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

REPORT

14 June 2024

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14 June 2024

Hon C Houssos MLC

Minister for Finance,

Minister for Domestic Manufacturing and Government Procurement

Minister for Natural Resources

Dear Minister

Re: Small Scale Titles Review

I have the honour of presenting my report to you on my Independent Review into the Statutory Framework for Small-Scale Titles in New South Wales. By way of background, I have annexed the report of an earlier review of Lightning Ridge, conducted in 2011, by the Hon Murray Wilcox AO QC, and the Government's response to it.

In conducting this present Review, I have had the benefit of exceptional work done, and support provided, by the legal services team assembled by Norton Rose Fulbright Australia, under the leadership of Dr Nicholas Brunton. I appreciate the work of Nick and all members of his team, along with the staff of the Mining, Exploration and Geoscience division of the Department of Regional New South Wales (MEG), on whom we relied heavily for information and technical support.

I also acknowledge the 369 parties who made submissions to the Review, following our Issues Paper. Many did so on a confidential basis, so no submissions, and no list of them, will be published. I have closely considered all of them, but have not opined on any individual, specific or personal complaints they included.

The background to the Review is set out in the Introduction to my report.

I was charged to carefully consider the costs and benefits of the opal industry in NSW, and I wish to make very clear at the outset that, as the State obtains significant benefit from an active and productive opal mining industry, I believe that it must provide a sound legal and policy framework to support and facilitate the industry's continuation and prosperity.

While the benefits are to be seen and enjoyed in the broad, there are many particular issues to be addressed, including locally, given that the local economies and communities of Lightning Ridge and White Cliffs are most closely involved and affected.

The cumulative and unremediated environmental damage caused by the mining of opals over the last 130 years – what one submission described as the “debris of a bygone era”, comprising mounds of salty dirt, and much rusting equipment – simply has to be addressed, as does the poisonous and aggressive climate that now surrounds dealings between landholders and miners.

Much of the “land use conflict” between these groups arises from the shared failure to appreciate that, all through modern history, the State has actually owned much of what is found in the ground – minerals, petroleum and gas resources have long been reserved to the State because they comprise a public good the benefits of which must be shared between their extractor and the wider community.

The State encourages extraction of minerals, and allows mining to occur on land, whether publicly or privately owned. Detailed obligations are imposed on how that mining is to occur and miners usually pay a royalty on what is extracted (but not in the case of NSW opals).

The legal framework clearly contemplates the coexistence of rights to mine and rights to use the land in other ways. No one set of rights prevails over another, so farmers and graziers have no legal entitlement to prevent or restrict opal or other mining legally permitted under the *Mining Act 1992*, and holders of mineral claims have no legal entitlement to hinder farming activities outside their immediate claim area. Put simply, the legal and policy framework requires farmers and miners to live together.

I hope that under the amended regime that will follow from this Review, both miners and landholders will accept the legal realities of mixed land use, and be more committed to living and working in harmony. It would then be desirable and beneficial for your office to bring those groups and other stakeholders together in some form of advisory council, to be chaired by an independent person.

Yours Faithfully

Terry Sheahan AO

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 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 legalisation 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.

EXECUTIVE SUMMARY

In the various chapters of what follows the Review makes the following recommendations:

R2.1 The Mining Act should be restructured to consolidate the opal mining provisions into a single part, with sections organised in a logical manner following the sequence of activities required by a person to undertake opal mining.

R2.2 The orders and instruments that supplement the provisions should be simplified and consolidated. Once remade, all orders and instruments should be provided online in an easy to understand format.

R2.3 The need to retain opal prospecting areas should be considered in light of the recommendation in Chapter 3 for the clearer identification of areas for opal prospecting and opal mining. Mapping of the areas available for opal prospecting and mining should be publicly available online in an easy to understand format.

R2.4 MEG, including the Resource Regulator, should ensure there are more regular visits from key staff at both Lightning Ridge and White Cliffs to promote education and their understanding of current mining activities, and to ensure appropriate enforcement and rehabilitation of mined areas.

R3.1 MEG should make and publish online a policy that no prospecting licences or mineral claims will be granted outside the Cretaceous ridge land except for puddling claims. Mapping of the Cretaceous ridge land should also be published online and in hard copy.

R3.2 The current moratorium on the grant of mineral claims within OPA4 should continue until the reforms recommended by the Review are implemented. Thereafter, the Review recommends that MEG accept applications for opal prospecting licences and mineral claims over the Cretaceous ridge land within the area of OPA4, and subject to the constraints mapping in Chapter 6 of the REF. This would enable applications to be lodged in relation to an additional 36,800 hectares of areas identified as having low environmental impact, and a further 9,900 hectares with a medium environmental impact within OPA4.

R3.3 The boundaries of the WCMCD should be remade and redeclared by the Secretary, limiting its boundaries to MR2686 and MR2684. The watershed of the White Cliffs town water supply should be excluded from the WCMCD.

R3.4 To improve certainty, appropriate definitions should be inserted into the Mining Act in respect of residential dwellings. For example, a dwelling could be defined to be a principal place of residence and include water tanks, verandahs etc but exclude buildings not attached to the dwelling such as car ports, farm sheds and other structures. The term significant improvement should be removed as it is too uncertain.

R3.5 The Mining Act be amended to include a right to object to the Secretary in relation to the grant of mineral claim by reason of encroachment into an area claimed by a landowner to be a residential buffer zone. The Secretary can determine the matter or delegate it to an appropriate staff member or independent decision maker.

R3.6 Existing ‘policy reserves’ should be reviewed. If following a review, these are determined to have no practical function, they should be repealed. If some of these policy reserves areas should be protected from mining, then a formal gazettal of the reserve under s 367 should be made.

R3.7 The use of OPAs in the Mining Act be reviewed.

R4.1 Considerable efficiencies can be achieved by developing and implementing a more modern regulatory system. As a starting point, all applications, renewals and other documentary processes should be capable of being lodged via an online platform as is common with other government services.

R4.2 The system should include specific functionality as recommended in the chapters that follow.

R4.3 Assistance should be made available to miners at the MEG Lightning Ridge Office on how to use the online system and the mining associations should consider how to assist their members in navigating the application process involve automated development of notices so that the application can be simple, smooth and functional.

R5.1 MEG should explore moving towards a fully graticulated system in which applicants select which areas they are applying for from a surveyed grid of the opal field.

R5.2 Until this system is fully implemented by MEG, the Mining Act should be amended to require miners to mark out their claims using appropriate geolocating technology. This could include GPS devices calibrated to a minimum accuracy, mobile phones or other technology as it becomes available.

R5.3 If appropriate, MEG could consider purchasing a number of devices and renting them to miners from its Lightning Ridge office. For White Cliffs, MEG should negotiate an agreement with the White Cliffs Miners Association so they can rent the devices to miners to mark out their proposed mineral claim.

R5.4 Once implemented, the requirements for an applicant to erect marker posts, dig a trench or dig a wall can be discontinued. Consideration should be given as to whether the requirement to place a notice on the land should be retained.

R6.1 The online system recommended in Chapter 4 should:

(a) require the miner to include all relevant information required by MEG including the lodgement of photographs of the mineral claim area recording its physical condition;

(b) require the payment of an application fee, security and applicable levies;

(c) require the payment of an amount for landholder compensation;

(d) be classed as a pending application until the process is completed;

(e) enable MEG to prepare a map of the mineral claim area based on the GPS data provided by the miner and send a copy of that map to the applicant; and

(f) automatically notify the relevant landholder(s) and include a copy of the application and the map of the mineral claim area.

R6.2 MEG should develop a tool to allow landholders to lodge an online objection to the granting of the mineral claim on the basis that the land is agricultural land under s 179;

R6.3 The System should then provide for the determination of the application by the Secretary and the notification to the applicant and to the landholder of the determination;

R6.4 The online system should automatically forward landholder compensation to the landholder on the granting of a mineral claim on their land.

R6.5 The online system be designed so that miners are automatically notified that their mineral claim is due to expire and an application for renewal needs to be lodged.

R6.6 The Mining Act be amended to facilitate the above recommendations.

R7.1 The online system recommended in Chapter 4 should allow for miners to apply for a permit to enter.

R7.2 MEG must not grant a permit to enter unless satisfied the applicant has completed appropriate training in:

(a) Obligations under the Mining Act;

(b) Environmental protection (including erosion control and watercourse management);

(c) Heritage conservation (including mining heritage and aboriginal cultural heritage);

(d) Biosecurity; and

(e) Animal welfare and the operation of grazing properties.

R7.3 A permit to enter is to be valid for 14 days.

R7.4 The system established by MEG should provide notice of the holder's intention to enter to the landholder's property within 72 hours' notice by way of email, text message or other electronic means.

R7.5 The applicant must provide in their application, and MEG must include in the notice to the landholder, the following information:

(a) names of all person(s) proposing to enter;

(b) vehicle model & type;

(c) if registered, the vehicle registration number; and

(d) how long the person(s) entering intend to be on the property.

R7.6 The offence of obstructing a person be amended to make clear this extends to obstruction by way of threat.

R7.7 The penalty for obstructing a person exercising their rights under a permit to enter should be increased to 500 penalty units.

R7.8 There be available training modules for miners on the above topics. Training could be provided by MEG with input from appropriately qualified and skilled miners and farmers.

R8.1 The existing Section 175 Orders for both mineral claims districts should be reviewed. Ideally, the Section 175 Orders for both districts should be similar to promote greater consistency in the regulation of the industry.

R8.2 To encourage investment in the opal mining industry, the classes of claims that should be available for miners should be reviewed. Consideration should be given to the following proposed classes in any new section 175 order:

Class	Term[1]	Area
General (small)	1-5 years	$2500m^2$
General (large)	1-10 years	$10,000m^2$
Puddling	5 years	$20,000m^2$
Mullock storage	5 years	$20,000m^2$
Open cut and trenching	5 years	$20,000m^2$
Trenching only	1 year	$2500m^2$

R8.3 If a new Section 175 Order is made, the new form of mineral claims can be phased in over time on the renewal of each existing mineral claim.

R8.4 Miners should be restricted to holding only two mineral claims. The definition of the holder of the mineral claim should be broadened to include all related party entities such as related companies including companies held by the same directors and shareholders and where the mineral claim is held by persons related to the holder.

R8.5 The Mining Act should be amended to provide that access management plans may be entered into in any part of a mineral claims district.

R8.6 The Mining Act should be amended to allow for the gazettal of a template access management plan (AMP). A template AMP could be based upon those determined in decisions of the NSW Land and Environment Court. MEG should consult with landholders and mining associations on the draft. AMPs based on the template could include additional conditions as agreed by the parties.

R8.7 The requirement to mark access tracks with marker posts be removed.

R8.8 Administrative fees should be reviewed having regard to relevant factors including cost to Government and costs to miners.

R8.9 Mineral claim holders should be required to submit an annual mining report to the Mining Regulator setting out the depth of the mine shaft, the lateral extent in metres, direction and dimension of any tunnels or caverns, and the void space created.

R9.1 A standard compensation determination for WCMCD should be made as a matter of urgency. It is suggested the standard compensation per annum for general (small) mineral claims granted within the WCMCD is the order of $55 and $200 within the LRMCD.

R9.2 MEG should develop and publish a policy outlining how the standard compensation is calculated and indexed based on the approach set out in Chapter 9.2.

R9.3 Standard compensation amounts should be proportionally increased for mineral claims granted over larger areas.

R9.4 The standard compensation amount should be reviewed every five years.

R9.5 Section 266(1) should be simplified to provide that a landowner is entitled to receive standard compensation on the grant of a mineral claim or an amount agreed in writing by the landholder and the applicant for the mineral claim.

R9.6 A definition of standard compensation should be inserted into the Mining Act, being the amount determined by the Minister having regard to valuation advice and published in the Government Gazette.

R9.7 Consideration should be given to repealing sections 266(6)-(8) of the Mining Act once a standard compensation determination for WCMCD is made.

R10.1 A new provision should be inserted into the Mining Act requiring mineral claims to be rehabilitated to certain standards published by MEG at the expiry of the mineral claim.

R10.2 The MEG publishes rehabilitation standards should:

(a) require all mining shafts within the preserved fields to be filled in to a depth of 2m below ground level at the end of the mineral claim term;

(b) require all mining shafts outside the preserved fields to be filled and capped including an amount to allow for subsidence;

(c) require the removal of any mining structures and machinery (regardless of who placed them there);

(d) specify methods for collecting, storing, and reinstating topsoil; and

(e) specify revegetation methods.

R10.3 Once a mineral claim is rehabilitated, the only future mineral claims that can be granted over that area are open cut or trenching mineral claims.

R10.4 MEG should impose more detailed conditions in open cut mineral claims requiring strict compliance with rehabilitation standards including how the miner must deal with the removal, storage, and reinstatement of topsoil and how the area is to be revegetated before the mineral claim is cancelled.

R10.5 The Mining Act should permit the sale and reuse of mullock. This material should be used for purposes such as backfilling former shafts and voids, road base and other appropriate uses. Mullock should be subject to a resource recovery order and exemption under the Protection of the Environment Operations Act 1997.

R10.6 Mullock storage should be confined to bunded areas. Conditions should apply to miners to ensure bunds are maintained.

R10.7 Miners should be required to notify MEG of all mullock removals and the estimated volume of material removed from a claim. The practice of dumping mullock on unregulated communal stockpiles should cease. Unregulated mullock stockpiles should be remediated by use of funds from the Environmental Levy fund.

R10.8 Security bonds should be lifted as set out below:

Type	Minimum bond amount
General (small)	$1,000
General (large)	$10,000 or an amount determined by a rehabilitation assessment tool
Puddling	$30,000
Mullock storage	$50,000
Open cut and trenching	$50,000
Trenching only	$10,000

R10.9 As noted in Chapter 4, a mineral claim application must include photos of the mineral claim area recording of its condition. MEG should develop guidelines on the minimum number of photos required to fairly depict the overall physical conditions of the claim. This record should be retained by MEG for use when assessing rehabilitation at the end of the mineral claim.

R10.10 Security bonds should be required for both LRMCD and WCMCD. In order for security bonds to be refunded, the Resource Regulator should inspect the mineral claim and certify that rehabilitation has been completed in compliance with MEG's rehabilitation standards. If, in the opinion of the Resource Regulator, this is not the case, an order to complete rehabilitation within 30 days should be given. If, at the end of this period, rehabilitation is still not completed to standard, the security bond should be forfeited, and the Resource Regulator given the discretion to issue a penalty notice.

R10.11 The standard conditions in a mineral claim should require the mineral claim holder to rehabilitate the entirety of the mineral claim regardless of who carried out the opal mining activity within that mineral claim.

R10.12 MEG should fund immediate and urgent rehabilitation works such as rubbish removal, filling-in of shafts and other priority works.

R10.13 The list of approved suppliers under the rehabilitation fund should be reviewed by MEG with a view to increasing the pool of available contractors. MEG should publicise the rehabilitation fund and publish a fact sheet on how to apply, what is covered and how the funds are to be spent.

R11.1 It is recommended that MEG review the preserved fields and consider rationalising them to ensure they can focus on a safer and more enriching tourism experience.

R11.2 Area A at White Cliffs should be formalised as a preserved field.

R11.3 Rehabilitation standards for the preserved fields should be published requiring shafts to be filled to no less than 2m below ground level or to be fenced with cyclone fencing, secured by posts cemented into the ground.

R11.4 The Lightning Ridge Opal Reserve manager should take the lead on improving safety within the preserved fields at Lightning Ridge using funds from the Environmental Levy.

R11.5 Stakeholders should work together to improve tourist infrastructure in the preserved fields by installing wayfinding signage, more detailed information on mining, better footpaths, amenities, seating and so on.

R12.1 No new permanent structures should be permitted on mineral claims, with clear guidelines published for what constitutes a temporary structure permissible on a claim.

R12.2 Existing residents whose dwellings were erected under the purported authorisation of MEG's predecessor and that have not been transition to a Western Lands Lease should be offered a long term lease or licence as a matter of urgency.

R12.3 The lease or licence should not be renewed at the conclusion of its term unless relevant planning and building approvals have been obtained for the dwelling and conditions imposed that if the lease or licence is not renewed, all improvements must be removed from the land.

R13.1 Miners should be required to comply with reasonable requirements of Biosecurity Management Plans. The obligation should be incorporated as a condition of the grant of a permit to enter, OPL or mineral claim.

R13.2 A miner may apply to the Secretary to determine whether a requirement of a Biosecurity Management Plan is reasonable. This function should be delegated by the Secretary to an independent expert whose decision shall be final and binding.

R13.3 A condition should be placed on the grant of mineral claims, requiring mineral claim holders to take reasonable steps to control weeds on their mineral claim.

R14.1 Training should be provided by MEG on the following competency areas:

a) Obligations under the Mining Act;

b) Surveying a mineral claim using GPS devices;

c) Workplace Health and Safety;

d) Mine geology and engineering basics;

e) Environmental protection (including erosion control and watercourse management);

f) Heritage conservation (including mining heritage and Aboriginal cultural heritage);

g) Biosecurity; and

h) Animal welfare and the operation of grazing properties.

R14.2 To obtain any permit to enter or OPL, the applicant will need to demonstrate they have completed training in (a),(e),(f),(g), and (h). To obtain a mineral claim an applicant will further need to demonstrate further training in (b),(c), and (d).

R14.3 An applicant for an OPL or mineral claim should be required to provide MEG with a recent police check and MEG should develop and implement a fit and proper person policy.

R15.1 The Mining Act and Land and Environment Court Act 1979 be amended in order for relatively minor disputes involving opal mining be able to be resolved by the Secretary and the Secretary

being able to delegate to an independent expert the role of settling the dispute. The decision of the independent expert should be final and binding.

R15.2 The disputes that may be resolved by this process include:

a) Determining whether a mineral claim is within a prescribed distance of a dwelling house under s 188(1);

b) Rights of way under s 211(7); and

c) The making of access management plans under s 236.

R15.3 The NSW Government should set aside $2 million for the future buyback of land within the mineral claims districts.

R15.4 The Reserve Manager should pursue the diversification of its income streams to reduce reliance on landholder compensation payments.

R15.5 The Review recommends that the land manager provide every opportunity for the Aboriginal community to access Country and that the recommendations and strategies in section 8.3 of the Plan of Management for the Lightning Ridge Opal Reserve be implemented, monitored and reported on and that this information be shared with the Aboriginal community.

R15.6 The Review recommends appointing a suitably qualified person to engage with stakeholders and consideration be given to establishing an advisory body which that person could chair.

GLOSSARY OF TERMS USED IN THIS REPORT

Access management area	An access management area constituted under Part 10A of the Mining Act.
Graticulation	The division of an area into a grid.
Lightning Ridge Mineral Claims District or **LRMCD**	An area surrounding the town of Lightning Ridge that is declared as a Mineral Claims District under s 173 of the Mining Act.
Mark out	The process of placing pegs and a notice in compliance with s 176 of the Mining Act and r 40 of the Mining Regulation to delimit the area of land over which a person intends to apply for a Mineral Claim.
MEG	Mining, Exploration and Geoscience, a division of the Department of Regional NSW.
Mineral Claim	A title to mine an area under part 9 of the Mining Act.
Mineral Claims District	An area constituted under Division 1 of Part 9 of the Mining Act. A Mineral Claims District is declared by an order in the Gazette.
Mining Act	The *Mining Act 1992* (NSW).
Mining Lease	A mining lease granted under Part 5 of the Mining Act.
Mining Regulation	the *Mining Regulation 2016* (NSW).
Mullock	The waste material that is separated from the ore extracted during opal mining. It is generally a light-coloured, clay-like dirt high in salt.
Notice of intention to apply for a mineral claim	A notice to be served by a miner on the landholder under s 177 of the Mining Act giving notice of an intention to apply for a mineral claim and identifying the land to be applied for.
Opal Prospecting Area or **OPA**	An Opal Prospecting Area constituted under Division 1 of Part 10 of the Mining Act. An OPA allows for the constituting of Opal Prospecting Blocks over which an Opal Prospecting Licence can be granted.
Opal Prospecting Block or **OPB**	An Opal Prospecting Block constituted under s 224 of the Mining Act. An OPB is a subunit of an OPA over which an Opal Prospecting Licence can be granted.
Opal Prospecting Licence or **OPL**	A licence granted under Division 2 of Part 10 of the Mining Act. An OPL allows a holder to prospect for opals in the OPB over which the licence is granted.
Policy reserve	An area which appears to have been excluded for opal mining as a matter of policy and without being prescribed by a statutory instrument.
Preserved fields	An area over which the Secretary has relaxed rehabilitation conditions on the grant of Mineral Claims. This has resulted in areas that preserve the look of working opal mines.
Puddling	The method of separating the mullock from the ore, usually with water in a large revolving barrel.
Potch	A hydrated amorphous form of silica without the characteristic colours of opal; i.e. colourless colour.
Resource Regulator	The unit within MEG that regulates the mining sector.
Notice of intention to exercise rights under a small-scale title	A notice required to be served by a miner on the landholder under s 266(4)(b) of the Mining Act giving notice of intention to start mining of specified land under a small-scale title.

Standard compensation	A rate of compensation determined by the Minister that may be paid to a landholder to meet the miner’s obligation to pay compensation under s 266(1) of the Mining Act.
Small-scale title	A mineral claim or an opal prospecting licence.
White Cliffs Mineral Claims District or **WCMCD**	An area surrounding the town of White Cliffs which is declared as a Mineral Claims District under s 173 of the Mining Act.

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INTRODUCTION

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

As set out in the Terms of Reference, the Review was 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 Review also carried out a comparison of the legislative regimes regulating opal mining in the two other jurisdictions they are found, being Queensland and South Australia. A high-level summary of this comparison is set out at Appendix A. The Review also examined the report of the Hon. Murray Wilcox AO QC dated 6 July 2011 and the Final NSW Government Response to it dated August 2013.

As required by the Terms of Reference, the Review undertook targeted stakeholder consultation and met with a variety of those stakeholders. The initial stakeholder engagement included two site visits to meet with stakeholders in Lightning Ridge and White Cliffs in November 2023. In the time available, it was not possible to meet with every miner, landholder and person involved in the opal industry. Some stakeholders were prepared to participate only on the condition of confidentiality, so the Review has chosen not to publish a list of stakeholders, contributions and submissions.

Initial stakeholder input provided the basis on which the Review published an Issues Paper in December 2023. In this paper, the Review posed questions on various issues affecting the regulatory framework for Small Scale Titles in NSW. The issues paper was published on the NSW Government's Have Your Say portal on 15 December 2023 with an invitation for the public to make submissions until 28 February 2024. After receiving requests for an extension, the submission period was extended to 31 March 2024.

The review received 369 submissions from a range of stakeholders. These submissions, along with the initial stakeholder input, and our research and inquiries have informed the writing of this report.

The Review has carefully considered the costs and benefits from opal mining in NSW. The Review wishes to be very clear from the outset it believes there are significant benefits to the State of NSW in supporting an active and productive opal mining industry. The Review considers that the positive benefits that opal mining brings to the local economies and communities of Lightning Ridge and White Cliffs means that the legal and policy framework should support and facilitate the continuation of the industry.

