics is called an 'externality'. The costs are imposed on landholders, the taxpayer via costs on MEG and the Crown, as well as the wider community who live in these regions.

Generally the impacts from opal mining appear to be greater at Lightning Ridge given the concentration of the industry in that region.

*Questions for submissions:*

- Should there be more specific and detailed obligations for the remediation of land impacted by opal mining activities?
- What changes could be made to more effectively ensure proper remediation?
- Should opal miners pay higher security bond to protect taxpayers from the cost of remediation?
- How should the impacts of historical mining operations (outside the preserved fields) be addressed?
- What should be the appropriate standards for managing the risk of opal shafts in preserved fields and should chain wire fences with steel posts (as shown in the above photo) be the minimum standard?
- What should be the standards for remediation of open cut and trenching operations?
- How should the completion of opal mining rehabilitation be verified, by visual inspection by MEG or other means?
- Should the sale of mullock from mullock stockpile areas be permitted?
- How should puddling mineral claim areas be managed in the long term?

## **12 Preserved fields**

In the Lightning Ridge area, there are areas known as 'preserved fields'. These are areas which have been established to preserve the history of opal mining.

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<sup>26</sup> Mining Act s 261BA.

<sup>27</sup> Mining Regulations cl 93.

The preserved fields that have been declared include the Lightning Ridge Preserved Mining Field, Grawin Preserved Mining Field, Old Coocoran Preserved Mining Field, Carter's Rush Preserved Mining Field, and the Glengarry/Sheepyards Preserved Mining Field.

A similar, but undeclared area, exists at White Cliffs and is known as Area A in the White Cliffs Miners' Association Plan of Management. This area contains some signage and displays and also includes some toilet facilities.

It appears to the Review that the preserved fields offer considerable potential benefits to the towns of White Cliffs and Lightning Ridge. The preserved fields potentially also have cultural landscape values in that they show areas that were previously mined and the methods and unique styles of mining.

However, there are clearly some safety issues as shown by some of the photographs of unfilled shafts and other equipment left behind in these areas. Some of the preserved fields appear to be in inaccessible locations while others are close to the towns and thus offer more useful tourism benefits.

Thus there is a question of whether all of these areas are fit for purpose. It would appear to the Review that the preserved fields could be significantly improved to create a more enriching and safer tourism experience.

*Questions for submissions:*

- Do all the preserved fields serve the same purpose and function?
- Should the preserved fields be reserved for only those close to the towns and which are clearly accessible for visitors?
- What improvements do you think could be made to make them more attractive and safer for residents and tourists?
- What should the standards be for the management of safety and environmental risks of within the preserved fields?
- Should parts of the Main Field at White Cliffs be declared to be a preserved field (such as area A on the plan of management developed by the White Cliffs Miners' Association)?
- What additional features could be included within the preserved fields to attract more visitors and give them a better experience?

### **13 Camps on claims**

Over many decades, miners have erected a variety of caravans, camp buildings and other structures on their mineral claim. The erection and use of certain structures in connection with mining activities occurring on the claim area is generally considered an ancillary mining activity.<sup>28</sup> Ancillary mining activities may be authorised in accordance with claim conditions and any other necessary approvals.

Over time, this practice has led to the construction of dwellings that could be considered of a more permanent nature across a large number of mineral claims. Some of these are significant homes with power and water services, rooftop solar, sheds and even swimming pools. It would appear that many of these are no longer 'ancillary mining activities'.

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<sup>28</sup> Mining Regulation cl 7(a)(i).



Some of these structures have since been abandoned on the cessation of mining on a particular claim with the result that the landholder has the liability of removing the structures. An example of an abandoned camp is shown below.



Source: Photo taken by the Review during a site visit to Lightning Ridge

The growth of dwellings on mineral claims has created a regulatory problem. This is because mineral claims granted under the Mining Act are temporary. Mineral claims are also meant to be where opal is mined and not a permanent residential home. Where the building or structure is temporary in its nature and clearly ancillary to mining of opal, then it would be within the terms of the mineral claim. Many do not meet this requirement.

Another issue is that given the age of many of these structures, there is uncertainty as to whether relevant building and occupancy approvals were obtained under the *Local Government Act 1993* and the *Environmental Planning and Assessment Act 1979* and their predecessors.

At Lightning Ridge and White Cliffs, many owners of dugouts and dwellings have recently obtained more secure tenure through long term leases granted under the *Crown Land Management Act 2016*. However, many others owners do not have secure tenure. It appears incongruous that certain dwellings have a secure tenure while others do not.

*Questions for submissions:*

- What strategy should be implemented to balance the needs of miners and landholders in relation to camps on claims?
- Should there be clearer guidelines on buildings and structures are allowed and not allowed on mineral claims?

- What other suggestions do you have for addressing issues associated with camps on claims?

## 14 Biosecurity

During the site visits, the Review heard concerns regarding farm biosecurity. This concern arises from the desire of landholders to ensure that mining activities do not impact on their business of growing and selling livestock.

This includes ensuring their accreditation is not impacted and that the spread of pests and weeds do not threaten their business.

In the Lightning Ridge Mineral Claims District, there is major concern over the spread of the invasive plant, the Hudson Pear (*Cylindropuntia pallida*). Hudson Pear is a species of cactus that originated from Mexico and, if not controlled, could have national implications for agriculture.