However, reform is required to address a range of issues. The objective of some of the recommendations in this report are to make it easier to obtain and renew mineral claims for small miners and to encourage more investment by larger operators. Other recommendations aim to improve rehabilitation outcomes through increases in fees and more supervision of the industry. The Review also recommends a more sophisticated methodology for determining landholder compensation.

The Review also proposes a streamlined interaction and dispute resolution process and measures to improve rehabilitation standards, dealing with legacy mines and mullock dumps, and lifting the standards and skills of the opal mining workforce such as through better access to training.

The Review believes the combination of measures recommended in this will result in a more professional, safe, and environmentally responsible industry that will continue to underpin the ongoing viability of the towns of White Cliffs and Lightning Ridge.

Chapter 1: Opal and the opal mining industry in New South Wales

1.1 What is opal?

Opal (SiO_2nH_2O) is a quartz-like form of silica containing water. Its structure refracts white light into various colours, giving it a unique and highly prized colourful display. Opal has a wide range of colours and types including milky white, grey, blue, black or colourless.

There are various theories about the formation of opal, but a growing consensus appears to be emerging that in the Early Cretaceous period, the Great Artesian Basin comprised a large inland sea which was flanked on the eastern side by a volcanic cordillera. The sea flooded and acted as a sink for sediments eroded from the cordillera's volcanic arc. The inland sea was shallow, cold, poorly connected to the open ocean, muddy and stagnant. Iron-rich and organic matter-rich sediments were deposited over time.

From 97 to 60 million years ago, Australia remained at high latitude, and a protracted period of uplift, erosion, denudation, and cooling of the crust unfolded. It is possibly during this period that the bulk of precious opal was formed via weathering, which released silica rich solutions which moved into the weathered semipermeable layer of silty claystone, the Finch Claystone, where the solution filled natural porosity, cracks, fractures, and cavities, derived from the dissolution of minerals and fossils, to form opal.

When uplifting stopped at around 60 million years ago, the opalised rock forms were preserved by the widespread deposition of other sediments in the Cenozoic era.[1]

Today the opal formed during that period is found mostly across a cluster of fields in Queensland, South Australia, and New South Wales, as shown in the map below.

[1] Patrice F Rey, 'Opalisation of the Great Artesian Basin (Central Australia): An Australian Story with a Martian Twist' (2013) 60(3) *Australian Journal of Earth Sciences* 291; J Herrmann et al, 'The Nature and Origin of Pigments in Black Opal from Lightning Ridge, New South Wales, Australia' 66(7) *Australian Journal of Earth Sciences* 1027.

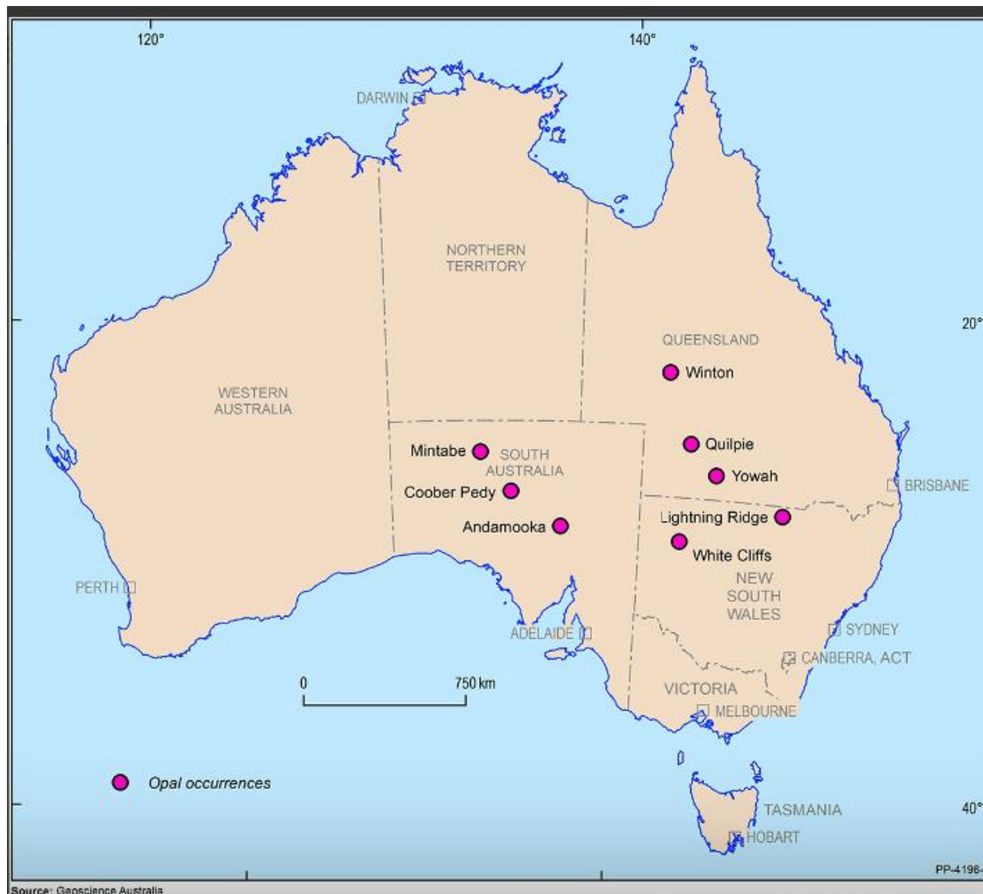

Figure 1: Map of opal mining areas in Australia: Geoscience Australia: 2016

Geoscience Australia has recorded that Australia is the only part of the world where opalised animal and plant fossils have been found. In particular, small opalised dinosaurs and primitive early mammalian remains, together with shallow marine shellfish and crustaceans have been found at Lightning Ridge.

In New South Wales, opal fields are found near the towns of White Cliffs and Lightning Ridge in north-western NSW. The opal fields of White Cliffs are on the country of the Barkandji people. Lightning Ridge opal fields are on the country of the Gamilaraay and Yuwaalaraay people.[2]

Opal is a product that is highly valued both domestically and internationally. A major source of what is called black opal is Lightning Ridge. Black opal (technically called opal-AG) contains backing of a dark material which enhances the play-of-colour and contributes to the commercial value of the precious opal.

Black opal is a highly prized stone and its uniqueness commands significant prices in the wholesale and retail markets. The Review has seen some large black opals worth in the order of $300-350,000 in the wholesale market. It would appear the bulk of the high-quality opal found in New South Wales is exported, but a portion is sold domestically.

Based on submissions from downstream dealers, retailers and exporters, it would appear the export market for NSW opal has significant potential for growth. It was noted to the Review that NSW opal is now sold to many major luxury brands such as Tiffany, Cartier, Dior and Louis

[2] National Indigenous Australians Agency, ‘Communities’ (Web Page) <https://www.indigenous.gov.au/communities>.

Vuitton, and that so long as regular supply is maintained, there are enormous growth opportunities.

1.2 Opal mining in NSW

The nature of the geological processes that created opal as outlined in Chapter 1.1, makes finding opal extremely difficult.

Opal is generally not found within an ore body and does not follow a seam. Nor are there generally any surface level markers of its presence. Some of the literature indicates there are some surface indicators for opal, such as the presence of structural features like faults (indicated by lineaments), breccia pipes ('blows'), and the presence of outcropped weathered Cretaceous sedimentary rocks. However, such structural features are just "indicators", and do not guarantee the presence of opal. Indeed, the known opal deposits have been found to have no recognised geochemical haloes.

Most miners explore out from known opal fields, with exploration generally being undertaken by core drilling, usually in close proximity to existing opal fields. This aspect of opal mining has influenced its development over the last 100 or so years.

Based on the location of mineral claims and opal exploration licences that have been granted, it would appear that only very limited exploration is undertaken in previously untested remote areas of Cretaceous sedimentary rocks away from the known opal-producing centres.

These features of the mineral have influenced who mines for it and how. Given that geology and surface features do not enable the accurate prediction of where opal can be found, the industry does not attract large-scale established mining companies. The capital required to explore and mine on a large scale is significant, and the risks are high. Thus it is not an attractive form of investment for medium to large-scale mining companies.

Instead, it is small-scale individual miners, sometimes operating in conjunction with other individuals, who make up the bulk of the opal mining workforce.

A feature of opal mining in NSW is that the current legal and policy framework strongly reflects its early history. Opal mining commenced in 1891 at White Cliffs and in 1901 at Lightning Ridge. In 1901 a Royal Commission into opal mining suggested the grant of titles to mine opals be restricted to a small scale (at that time 100 square feet).[3]

Since this time, mining has been established and continued at Lightning Ridge and White Cliffs, through the grant of small-scale titles (the bulk of which are restricted to 2,500m^2), continuing the tradition of a small-scale industry of largely individual miners.

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[3] *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>.

Figure 2: Lightning Ridge circa 1958. Source: Mining, Exploration and Geoscience

1.3 Mining methods

Historically, opal was commonly mined by two or more individuals shaft sinking and tunnelling and following the opal 'level' using picks and shovels. A hand operated winch was used to haul buckets of excavated material to the surface.

Today this industry is highly mechanised, but is still in the hands of individuals, who work mainly within small mining claims which are operated according to state mining regulations. For example, except under special circumstances, in NSW only underground mining is allowed, whereas in South Australia both underground and open cut mining are permissible. In Queensland, open cut mining is the norm, and bulldozers and 20 to 40 tonne excavators are widely used.

Exploration is undertaken by a variety of methods. In a report issued in 2023, EMM Consulting[4] found that the most common methods are:

- Shaft sinking – this method includes sinking a shaft to intersect the claystone, then developing drives horizontally to test the value of the opal dirt. The shafts were traditionally sunk by hand or by Caldwell drill. This process is relatively slow and costly.

- Auger drilling – this method includes the introduction of the 230 mm diameter auger drill. This technology redirected the emphasis in prospecting away from shaft-sinking to gain access to the opal clays, toward testing for the existence of the necessary overlying sandstone and looking for colour in the small sample of clays that the auger drill produces. In most cases, the use of auger drills to assess the opal-bearing potential of an area is quicker and more cost-effective than shaft-sinking.

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[4] EMM Consulting Pty Ltd, *Review of Environmental Factors, Area 1 of Narran Warrambool Reserve* (Report, 14 August 2023) 27.

- Percussion drilling – smaller-diameter (>120 mm) percussion drilling rigs have also been used in recent years with some success. Although they create a smaller hole, with smaller samples than auger drills, they are quicker, and readily penetrate silcrete. Prospectors are required to backfill percussion drilling holes in accordance with departmental standards.

- SIROTEM is a geophysical method, which uses electrical current to measure the varying resistance of the underlying rocks, and, in doing so, provides information that can be readily interpreted to indicate where sandstone, claystone and faults are likely to exist. The benefits of this method are that large areas of ground can be tested quickly to provide a comparative assessment of the areas before drilling. These geophysical techniques remain in their infancy as far as the opal fields are concerned, but have the potential to become an important tool for the opal prospector.

Exploration can be undertaken under an opal prospecting licence (OPL) or under a mineral claim for prospecting. Miners typically explore for potential opal using a 9-inch auger drill which is capable of recovering large samples of the drilled material. If exploration indicates the presence of opal, the miner may lodge an application for a mineral claim to extract it.

Mining is undertaken by drilling vertical shafts, approximately one metre in diameter, using large diameter bucket drills. Once the appropriate depth is reached, miners create an underground cavern, and branch out horizontally to search for opal. If potentially economic opal is found, tunnels are dug, using jackhammers or underground hydraulic excavators. The excavated material is either sucked to the surface using ‘blowers’, or brought up by automated bucket winches or conveyors.

At Lightning Ridge, the excavated material is trucked to large processing centres known as ‘puddling dams’, where modified ‘cement-mixer’ type concrete trucks rotate, wash and screen the ore for several hours until only the harder fragments remain. Once washing is completed, the hard material is hand-sorted and any precious opal removed for assessment, cutting, polishing and eventual sale. Most of the opal in the concentrate is of the non-precious variety, or ‘potch’, mixed with a much smaller amount of potential gemstone. From the processing of a complete truckload of material (typically 5 to 10 cubic metres), even when from a very good mine, the precious opal recovered in most instances would easily fit into a shoebox.

At White Cliffs, the extracted material is not typically washed (given a lack of available water), but rather it is sieved, and the material examined to locate potential opal.

The waste material from this process is referred to by opal miners as ‘mullock’. 'Noodling' involves people searching through old mullock heaps for pieces of opal that might have been missed in the initial mining operation.

Figure 3: Aerial view across opal mine mullock heaps in White Cliffs. Source: Mining, Exploration and Geoscience

The above traditional methods of opal mining have largely remained consistent for decades, although some miners now also use open cut methods, and hydraulic power tools have now replaced digging by hand.

Opal mining occurs across a variety of land tenures in NSW, including Crown land, Crown land that is subject to a Western Lands Lease (which are unlimited in term and are thus called perpetual leases), and some areas of freehold land. Land that is freehold or subject to a Western Lands Lease is typically used for agricultural purposes. At Lightning Ridge, the Cretaceous ridge land is mostly used for grazing of sheep and goats while the plains are used for grazing and cropping, depending on rainfall and availability of pasture.

For some the mining of opal is a hobby, for others a primary means of income. While data on the exact number of miners is not available, data from MEG suggests that there are just under 1,200 active opal miners in NSW mining across 3,343 mineral claims.[5]

1.4 The value of opal mining in NSW

Determining the scale and value of opal mining in NSW is extremely difficult because of a lack of reliable data. This problem is longstanding. For example, one submission to the Review included a 2001 report on the opal mining industry authored by McKinna.[6] This report found

[5] Centre for International Economics, 'Opal Mining in NSW: Cost Benefit Analysis' (Report, 21 February 2024) 7 (CBA Report).

[6] David McKinna et al, *Strategic Assessment of the Australian Opal Industry* (Report, 28 May 2001).

that valuing the opal mining industry was next to impossible, because of the highly secretive nature of the industry, which involves a commodity which is valuable and easily exported without detection. The supply chain is highly convoluted, and parts of the industry operate using mainly cash. This appears as true today as it was in 2001.

One of the reasons the State of NSW does not have any meaningful data is because there is no regulatory framework requiring the payment of royalties based on the amount of opal extracted. Opal miners generally do not need to declare and account for opal they find (other than through the taxation system). Historically it was common for miners to deal with the opal they have found by selling it for cash to opal buyers and dealers. This is becoming less prevalent due to the nature of the taxation and supply-chain systems, and the need for high-quality opal to have sound provenance.

Both international and domestic sales of opal found in NSW are not recorded in any systematic and verifiable manner. Thus, the volume of opal extracted, and the value of the opal sold to domestic and international buyers, cannot be estimated with any degree of accuracy.

As part of the Independent Review process, MEG commissioned, and the Review was provided with a cost benefit analysis of opal mining (CBA Report). The Review has found the CBA Report suffers from the same data limitations as noted in the McKinna report some 23 years ago.

The CBA Report relied on a number of data sources. The first source comprise reports prepared by the Australian Bureau of Statistics (ABS) on the value of exports of “precious and semi-precious stones and pearls” (of which opal is a subset). According to the ABS, Australia exported around $125 million in precious stones in the financial year ending 30 June 2022. No indication is given as to what proportion of this is derived from NSW sourced opal. This figure also excludes domestic sales of opal, and is thus an underestimate of total production.

The second source of data is a report by the NSW Department of Primary Industries (DPI) analysing ABS customs data which suggested the value of opal exports in the year ending 30 June 2000 was $79 million. The Review notes that the CBA Report does not identify the methodology used in this analysis. This, together with the age of the data, renders this source of information somewhat unreliable.

Another data point referred to in the CBA Report is an estimate from an unidentified opal supplier and retailer, who believed the value of Australian opal exports to be between $60 and $85 million between 1997 and 1999. Again, this is very poor-quality information. It is very old, the view is from an unidentified retailer, and the basis of the estimate is not known. For these reasons, the Review gives it little weight.

Another data source relied on in the CBA Report was a document[7] that stated that DPI estimated the value of opal production in NSW in 2002-03 at $35 million. However, the CBA Report fails to identify that the DPI figure is based on black opal exports only. It did not include domestic sales or exports of other opal types.

Notwithstanding these limitations in the data, the CBA Report estimates that the value of opal mining to NSW (made up of the export of opals, government revenue, and the forfeiture of

[7] NSW Department of Primary Industries, ‘Opal’ (Online Publication, 2000) <https://www.resourcesregulator.nsw.gov.au/sites//default/files/2022-11/opal.pdf>.

security deposits) is $42.43m over a 10-year period.[8] The Review notes this figure does not capture the downstream economic benefits of mining, as the report adopts the NSW Treasury methodology of excluding these economic benefits from the cost benefit analysis.

It is clear to the Review that opal mining supports flow-on economic activities, including cutting, polishing, jewellery making, and trading of opals for sale and export, as well as support services such as machinery hire. The choice not to include the downstream economic benefits of opal mining is justified by the claim that these benefits are "substitutable" (for example that jewellers may substitute opals for other gemstones).[9] This assumption is questionable. While substitution may occur in the wider economy, opal mining clearly plays an irreplaceable role in the local economies of White Cliffs and Lightning Ridge.

While gemstone processing may be substitutable at a state level, one submission suggests that there are 60-80 people cutting and polishing stones in and around Lightning Ridge, and more than 50 wholesalers operating there. These would likely not be found in this location, but for the presence of the nearby opal mines.

It is clear to the Review that opal mining attracts a population, and provides employment and income for miners and local residents, as well as attracting services to support the industry. This economic activity has flow-on benefits for the towns of Lightning Ridge and White Cliffs, and for Walgett Shire Council and Central Darling Shire Council through rate collection. It is clear to the Review that Lightning Ridge and White Cliffs would experience large contractions in their populations and economies should opal mining not continue.

Opal mining is also a major factor in attracting local as well as international visitors. Submitters suggested that somewhere between 50,000 and 200,000 visitors come to Lightning Ridge each year. This number may well increase once the new Australian Opal Mining Centre opens. The Review observed significant tourism infrastructure and services during its visits to both White Cliffs and Lightning Ridge.

The CBA Report took the view that measuring tourism as part of the benefits of opal mining was not appropriate. This view was based on the argument that tourism is attracted to historical and cultural aspects of mining rather than the presence of active mines.[10] The CBA Report cited examples of sites in other jurisdictions where tourism reportedly remained significant after the cessation of mining. The Review doubts the validity of this conclusion, and its applicability to the circumstances of Lightning Ridge and White Cliffs. The Review observed that tourism in these towns is inextricably linked to the presence of opal miners and the activity of opal mining. The Review observed numerous sites where tourists visit active and working opal mining areas.

The Review also notes that some tourism services offered by miners themselves (for example, a tour with a local miner[11]) would not be available without active mining. The dual use of certain businesses by miners and tourists, such as cafes, restaurants, and the large licensed club in Lightning Ridge makes it unlikely that the extent of services available to tourists in Lightning Ridge and White Cliffs would exist in the absence of an active opal mining industry.

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[8] CBA Report, 3.

[9] CBA Report, 36.

[10] CBA Report, 35.

[11] 'Chambers of the Black Hand Lightning Ridge' <https://chambersoftheblackhand.com.au/>.

The benefits of opal mining to the tourism industry were noted in many submissions to the Review. As one submitter noted:

> *The benefits of maintaining and growing the tourism/visitor economy are substantial. Lightning Ridge enjoys a future that would be the envy of many outback towns that are fighting for survival. We have a thriving commercial and tourism base, provide opportunity for education and jobs which positively impacts on employment and lessens need for government assistance, act as a magnet for visitors who travel through the Shire and deliver relatively consistent financial performance regardless of the cycle [sic] climatic conditions that affect primary producers in the region.*

The Review also heard from miners that opal mining provides non-economic benefits, including a lifestyle conducive to physical and mental health. In the Review's opinion, this aspect is extremely important, given the opal mining workforce includes many people in the latter half of their lives. Mining for opal clearly provides extensive non-monetary benefits to those who participate, as well as to the wider community, but those benefits are not captured by the CBA Report.

Similarly unquantified is the symbolic and cultural role of opal mining. In 1993 the then Governor-General, the Hon Bill Hayden AC declared the opal to be the "national gemstone of Australia".[12] Further, the black opal is recognised as the gemstone State emblem of NSW.[13] The Review has heard and read that the black opal obtained from Lightning Ridge is internationally recognised as the highest quality opal in the world. The presence of opal also has significant cultural heritage value to Indigenous communities as well as having an impact on broader culture through mining, tourism, and heritage, literature such as the novel 'Opal Country' by Chris Hammer, and even reality television through the show 'Outback Opal Hunters'.

The CBA report also did not consider the likely economic benefits associated with the construction in Lightning Ridge of a new $35 million Australian Opal Centre, due to open in late 2024. This facility is jointly funded by the Commonwealth and NSW Government and is designed by Wendy Lewin in conjunction with Dunn + Hillam architects. It will be an important addition to the tourism infrastructure at Lightning Ridge, as well as providing information, education and cultural development opportunities.

One submitter provided the Review with a detailed economic analysis of the impacts of opal mining within the district of Walgett.[14] This report analysed the net annual regional economic impact, and concluded that opal mining provided the following economic impacts within the Walgett local government area:

- An estimated direct output of $63.1 million, and additional flow-on increases in output of $29.9 million, for a total industry impact of $93 million annually. A further $5.2 million in output in the region can be associated with consumption-induced effects.
- Estimated direct income (wages and salaries) of $17.1 million, with $6.9 million in additional income generated through flow-on effects.

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[12] *Commonwealth of Australia Gazette*, No 229, 29 July 1993, S229.

[13] *State Arms, Symbols and Emblems Amendment (Black Opal) Act 2008* (NSW).

[14] Lawrence Consulting, *Economic Impact of Opal Industry in Walgett Shire* (Report, March 2024).

- Approximately 352.1 full-time equivalent (FTE) direct employment positions, with an estimated additional 327.5 employment positions, supported indirectly through other industries and household consumption, for a total employment impact of 679.6 FTE jobs.

- An estimated contribution to gross regional product of $32.9 million from direct effects, with a flow-on impact of $14.4 million, for a total industry value-add of $47.3 million.

- Tourist visits of approximately 50,000 per year, leading to a direct output of $19.4 million, plus flow-on increases in output of $4.8 million though other industries, for a total industry impact of $24.2 million, and a further $4.1 million of consumption-induced effects.

- Tourism-related direct employment of 204.7 direct FTE positions in tourism, with 68.6 positions in other industries and household consumption, leading to total employment impact of 273.2 FTE jobs.

Whilst the Review does not have the benefit of further information on the methodology and source of information adopted in this report, it appears to indicate that the CBA Report figure is a significant underestimate of the value of opal mining to NSW.

1.5 The costs of opal mining

The Review recognises that while opal mining produces economic benefits to the community, it involves a range of costs, some of which are not being paid by the industry. As outlined in greater detail in Chapter 8.4, the fees and levies paid by opal miners to the NSW Government do not cover the costs of regulating opal mining. The forecast cost of regulating opal mining in 2023-2024 is $5.36 million, but the revenue MEG routinely collects falls far short of this.[15]

In 2021-22, the year prior to the Small-Scale Titles (Opal Mining) Validation Program refunds, revenue was $0.84 million.[16] This means that MEG relies on revenue raised from other mining activities in NSW to regulate opal mining. In effect, its regulation is currently subsidised by other mining industries.

In addition, opal mining causes environmental impacts, including creation of deep holes and caverns in the landscape – some of which are not filled at the end of the relevant mine, land clearing, removal of topsoil, subsidence, erosion, and the pollution of waterways. In some areas the presence of highly saline spoil (ie mullock) can result in the permanent sterilisation of the land.

Where mining occurs on non-public land and rehabilitation has not occurred, the impacts can result in the land being unusable for grazing, resulting in costs for the landholder. The CBA Report estimates that historic unrehabilitated opal mines and communal mullock dumps create a liability of some $24 million.[17]

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[15] CBA Report, 23.

[16] CBA Report, 23.

[17] CBA Report, 40.

The Review also observed many abandoned buildings and items of machinery, as well as other rubbish left by opal miners. The Lightning Ridge Opal Reserve Manager spends approximately $60,000 per year cleaning up material abandoned by opal miners on the Crown reserve.[18]

Opal Mining also impacts upon Aboriginal cultural heritage. The Review heard from Elders who had serious concerns about the impacts of opal mining on country and their cultural heritage. This issue was noted in the Wilcox Report, but no recommendations were made.[19]

The deaths and injuries associated with opal mining also involve social and economic costs. Data provided by the Resource Regulator shows a rate of fatalities per hours worked in opal mining is 6.5 times greater than coal, extractive and metalliferous mines.[20] The CBA estimates that fatalities and injuries caused by opal mining cost NSW $2.1 million per year.[21]

The Review also observed the safety risks posed by unrehabilitated and uncapped mines to landholders, members of the public, and livestock. The potential impact of risks to third parties is not quantified by the CBA Report.

1.6 Land use conflicts

A recurrent theme during the work of the Review was that of land use conflict, much of which stems from a general poor understanding of the legal framework around land and mining.

It is often not understood that in Australia, the State owns much of what is in the ground. It owns ‘publicly owned minerals’ under the Mining Act as well as all petroleum and gas resources. Minerals, petroleum and gas resources are reserved to the State for the primary reason that they comprise a public good, the benefits of which need to be shared between the miner/extractor and the wider community. Usually, miners/extractors pay a tax (called a royalty) based on the amount extracted. However, uniquely to NSW, this does not occur for opals.

The State of NSW encourages the extraction of minerals and other resources for the wider economic benefits they provide to the community as a whole. Legislation thus allows mining to occur on land both privately owned and publicly owned. The legislation grants certain rights (prospecting licences, mining leases, mineral claims and other titles) which are highly valuable. The legislation also imposes detailed obligations on how mining can occur.

The State also grants estates in land. The most valuable estate is called the fee simple estate, or freehold estate. Roughly half of the land in NSW is freehold title, being land granted by the State of NSW to its citizens after 1788 – without, of course, the proper recognition that the land was owned by the Indigenous inhabitants. That recognition finally came about following the decision of *Mabo v Queensland* [1988] HCA 69; (1969) 166 CLR 186 and the subsequent enactment of the *Native Title Act 1993*.

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[18] CBA Report, 40.

[19] Murray Wilcox AO QC, ‘Lightning Ridge Opal Mining’ (Report, 6 July 2011) [143] (Wilcox Report).

[20] Data provided by the Resource Regulator showed fatalities per 200,000 hours in coal, extractive and metalliferous mines between 2016 and 2023 to be 0.04. The same period for opal mines (assuming that 1,500 operators worked 1,500 hours each), showed a rate of 0.26 per 200,000 hours.

[21] CBA Report, 43.

The State also grants other forms of title in land, including leasehold titles granted under the *Crown Land Management Act 2016* (**CLM Act**). At Lightning Ridge and White Cliffs, one finds both freehold and leasehold land.

Parliament has, therefore, created a legal framework which contemplates the co-existence of these two sets of rights – rights to mine opal under the Mining Act, and private property rights being either freehold ownership or leasehold rights. The holders of these rights also have obligations. Miners operate under a range of conditions on their titles. Leaseholders are also subject to conditions in their leases. In addition, all owners and occupiers of land have obligations under what is called the common law, especially regarding the obligation not to engage in negligent conduct, not to trespass on land, and not to commit other causes of action.

Parliament has enacted laws which mean that one set of rights does not prevail over the other. Farmers and graziers have no legal entitlement to prevent, reduce or restrict opal mining that is lawfully permitted under the Mining Act. Similarly, holders of mineral claims have no legal entitlement to hinder farming activities outside their mineral claims, or to hinder farming while prospecting. The legal framework established by Parliament extends to the detailed planning strategies and environmental planning instruments that have been made for opal mining areas. These planning instruments similarly promote the dual uses of land around the towns of Lightning Ridge and White Cliffs for agricultural purposes and for opal mining.

Put simply, the legal and policy framework established by the State of NSW requires miners and farmers to live together. Neither party is going to go away. At times during the Review's work, it appeared that this simple concept either is not understood or deliberately ignored.

It should be no surprise to farmers and graziers and their lobby groups that opal mining will continue to occur in the regions around Lightning Ridge and White Cliffs. It has been occurring in those regions for more than 130 years. A person acquiring a leasehold interest or buying freehold land knows full well that opal mining occurs in the area or may occur in the future.

Similarly, opal miners and their lobby groups should be under no misapprehension that they 'own' their mineral claim and can do whatever they wish on it. They have a legal right to mine there, and carry out related activities, subject to important legal constraints set out in the claim conditions, and only for such time as permitted under the claim. This right does not comprise ownership – even if a form of dwelling has been established on the claim.

Land use conflict arising from opal mining emerged in the early 20th century and continues to this day. The Wilcox Report discussed it at length, and made a range of recommendations,[22] but the issue continues to cause problems.

The Review has seen and heard evidence of poor behaviour on the part of both miners and landholders. Ignorant, immature, aggressive and occasionally violent behaviour does little to enhance the position of either group. Trust is broken down, relationships are destroyed, stress is increased, and poor physical and mental health outcomes result. In addition, some people have had adverse contact with Police and other regulators.

Those who engage in poor behaviour should know better. A life where you respect the rights of others, listen to their concerns, and improve your own behaviour, benefits everyone involved.

[22] Wilcox Report [24].

Chapter 2: The Regulation of the opal mining industry in NSW

Opal mining is regulated in NSW by the *Mining Act 1992* (Mining Act). The administration of opal mining is supplemented by the *Mining Regulation 2016* (Mining Regulations) and various orders made by the decision-maker under the Mining Act. Other legislation also applies to aspects of opal mining including the *Environmental Planning and Assessment Act 1979*, the *Workplace Health and Safety Act 2011,* and the *Biosecurity Act 2015*.

The Mining Act sets out a unique regime for opal mining, which is quite different from the regulation of other mining activities in NSW. Opal Mining is principally dealt with across four parts of the Mining Act, namely Parts 9, 10, 10A and 13.

Generally, the legislation addresses the following:

1. The constitution of areas of land as mineral claims districts (Part 9 Div 1), opal prospecting areas (OPA), and opal prospecting blocks (OPB) (Part 10 Div 1);

2. The process for obtaining and granting a mineral claim (Part 9 Div 2-Div 4), and an opal prospecting licence (OPL) (Part 10 Div 2);

3. Landholder compensation (s 266) (Part 13);

4. Rights and duties under a mineral claim (Part 9 Div 5);

5. Access to mineral claims (Part 10A); and

6. Renewal, transfer, and cancellation of mineral claims (Part 9 Div 6).

The Mining Regulations deal with small-scale titles in Part 4.

The Review observes that the relevant provisions in the Mining Act dealing with opal mining are confusing, cumbersome and sometimes illogical, and that the steps required of opal miners to obtain permission to mine are not set out sequentially.

For example, the provisions dealing with the grant of mineral claims (Part 9) precede those for the grant of opal prospecting licences (Part 10) and preparing and agreeing to access management plans (Part 10A). The key provision relating to landholder compensation (s 266 in Part 13) is located apart from other opal mining provisions.

Submissions to the Review expressed widespread frustration with the nature and form of current opal mining regulation. Many expressed the view that the framework is old, difficult to follow and out of date. The Review agrees, and recommends a restructure of the Mining Act so that all of the provisions dealing with opal mining are set out in a single part, chapter or schedule.

Another structural problem with the Mining Act is that it provides for the making of different types of statutory instruments that permit where and how mining can occur. These are:

1. Section 173 which allows the Govenor to make an order constituting a mineral claims district;

2. Section 173A which allows the Secretary to make ancillary orders prohibiting the lodgement of mineral claims over specified areas within any mineral claims district;

3. Section 175 which allows the Minister to make orders specifying conditions to apply to mineral claims within any mineral claims district;
4. Sections 181 and 182 which preclude the grant of mineral claims over certain areas, such as 'exempted areas', without permission of the controlling body of that area, and within section 367 reserves, mineral allocation areas or controlled release areas;
5. Section 220 which allows the Minister to make an order constituting an OPA;
6. Section 224 which allows the Minister to make an order constituting an OPB; and
7. Section 367 which allows the Governor to constitute a reserve over which certain types of tenure such as a mining lease, an assessment lease, or an exploration licence, cannot be granted.

These provisions mean that there is a multitude of gazetted orders, statutory and other instruments which regulate opal mining at White Cliffs and Lightning Ridge. It is no surprise to the Review that there were extensive submissions from miners that the regulatory framework is hard for them to understand.

Further, some of these provisions appear to be unnecessarily complex. For example, at Lightning Ridge the s 367 order relating to the declaration of the Narran-Warrambool Reserve prohibits the grant of an exploration licence in that Reserve.[23] A further order restricting the granting of an exploration licence or mining lease (with the exception of mining leases in respect of an ancillary mining activity or activities only to facilitate opal mining) applies to only OPA1 within the Narran-Warrambool Reserve.[24] Another example of unnecessary complexity is the separate creation of the boundaries of both the Narran-Warrambool Reserve and the Lightning Ridge Minerals Claims District (LRMCD). There does not appear to be any reason these two instruments could not be consolidated into a single instrument.

The provisions should not only be consolidated into a single Part of the Mining Act but set out in a sequential and logical manner. Supporting orders and instruments should be minimised where possible. Consideration should also be given to reviewing the need for opal prospecting areas.

As noted in Chapter 3, it appears to the Review that opal prospecting and opal mining at Lightning Ridge should generally be permitted in the Cretaceous ridge land, except for puddling claims which may be permitted in areas outside the boundaries of the Cretaceous ridge land.

Importantly, the Review believes that the areas available for opal prospecting and mining should be clearly communicated and accessible to potential miners by having appropriate maps provided online by MEG.

Another issue raised in many submissions is how the industry is regulated. Many stated that they want MEG, including the Resource Regulator to take a much more active role. Given the revenue generated from fees from opal mining does not cover the costs of administration of the industry, it is not surprising to the Review that the resources devoted to the opal mining industry do not match those devoted to other sectors.

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[23] *New South Wales Government Gazette*, No 120, 30 September 2005, 8018.

[24] *New South Wales Government Gazette*, No 32, 14 February 2020, 571; *New South Wales Government Gazette*, No 169, 14 December 1990, 11143.

That said, the issues with opal mining mean that considerable resources need to be allocated to the industry. Regulating mining in remote settings is not a simple task of placing a few staff in a local office and letting them manage the entire industry. The literature, and the practical experience of regulators, underscore how this can lead into problems of insufficient regulation over time. At present, the Review understands that key regulatory staff are located outside the towns while certain administrative staff live locally. The Review has heard from many submitters that an increased presence, particularly at White Cliffs, would be beneficial.

It was noted that long periods between compliance checks is not conducive to compliance behaviour. However, many submitters made the easy point of wanting the ‘Government’ to do more without a clear understanding of the cost.

The Review has heard from MEG that a range of important changes have recently been made on how it regulates the opal mining industry, and the Review believes that the current model adopted by MEG needs time to develop and be implemented.

It is trite to note that the issues with the titling framework in 2023 and the need for miners to reapply for titles was unwelcome and difficult. However, MEG acted on a problem, had remedial legislation enacted, and provided a solution to this issue.

Now that titles have been reissued, it is appropriate to allow time for the operating framework to settle down and gain momentum. In the Review’s opinion, the current policy that important key staff based in other towns travel often to White Cliffs and Lightning Ridge is more appropriate than requiring all staff to live and work in those towns.

Consideration should be given, however, to increasing MEG’s and the Resource Regulator’s visits to both Lightning Ridge and White Cliffs to promote knowledge of the rules and obligations, and to ensure appropriate enforcement and rehabilitation of mineral claim areas.

Recommendations

R2.1 The Mining Act should be restructured to consolidate the opal mining provisions into a single part, with sections organised in a logical manner following the sequence of activities required by a person to undertake opal mining.

R2.2 The orders and instruments that supplement the provisions should be simplified and consolidated. Once remade, all orders and instruments should be provided online in an easy to understand format.

R2.3 The need to retain opal prospecting areas should be considered in light of the recommendation in Chapter 3 for the clearer identification of areas for opal prospecting and opal mining. Mapping of the areas available for opal prospecting and mining should be publicly available online in an easy to understand format.

R2.4 MEG, including the Resource Regulator, should ensure there are more regular visits from key staff at both Lightning Ridge and White Cliffs to promote education and their understanding of current mining activities, and to ensure appropriate enforcement and rehabilitation of mined areas.

Chapter 3: Availability of land for opal mining

Opal mining currently occurs at Lightning Ridge within the LRMCD, and at White Cliffs within the WCMCD.

3.1 Lightning Ridge

The LRMCD covers an area of 5,605.83km^2. The LRMCD can be seen marked in blue and black in Figure 4.

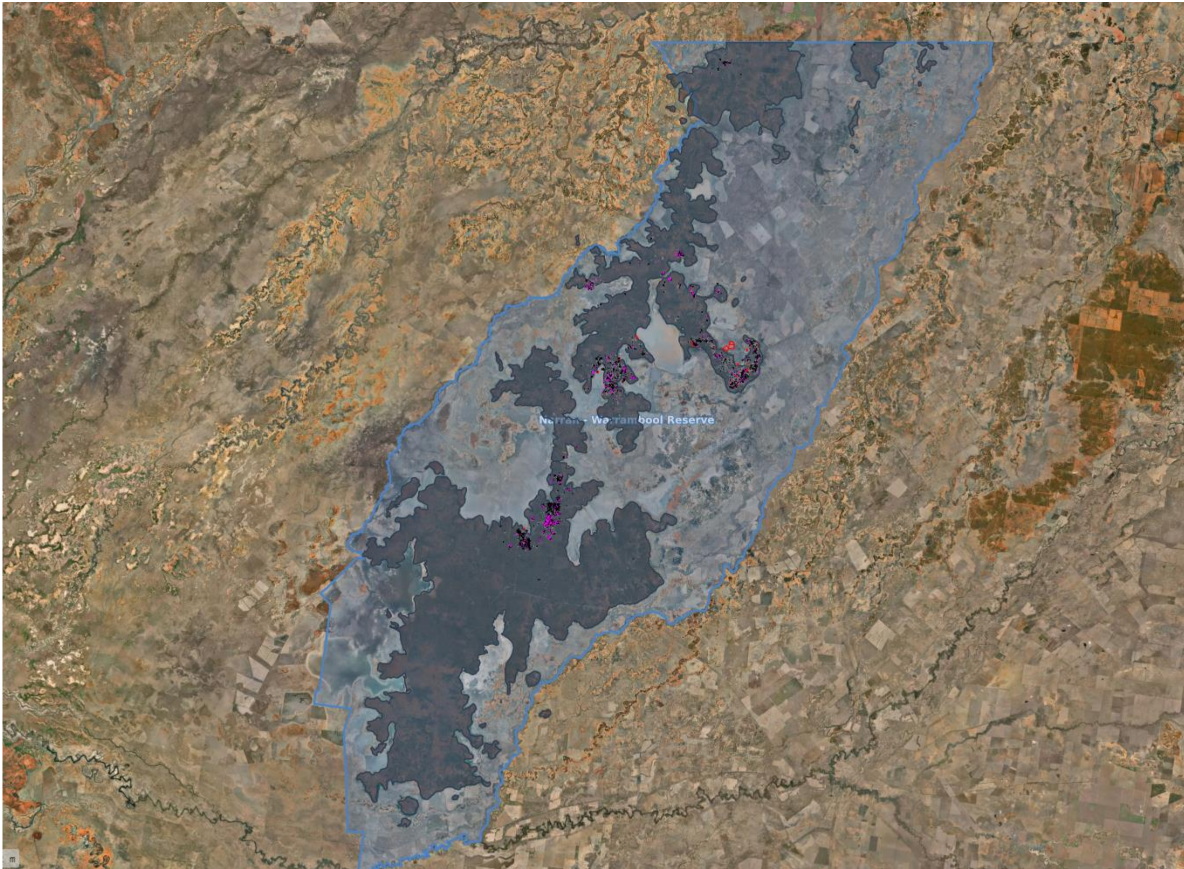

Figure 4: Minview map showing the LRMCD (blue) and Cretaceous ridge land (black) Source: Mining Exploration and Geoscience.

Opal is typically found in the Cretaceous ridge land. This land is, as its name suggests, higher land above the surrounding plains. This ridge land is generally sloping, and has poorer quality soils. As a result, it is largely used by landholders for grazing purposes. Areas outside the Cretaceous ridge land include what are called the black soil plains, which are generally flat, and have high quality soils which can support cropping in the right conditions.

As already noted, the LRMCD is subject to declared opal prospecting areas (OPAs), shown on the plan below. Opal prospecting may be undertaken only with approval under an opal prospecting licence.[25] An opal prospecting licence can be applied for only in relation to land constituted within an opal prospecting block, within an opal prospecting area.[26] Currently, there

[25] Mining Act s 232.

[26] Mining Act s 226.

are four opal prospecting areas within the LRMCD. Most, but not all, of the opal prospecting areas contain opal prospecting blocks.

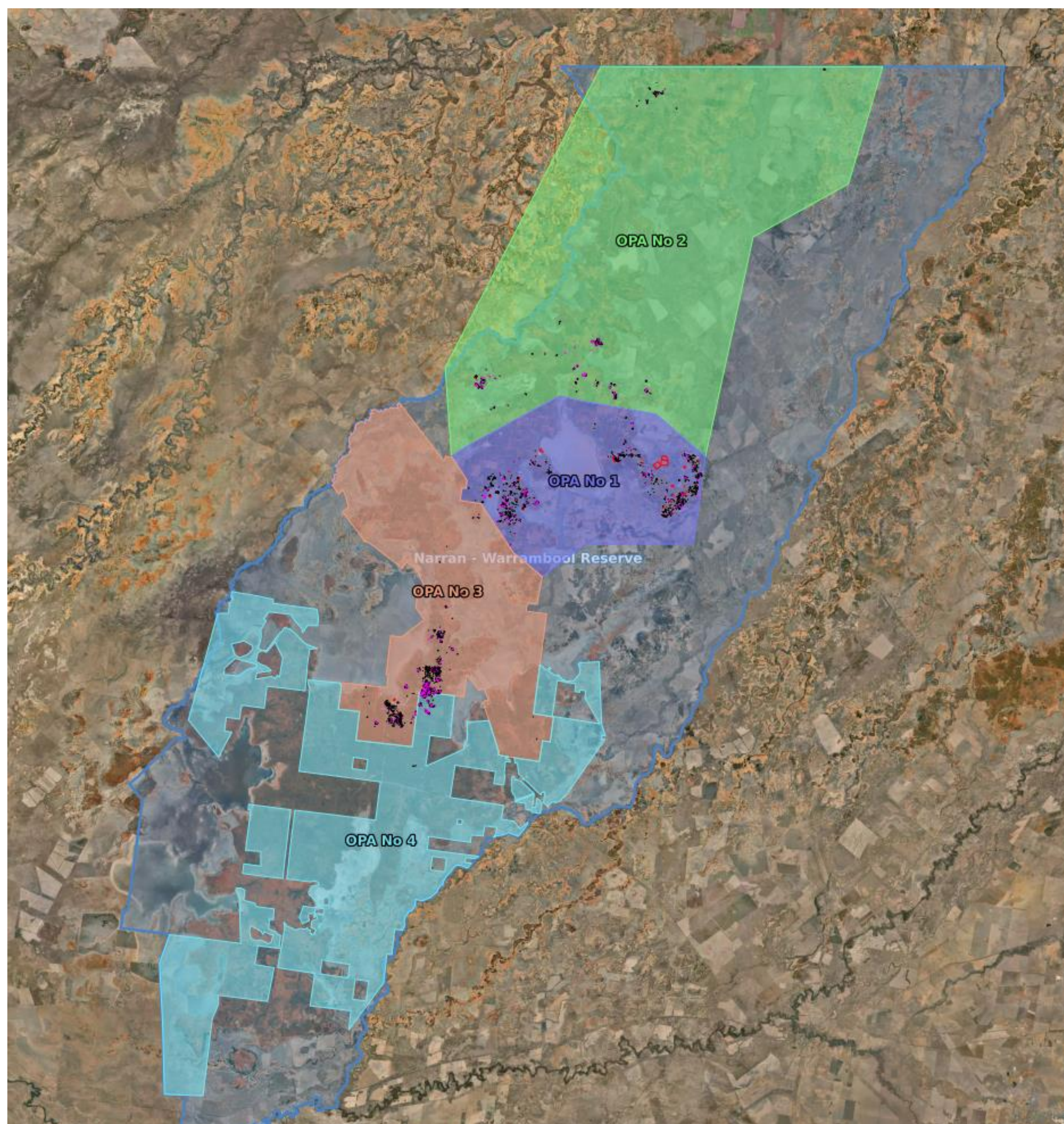

Figure 5: opal prospecting areas at Lightning Ridge, NSW. Source: Mining Exploration and Geoscience.

The area of the LRMCD and the areas within it that have been historically mined for opal or which are currently being mined for opal are summarised below. This data has been provided to the Review by spatial analysts within MEG.

April 2024		
Narran - Warrambool Reserve	**Area / Percentage**	**Units**
Total area	5,605.83	sqkm
Current claim footprint	8.19	sqkm
% of District currently under claim	0.15	%
Historical claim footprint	18.34	sqkm
% of District historically under claim	0.33	%
Combined (merged) current and historical claim footprint	23.63	sqkm
% of District under claim now or in the past	0.42	%

The above table can be misleading because the area of the reserve includes extensive areas where opal is generally not found, such as areas outside the Cretaceous ridge land.

More relevant is the data on the size of the Cretaceous ridge land and the amount of mining activity within it, which is summarised as follows:

Ridgeland		
Total area	1,785.64	sqkm
Current claim footprint	7.75	sqkm
% of Ridgeland currently under claim	0.43	%
Historical claim footprint	17.98	sqkm
% of Ridgeland historically under claim	0.99	%
Combined (merged) current and historical claim footprint	22.86	sqkm
% of Ridgeland under claim now or in the past	1.27	%

In broad terms, the data shows that within the Cretaceous ridge land, over a 120-year period, less than 1.5% of the area has been or is being mined for opal, indicating that there is a huge area of land potentially available for the continuation of opal mining at Lightning Ridge. Even if the industry expanded to say 10 times its current size, the rate of uptake of mineral claims would not exhaust the available land for 800 years. Thus, the claim there is a lack of available land for opal mining is simply not correct.