The Hudson Pear cactus flowers in late spring and summer. Hudson Pear reproduces vegetatively and is believed to not produce viable seed. Like many other cactus species, Hudson Pear spreads by movement of segments and fruit that root where they come in contact with the ground. The term 'segments' has been used here to cover both parts of the plant and fruit as they behave similarly.

Much of the spread of Hudson Pear in the Lightning Ridge, Grawin and Glengarry areas appears to be associated with livestock, native and feral animals, vehicles, and water movement. It is found particularly around the opal mining areas of Lightning Ridge, Grawin and Glengarry and impacts between 60,000-100,000 hectares.<sup>29</sup> A photograph of a paddock severely affected by Hudson Pear is below.



Source: Photo taken by the Review at Lightning Ridge

<sup>29</sup> NSW Department of Primary Industries, 'Hudson Pear (*Cylindropuntia pallida*)', *NSW WeedWise* (Web Page, 2023) < <https://weeds.dpi.nsw.gov.au/Weeds/Hudsonpear> >.



There is concern among landholders that the movement of opal miners could contribute to the spread of Hudson Pear and other invasive species. The right of access provided by the Mining Act<sup>30</sup> currently exempts miners entering upon land uses for grazing from having to comply with that property's Biosecurity Management Plan.<sup>31</sup> However, it is understood that MEG encourages miners to comply with such plans. Regardless, any person entering agricultural, horticultural or public land has a general biosecurity duty to minimise biosecurity risk under the *Biosecurity Act 2015*.<sup>32</sup>

The Review was advised that the exemption for compliance with properties' Biosecurity Management Plans has the potential to affect landholders' certifications and ability to comply with Meat & Livestock Australia guidelines for livestock production assurance and thus may affect their ability to sell stock.

*Questions for submissions:*

- How can the need to ensure biosecurity protocols are followed be balanced with the rights of miners to lawfully enter land for the purpose of opal mining?
- What is the best mechanism to ensure the spread of pests and weeds are controlled?
- Should biosecurity management be a formal part of land access agreements?
- Could the Mining Act facilitate biosecurity in any other way?
- How should miners be educated about the need to ensure biosecurity measures are carried out?

## 15 Competency and training for opal mining

At present a miner is required to complete a course on safety that is delivered online or in person twice a year in Lightning Ridge and once a year in White Cliffs. We have heard from miners at White Cliffs that the course is tailored to the geological conditions at Lightning Ridge and does not take into account the specific conditions at White Cliffs.

In addition, if a miner wishes to mine within OPA4 or on the property Wyoming at Lightning Ridge, a miner needs to complete an environmental awareness training course.

The Mining Act itself does not require a person applying for a permit to enter, opal prospecting licence or mineral claim to demonstrate they have the knowledge and skills to mine in a manner that is safe, environmentally sound and compliant with all the requirements of the Mining Act.

Another issue is that the methods used to mine opal are changing. Now some miners can undertake mining by open cut or trenching methods. Trenching sometimes occurs across multiple mineral claims. Other miners create portals through which vehicles drive down and enter underground caverns to mine for opal.

There is a question about whether there needs to be more training in mine engineering and safety, as well as wider training on environmental issues. In addition, there appears to be a need for detailed training on biosecurity and how to reduce the impacts of mining on grazing activities. For example, landholders have expressed specific concerns that mining activities can potentially destroy the bonding between the ewe and lamb with the effect the ewe abandons the lamb and it dies.

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<sup>30</sup> Mining Act s 211.

<sup>31</sup> *Biosecurity Regulations 2017* cl 44A(2).

<sup>32</sup> *Biosecurity Act 2015* s 22.



Other specific issues of land management could be included in training such as water management and the need to avoid erosion in arid zones and the importance of ground cover to stock and the land generally. This training is consistent with the concept of caring for country.<sup>33</sup> It has also been suggested by stakeholders that miners should be required to demonstrate that they are competent in the above topics before they are issued with a permit to enter, opal prospecting licence or mine under a mineral claim.

Currently the only test a miner must meet before obtaining a mineral claim, is that they are a fit and proper person.<sup>34</sup> The standard of fit and proper is not defined by the Mining Act. Without limitation, matters that can be considered in deciding whether a person is a fit and proper person are prescribed by the Mining Regulation.

Currently the system relies on applicants providing statutory declarations to MEG for consideration of whether the applicant is fit and proper or whether further information and assessment is required. This raises questions on the quality of the information provided.

*Questions for submissions:*

- Is the training currently offered by MEG sufficient?
- What other training could be offered to better equip opal miners to carry out mining safely and in accordance with appropriate environmental standards?
- Should applicants for mineral claims be required to meet certain thresholds for competency and, if so, what should those competencies be?
- Should a police check<sup>35</sup> be required to assist MEG determine whether an applicant is a fit and proper person?
- Could the mining associations and their very senior and experienced members be involved in hands on practical training?
- What role could other organisations play in training such as Local Land Services, the NSW Farmers Federation, NSW Police and local councils?
- Should training be required before any OPL or permit to enter is granted?

## 16 Other issues

This Review is not limited to the issues raised in this paper. If you have other issues that you wish to raise, please include them in your submission.

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<sup>33</sup> Janke et al, 'Indigenous: National and International Frameworks that Support Caring for Country' in *Australia State of the Environment 2021* (Australian Government Department of Agriculture, Water and the Environment, 2021) < <https://soe.dcceew.gov.au/indigenous/management/national-and-international-frameworks-support-caring-country>>.

<sup>34</sup> Mining Act s 393.

<sup>35</sup> A standard police check costs \$54.