It appears that opal miners seek mineral claims in areas which are relatively close to other operationally important areas such as puddling areas and mullock stockpiles, as well as being relatively close to towns. It also appears that being able to quickly access a mineral claim is important to maintain security over the miner's assets. Being further away increases the risk of theft from mines of plant and equipment and opal resources (colloquially called 'ratting').

There may be an argument that land available for opal mining within a reasonable distance of Lightning Ridge and other surrounding key producing fields such as Coocoran, Jag Hill and Grawin/Glengarry/Sheepyards is gradually reducing, but no submitter from the opal industry provided any empirical data to support this contention, let alone any suggestions of how best to address it.

The Review notes that it is not the responsibility of government to build new townships in remote areas of the Cretaceous ridge land for the purpose of supporting the opal mining industry. Rather, it is the responsibility of the NSW Government to provide access to land to enable opal prospecting and mining to occur. It is clear from the data provided to the Review that the Government has done exactly that.

The Review notes that some submitters sought to argue that it was appropriate to allow opal mining to expand in areas around Lightning Ridge such as the black soil plains and near the boundaries of the Cretaceous ridge land.

MEG has advised the Review that the soft soil conditions in the black soil plains are such that opal mining is potentially dangerous in these areas and may pose difficulties for rehabilitation. The Review has seen impacts in the Jag Hill area where subsidence has caused fissures 2-5 metres deep and approximately 25-30m in length. The Review notes that MEG has undertaken extensive mapping to support the preparation of a boundary around the Cretaceous ridge land. The Review supports and endorses the making of a policy by MEG that provides that no mineral claims should be granted outside the Cretaceous ridge land except for puddling claims (which need water).

The Review understands that detailed geological and mapping investigations have occurred which provide a sound basis for defining what is the Cretaceous ridge land. The Review understands there is a 100m buffer zone proposed along the Cretaceous ridge land boundary and that mineral claims may be granted within this area if the applicant provides a more detailed environmental assessment of the proposed mining activity and the application satisfies a safety and risk assessment. Given the importance for the industry of understanding where opal mining may occur, it is recommended that the mapping of the Cretaceous ridge land and the buffer zone be made publicly available online by MEG.

At present there is a moratorium on the grant of mineral claims within OPA4. OPA4 is located in the southernmost portion of the LRMCD as shown in Figure 5. This moratorium was established via an order made under section 173A of the Mining Act.[27] The order was made to enable parties to review the findings of a Review of Environmental Factors (REF) prepared by EMM Consulting and published by MEG, and while the Review was undertaken.

The background to the REF is that while “mineral exploration and fossicking” and “mining within a mineral claims district pursuant to a mineral claim under the Mining Act 1992” are development permissible without consent, the provisions of Part 5.1 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) impose a duty on MEG to assess and consider the likely environmental impacts of each activity approval, being the granting of opal prospecting licences and mineral claims.[28]

MEG is a determining authority for the proposed activities under Part 5.1 of the EP&A Act. To enable it to discharge its function as a determining authority, it commissioned the REF. The REF is dated 14 August 2023 and is thus a very recent and relevant study. The study area (being Area 1), which includes OPA4, is shown on the map below.

[27] *New South Wales Government Gazette,* No 364, 18 August 2023, 1460.

[28] *State Environmental Planning Policy (Resources and Energy) 2021* cl 2.8.

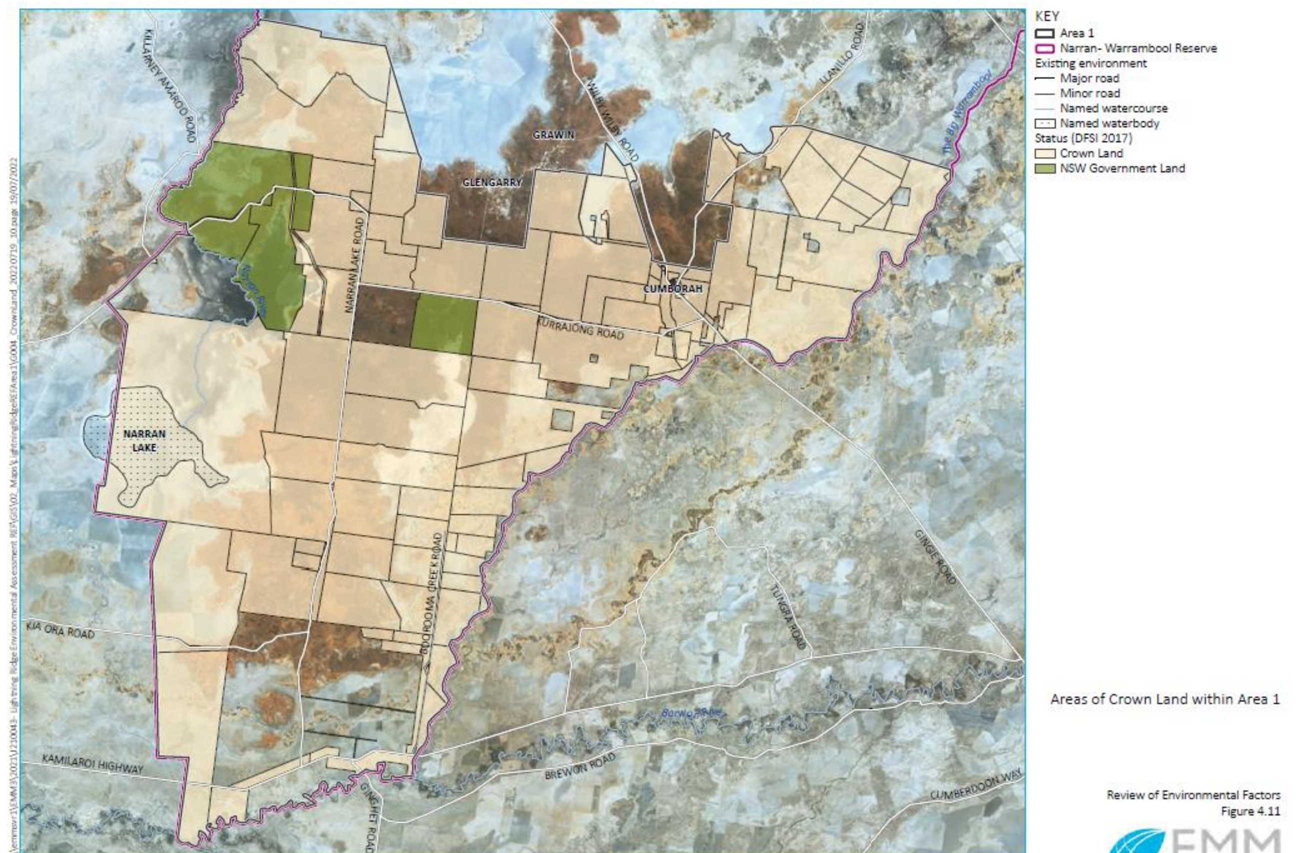

Figure 6: Status of land within Area 1. Source: REF by EMM.

The REF examined whether opal prospecting and mining should occur in Area 1. Many of the issues raised in this Review were also raised during public consultation carried out as part of the REF.

This extremely detailed study found that the impacts from opal mining would be acceptable in areas identified in Chapter 6 of the REF as not being constrained (such as areas subject to high soil capability, ecological, heritage (both Indigenous and non-Indigenous), waterways and other constraints).

The Review supports the grant of opal prospecting licences and mineral claims over the Cretaceous ridge land within the area of OPA4 and subject to the constraints mapping in Chapter 6 of the REF as part of the package of reforms suggested in this report. In other words, the Review would support the lifting of the existing moratorium once other reforms are implemented as proposed in this report. This would make available 36,800 hectares of areas identified as having low environmental impact, and a further 9,900 hectares with a medium environmental impact.

3.2 White Cliffs Mineral Claims District

The WCMCD is 971.69km^2 and includes three mining reserves, MR2684 (also known as 'the Main Field'), MR2685 (also known as 'Barclay's Bunker') and MR2686 (also known as 'Gemville'), noted in Figure 7 below. These mining reserves exclude the grant of any exploration licence, assessment lease or mining lease, effectively preserving the land for the mining of opals.

Figure 7: Map of WCMCD. Source Mining, Exploration and Geoscience

The Review notes that the majority of active mineral claims are within just two of these reserves, MR2684 and MR2686. Minview shows two active mineral claims and one cancelled mineral claim outside a mining reserve to the south of MR2685. There are no mineral claims within MR2685.

Given that demand is largely confined to MR2684 and MR2686, the Review considers that retaining the MR2685 reserve serves no purpose.

It does not appear that there is any shortage of available land within the two actively mined mining reserves. MEG has advised that the following areas have been subject to opal mining:

Mining Reserve 2686	**Km2**	%
Total area	8.12	
Current mineral claim footprint	0.01	0.18
Historic mineral claim footprint	0.02	0.25
Mining Reserve 2684	**Km2**	%
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 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.[29]

However, even when taking this into account, it is the Review's view that there is ample land within MR2686 and MR2684 to provide for the future of opal mining. The Review considers this presents an opportunity to reshape the WCMCD to limit it to the areas of MR2686 and MR2684.

The Review also heard concerns from landholders about the effects of mining on the White Cliffs water supply. The Review understands that White Cliffs sources its water from a dam on Wannara Creek, located north-east of the town within MR2684. The dam is circled in red in Figure 8 below.

Figure 8: Dam supplying water to White Cliffs. Source: Mining Exploration and Geoscience

Water security is vitally important to the continued existence of White Cliffs as a town in an arid area with limited rainfall. The remoteness of the town means that trucking water in would be highly costly for the council, should the water supply become contaminated.

The Review considers that opal mining presents a risk to the watershed that supplies the dam, by causing erosion from vehicle and mining operations and the potential for contamination from

[29] Mining Act ss 187, 188, 223.

mines and human and dog waste. The Review recommends that the watershed supplying White Cliff township's water supply should be mapped and excluded from the area in which mining is permitted.

3.3 Agricultural land

Under section 187 of the Mining Act, a mineral claim may not be granted, without the landholder's consent, over land that has been determined to be 'agricultural land', defined by Schedule 2 of the Mining Act, essentially as 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. When a landholder receives notification that a mineral claim has been applied for over their land, they may object within 28 days to the granting of the mineral claim on the basis that the land is agricultural land.[30] It is then for the Secretary to determine whether the land is in fact agricultural land.

This provision can produce conflict between miners and landholders in relation to factual issues about the land. The Review believes that much of this conflict will be reduced if black soil plains are excluded from the LRMCD.

It is recommended that any determination of an agricultural land objection be delegated by the Secretary to an independent decision-maker.

3.4 Residential buffers

Section 188 of the Mining Act provides that mineral claims may not be granted within 200m of a dwelling-house that is a principal place of residence, an in-use woolshed or shearing shed, or within 50 metres of a garden or significant improvement other than an ancillary mining improvement, except with the written consent of the owner of the dwelling-house, woolshed, shearing shed, garden or improvement (and, in the case of the dwelling-house, the written consent of its occupant).

The Review was told that this provision has led to disagreement and conflict between landholders and miners. For example, it is unclear whether a carport or water tank may constitute part of a dwelling-house. The Review considers that clarity can be improved by inserting detailed definitions of certain terms, and deleting the unclear phrase 'significant improvement'. For example, a dwelling-house could be defined as a building that is the primary place of residence, including any attached structures (such as verandahs or water tanks), but excluding any outbuildings, car ports or other structures not physically connected to the dwelling-house.

The Review considers that a move to graticulated titles will reduce the prospect of conflict, with MEG being able to remove areas around residential buffers from the land available for mining.

3.5 Other land

Section 181 of the Mining Act provides that a mineral claim may not be granted over an 'exempted area', defined in the Dictionary of the Act to include four categories of such land including land, reserved for a public purpose, land held under a water supply lease, land vested

[30] Mining Act s 179, Sch 2 cl 2A.

in the Crown for a public purpose such as racecourse, cricket ground, a recreation reserve, park or common, and lands prescribed by the regulations for the purposes of this section.[31]

In addition, opal mining can be precluded from reserves gazetted under section 367 of the Mining Act by the Governor.

There are in the mining areas what are called 'policy reserves', the status of some of which is unclear. It would appear there is no formal legal basis for these 'policy reserves'. According to Minview, some have been granted to give effect to a declaration of agricultural land. Others reference a feature such as 'stock holding pen', which may refer to the buffer provided for a significant improvement.[32] Others ambiguously list the reason 'at the request of landholder', or record no reason at all. MEG has advised that it does not have adequate records of the origins of some of these reserves. It appears to the Review that reserves have been created by various decision-makers over the years in a somewhat ad hoc manner.

The Review recommends that the current practice of precluding the grant of mineral claims in these areas be reviewed. It may well be that some of these reserves are no longer appropriate, and that opal mining can and should occur in these areas. If some of the policy reserves should be protected from mining, then a formal gazettal of the reserve under s 367 should be made.

The review of these reserves was a recommendation of the Wilcox report, [33] but rejected by the Government as it did not consider it feasible.[34] The Review does not agree with this position. If the current regulator cannot advise the Review why these reserves were created, then it begs the question why they exist.

3.6 Opal prospecting areas

As noted above in Chapter 2, there appears to be a question whether the category of opal prospecting areas (OPAs) adds any value to the regulatory framework. The existing opal prospecting blocks in the LRMCD generally overlap with the Cretaceous ridge land. Thus, if the government adopts a policy that opal prospecting and opal mining can occur only on the Cretaceous ridge land (except for puddling claims), there appears to be little use for OPAs.

In WCMCD there are two opal prospecting areas, shown on Figure 7 in blue and teal.

The first, the White Cliffs OPA, is located to the west of MR2684, and contains 19 OPBs. The lack of congruency with the reserve is puzzling, and may be an administrative error. The Review can see no reason the opal prospecting areas should be outside the reserve.

The second, the Gemville OPA, partially overlaps with MR2686. It has no OPBs, which means that OPLs cannot be granted here. Again, this appears to indicate an administrative error.

The Review recommends that the continued use of OPAs be examined. It may be that, on detailed analysis, the legal framework can exist without the need for such areas.

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[31] Mining Act s 181, Dictionary (definition of 'exempted area').

[32] Mining Act s 188(1)(c).

[33] Wilcox Review [iv].

[34] NSW Government, *Final NSW Government Response to the Wilcox Report into Lightning Ridge Opal Mining* (Report, August 2013) 7 (Government Response to Wilcox Report).

Recommendations

R3.1 MEG should make and publish online a policy that no prospecting licences or mineral claims will be granted outside the Cretaceous ridge land except for puddling claims. Mapping of the Cretaceous ridge land should also be published online and in hard copy.

R3.2 The current moratorium on the grant of mineral claims within OPA4 should continue until the reforms recommended by the Review are implemented. Thereafter, the Review recommends that MEG accept applications for opal prospecting licences and mineral claims over the Cretaceous ridge land within the area of OPA4, and subject to the constraints mapping in Chapter 6 of the REF. This would enable applications to be lodged in relation to an additional 36,800 hectares of areas identified as having low environmental impact, and a further 9,900 hectares with a medium environmental impact within OPA4.

R3.3 The boundaries of the WCMCD should be remade and redeclared by the Secretary, limiting its boundaries to MR2686 and MR2684. The watershed of the White Cliffs town water supply should be excluded from the WCMCD.

R3.4 To improve certainty, appropriate definitions should be inserted into the Mining Act in respect of residential dwellings. For example, a dwelling could be defined to be a principal place of residence and include water tanks, verandahs etc but exclude buildings not attached to the dwelling such as car ports, farm sheds and other structures. The term significant improvement should be removed as it is too uncertain.

R3.5 The Mining Act be amended to include a right to object to the Secretary in relation to the grant of mineral claim by reason of encroachment into an area claimed by a landowner to be a residential buffer zone. The Secretary can determine the matter or delegate it to an appropriate staff member or independent decision maker.

R3.6 Existing 'policy reserves' should be reviewed. If following a review, these are determined to have no practical function, they should be repealed. If some of these policy reserves areas should be protected from mining, then a formal gazettal of the reserve under s 367 should be made.

R3.7 The use of OPAs in the Mining Act be reviewed.

Chapter 4: Updating the regulatory process

Any quick reading of the Mining Act reveals that it is very out-of-date. It refers to faxes and applications being posted, and makes no mention of anything being able to be lodged online, or information being available via the internet.

This Review strongly recommends that considerable efficiencies can be gained by requiring the regulator (MEG) to develop and implement a more modern regulatory framework. As a starting point, all applications, renewals and other documentary processes should be capable of being made online as is common nowadays for many other interactions with government.

The current system requires that a miner, in order to obtain an OPL in the LRMCD must lodge a paper form at MEG's Lightning Ridge office. An application form for an opal prospecting licence in the WCMCD must either be posted or faxed to the Lightning Ridge office of MEG.[35]

This paper-based application process is highly inefficient both for the applicant and MEG. Similarly the process of applying for a mineral claim is paper-focused, with limited opportunity to lodge applications electronically.[36] The Review has heard from miners in White Cliffs that the need to fax applications is particularly cumbersome, given the town only has one fax machine, located at the town medical facility.

The Review believes that a well-designed system will be both easier to use and cheaper to administer. The system should be designed to automatically create documents, such as notices to the land-holders that an application has been lodged by a miner. Currently various notices must be sent by mail which again is slow, cumbersome and inefficient. Furthermore, information on landholders and their contact details is held by MEG rather than miners.

The Review notes that Queensland has implemented an online system where miners apply for titles through an online portal.

Some submissions raised concerns about the accessibility for miners of an online portal. As is common with other online NSW government services, assistance can still be provided to those who are without an internet connected device, or who need support understanding the process. A dedicated computer terminal could be provided in the MEG Lightning Ridge office or in the Lightning Ridge Mining Association office and White Cliffs Mining Association office. Alternatively, or in addition, this service could be provided state-wide through Service NSW offices.

Given the widespread availability of internet connected devices and email, a second option of a PDF fillable form could be established which can then be emailed to MEG.

The Review received submissions raising concerns about the potential for an online application system to facilitate 'land banking' by applicants who do not intend to use the claim. The Review considers that concerns relating to the potential for 'land banking' can largely be addressed by the introduction of annual reporting requirements, as outlined in Chapter 8.5. Further consultation between MEG and the opal mining industry should occur to ensure that any transition to an online application system addresses concerns raised by stakeholders.

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[35] Mining Regulation cl 51.

[36] Mining Regulation cl 42(4).

Recommendations

R4.1 Considerable efficiencies can be gained by requiring the development and implementation of a more modern regulatory system. All applications, renewals and other documentary processes should be capable of being lodged online as is common with other government services.

R4.2 The system should include specific functionality as recommended in the chapters that follow.

R4.3 Assistance should be made available to miners at the MEG Lightning Ridge Office on how to use the online system and the mining associations should consider how to assist their members in navigating the application process involve automated development of notices so that the application can be simple, smooth and functional.

Chapter 5: The marking out of a proposed mineral claim

The current process set out in the Mining Act relies on an applicant identifying the area of their proposed mineral claim by marking out the area with posts, trenches or rock wall, and then producing hand-drawn maps. This has proven inadequate for producing accurate records of the location of mineral claims, often leading to there being “disconnects” between MEG’s geospatial system and what has been marked out “on the ground”.

The result is uncertainty for MEG, in granting titles and enforcing the conditions of mineral claims, and for landholders, who lack knowledge of precisely where such claims are on their land, and creates the conditions for disputes to arise between miners and landholders and between miners as to where their claims start and end.

The Review considers that MEG’s recent project of surveying existing mineral claims is a worthwhile step which will improve certainty, and provide better and more accurate data.

A long-term and more secure solution would be to move to a system in which opal fields are divided into a grid through a detailed mapping system. This is known as graticulation. Applicants could then select an area for which to apply by reference to the grids on the system.

This approach would give certainty to all parties as to the exact location of the mineral claim applied for and granted.

It would also have the benefit that MEG would make available only blocks on which mining is permitted (for example by removing areas that are reserves, or within dwelling buffer zones). This would eliminate any confusion or dispute between miners and landholders as to where mining is permitted to occur.

One challenge for MEG will be to fit the graticulated scheme into the existing scattering of mineral claims. It is expected that a transition period will be necessary to allow existing mineral claims to stand until they are relinquished. During this time new mineral claims will be able to be obtained only from pre-mapped graticulated areas.

The Review notes that many submissions did not support moving to a graticulated system. However, the Review believes that the accuracy of title information that supports a well regulated industry is critical. Accordingly, it supports the investigation of how such a system could be implemented. If a graticulation system is proposed, detailed consultation with the industry would be extremely important to enable a smooth transition and resolve any operational concerns.

Mapping and establishing a graticulated system including the online portal may take some time. In the interim, the applicant for a mineral claim should be required to use geolocation technology capable of recording accurate measurements of the claim, such as by recording GPS coordinates for each corner post.

The use of a GPS-enabled smart phone for this purpose is not currently recommended, because these phones generally have an accuracy of +/- 5-20m, which we understand would not be accurate enough to produce usable geospatial data. However, this may change over time as technology improves.

Suitable technology include GPS-enabled devices that achieve a standard of less than +/- 1m and can be available to rent to miners for the purpose of marking out mineral claims. To overcome any problem in obtaining access to these devices at low cost, we recommend that MEG purchase a pool of appropriate devices. The cost of these devices will be offset by rental income and the devices should produce much more accurate mapping of a proposed mineral claim. Where GPS devices are used, a

photo of the relevant GPS readings (which typically includes the accuracy) should be submitted with the application.

Recommendations

R5.1 MEG should explore moving towards a fully graticulated system in which applicants select which areas they are applying for from a surveyed grid of the opal field.

R5.2 Until this system is fully implemented by MEG, the Mining Act should be amended to require miners to mark out their claims using appropriate geolocating technology. This could include GPS devices calibrated to a minimum accuracy, mobile phones or other technology as it becomes available.

R5.3 If appropriate, MEG could consider purchasing a number of devices and renting them to miners from its Lightning Ridge office. For White Cliffs, MEG should negotiate an agreement with the White Cliffs Miners Association so they can rent the devices to miners to mark out their proposed mineral claim.

R5.4 Once implemented, the requirements for an applicant to erect marker posts, dig a trench or dig a wall can be discontinued. Consideration should be given as to whether the requirement to place a notice on the land should be retained.

Chapter 6: Obtaining approval to mine for opal in NSW

The process for obtaining a mineral claim currently consists of the following steps:

1. Applicants will first need to inspect and identify the land on which they seek to mine. As noted above, this can be carried out via an opal prospecting licence or a permit to enter.

2. The applicant 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.[37] A notice is then required to be attached to a marker post, with certain details about the claim.[38]

3. The applicant must complete the notification form (LR21 for Lightning Ridge and WC21 for White Cliffs), and prepare a map, which is at least of a 1:100,000 scale, and clearly indicates the extent and location of that land relative to property boundaries and man-made features such as roads, fences and buildings.[39]

4. The applicant must serve the Form LR21 and map on the landholder.

5. The applicant must then submit a completed application form (LR2A for Lighting Ridge and the WC2A for White Cliffs), with all the required information and documentation including the mark out diagram, and also pay the required fee. An application over land in the LRMCD must be lodged in-person at Lightning Ridge. Applications over land in WCMCD may be made by post or facsimile.

6. The applicant must complete another form (LR23 for Lightning Ridge or WC23 for White Cliffs), which notifies the landholder of the intention to exercise rights under the mineral claim, and serve that notice by post on the landholder.

7. Upon confirmation of receipt by the landholder of the LR23 or WC23 Notice, or seven working days 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 s 266(4)(b) and at least seven working days have passed; or

    b. evidence proving 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.

The Review considers the current process cumbersome and inefficient.

During 2023, MEG undertook a major surveying program to address inaccuracies in their geospatial data. Mineral claims were professionally surveyed, and the data re-entered into the Minview system. As recommended in Chapter 5, the Mining Act should be amended to allow the use of GPS systems to

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[37] Mining Act s 176; Mining Regulation cl 40.

[38] Mining Regulation cl 40.

[39] Mining Regulation cl 41(2).

mark out a mineral claim. Once that has occurred, the miner should lodge the application using the online system.

Once developed, the online application:

1. Should include all relevant information required by MEG;
2. Should require the payment of an application fee, security bond and applicable levies;
3. Should require the payment of an amount for landholder compensation (see Chapter 9 below);
4. Will be a 'pending application' until the process is completed.

Once that application form has been received, MEG should be able to produce a map of the location of the proposed mineral claim and send that to the applicant.

The application (including the map) should then be automatically sent by MEG to the relevant landholder. This can be automated. MEG has all the information about the identity of the relevant landowners. The notification can advise the landholder of the lodgement of an application and automatically provide the coordinates and a map of the location of the proposed mineral claim. This would remove the need for the miner to find the address details of the landholder and mail a notice. The Review also notes that the current process requires applicants to know the address of the landholder. While this may be straightforward for some landholders, the Review observes that the definition of landholder in the Mining Act includes anyone with an interest in the land (such as a mortgagee, lessee, a minister with the benefit of a covenant or conservation agreement), native title holders and Crown lease or licence holders.[40] Identifying and locating each of these persons in some cases can be difficult.

Similar to the online application, MEG should develop a tool to allow landholders to lodge an online objection to the granting of the mineral claim on the basis that the land is agricultural land under s 179.

If the mineral claim is granted, the application system should then automatically send the landholder compensation to the landholder.

In relation to renewals of mineral claims, we recommend that the online system be designed so that miners are automatically notified that their mineral claim is due to expire and an application for renewal needs to be lodged. This occurs with driver licences and motor vehicle registration renewals, and the Review sees no reason this cannot be implemented for mineral claims.

[40] Mining Act, Dictionary (definition of 'landholder').

Recommendations

R6.1 The online system recommended in Chapter 4 should:

(a) require the miner to include all relevant information required by MEG including the lodgement of photographs of the mineral claim area recording its physical condition;

(b) require the payment of an application fee, security bond and applicable;

(c) require the payment of an amount for landholder compensation;

(d) be classed as a pending application until the process is completed;

(e) enable MEG to prepare a map of the mineral claim area based on the GPS data provided by the miner and send a copy of that map to the applicant; and

(f) automatically notify the relevant landholder(s) and include a copy of the application and the map of the mineral claim area.

R6.2 MEG should develop a tool to allow landholders to lodge an online objection to the granting of the mineral claim on the basis that the land is agricultural land under s 179;

R6.3 The System should then provide for the determination of the application by the Secretary and the notification to the applicant and to the landholder of the determination;

R6.4 The online system should automatically forward landholder compensation to the landholder on the granting of a mineral claim on their land.

R6.5 The online system be designed so that miners are automatically notified that their mineral claim is due to expire and an application for renewal needs to be lodged.

R6.6 The Mining Act be amended to facilitate the above recommendations.

Chapter 7: Permits to enter

A 'permit to enter' is an instrument granted under section 254 of the Mining Act, which allows the holder the right to inspect land and mark out a claim, but not to prospect.

A permit to enter has a time limit of 28 days.[41] We have heard from some landholders that this time period seems excessive given the purpose is to enter land and decide where one wishes to propose a mineral claim. The Review considers a period of 14 days to be a more reasonable period.

A further problem is that the legislative provisions detailing the conditions of a permit to enter lack specificity. Section 254(1) of the Mining Act requires the holder to give reasonable notice to a landholder of the intention to exercise their right of entry, which must be at a reasonable time. What constitutes a reasonable notice timeframe, the method of giving notice and time of day to enter has, unsurprisingly, led to conflict between landholders and miners. The Review considers this conflict can be avoided if the legislation specifies objective criteria for these details.

As noted below, the Review recommends the establishment of an online system whereby miners apply for a permit to enter, and, if granted, the system automatically notifies landholders with no less than 72 hours' notice via email, or 7 days' notice via letter. This avoids miners having to send the notice.

The Review also heard concerns that landholders lack the means to easily verify who has a permit to enter their land other than stopping and requesting proof of the permit. The Wilcox Report recommended the NSW government consider identification cards and vehicle stickers to remedy this problem. The Government response was that it would work with industry and landholders to develop an identification program,[42] but the Review understands this did not occur.

The Review considers this problem can easily be remedied by requiring the application to include the name of the holder and any persons proposed to accompany the holder, the vehicle model type, the vehicle's registration number and how long the holder intends to be on the property. The latter is important for landholders to have certainty over when they may need to be mindful of others on their property. The automatically generated notice can then provide these details to the landholder.

The Review has also heard from landholders their concerns about the actions of persons entering using a permit to enter (for example driving off formed tracks, spreading noxious weeds, disturbing stock, obstructing farming operations). It was raised with the Review that there are no requirements limiting who can apply for a permit for entry. People who may have no knowledge of workplace health and safety (WHS), biosecurity, Aboriginal cultural heritage, or the workings of the farms may inadvertently cause damage or disruption.

The Review considers that education can play a key role here in lifting the awareness of miners on how to respectfully access farm land. As detailed in Chapter 14.1, the Review recommends lifting the standard of training. This training should be completed before obtaining a permit to enter. This will help ensure that miner-landholder conflict is reduced from the beginning.

The Review notes that it is not only miners who are capable of causing disruption. Landholders also have the capacity to infringe the rights of a holder of a permit to enter by obstructing their lawful access by locking gates or engaging in actions intended to intimidate holders into leaving the land. We heard allegations from miners that this has occurred in a small number of cases. Currently the Mining Act

[41] Mining Act s 259.

[42] Government Response to Wilcox Report, 5.

provides a penalty for “obstructing, hindering or restricting a person” entering land under the authority of a permit to enter.[43] The Review considers that this provision explicitly prevents physical obstruction, but may not extend to threats or intimidating behaviours which may result in a miner feeling too unsafe to exercise their rights. The Review considers that the words “by threats or force”[44] be added to the beginning of this provision to make clear that obstruction can be by threat. Further, the Review considers the penalty amount of 100 units too low to provide any serious deterrent effect and recommends it be increased to 500 penalty units.

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[43] Mining Act s 257.

[44] See, for example, *Crimes Act 1900* (NSW) s 56.

Recommendations

R7.1 The online system recommended in Chapter 4 should allow for miners to apply for a permit to enter.

R7.2 MEG must not grant a permit to enter unless satisfied the applicant has completed appropriate training in:

a) Obligations under the Mining Act;

b) Environmental protection (including erosion control and watercourse management);

c) Heritage conservation (including mining heritage and aboriginal cultural heritage);

d) Biosecurity; and

e) Animal welfare and the operation of grazing properties.

R7.3 A permit to enter is to be valid for 14 days.

R7.4 The system established by MEG should provide notice of the holder's intention to enter to the landholder's property within 72 hours' notice by way of email, text message or other electronic means.

R7.5 The applicant must provide in their application, and MEG must include in the notice to the landholder, the following information:

a) names of all person(s) proposing to enter;

b) vehicle model & type;

c) if registered, the vehicle registration number; and

d) how long the person(s) entering intend to be on the property.

R7.6 The offence of obstructing a person be amended to make clear this extends to obstruction by way of threat.

R7.7 The penalty for obstructing a person exercising their rights under a permit to enter should be increased to 500 penalty units.

R7.8 There be available training modules for miners on the above topics. Training could be provided by MEG with input from appropriately qualified and skilled miners and farmers.

Chapter 8: The Mineral Claim framework

8.1 Types of mineral claims

Part 9 of the Mining Act contains detailed provisions relating to the grant of the form of title called a 'mineral claim'. While potentially available for a range of minerals, in practice mineral claims are granted only for the opal mining industry.

The grant of a mineral claim allows the holder, subject to the conditions of the claim, to prospect or mine for opal. Again, subject to the conditions of the mineral claim, the holder may also be permitted to:

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

As noted above, the provisions of Part 9 are supplemented by an order made under section 175, which contains the details on the form and restrictions which apply to opal mining in both White Cliffs and Lightning Ridge.

The relevant section 175 Order for Lightning Ridge was made by Minister Barilaro on 29 November 2019. The Order is detailed and is therefore included in full in Appendix B. The section 175 Order for White Cliffs is much older, being dated 3 May 1994 but was gazetted on 20 May 1994, and is also contained in Appendix B.

The Section 175 Order for Lightning Ridge provides for the potential grant of mineral claims in the following classes:

- Class A – Standard mineral claim;
- Class B – A person who is at the time of lodgement of an application for a mineral claim, the holder of a 3 month opal prospecting licence;
- Class C – A person who is at the time of lodgement of an application for a mineral claim, the holder of a 28 day opal prospecting licence;
- Class D – Mining Purpose – Processing; (used for puddling claims)
- Class E – Mining Purpose – Mullock Stockpiling;
- Class F- Prospecting claim areas within OPA 1-3 but not within opal prospecting blocks in the Narran-Warrambool mining reserve; and
- Class G – Open cut and associated prospecting and other mining purposes.

At White Cliffs only one type of mineral claim may be granted, and it may not exceed 2,500m^2.[45]

[45] *New South Wales Government Gazette*, No 71, 20 May 1994, 2336.

The Section 175 Order for Lightning Ridge also contains prohibitions on certain activities. For Class A and Class B mineral claims, the following activities are not allowed:

- open cut operations (trenching);
- the use of a dry rumbler, a wet rumbler or other motorised revolving drum for the purpose of opal puddling; and
- the use of power-operated equipment or machinery, which includes a bulldozer, ripper (whether self-propelled or towed), backhoe, dragline, cable scraper, face shovel, front end or overhead loader, skimmer, grab, bucketwheel excavator, trench cutter, grader, or suction pump.

Power-operated equipment activities which *are* permitted on Class A and Class B mineral claims include:

- handheld pneumatic or electric pick, hammer or road breaker;
- shaft sinking equipment or machinery or drilling or boring equipment or machinery when used to sink a vertical or near vertical shaft or exploratory shaft, drill hole or borehole;
- windlass winch or elevator for transporting mined or excavated material to the surface; or
- equipment or machinery used to: load and transport previously mined or excavated material to a treatment plant; fill in, make safe or securely protect any shaft or excavation.

The above restrictions do not apply if operations are conducted in accordance with an additional approval issued by the NSW Resources Regulator (under delegation from the Secretary).

The Review was advised by MEG that some of the classes of mineral claims for Lightning Ridge are not used and are redundant. It is also somewhat incongruous that the two mineral claims districts have different classes of mineral claims. Further, the Section 175 Order for White Cliffs is out of date, referring to the former Mining Warden and the Mining Registrar, positions abolished many years ago.[46]

The Review considers that both Section 175 Orders should be reviewed, and the classes of mineral claims should be rationalised and obsolete classes removed. A suggested range of new mineral claim classes is set out below. Given the importance of any change, detailed consultation with the opal mining industry should be conducted to ensure the classes are practical and useful. If following consultation, a change is implemented, then existing mineral claims can be grandfathered into the new regime over time on expiry of their current terms.

In both mineral claims districts, a person is restricted from applying for and holding more than two mineral claims.[47] A similar limit of only two claims applies in both South Australia and

[46] *New South Wales Government Gazette*, No 71, 20 May 1994, 2336.

[47] *New South Wales Government Gazette*, No 71, 20 May 1994, 2336; *New South Wales Government Gazette*, No 129, 24 December 2014, 4741.

Queensland.[48] In practice, however, this does not restrict miners to holding only two mineral claims.

The Review is aware that some miners hold additional claims by proxy, registering them in the names of family members or companies. MEG has advised that 21 miners hold a total of 330 mineral claims in NSW. It is readily apparent that the two-claim limit has little effect in practice.

The Review heard mixed views on whether to retain the two-claim limit. Some expressed the view that the rule enabled part time and hobby miners to participate in the industry, and thus encouraged the continuation of the small-scale nature of the industry. Others supported removing the restriction with a view to encouraging larger players with more financial stability, higher levels of training and greater safety expertise.

To properly enforce a two-claim limit using the current classes of mineral claims, amendments to the Mining Act would be necessary to prevent related entities and related parties from holding mineral claims on behalf of the operator. In the Review's opinion, without changing the nature of mineral claims, adopting such an approach would be disruptive to the industry and inhibit production.

Accordingly, the Review recommends retaining a two-title limit but with other changes to facilitate greater investment in the industry. In this regard, the Review recommends introducing a new class of mineral claim called "General (large)" which can cover an area no more than 10,000m^2. A mining operation (to be defined broadly) cannot have more than two General (small) or two General (large) mineral claims. The definition of a mining operation includes where the mineral claim is held by a miner, their relatives, or where companies have the miner or the miner's relatives as shareholders or directors.

The aim of the General (large) class of mineral claim is to provide larger operators with clear title to a larger area and a term of up to 10 years.[49] The aim of this class is to provide more certainty to this type of miner. This may encourage the growth of larger operators with greater capital resources and a better trained workforce. However, as discussed later in Chapter 10.6, to obtain a larger title will require the lodgement of a proportionally larger bond compared to that for the existing 2,500m^2 mineral claim.

The Review notes that the option of obtaining two mineral claims of the General (large) category enables opal mining over an area of 20,000m^2 which may be more attractive to larger opal mining operators thereby raising industry standards. It is also broadly in line with the interstate regimes. The Review further notes that in Queensland, mineral claims may be granted for areas of 10,000m^2 for hand-mining claims and up to 20 hectares for machine mining claims.[50] In South Australia claims are permitted up to 20,000m^2.[51]

The Review suggests the following classes of mineral claims be created for each district, and phased in over time.

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[48] *Opal Mining Act 1995* (SA) s 21; *Mineral Resources Act 1989* (Qld) s 55.

[49] Terms of greater than 5 years can only be granted where native title has been extinguished.

[50] *Mineral Resources Act 1989* (Qld) s 53.

[51] *Opal Mining Regulations 2012* (SA) r 8(1).

Class	Term	Area
General (small)	1-5 years	$2500m^2$
General (large)	1-10 years	$10,000m^2$
Puddling	1-10 years	$20,000m^2$
Mullock storage	1-10 years	$20,000m^2$
Open cut and trenching	5 years	$20,000m^2$
Trenching only	1 year	$2500m^2$

8.2 Conditions requiring the working of mineral claims

A condition of current mineral claims requires a miner to work the claim. A concern has been expressed to the Review that where mineral claims are not worked, the effect is to 'lock up' areas and prevent others from mining for opal.

The Review has not been provided with any evidence of this hoarding of mineral claims and deliberate avoidance of working the claim. However, as set out below, we recommend the provision of information to MEG each year about the working of mineral claims.

Should this information demonstrate that mineral claims are not being actively worked, then MEG has existing powers to address the issue, including cancellation of the mineral claim if the holder of the claim fails to use the land comprised in the claim in good faith for the purposes for which the claim has been granted.[52]

8.3 Access to mineral claims

The Mining Act provides that a holder of a mineral claim is entitled to a right of way across a private landholding between their mineral claim and a public road.[53] The route of the right of way "should, wherever practicable, follow the route of existing roads or tracks".[54]

The Mining Act also provides that miners and landholders may negotiate access management plans in certain areas gazetted by the Secretary.[55] Access management plans provide greater detail on where a miner may enter and cross the relevant land, the manner that may occur, the times at which rights of access may be exercised, and a method of dispute resolution. Where an access management plan is in force, a miner exercising their right of way must comply with the relevant access management plan.[56]

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[52] Mining Act s 203(1)(h).

[53] Mining Act s 211(1).

[54] Mining Act s 211(2).

[55] Mining Act s 236B, 236C.

[56] Mining Act s 211(2).

The Mining Act therefore establishes two types of access regimes. One is the right of way along a designated route from a public road to the relevant claim. Once an access management plan is registered and published, then all existing and future small-scale titles are bound by its terms until it is replaced or terminated under ss 236L and s 236M.

The Review considers that access management plans have the capacity to provide both parties with greater certainty by confining access to agreed routes and on agreed conditions. However, the Review is aware that not all landholders have access management plans in place - there are currently access management plans in place across six properties in the LRMCD. Excluding the Crown reserve, this represents only 2% of the privately held land in the LRMCD, or 7% of the privately held land within the Cretaceous ridge area. The Review considers that wider adoption of access management plans would serve to reduce disputes between landholders and miners.

There is no gazetted access management area for WCMCD. The Review recommends that the Mining Act be amended to allow an access management plan to be implemented in any land within a mineral claims district.

The Review has seen various examples of access management agreements. They can be complex, and can require costly legal advice for the parties to draft from scratch.

Sometimes the parties to a proposed access management plan have been unable to resolve the dispute and litigation has followed. In *O'Brien v Slack-Smith & Anor (No2); O'Brien v Hall & Anor (No2); O'Brien v Hall (No2)* [2015] NSWLEC 1271, the Court was tasked with determining access management plans for three properties. The Review notes that the decision dealt comprehensively with a large number or issues raised by landowners and miners. In *Lightning Ridge Miners' Association Limited v Hall; Lightning Ridge Miners' Association Limited v Hall; O'Brien v Newton* [2016] NSWLEC 1636, the Court usefully published the full text of the final terms of the access management plan, as determined by the Court.

The Review notes that the reason some of the above cases ultimately reached the Court was that the Secretary declined to determine the access management plan.[57] The Review was advised by MEG that the decision of the Secretary was based on the perception that it placed the Secretary in a position of conflict with the miner regulated.

Some submissions argued that the process for resolving disputes over access management plans is very costly and time intensive. To assist both miners and landholders, the Review believes there is merit in building upon the work of the Court in the above cases, and developing and gazetting a template access management plan under the Mining Act. The Mining Act should provide that parties must use this template when preparing and negotiating an access management plan, and that the parties may incorporate additional conditions where appropriate.

A draft template access management plan should be made available for detailed public consultation before being finalised and gazetted. Once gazetted, the access management plan should be made available on the MEG website.

The aim of this suggestion is to assist the parties in resolving disputes in a quicker and cheaper way. If the parties to an access management plan still cannot not reach agreement despite the

[57] *O'Brien v Slack-Smith & Anor (No 2); O'Brien v Hall & Anor (No 2); O'Brien v Hall (No 2)* [2015] NSWLEC 1271, [7].

use of the gazetted template plan, then it is suggested that the dispute be able to be resolved again in a quicker and cheaper way.

Recognising the conflict point raised by the Secretary, the Review suggests the Mining Act expressly permit the Secretary to delegate the power to determine an access management plan to an appointed independent expert who can determine disputes quickly and at low cost (such as by using a process to decide the matter based on documents provided by the parties). The option of appealing the determination of the Secretary (by the delegated independent expert) to the Court should be reviewed.

Currently access management plans are binding only on the current landholder. In other words they do not 'run with the land' and must be remade when the land is transferred to another party. It would appear to the Review that there would be benefit in access management plans running with the land. MEG should give consideration to whether this change should be implemented.

Another issue raised in submissions concerning access management plans was the requirement under the Mining Regulations to ensure that rights of way are indicated by marker posts at the start and finish and every 250 metres along the right of way, and at each point where the route of the right of way changes direction.[58] The Review has heard concerns from landholders that the marker posts are unnecessary and create a hazard for cattle or farm machinery. The Review notes that a miner must also provide the landholder with a map of the right of way.[59] The Review considers this sufficient to identify a right of way, and that the requirement for marker posts should be removed.

8.4 Administrative fees

An application for a mineral claim of 2500m^2 in the LRMCD or WCMCD currently costs $130.[60] Other fees and charges collected by MEG include stamp duty on title transfers, a mullock dump levy, road levy, and environmental levy. The Review understands that administrative fees have not been updated for some time.

The forecast cost of regulating opal mining in 2023-2024 is $5.36 million but the revenue MEG routinely collects from opal mining falls well below this cost.[61] In both 2022-23 and 2023-24 revenue was severely curtailed by the need to issue refunds as part of the Small-Scale Titles Validation Program. In 2021-22, the year prior to the Small-Scale Titles Validation Program refunds, revenue was $0.83 million.[62] The Review understands the shortfall is funded through the fees and charges collected from other mining operations in NSW.

To achieve cost-neutrality, fees and charges would need to rise to approximately 6.5 times the current level. If so, this would result in an increase from $130 to $845. In the Review's opinion, moving immediately to cost neutrality would impose too great a burden on the industry. Raising fees to such a degree may in fact result in fewer applications, resulting in even less revenue.

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[58] Mining Regulation cl 47(1).

[59] Mining Regulation cl 47(5).

[60] Mining Regulation Sch 9 item 45.

[61] CBA Report, 23.

[62] CBA Report, 23.

The Review notes that in South Australia a fee for a 2500m^2 claim area is lower than NSW at $58, while in Queensland fees are higher at $432.90, but cover larger areas (up to 20 hectares).

The Review considers a modest increase in fees would be appropriate, given they have not increased for some time. Providing for some indexation in future would also seem desirable. However, we recognise these are matters for MEG to consider having regard to a wider range of considerations which are beyond our terms of reference.

8.5 Reporting on opal mining

A further problem raised with the Review by the Resource Regulator was the lack of information available to the Regulator to understand how mining is occurring. Currently there is little or no information on where underground opal mines are, creating risks for others using the land above the mines, including other miners. This contrasts with the wider mining industry and requirements for mining leases in which miners submit plans and annual reports that detail where a miner is to mine and how. This information is crucial to allow the Mining Regulator to identify compliance issues and safety risks.

The Review considers that miners should submit an annual mining report to the Resource Regulator for review at the end of each year. The Resource Regulator should conduct spot checks to ensure the information being provided is accurate. A form should be available on MEG's website to enter the details. The report should set out:

a) The depth of the mine shaft;

b) The lateral extent in metres, and the direction and dimension of any tunnels or caverns; and

c) The volume of void space created.

Submitting a report will also have the benefit of allowing the Mining Regulator to identify any claims which are not being actively mined (see Chapter 4).

Class	Term	Area
General (small)	1-5 years	2500m^2
General (large)	1-10 years	10,000m^2
Puddling	5 years	20,000m^2
Mullock storage	5 years	20,000m^2
Open cut and trenching	5 years	20,000m^2
Trenching only	1 year	2500m^2

R8.3 If a new Section 175 Order is made, the new form of mineral claims can be phased in over time on the renewal of each existing mineral claim.

R8.4 Miners should be restricted to holding only two mineral claims. The definition of the holder of the mineral claim should be broadened to include all related party entities such as related companies including companies held by the same directors and shareholders and where the mineral claim is held by persons related to the holder.

R8.5 The Mining Act should be amended to provide that access management plans may be entered into in any part of a mineral claims district.

R8.6 The Mining Act should be amended to allow for the gazettal of a template access management plan (AMP). A template AMP could be based upon those determined in decisions of the NSW Land and Environment Court. MEG should consult with landholders and mining associations on the draft. AMPs based on the template could include additional conditions as agreed by the parties.

R8.7 The requirement to mark access tracks with marker posts be removed.

R8.8 Administrative fees should be reviewed having regard to relevant factors including cost to Government and costs to miners.

R8.9 Mineral claim holders should be required to submit an annual mining report to the Mining Regulator setting out the depth of the mine shaft, the lateral extent in metres, direction and dimension of any tunnels or caverns, and the void space created.

Chapter 9: Amount of compensation payable to landholders for a mineral claim

9.1 Types of compensation payments

The Mining Act requires an applicant for a mineral claim to pay compensation to a landholder in lieu of 'any compensable loss suffered, or likely to be suffered, by the landholder as a result of the rights conferred by the small-scale title.' [63]

The Mining Act provides that landholders may be compensated by either paying the:

a) the standard compensation amount as determined by the Secretary; [64] or

b) an amount as agreed between the landholder and miner.[65]

Standard compensation has been determined for LRMCD.[66] There is no standard compensation amount determined for the WCMCD. It is not clear why this is the case, but it creates a clear disadvantage for miners at WCMCD, as in the absence of standard compensation, the alternatives of negotiating an agreement or going to the Land and Environment Court for determination can be a deterrent. The Review considers a standard compensation determination for WCMCD should be made as a matter of urgency.

One submission suggested that compensation should not be payable on Crown land. The Review does not agree, as the Crown is a landholder which has responsibilities to maintain public assets on behalf of the community. Once a mineral claim is granted, the public cannot access the claim. The Crown, therefore, is denied the wider benefits of being able to use that land for other purposes for during the term of the mineral claim. The Crown land manager also invests money to manage the Crown land, which benefits opal miners, for example through road maintenance. As the Crown land manager at Lightning Ridge pointed out, landholder compensation is the Opal Reserve's main source of income and the reserve would not be sustainable without it.

9.2 Amount of standard compensation

Standard compensation for LRMCD was introduced as part of the NSW Government's response to the Wilcox Report.[67] In the LRMCD standard compensation has been determined at $100 per annum for any mineral claim, indexed to the Consumer Price Index, meaning as at the date of writing it is $126 per annum.[68] The introduction of standard compensation in the LRMCD appears to have addressed the larger conflict over the non-payment of compensation identified by the Wilcox Report.

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[63] Mining Act s 266(1).

[64] Mining Act s 266(2)-(3).

[65] Mining Act s 266(4).

[66] *New South Wales Government Gazette*, No 129, 24 December 2014, 4741.

[67] Government Response to Wilcox Report, 1.

[68] *New South Wales Government Gazette*, No 129, 24 December 2014, 4741.

The purpose of compensation is to compensate landholders for the loss they will likely suffer from opal mining on the mineral claim. The question is how best to determine that.

The Wilcox Report recommended a payment of $50 per annum for mineral claims.[69] The basis of the recommended amount was that some privately agreed compensation amounts were $40, which was then rounded up to $50 to account for inflation.[70] The NSW Government Response was to fix the payment at $100 per annum indexed to CPI.[71] The response to the Wilcox review does not explain how the adopted figure of $100 was determined.

It is the Review's view that MEG should develop a policy outlining how the standard compensation is calculated and indexed. It is recommended that this policy be based on the following approach.

First, it should be recognised that the grant of a mineral claim gives the holder of the claim a right to use that land for a period of up to 5 years. While the grant of a mineral claim does not entitle the holder to exclusive possession of the parcel, in most cases it is not practical for any agricultural or other activities to coexist with opal mining activities within the mineral claim.

Based on the understanding that a mineral claim amounts in practice to exclusive possession, the amount of standard compensation should be based on an assessment of an appropriate return to the landholder as if the land comprising the mineral claim were rented as a standalone parcel.

It should be accepted that it is likely to be very difficult to find appropriate comparable and reliable market evidence of the amount of rent that the market would consider to be appropriate for a 2,500m^2 parcel of vacant land surrounding Lightning Ridge and White Cliffs. Accordingly, it is common in such situations for valuers to first determine the market value of the parcel on a freehold basis and then to work out what is an appropriate rental or yield for the property.

In this regard, the Department of Regional NSW obtained valuation reports from Aspect Property for the WCMCD dated 23 February 2023 (**WC Valuation Report**) and for the LRMCD dated 9 May 2023 (**LR Valuation Report**). Each of these reports sought to determine the market value of a 2,500m^2 parcel within each mineral claim district. The reports assumed the parcel was a standalone parcel, capable of being sold.

The WC Valuation Report considered 11 sales which, when adjusted, showed values ranging from $1,000 to $2,000 with an average value of $1,136.35. The Review has rounded this up to $1,150.

The LR Valuation Report considered 20 sales which, when adjusted, showed values ranging from $2,000 to $10,000. The range in values reflection the location, access and other factors. The average of these sales is $4,175.

The next question is the appropriate yield or return. Rental returns can vary greatly in the market, ranging from 1% to 10% per annum depending on the property class, the level of risk associated with the tenancy, the demand and supply of land, as well as other factors.

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[69] Wilcox Report [i].

[70] Wilcox Report [170].

[71] Government Response to Wilcox Report,1.

The Review has considered what would be an appropriate yield, and considers that a rate of 5% would be appropriate. This is a fairly high yield and reflects the risk the land may not be remediated to exactly its pre-mining state.

Applying this yield to the market value of the assumed 2,500m^2 parcel produces an annual standard compensation of $57.50 for White Cliffs and $208.75 for Lightning Ridge. The Review suggests these be rounded down to $55 per annum for White Cliffs and $200 per annum for Lightning Ridge. For a 5-year mineral claim, that would result in landholder compensation totalling $275 for White Cliffs and $1,000 for Lightning Ridge.

The Review recommends that the Minister, as a matter of priority, determine and gazette the above amounts as Standard Compensation for White Cliffs and Lightning Ridge under s 266(2).

The Review also recommends the Standard Compensation amounts per annum should be proportionally increased for General (large), Puddling, and Mullock stockpiling mineral claims.

The Review considers that to keep the Standard Compensation current, a valuation report should be commissioned every 5 years and the Standard Compensation updated in line with such valuation advice. The Review does not consider indexation to the consumer price index (CPI) would be appropriate, as CPI does not correlate with changes to land values, it being derived from what consumers pay for goods and services.

If the above approach were adopted, the terms of section 266(1) can be simplified. The provision can provide that on the grant of a mineral claim, the landholder is entitled to be paid Standard Compensation. A definition of Standard Compensation can be inserted into the Mining Act as an amount determined by the Minister having regard to valuation advice. Such amount must be published in the Government Gazette, and must be reviewed every 5 years.

9.3 Compensation by agreement

Given that some landholders and miners may want to negotiate compensation, the Review recommends the Mining Act provide that the Standard Compensation is payable for all mineral claims unless the parties otherwise agree in writing, and provide that agreement to MEG when the miner lodges an application for a mineral claim.

9.4 NSW Land and Environment Court determination

The current provisions provide that where standard compensation has not been determined, and an agreement has not been reached, a landholder may apply to the Land and Environment Court for determination of compensation.[72] The Wilcox Report identified that this appeal right had not been utilised as at the date of that report.[73] The Review is also not aware of any cases having been brought in the NSW Land and Environment Court relating to the determination of compensation since the Wilcox report.

Given the Review recommends that a Standard Compensation amount should be gazetted for the WCMCD, and increased for the LRMCD, it is almost certain there will no further disputes on compensation. The Review, therefore, considers that the provisions in section s 266 dealing with appeals to the Land and Environment Court should be repealed.

[72] Mining Act s 266(6).

[73] Wilcox Report, [147].

Recommendations

R9.1 A standard compensation determination for WCMCD should be made as a matter of urgency. It is suggested the standard compensation per annum for general (small) mineral claims granted within the WCMCD is the order of $55 and $200 within the LRMCD.

R9.2 MEG should develop and publish a policy outlining how the standard compensation is calculated and indexed based on the approach set out in Chapter 9.2.

R9.3 Standard compensation amounts should be proportionally increased for mineral claims granted over larger areas.

R9.4 The standard compensation amount should be reviewed every five years.

R9.5 Section 266(1) should be simplified to provide that a landowner is entitled to receive standard compensation on the grant of a mineral claim or an amount agreed in writing by the landholder and the applicant for the mineral claim.

R9.6 A definition of standard compensation should be inserted into the Mining Act, being the amount determined by the Minister having regard to valuation advice and published in the Government Gazette.

R9.7 Consideration should be given to repealing sections 266(6)-(8) of the Mining Act once a standard compensation determination for WCMCD is made.

Chapter 10: Rehabilitation of areas affected by opal mining

10.1 Opal mining shafts

Opal mining has been carried out in a relatively confined area surrounding the towns of White Cliffs and Lightning Ridge for over 120 years, but the impacts of this activity are evident everywhere one looks around these towns.

The Review's visits to both White Cliffs and Lightning Ridge revealed a landscape scarred by unrehabilitated opal mines. While the filling of shafts is not required in what are called the "preserved fields", the shafts are meant to comply with certain standards.[74] However, the Review observed that measures used to protect these deep shafts were often quite poor. We saw many instances where shafts had inadequate capping, and where safety devices such as pickets, wire or caps had been blown away by the wind, or otherwise degraded. In the older mined areas, there were often deep shafts on properties with inadequate or no protection at all.

The Review considers that unfilled mine shafts pose an unacceptable risk to members of the public, livestock, and wildlife. The Review received many submissions from landholders and others about the risks posed by unfilled shafts. As noted in the Issues Paper, on 16 December 2017, a resident at Lightning Ridge fell about 6 metres down a shaft. More than 24 hours passed before the resident was found and rescued. In 2014, an opal fossicker at Coober Pedy fell down a shaft and died. The Review has also been provided with photos of stock that have fallen down shafts, and has been told by landholders that they have observed the carcasses of native wildlife down shafts.

The Review considers that the only long-term measure to secure shafts is to fill them all in. Within the preserved fields, we recommend that shafts be filled to a level 2 metres below existing ground level or the shaft be fenced with cyclone fencing, secured by posts cemented into the ground. An example of such fencing was included in the Issues Paper and is reproduced below:

[74] NSW Department of Primary Industries 'Rehabilitation Standards for Cancelled Claims' (12 January 2001).

Figure 9: Source: Photo taken by the Review in November 2023 at Lightning Ridge, NSW.

Outside the preserved fields, all opal mining shafts should be completely filled in. The Review has been informed by MEG that the way to ensure shafts remain filled is to ensure a mound of fill is placed over the shaft. Standards for the amount of fill necessary to adequately fill a shaft should be developed and implemented.

Further, the Review has been made aware that once a mine has been filled with loose material and rehabilitated, it becomes dangerous to mine using shaft and tunnel methods. The Review recommends that once a mineral claim is rehabilitated, only open cut or trenching operations should be permitted on it.

10.2 Open cut mines

The Review examined historical open cut areas and observed large unrehabilitated pits and dangerous faces with potential for collapse, as well as inadequately filled open cut rehabilitation. A major example is the so called 'Lunatic Hill' site at Lightning Ridge.

Open cut mining involves the removal of topsoil from the entirety of the pit. If this topsoil is not removed, stored, and returned, there is little prospect of vegetation regrowing in the filled-in material upon closure of the open cut mine. MEG should impose more detailed conditions in open cut mineral claims requiring strict compliance with rehabilitation standards including how the miner must deal with the removal, storage, and reinstatement of topsoil and how the area is to be revegetated before the mineral claim is cancelled.

10.3 Mullock dumps

The Review also saw large areas covered by mullock dumps. At Lightning Ridge, the Review was advised that the mullock is highly saline which has the effect of preventing the regrowth of

vegetation. A lack of ground cover promotes erosion and the degradation of the land as well as preventing its long-term ecological recovery. It appeared to the Review that at White Cliffs, the mullock did not have the same effect of sterilising the land as vegetation was observed growing upon mullock piles.

The Review is aware that mullock from opal mining needs to be stored while the claim is worked. In addition, miners are unable to utilise all the material excavated when they backfill a shaft and void. At Lightning Ridge, this has resulted in the creation of large communal mullock dumps.

These large mullock dumps pose particular risks and issues, including risks of falls or collapses of stockpiles if the dump does not have safe batter slopes, issues of mullock spreading beyond the mullock mineral claim area, and the permanent sterilisation of the mullock dump land. In addition, some mullock dumps have been created on the Crown reserve without a mineral claim. This creates a significant potential liability for the Crown land reserve manager.

The issue of mullock dumping is exacerbated by the fact that the current regulation and restrictions on the transfer of mullock, including the prohibition on "the removal, stockpiling or depositing of overburden" as a "designated ancillary mining activity" under the Mining Act, as well as the drafting of conditions on mineral claims, effectively prevent its sale or transfer to third parties.[75] This hampers the management of mullock stockpiles.

The Review considers that the sale or transfer of mullock to third parties for specific activities such as road base, back filling of disused opal mining shafts and voids, and other safe uses should be permitted. In addition, the *Protection of the Environment Operations Act 1997* should be amended to ensure that mullock is not treated as waste.[76] This will remove regulatory restrictions upon the transportation, storage, re-use, and disposal of mullock.

Where mullock is stored it should be required to be in bunded areas to prevent erosion and leaching of salts into the soil. Bunds should be required to be maintained. Further, to ensure transparency of how much mullock is being removed, miners should be required to notify MEG of all mullock removals and the estimated volume of material removed from a claim.

The Review is also aware of 46 communal mullock stockpiles. As the Mining Act prohibited the depositing of mullock outside a mineral claim,[77] until the 2023 exemption granted for the deposition of mullock in these stockpiles,[78] they operated unlawfully. They are essentially uncontrolled dumping grounds on public land which create liability risks for the Crown land reserve manager who is left with the environmental and safety risk as well as the potential clean-up costs. The CBA Report estimates the Crown's liability for the 46 communal stockpiles is between $2.67 million and $3.03 million.[79]

The Review considers that the practice of dumping mullock on communal stockpiles should cease. These sites will need to be progressively rehabilitated by the Crown land reserve manager, who may apply to obtain funding from the Environmental levy fund (see Chapter

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[75] Mining Act s 6; Mining Regulation cl 11.

[76] *Protection of the Environment Operations Act 1997* (NSW) Sch 1 cl 49.

[77] Mining Act s 6(3).

[78] *New South Wales Government Gazette*, No 524, 10 November 2023, 2073.

[79] CBA Report, 40.

10.7). The Review considers that as far as practicable, the material in communal mullock dumps should be available for sale and for use to backfill former opal mine shafts and voids. This was supported by an overwhelming number of submissions to the Review from both miners and landholders.

10.4 Puddling claims

Puddling sites are areas where mullock is washed in 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. Some of these puddling claims are held and operated by the Lightning Ridge Miners Association. It can be observed from satellite imagery that the processing of mullock creates a highly disturbed and sterilised area (see Figures 10 and 11 below). These impacts appear permanent.

Figure 10: Puddling Dam locate north-west of Lightning Ridge. Source: Mining, Exploration and Geoscience

Figure 11: Opal washing agitators located on Coocoran opal fields near Lightning Ridge. Source: Mining, Exploration and Geoscience

The Review believes appropriate conditions requiring the bunding and management of puddling claims should be incorporated into all mineral claim conditions. Such conditions should include measures for inspection, repair and maintenance of bunding, and rectification of bunding walls if leaks occur.

10.5 Abandoned structures and machinery

The Review observed a large number of abandoned structures and machinery remaining on expired mineral claims. This appeared to be a particular a problem at Lightning Ridge. The cost of removal is effectively left for the landholder or, in the Crown reserve, for the Crown land reserve manager.[80]

The Review considers this to be unacceptable. A miner should not leave machinery and plant and equipment to rust away on a former mineral claim. The removal of all structures and machinery from a mineral claim must form part of the rehabilitation standards and be required before a mineral claim is cancelled. If there is old equipment on a mineral claim from earlier operations, the current holder of the mineral claim should be responsible for its removal before the end of the term of the current claim.

[80] CBA Report, 40.

10.6 Enforcement

The Mining Act provides that conditions may be imposed on an opal prospecting licence or a mineral claim, requiring the holder to rehabilitate prior to the end of the term of the licence or mineral claim.[81]

In addition, the Secretary has the power to make directions, including to enforce a condition of an authorisation, or to address impacts on the environment, protect the environment from harm or rehabilitate land that has been affected by mining.[82] The Review considers that rehabilitation is essential to enabling a sustainable opal mining industry. The Mining Act should provide for rehabilitation of land to specific standards. This should include the stockpiling of topsoil for respreading to enable the return of vegetation. These standards should be published by MEG and made available on its website.

To address the potential risk of a mineral claim holder not rehabilitating their mineral claim at the end of the term, the Mining Act provides the Secretary with discretion to require security bonds to be lodged.[83] Where a deposit is required, a minimum bond amount of $200 applies.[84] This amount was introduced in 2012 and has not been reviewed since. In practice MEG requires security bonds only for mineral claims within the LRMCD, dependent on the class of mineral claim granted. A standard mineral claim in LRMCD (class A) attracts a security bond of $700. The Review can see no reason security bonds should be applied in LRMCD and not WCMCD.

The average cost to rehabilitate an opal mine is $15,000-$20,000.[85] The Review considers that security bonds should be raised to better reflect the potential cost to the State should a miner fail to rehabilitate their mineral claim. The Review considers that security bonds should be lifted as set out below:

Type	Minimum bond amount
General (small)	$1,000
General (large)	$10,000 or an amount determined by a rehabilitation assessment tool
Puddling	$30,000
Mullock storage	$50,000
Open cut and trenching	$50,000
Trenching only	$10,000

[81] Mining Act s 175.

[82] Mining Act s 240.

[83] Mining Act s 261BA.

[84] Mining Regulation cl 93.

[85] CBA Report, 22.

The Review also understands that there is a Deed in place between the Department and the Lightning Ridge Miners Association (LRMA) which allows the LRMA to provide and maintain a collective rehabilitation bond on behalf of its members, meaning liability rests with the LRMA rather than individual members. Given our recommendations regarding the increase in the amount of bond for various classes of mineral claim, the terms of this deed may need to be revised.

It appears to the Review that there is little enforcement of whether rehabilitation is completed satisfactorily. First, it appears that there is no baseline survey conducted of the pre-mining physical conditions of the claim. This means that a person assessing the rehabilitation task has no reference point for the natural conditions the rehabilitation aims to replicate.

While the Review recognises that conducting studies would be onerous, it considers that at the very least, a miner should be required to take and verify photos of the general state of the proposed mineral claim when lodging an application. MEG should develop guidelines on the minimum number of photos required to fairly depict the overall physical conditions of the claim.

The Review considers that after a mineral claim expires or is cancelled, a physical inspection by the Resource Regulator should be carried out, with an assessment of whether rehabilitation has been completed in accordance with the required standards, and with reference to the physical conditions of the mineral claim before mining commenced. The Resource Regulator may then either sign off that the rehabilitation has been completed in compliance with the standards, or issue a rectification order giving the miner 30 days to bring the rehabilitation up to standard. In the event that the rehabilitation is still not compliant at the expiry of this period, the bond should be forfeited, and the Resource Regulator is given the discretion to apply a penalty provision.

10.7 Historic unrehabilitated mines

The CBA report noted on page 39 that some 35 hectares at White Cliffs and 1,579 hectares at Lightning Ridge are historic mineral claim sites. Of this total land area with historical mineral claim sites, it is estimated 67 per cent have been left unrehabilitated. The CBA report estimated that to remediate one hectare of this land to a standard suitable for grazing would cost approximately $20,000 per hectare. However, this estimate does not include the costs of topsoiling and revegetation of the land. To complete full rehabilitation as required by conditions of mineral claims may cost up to $80,000 per hectare.[86] Accordingly, there is presently a potential significant long term liability in relation to unremediated historic mineral claims.

Sometimes old mineral claims are reworked by new claim holders. It has been raised with the Review there are difficulties in requiring a current mineral claim holder to rehabilitate areas that have previously been mined by others. The Review has been advised by MEG that previously disturbed areas are frequently utilised by miners who 'peg over' new claims to benefit from the work of previous miners without any responsibility to rehabilitate those areas.

From an enforcement point of view, this creates a problem where it becomes difficult for the Resource Regulator to establish whether disturbance was caused by the current mineral claim holder.

To remedy this situation, the Review considers that all mineral claims should be required to be rehabilitated by the current holder regardless of who carried out the mining activity and when it occurred. This could be implemented by amending the standard conditions.

[86] CBA Report, page 39.

Miners have the option of choosing undisturbed areas should they not wish to take on this responsibility. However, if they wish to mine in an area in which past mining activities occurred, then they should take on the responsibility for any remediation of that past activity. This also serves the policy position of rehabilitating historical mines and will make enforcement of rehabilitation obligations easier for the Resource Regulator.

While this may assist in rehabilitating some historic claims, it will not provide completely for the large number of unrehabilitated historical mines across the mineral claims districts. The Review considers the cost of this rehabilitation should be borne by the industry itself, in recognition that for many decades the opal mining industry has passed this negative externality onto others including the local councils, the Lighting Ridge Opal Reserve Manger, MEG, and affected landholders.

In Lightning Ridge, there is currently an environmental levy of $10 per year.[87] This is paid into two funds, one for rehabilitation or environmental maintenance of mullock stockpiles (the **Mullock Levy Fund**) and the other for rehabilitation or environmental maintenance work on land not held under a Small-Scale Title but affected by work relating to one (the **Environment Levy Fund**). The Review understands that each fund receives $31,000 per year. The balance of each fund, including the road levy fund, as at the time of writing is approximately:

a) Mullock Levy Fund - $270,000

b) Environment Levy Fund - $560,000

c) Road Levy Fund - $370,000

The CBA Report estimated that remediating the 46 communal mullock stockpiles will cost up to $3.03 million.[88] The current balance of the Mullock Levy Fund and likely future cash flow is clearly insufficient to pay for this clean-up job.

The average cost to rehabilitate an opal mine is $15,000-$20,000.[89] The current balance of the Environment Levy Fund would therefore pay for the rehabilitation of 27 historical mines plus 1.5 per year thereafter. This is a very small proportion of the number of unrehabilitated mines that exist.

In this situation, the Review considers the cost of rehabilitation justifies a higher environmental levy of at least $100 per year to provide for the tasks of rehabilitating historic mines and communal mullock stockpiles. It is recommended that MEG fund immediate and urgent rehabilitation works such as rubbish removal, filling-in of shafts and other priority works. Once the priority works are completed, it may be appropriate to review the environmental levy.

The Review understands that the designated funds are underutilised for their stated purposes. Generally, the funds have been accessed by Mining Associations, and in some instances, MEG has used funds to remediate mullock stockpiles. The Environment Levy Fund has been rarely accessed, with only two recent instances where a mining association has applied for funds.

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[87] *New South Wales Government Gazette*, No 129, 24 December 2014, 4741.

[88] CBA Report, 40.

[89] CBA Report, 22.

Currently, to access the funds, a person or organisation applying must provide details of the proposed works and use an approved supplier to carry them out. Some landholders are dissatisfied that they must use a limited number of approved suppliers and cannot do the work themselves, but the Review considers that the approved contractor requirement is essential to ensure the integrity and probity of the use of the funds.

The Review recommends MEG review and publish a list of approved contractors and consider whether any suppliers can be added to enlarge the pool.

It is essential that the existence of the available funds is widely publicised. The Review considers a fact sheet should be published on how to apply, what is covered, and how the funds are to be spent.

Recommendations

R10.1 A new provision should be inserted into the Mining Act requiring mineral claims to be rehabilitated to certain standards published by MEG at the expiry of the mineral claim.

R10.2 The MEG publishes rehabilitation standards should:

a) require all mining shafts within the preserved fields to be filled in to a depth of 2m below ground level at the end of the mineral claim term;
b) require all mining shafts outside the preserved fields to be filled and capped including an amount to allow for subsidence;
c) require the removal of any mining structures and machinery (regardless of who placed them there);
d) specify methods for collecting, storing, and reinstating topsoil; and
e) specify revegetation methods.

R10.3 Once a mineral claim is rehabilitated, the only future mineral claims that can be granted over that area are open cut or trenching mineral claims.

R10.4 MEG should impose more detailed conditions in open cut mineral claims requiring strict compliance with rehabilitation standards including how the miner must deal with the removal, storage, and reinstatement of topsoil and how the area is to be revegetated before the mineral claim is cancelled.

R10.5 The Mining Act should permit the sale and reuse of mullock. This material should be used for purposes such as backfilling former shafts and voids, road base and other appropriate uses. Mullock should be subject to a resource recovery order and exemption under the Protection of the Environment Operations Act 1997.

R10.6 Mullock storage should be confined to bunded areas. Conditions should apply to miners to ensure bunds are maintained.

R10.7 Miners should be required to notify MEG of all mullock removals and the estimated volume of material removed from a claim. The practice of dumping mullock on unregulated communal stockpiles should cease. Unregulated mullock stockpiles should be remediated by use of funds from the Environmental Levy fund.

R10.8 Security bonds should be lifted as set out below:

Type	Minimum bond amount
General (small)	$1,000
General (large)	$10,000 or an amount determined by a rehabilitation assessment tool
Puddling	$30,000
Mullock storage	$50,000
Open cut and trenching	$50,000
Trenching only	$10,000

R10.9 As noted in Chapter 4, a mineral claim application must include photos of the mineral claim area recording of its condition. MEG should develop guidelines on the minimum number of photos required to fairly depict the overall physical conditions of the claim. This record should be retained by MEG for use when assessing rehabilitation at the end of the mineral claim.

R10.10 Security bonds should be required for both LRMCD and WCMCD. In order for security bonds to be refunded, the Resource Regulator should inspect the mineral claim and certify that rehabilitation has been completed in compliance with MEG's rehabilitation standards. If, in the opinion of the Resource Regulator, this is not the case, an order to complete rehabilitation within 30 days should be given. If, at the end of this period, rehabilitation is still not completed to standard, the security bond should be forfeited, and the Resource Regulator given the discretion to issue a penalty notice.

R10.11 The standard conditions in a mineral claim should require the mineral claim holder to rehabilitate the entirety of the mineral claim regardless of who carried out the opal mining activity within that mineral claim.

R10.12 MEG should fund immediate and urgent rehabilitation works such as rubbish removal, filling-in of shafts and other priority works.

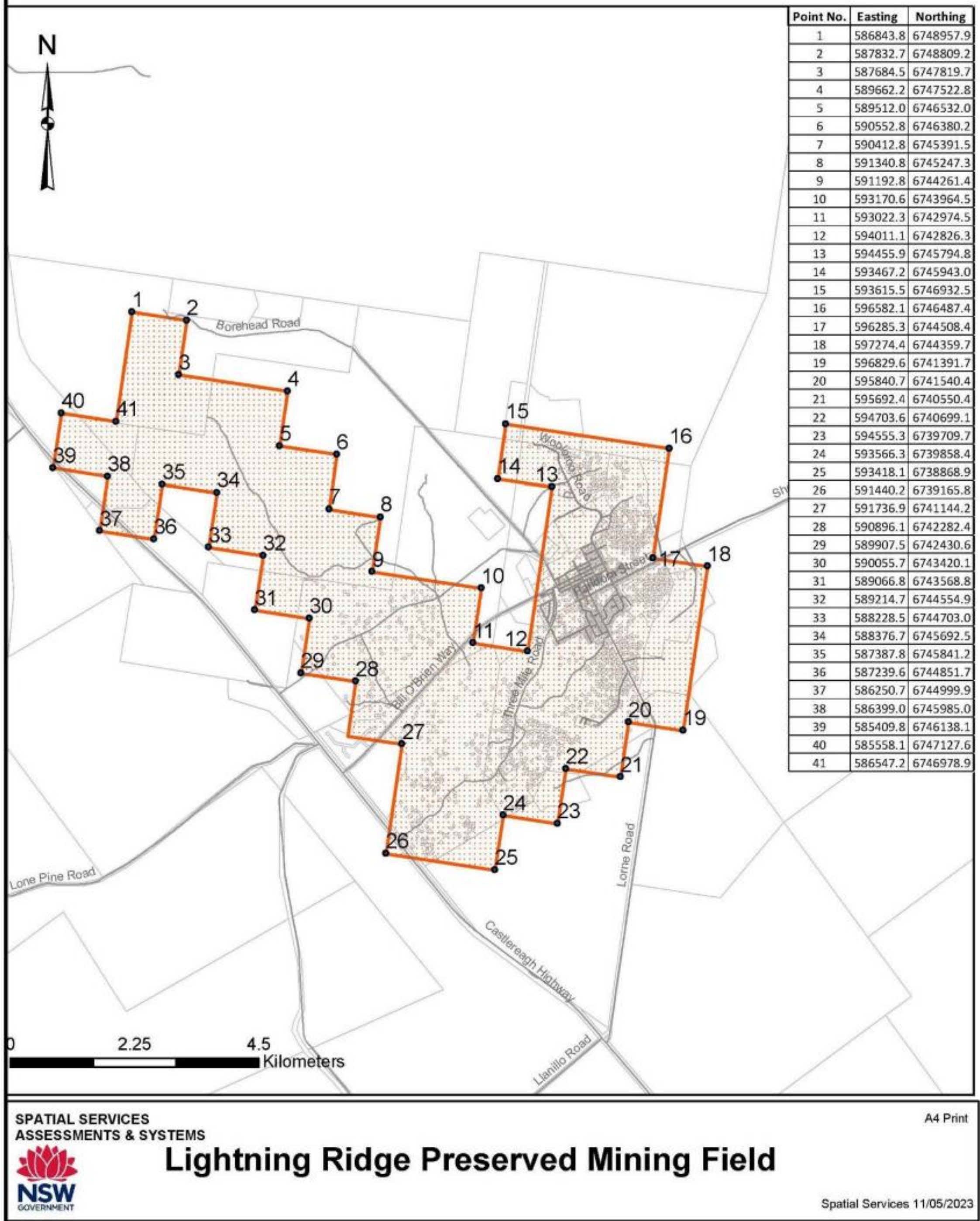
R10.13 The list of approved suppliers under the rehabilitation fund should be reviewed by MEG with a view to increasing the pool of available contractors. MEG should publicise the rehabilitation fund and publish a fact sheet on how to apply, what is covered and how the funds are to be spent.

Chapter 11: Preserved fields

In LRMCD, five areas have been declared as preserved fields.[90] The largest is the Lightning Ridge Preserved field, which surrounds the town.

Figure 12: Map showing LRMCD preserved fields in black outline.

[90] *New South Wales Government Gazette*, No 224, 26 May 2023, 824.



Point No.	Easting	Northing
1	586843.8	6748957.9
2	587832.7	6748809.2
3	587684.5	6747819.7
4	589662.2	6747522.8
5	589512.0	6746532.0
6	590552.8	6746380.2
7	590412.8	6745391.5
8	591340.8	6745247.3
9	591192.8	6744261.4
10	593170.6	6743964.5
11	593022.3	6742974.5
12	594011.1	6742826.3
13	594455.9	6745794.8
14	593467.2	6745943.0
15	593615.5	6746932.5
16	596582.1	6746487.4
17	596285.3	6744508.4
18	597274.4	6744359.7
19	596829.6	6741391.7
20	595840.7	6741540.4
21	595692.4	6740550.4
22	594703.6	6740699.1
23	594555.3	6739709.7
24	593566.3	6739858.4
25	593418.1	6738868.9
26	591440.2	6739165.8
27	591736.9	6741144.2
28	590896.1	6742282.4
29	589907.5	6742430.6
30	590055.7	6743420.1
31	589066.8	6743568.8
32	589214.7	6744554.9
33	588228.5	6744703.0
34	588376.7	6745692.5
35	587387.8	6745841.2
36	587239.6	6744851.7
37	586250.7	6744999.9
38	586399.0	6745985.0
39	585409.8	6746138.1
40	585558.1	6747127.6
41	586547.2	6746978.9

Figure 13: The preserved field at Lightning Ridge

The preserved fields were initially established in 1993-1994 to maintain the appearance of certain opal fields, with a long history of mining and habitation, for heritage and social reasons.[91] The reserves were formally gazetted, on 11 May 2023. In these areas rehabilitation has not been enforced, preserving mineral claims in their mined state.

[91] Lands Advisory Services Pty Ltd, 'Lightning Ridge Area Opal Reserve: Plan of Management (June 2023), 18 (LRAOR Plan of Management).

A similar, but undeclared area, exists at White Cliffs, and is known as Area A in the White Cliffs Miners' Association Plan of Management (1992) shown on Figure 14. This area contains some signage and displays, and also includes some toilet facilities.

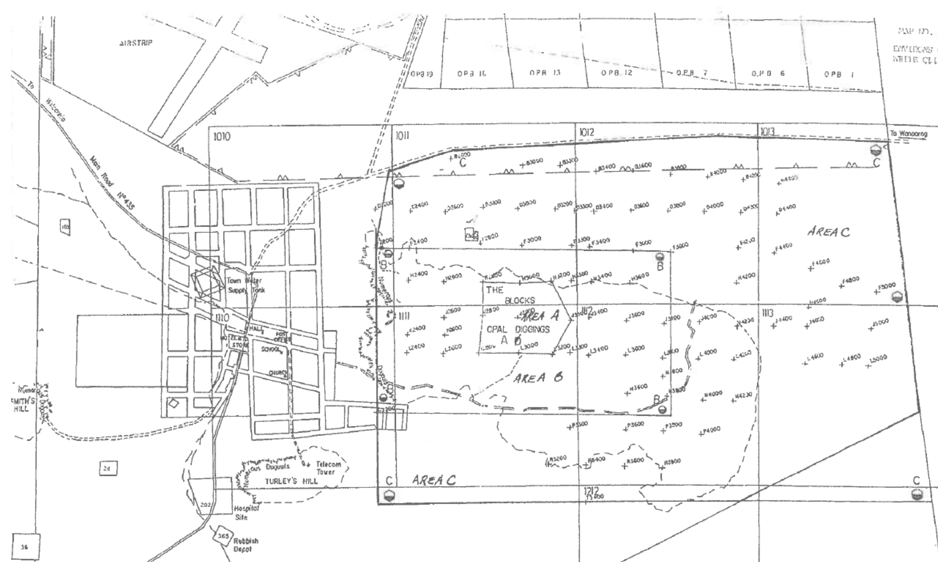


Figure 14: Map of MR2684 extracted from the White Cliffs Miners' Association Plan of Management (1992)

The Review recognises the heritage and cultural aspects of preserving parts of opal mining fields to show the history of mining and mining methods. The Review also understands that many of the preserved fields, whether declared or not, are a considerable tourist drawcard for both Lightning Ridge and White Cliffs.

However, there are clearly safety issues with the preserved fields, with unfilled shafts and abandoned equipment posing risks to tourists and other users. The lack of rehabilitation in parts of these areas also has environmental consequences. In the LRMCD, the salinity content of mullock means that within the preserved fields, vegetation regrowth is unlikely to occur.

Some preserved fields appear to be infrequently visited. The Review considers that reducing the number of preserved fields to those that hold significant heritage value and focusing investment on those preserved fields to attract tourism is an appropriate goal. It is recommended that consideration be given to reducing the preserved fields at Lightning Ridge to allow for greater investment in ensuring those areas are safe and attractive to tourism.

Rationalisation will ensure these preserved fields can be focused on for the development of a safer and more enriching tourism experience.

Area A at White Cliffs should be formalised as a preserved field, allowing the focus of historical preservation and tourism to be contained to this pre-identified area.

As noted in our Issues Paper, the status of many existing shafts within the preserved fields is sub-optimal from a safety perspective. Additional investment needs to be made to improve safety and provide more detailed wayfinding and historical signage. As previously noted, the Review considers that such standards should require shafts to be filled to no less than two metres below ground level or to be fenced with cyclone fencing, secured by posts cemented

into the ground. The Lightning Ridge Area Opal Reserve should be the lead agency to make these areas safe by accessing the funding held by MEG in the Environmental Levy Fund.

The Review believes the preserved fields have even greater tourist potential with necessary investment in tourism facilities such as interpretive signage, maps, walking paths and safety barriers. The Review heard from the White Cliffs Mining Association of their own plans to improve tourism infrastructure in Area A, for example by building a viewing platform. The Review encourages all stakeholders including the tourism bodies, mining associations, MEG, the Crown land reserve manager and relevant local councils to work together to improve tourist infrastructure in the preserved fields. There is a major opportunity to improve tourism in both towns.

Recommendations

R11.1 It is recommended that MEG review the preserved fields and consider rationalising them to ensure they can focus on a safer and more enriching tourism experience.

R11.2 Area A at White Cliffs should be formalised as a preserved field.

R11.3 Rehabilitation standards for the preserved fields should be published requiring shafts to be filled to no less than 2m below ground level or to be fenced with cyclone fencing, secured by posts cemented into the ground.

R11.4 The Lightning Ridge Opal Reserve manager should take the lead on improving safety within the preserved fields at Lightning Ridge using funds from the Environmental Levy.

R11.5 Stakeholders should work together to improve tourist infrastructure in the preserved fields by installing wayfinding signage, more detailed information on mining, better footpaths, amenities, seating and so on.

Chapter 12: Camps on claims

The proliferation of dwellings on mineral claims has occurred over many decades. Originally permitted as ancillary structures to provide miners with accommodation while they worked in remote areas, some now involve significant developments. While many of these structures would be considered as ancillary to mining activities under the Mining Act,[92] some are significant houses which would not meet that test.

The development of these dwellings has been facilitated by the practice of MEG and its predecessors of granting a 'residential' class of mineral claim, being a mineral claim with a condition that purportedly authorised the erection of a dwelling. It is now recognised by MEG that there are legal questions over the power to grant mineral claims of this nature. Thus, the practice has now ceased.

Due to the limited tenure of mineral claims, some of the structures are abandoned once the mineral claim expires. The Review has seen examples of many abandoned structures and other buildings at Lightning Ridge. Presently the cost to the Crown land reserve manager of removing buildings and other rubbish left behind after cessation of mining activities is $60,000 per year.[93]

If the erection and use of these structures are ancillary to mining activities under a mineral claim, and the use of the land for that purpose is permissible without development consent under Part 4 of *the Environmental Planning and Assessment Act 1979* (EP&A Act), and the grant of mineral claims has been assessed and approved under Part 5 of the EP&A Act, it is possible that the structures are lawful.

However, it is very likely that many do not fall into that description. There are questions as to whether development consent under Part 4 should have been obtained for some, and whether they have been adequately erected from an environmental and safety perspective. For example, the unauthorised use of drop toilets and septic systems create health and environmental hazards. The lack of planning approvals also means the relevant local council is unable to plan for the delivery of appropriate services to residences.

Miners communicated a strong desire for the continuation of camping on mineral claims. For many the ability to camp on a mineral claim is about providing convenience as well as security. For others, camps on claims have become their primary place of residence.

The Review considers that there should be no additional grants of mineral claims (residential). Camping, in the form of temporary structures such as tents, caravans, shipping container dwellings or demountables should continue to be permitted to enable miners to obtain easy access to their claims. Guidelines should be implemented that limit new "camps" to temporary structures that can be removed at the expiry of tenure. Permanent structures involving elements like concrete slabs, drop toilets and septic systems should generally not be permitted.

At the same time, people who have made their homes on claims, in reliance on a general permissiveness over many years by MEG, its predecessors, and the local councils, should have the security of their tenure confirmed.

The Review understands that in the early to mid-2000s around 900 former mineral claims in the vicinity of Lightning Ridge township were converted to Western Lands Leases that authorised residential use. These leases provided secure tenure for a term of 20 years at a rent of 3% of land value. Certain

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[92] Mining Regulation cl 7(a)(i).

[93] CBA Report, 40.

holders later extended their lease.[94] The program to convert residential mineral claims to Western Lands Leases was led by an interagency working group. However, this was disbanded, and the program discontinued. MEG has advised the Review that there are approximately 675 remaining mineral claims with dwellings that MEG's predecessor purportedly approved.

The Review considers that Crown Lands (or MEG by delegation from Crown Lands) should ensure that residents of any remaining dwellings that were erected under a purported authorisation by MEG's predecessor, are offered a form of long-term tenure (either a lease or licence) under the *Crown Land Management Act 2016*. If residents do not take up the opportunity, the dwelling should be required to be removed at the end of the term of the mineral claim.

This approach would provide security of tenure to residents for a reasonable period. It would also ensure the State is being fairly compensated for the residential use of public land, through the collection of rent. At the conclusion of the lease or licence period, the Review considers no further renewals should be granted unless the resident can demonstrate that relevant planning and building approvals have been obtained authorising their dwelling.

This will provide ample time for residents who wish to seek planning approval to regularise their dwelling. Any lease or licence should include a condition that the owner remove any improvements or rubbish from the land at the conclusion of the lease or licence period.

No new mineral claims should be granted which purportedly approve residential dwellings.

Recommendations

R12.1 No new permanent structures should be permitted on mineral claims, with clear guidelines published for what constitutes a temporary structure permissible on a claim.

R12.2 Existing residents whose dwellings were erected under the purported authorisation of MEG's predecessor and that have not been transition to a Western Lands Lease should be offered a long term lease or licence as a matter of urgency.

R12.3 The lease or licence should not be renewed at the conclusion of its term unless relevant planning and building approvals have been obtained for the dwelling and conditions imposed that if the lease or licence is not renewed, all improvements must be removed from the land.

[94] Department of Lands, 'Western Lands Leases over Camps on the Lightning Ridge Opal Fields' (Brochure, undated).

Chapter 12: Biosecurity

In his 2011 report, Wilcox observed that, "vehicles can carry on their tyres seeds of invasive weeds. The greater the ground area over which miners' vehicles run, the wider the possible distribution of weed seeds."

Since the release of the Wilcox Report in 2011, the *Biosecurity Act 2015* has been enacted. It is clear that biosecurity is a considerable concern for farmers. Many farmers spoke to the Review about the risks of opal mining becoming a vector for the movement of invasive species, thereby posing a risk to the viability of farming operations.

In the LRMCD, there is significant concern over the spread of Hudson pear (*Cylindropuntia pallida*), a cactus covered in thorns, which can cause serious injury to humans, livestock, and working animals such as horses and dogs. Its presence has the potential to severely affect the viability of livestock farming.

Currently, the rights of entry provided in the Mining Act exempt miners entering land used for farming from having to comply with that property's Biosecurity Management Plan,[95] but 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*.[96] Further, the Secretary of the Department of Regional NSW has broad powers to deal with a biosecurity emergency.[97]

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

The Review considers that miners should be required to comply with reasonable requirements of a Biosecurity Management Plan as part of the conditions of the grant of a permit to enter, opal prospecting licence, or mineral claim. Where a miner considers compliance with a Biosecurity Management Plan would be unreasonable, a miner should be able to apply to the Secretary for a determination on whether compliance with the Biosecurity Management Plan would be reasonable. This power should be delegated to an independent decision-maker.

Weeds are especially likely to spread to areas where native vegetation has been cleared and/or soil has been disturbed. As such, active mineral claims pose a considerable risk for the spreading of weeds. Under the *Biosecurity Act 2015*, an occupier of land would have a general biosecurity duty to, as far as reasonably practicable, prevent, eliminate, or minimise a biosecurity risk on land they occupy.[98] This arguably obliges an opal miner to control weeds such as Hudson pear on their mineral claim.

To make this clear to miners, the Review considers that this duty should be translated into an express condition of a mineral claim, OPL or permit to enter requiring that mineral claim holders take reasonable

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[95] *Biosecurity Regulations 2017* (NSW) cl 44A(2).

[96] *Biosecurity Act 2015* (NSW) s 22.

[97] *Biosecurity Act 2015* (NSW) Pt 5.

[98] *Biosecurity Act 2015* (NSW) s 22.

steps to control weeds on their mineral claim. This will make at least some contribution to the control of Hudson pear and other weeds in the mineral claims districts if implemented and enforced effectively.

The Review also considers that education of miners in biosecurity has a role to play in raising awareness of the need to take measures to protect farm biosecurity. In the LRMCD there should be a special focus on the control of Hudson pear. The Review is aware that Local Land Services and Castlereagh Macquarie County Council have developed resources on the control of Hudson pear.

Recommendations

R13.1 Miners should be required to comply with reasonable requirements of Biosecurity Management Plans. The obligation should be incorporated as a condition of the grant of a permit to enter, OPL or mineral claim.

R13.2 A miner may apply to the Secretary to determine whether a requirement of a Biosecurity Management Plan is reasonable. This function should be delegated by the Secretary to an independent expert whose decision shall be final and binding.

R13.3 A condition should be placed on the grant of mineral claims, requiring mineral claim holders to take reasonable steps to control weeds on their mineral claim.

Chapter 14 : Competency and training for Opal Mining

14.1 Training

The opal mining industry comprises a diverse range of participants. Some benefit from decades of experience in opal mining, and a few even have experience working in the wider mining industry. However, every year many new entrants start opal mining, some with no experience of any mining.

The Mining Act does not require a miner to demonstrate competence in mine safety, environmental matters, and compliance with all the requirements of the Mining Act. At present a new miner is required to complete only a course on safety, delivered online or in-person twice a year in Lightning Ridge and once a year in White Cliffs. The Review heard from miners at White Cliffs that the course is tailored to the geological conditions at Lightning Ridge and does not take account of the specific conditions at White Cliffs.

While opal mining is often described as ‘small-scale’ in comparison to the wider mining industry, the essential elements of digging shafts and tunnels or open cut pits remains the same and carry considerable risks of collapse and injury if not undertaken in a proper manner. Further, the Review observed opal mining operations that could not be described as small-scale, involving portals through which large trucks could be driven into what the Review was told to be large underground caverns. Some of these operations involve employees, creating workplace safety obligations for the mining operator. It would appear that tunnelling and creating large void spaces involve considerable risk, and that an understanding of geology and engineering is necessary to carry out such works in a safe manner.

Other topics warranting improved training include biosecurity, farming operations, and other matters. Also, given the recommendations above that mapping of claims should be done using a calibrated GPS device in the short term, the Review considers some training on how to accurately use GPS devices should be offered. This will greatly reduce the risk that inaccurate data is provided.

Data provided by the Mining Regulator showed that the rate of fatalities per hours worked in opal mining is 6.5 times that for coal, extractive and metalliferous mines.[99] While the number of serious injuries per work hours was lower for opal mines than in coal, extractive and metalliferous mines, we were advised by the Resource Regulator that this is likely to be a result of under-reporting of serious injuries in opal mines. Opal mining safety should be an ongoing and major element in training.

Beyond safety, the Review notes that a recurrent theme has been of miners (and in some cases landholders) not fully understanding their rights and responsibilities under the Mining Act and other legislation. For example, we have heard concerns about the potential of opal mining to impact Aboriginal cultural heritage. While Aboriginal cultural heritage is protected by the *National Parks and Wildlife Act 1974*, a lack of understanding of obligations and awareness of what may constitute Aboriginal cultural heritage in the landscape may lead to poor compliance outcomes. This should also form part of the basic training of any miner.

[99] Data provided by the Mining Regulator showed fatalities per 200,000 hours in coal, extractive and metalliferous mines between 2016 and 2023 to be 0.04. The same period for opal mines (assuming that 1,500 operators worked 1,500hours each), showed a rate of 0.26 per 200,000 hours.

The Review also believes that many of the conflicts between landholders and miners stem from a failure of miners to understand the workings of grazing properties and how mining activities can impact on landholders. For example, a miner may not appreciate that by entering a lambing field during the first months of life, disruption can potentially destroy the bonding between the ewe and lamb with the effect that the ewe abandons the lamb and it dies. The Review considers there is much more room for education in reducing these conflicts.

In summary, the Review considers the following training modules should be required to be completed:

1. Obligations under the Mining Act;
2. Surveying a mineral claim using GPS devices;
3. Workplace Health and Safety;
4. Mine geology and engineering basics;
5. Environmental protection (including erosion control and watercourse management);
6. Heritage conservation (including mining heritage and Aboriginal cultural heritage);
7. Biosecurity; and
8. Animal welfare and the operation of grazing properties.
9. Demonstration of competency

The Mining Act already allows the Secretary to consider, when determining whether to grant an application, whether an applicant for an authorisation meets minimum standards, including whether they have the technical and financial capability to carry out their proposed works.[100] The Review understands that this is used in relation to other areas of mining in NSW where rigorous standards exist requiring minimum competencies.

The Review considers that miners should have completed a minimum level of training in order to carry out opal mining activities. The Review has recommended in Chapter 7, five areas of training in order to obtain a permit to enter. It is recommended that a further three areas of training in using a GPS, workplace health and safety and mining geology and engineering be completed prior to the grant of a mineral claim. Certain competencies (such as animal welfare) may be relevant only to claims on farms and should be required only where an authorisation is sought for a private farm.

Evidence that the courses have been successfully completed should remain valid for five years, after which any new application, including an application to renew a mineral claim, should require undertaking the training again. This will ensure participants stay up to date with any developments in the industry.

[100] Mining Act Sch 1B cl 4.

14.2 Fit and proper person

Currently the only character test a miner must meet before obtaining an opal prospecting licence or mineral claim, is that they are a "fit and proper person".[101] The standard and considerations relating to what constitutes a fit and proper person is no longer outlined in the Mining Act,[102] and, at the time of writing, the Review is not aware of any current policy document which outlines the relevant standard and requirements.

MEG currently relies upon information provided under statutory declaration to determine whether an applicant is fit and proper. The Review considers that MEG should have recourse to an objective source of information regarding the character of the applicant, and that a police check is the most efficient way to supplement the information provided by the statutory declaration.

The Wilcox Report heard from landholders a desire for police checks in the context of concern for the criminal history of some miners working on their land.[103] The Wilcox Report left the question of obtaining police checks for the Minister,[104] but checks were not ultimately adopted.

In South Australia, a police check is required for a precious stones prospecting permit in the Mintabie precious stones field.[105] The Review understands that in NSW a police check can be obtained for $54 and so is not a large impost upon an applicant.

The Review considers that the findings of such police check should not necessarily preclude the granting of a mineral claim. However, the obtaining of such a document would confirm the information provided in the applicant's statutory declaration. It would also provide objective information on which a decision maker could rely, in determining whether an applicant is a fit and proper person.

We note that MEG had adopted a fit and proper person policy in 2018 but that this policy is no longer used. We recommend MEG develop and implement a new fit and proper person policy to assist the decision maker in applying the fit and proper person test.

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[101] Mining Act s 393.

[102] S 380A of the Mining Act was repealed in March 2023.

[103] Wilcox Report [83].

[104] Wilcox Review [85].

[105] *Anangu Pitjantjatjara Yankunytjatjara Land Rights Act 1981* (SA) s 29C(3).

Recommendations

R14.1 Training should be provided by MEG on the following competency areas:

(a) Obligations under the Mining Act;

(b) Surveying a mineral claim using GPS devices;

(c) Workplace Health and Safety;

(d) Mine geology and engineering basics;

(e) Environmental protection (including erosion control and watercourse management);

(f) Heritage conservation (including mining heritage and Aboriginal cultural heritage);

(g) Biosecurity; and

(h) Animal welfare and the operation of grazing properties.

R14.2 To obtain any permit to enter or OPL, the applicant will need to demonstrate they have completed training in (a),(e),(f),(g), and (h). To obtain a mineral claim an applicant will further need to demonstrate further training in (b),(c), and (d).

R14.3 An applicant for an OPL or mineral claim should be required to provide MEG with a recent police check and MEG should develop and implement a fit and proper person policy.

Chapter 15: Other issues

15.1 Dispute resolution

Section 21C of the *Land and Environment Court Act 1979* and section 293 of the Mining Act vest the Court with jurisdiction over a wide range of matters under the Mining Act concerning mining, authorities and mineral claims. These matters are dealt with in the Class 8 jurisdiction of the Court.

The Land and Environment Court was given jurisdiction to hear and dispose of proceedings under the Mining Act in 2009 following the passing of the *Courts and Crimes Legislation Further Amendment Act 2008*.[106] These legislative changes abolished the Mining Warden's Court, representing a significant shift from the way in which disputes relating to small-scale titles framework in the towns of Lightning Ridge and White Cliffs were dealt with.

The Review examined the Court's first Annual Review following the introduction of this jurisdiction and notes that "[t]o implement this new jurisdiction, the Court held stakeholder meetings in Sydney and Lightning Ridge, established and held meetings of a specialist Mining Court Users Group, and established special webpages on the Court's website on the mining jurisdiction".[107] Presentations were given by the Chief Judge, Senior Commissioner and a Commissioner for Mining in Lightning Ridge, and later in Broken Hill, and an opportunity was provided to raise questions and make suggestions.

Despite these attempts to facilitate the introduction of this jurisdiction and engage stakeholders, the Review received a number of submissions which noted that the cost, inconvenience, and delay of taking matters to the Court poses a problem for stakeholders. The Review suspects these are major reasons miners and landholders are not inclined to use the Court for dispute resolution. Some submissions to the Review also recalled that in the past, the Mining Warden was effective at determining disputes as an independent decision-maker available locally.

The NSW Government Response to the Wilcox Report also observed the unwillingness of parties to take opal mining disputes to the Land and Environment Court.

Further, it appears to the Review, based on the figures published by the Court annually, that very few cases have been brought in the Class 8 jurisdiction. Since the Class 8 jurisdiction was introduced, the number of cases registered have ranged from 1 per year to 10, with an average of about 4.[108] In 2022, Class 8 matters were less than 1 per cent of the Court's finalised caseload.[109] Of these figures, an even smaller portion deal with matters concerning opal mining. The Review notes that only a very small handful of published judgments relating to the small-scale title framework have been handed down, largely relating to access management plans or disputes between miners. No cases are recorded as being sourced in White Cliffs.

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[106] *Courts and Crimes Legislation Further Amendment Act 2008* (NSW) sch 14.

[107] Land and Environment Court of NSW, *Annual Review* (Report, 2009) 3.

[108] See figures published in the Annual Review reports released by the Land and Environment Court of NSW between 2009 and 2022 at <https://lec.nsw.gov.au/publications-and-resources/annual-reviews.html>.

[109] Land and Environment Court of NSW, 'Class 8 – Mining' (Web Page) <https://lec.nsw.gov.au/types-of-cases/mining.html>.

This calls into question whether an alternative dispute mechanism may be more suitable for a limited number of situations. It seems that disputes over access management plans is one such area. Others could include determining whether the mineral claim is within the prescribed distance of a dwelling house, garden or significant improvement under s 188(1)(a), and determining a right of way under s 211(7).

It is noted that for other matters covered by section 293, it would be important to retain the jurisdiction of the Court.

The Review understands that the Secretary's regulatory role requires the Secretary to keep an arms-length from certain decisions. As such, the Review considers that while the power to determine the disputes noted above should vest in the Secretary, the decision-making function could be delegated to an independent and appropriately qualified expert appointed by the Secretary. This mechanism would enable parties to write to the Secretary advising that they have a dispute and the Secretary to quickly appoint an expert who can then engage with the parties and then arrange a process for resolution of the dispute. This may include mediation, onsite meetings or any other tools the expert considers appropriate. Given the small-scale nature of the disputes, this appears to be a lower cost option and one that could be a lot quicker. The decision of the expert should be final and binding. The Review recommends that any independent expert must be prepared to travel from time to time to the mineral claims districts but not be required to reside there.

15.2 Land buyback contingency fund

The Review notes that opal mining has occurred in both the LRMCD and the WCMCD for well over a century and is a highly prominent feature of the towns of Lightning Ridge and White Cliffs. Any purchaser of land in these areas making reasonable enquiries would be made aware that opal prospecting and opal mining are activities that may occur over their land.

Despite this, land use conflict has been a recurrent theme in the submissions received by the Review. Many of the recommendations in this Report are aimed at reducing land use conflict between opal miners and landholders. However, the Review expects that despite all reasonable measures to reduce conflict between landholders and miners, some landholders will continue to see mining and agriculture as incompatible land uses.

In 2016, the NSW government undertook the Voluntary Surrender Scheme with the aim of reducing conflict between landholders and miners. This resulted in the purchase of four western lands leases totalling about 17,500 hectares and incorporating over 800 mineral claims at a cost of $6.8 million.[110]

The Review considers that an ongoing commitment to land buybacks has a role to play in diffusing conflict between landholders and opal miners. Even if the land buyback is not used immediately, landholders may be assured that in the event conflict with miners escalates in the future, they have an option to leave for a fair price. This extra protection may give landholders the confidence to continue working their land. For this reason, the Review considers a modest initial fund of $2 million should be set aside to fund any future land buybacks in the mineral claims districts.

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[110] LRAOR Plan of Management, 26-7.

15.3 Role of the Crown Land Manager

The Review notes that the Lightning Ridge Area Opal Reserve Land Manager (**Land Manager**) is a key stakeholder in the management of a large portion of the LRMCD, being responsible for 20,282 hectares of Crown land.[111] The Land Manager is appointed under the *Crown Land Management Act 2016,*[112] and is made up of a board consisting of community representatives and ex-officio positions. The Land Manager is required to manage the Lightning Ridge Area Opal Reserve in accordance with any applicable plan of management.[113]

The Plan of Management for the Lightning Ridge Area Opal Reserve provides that the reserve has a wide range of values including in relation to opal mining, aboriginal culture, heritage, tourism, recreation, science, and education.[114] It also sets out 28 permitted uses, of which opal mining and exploration is only one.[115] The plan of management sets out strategies including for tourism, opal mining, infrastructure, natural resource management, history, and heritage.[116]

The Review notes that the Land Manager appears to be highly dependent financially on opal mining through landholder compensation payments, with this payment making up 73-77% of the Reserves income in the three financial years to 2021.[117]

In these circumstances, the Land Manager could be perceived to have an interest in promoting the interests of opal mining in order to ensure its own financial viability. The Review notes that the plan of management provides for various alternative methods of raising revenue, including through grant funding, bio banking credits, authorisation of occupations (raised from various residential and commercial lessees and licensees).[118] To this end the Review recommends the Land Manager actively pursue the diversification of its income sources to reduce reliance on landholder compensation payments.

A critically important role of the Land Manager is to recognise that the Aboriginal community is the traditional custodian of this land and that the Crown reserve provides important access to waterways and Country that are not otherwise available. This land also contains a network of old growth native vegetation and their seedbanks, wildlife corridors and Aboriginal cultural heritage. The Review notes it is vital that the Land Manager provide every opportunity for the Aboriginal community to access Country and that the recommendations and strategies in section 8.3 of the Plan of Management for the Lightning Ridge Opal Reserve be implemented, monitored and reported on and that this information be shared with the Aboriginal community.

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[111] Lightning Ridge Area Opal Reserve, 'About' (Webpage) < https://lror.org/about-us/>.

[112] *Crown Land Management Act 2016* s 3.3.

[113] *Crown Land Management Act 2016* s 3.13.

[114] LRAOR Plan of Management, 86.

[115] LRAOR Plan of Management, 87.

[116] LRAOR Plan of Management, Part 8.

[117] LRAOR Plan of Management, 141.

[118] LRAOR Plan of Management, Part 8.

15.5 Liability

Some landholders expressed their fear that they could potentially be held liable for accidental injuries suffered by miners on their land. It was put to the Review that landholders should be shielded from liability, but as far as the Review can ascertain, there have been no instances of a landholder being sued by an opal miner for an accidental injury suffered. As such, the Review believes the problem to be hypothetical.

The principles of civil liability in NSW are generally set out by the *Civil Liability Act 2002*. In general, liability for harm arises only where a person's act or omission resulted in harm where it was reasonably foreseeable that a not insignificant risk of harm would occur, and where a reasonable person would have taken precautions against that harm.[119] There are limited circumstances where people are shielded from liability by the *Civil Liability Act,* generally based on clear public policy reasons. The Review cannot see a strong public policy ground for treating landholders in mineral claims districts differently from other landholders in NSW who may have duties to take reasonable care for individuals that come onto their land. Indeed, the inverse of the proposition, that landholders should not have to take reasonable care when undertaking activities that could harm a miner is not something the Review can support.

Similarly, it was put to the Review that landholders should be compensated for any raised insurance premiums which occur from having miners on their land. No evidence was presented that opal mining has resulted in higher insurance premiums and so the Review makes no recommendations in this regard.

15.6 Consultative mechanisms

We have heard differing views on the effectiveness of the former Lightning Ridge Mining Board, and the Review does not consider a revival of the Board would be appropriate.

On the other hand, the Review notes that the appointment of a Special Envoy has played a valuable role in the opal mining community during the Review. A similarly suitably qualified person could usefully be engaged permanently to provide stakeholders, including Indigenous communities, with access to government to raise issues of concern.

The Review considers that some advisory body would be desirable and beneficial in the wake of the reforms we recommend and when some improvement can be seen in relations between key groups.

The suitably qualified person engaged to assist stakeholders referred to above could be considered as Chair of such a body.

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[119] *Civil Liability Act 2002* (NSW) s 5B.

Recommendations

R15.1 The Mining Act and Land and Environment Court Act 1979 be amended in order for relatively minor disputes involving opal mining be able to be resolved by the Secretary and the Secretary being able to delegate to an independent expert the role of settling the dispute. The decision of the independent expert should be final and binding.

R15.2 The disputes that may be resolved by this process include:

a) Determining whether a mineral claim is within a prescribed distance of a dwelling house under s 188(1);

b) Rights of way under s 211(7); and

c) The making of access management plans under s 236.

R15.3 The NSW Government should set aside $2 million for the future buyback of land within the mineral claims districts.

R15.4 The Reserve Manager should pursue the diversification of its income streams to reduce reliance on landholder compensation payments.

R15.5 The Review recommends that the land manager provide every opportunity for the Aboriginal community to access Country and that the recommendations and strategies in section 8.3 of the Plan of Management for the Lightning Ridge Opal Reserve be implemented, monitored and reported on and that this information be shared with the Aboriginal community.

R15.6 The Review recommends appointing a suitably qualified person to engage with stakeholders and consideration be given to establishing an advisory body which that person could chair.

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Appendix A – Comparison of NSW, QLD and SA regulation of opal mining

Governing Legislation

In NSW the principal legislation governing opal mining is the Mining Act and the Mining Regulation. In South Australia it is the *Opal Mining Act 1995* (SA), *Mining Act 1971* (SA) and *Opal Mining Regulations 2012* (SA). In Queensland it is the *Mineral Resources Act 1989* (QLD), *Fossicking Act 1994* (QLD) and the *Mineral Resources Regulation 2013* (QLD).

Areas where mining is permitted

In NSW and South Australia opal mining may only occur in designated areas called mineral claims districts (in NSW) and precious stones fields (in South Australia).[120] In South Australia, opal mining may also occur outside a precious stone field with the consent of the land owner.[121] In Queensland opal mining may occur in any part of the State that is not restricted land, but fossicking may only occur on private land in declared areas.[122] All states permit mining on Crown and private land.

All three States also exempt certain land from opal mining. Each state lists a range of land uses which are exempt. For example, the areas around residential dwellings are exempt. In NSW and Queensland land is exempt where it is within 200m of a principal place of residence.[123] In SA, this buffer distance from a principal place of residence is 400m.[124] Certain agricultural land is also exempted subject to definitional variances in each jurisdiction.[125]

Opal Mining Permits

In NSW a person can apply for an opal prospecting licence which entitles them to prospect for opals over an area of land within an opal prospecting block. In South Australia, this is known as a precious stones prospecting permit and is granted over a pegged out area.[126] Queensland has two categories of prospecting permits: district prospecting permits, which give a right to prospect over a declared district and parcel prospecting permits which give a right to prospect over certain parcel of land.[127] Separate permits for opal fossicking are also available in Queensland.[128]

In NSW mining may occur under the authority of a mineral claim. Standard mineral claims are restricted to 2,500m^2. In South Australia a holder of a precious stones prospecting permit may apply for a precious stones claim in the sizes of small (50x50m), large (50x100m), extra-large (100x200m), or an opal development lease (200x200m).[129] In Queensland, mining claims may be a maximum of 20

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[120] Mining Act s 180(2); *Opal Mining Act 1995* (SA) s 4 (**Opal Mining Act**).

[121] Opal Mining Act s 6(1).

[122] *Fossicking Act 1994* (QLD) s 27.

[123] *Mineral Resources Act 1989* (Qld) s 51 (**Mineral Resources Act**); *Mineral and Energy Resources (Common Provisions) Act 2014* (Qld) s 68.

[124] Opal Mining Act s 6(1).

[125] See, for example, *Mineral and Energy Resources (Common Provisions) Act 2014* s 68; Opal Mining Act s 6(1)(d).

[126] Opal Mining Act s 10.

[127] Mineral Resources Act ss 21, 33.

[128] *Fossicking Act 1994* s 14.

[129] Opal Mining Act Pt 2.

hectares, or 1 hectare in the case of hand mining claims.[130] Opal mining is also possible on a larger scale in Queensland such as through a mining lease.[131]

In NSW a mineral claim has a term of 1-5 years in the LRMCD and 1 year in the WCMCD. In South Australia a precious stones claim has an initial period of 3 months but may then be renewed for 12-month periods.[132] Queensland permits terms of up to 10 years for mining claims.[133]

Application Process

In both NSW and South Australia, the boundaries of mineral claims must be pegged by a claimant.[134] In South Australia, pegging out may only occur under a prospecting permit, but once pegged out the applicant may mine the area for 14 days while their application is processed.[135] In Queensland mining claims need only be identified through a map.[136]

In NSW, as part of the application process an applicant must notify the landholder twice. First of their intention to apply for a mineral claim, and second of their intention to exercise rights under a mineral claim. In South Australia and Queensland, landholder notification is limited to notice of entry.

Costs of Applications

The below table sets out a selection of application fees for a standard mineral (Class A) mineral claim and the equivalent in South Australia and Queensland.

Type	NSW	SA	QLD
0.25ha	$130	$175	$432.90
0.5ha	N/A	$350	
2ha	N/A	$525	

Costs of security bond

In NSW a Class A mineral claim attracts a security bond of $700. In South Australia bonds are at the discretion of the minister.[137] In Queensland bonds are self-assessed using an assessment tool. The tool indicates that security is based solely on the structures a miner proposes to erect, thereby securing their removal, rather than the cost of rehabilitating a mine.[138]

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[130] Mineral Resources Act s 53.

[131] Mineral Resources Act s 234(1)(b).

[132] Opal Mining Act s 22.

[133] Mineral Resources Act s 91.

[134] *Opal Mining Regulations 2012* (SA) cl 11; Opal Mining Act s 15.

[135] Opal Mining Act s 15.

[136] Mineral Resource Act s 61.

[137] Opal Mining Act s 36.

[138] Queensland Government, ‘Self-Assessment Calculator: Small Scale Mining Security’ (Online Form) <https://www.resources.qld.gov.au/__data/assets/pdf_file/0009/1448811/self-assessment-calculator-ssm-security.pdf>.

Restriction on grant of permit

In NSW the only test a miner must meet before obtaining a mineral claim, is that they are a fit and proper person. Queensland has similar provisions allowing ministerial discretion to disqualify persons from holding authorities.[139]

Additional requirements are that in Queensland an applicant must be an adult, and in South Australia they must be over 16 years old.[140] In South Australia there is further scrutiny of the criminal background of persons applying for a permit in the Mintabie Precious Stones Field.[141]

Landholder compensation

In NSW compensation must be paid to landholders. This can take the form of standard compensation, being $126 in LRMCD, compensation by agreement, or compensation determined in 'exceptional circumstances' by the Land and Environment Court. A standard compensation amount is unique to NSW. In both South Australia and Queensland, compensation is determined by negotiation between the miner and landholder, and failing this a party may apply to a court for a determination of compensation.[142]

Claim operations and conditions

In NSW a miner is entitled to hold a right of way across land to their mineral claim. This must, wherever practical, follow the route of existing tracks. Reasonable notice of entry is required under a permit to enter, but not for a mineral claim. In South Australia opal miners generally may not enter onto land to prospect or mine unless they have given a notice of entry 21 days prior to entry.[143] In Queensland notice must be given 5 days before entry.[144]

In NSW holders of a claim may erect ancillary structures and buildings and camp on a mineral claim. Queensland specifies that a person may temporarily reside on a claim and that only temporary accommodation structures are permitted.[145] In South Australia tenement holders may not reside on the tenement unless it is within the Mintabie township lease area in accordance with a licence issued under section 29D of the *Anangu Pitjantjatjara Yankunytjatjara Land Rights Act 1981*, or as otherwise allowed under that Act.[146]

Renewal

In NSW and South Australia mineral claims may be renewed by applying within 2 months before expiry.[147] In Queensland renewal may occur between 6 and 12 months before expiry.[148]

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[139] *Mineral and Energy Resources (Common Provisions) Act 2014* (Qld) s 196C.

[140] Mineral Resources Act, Dictionary (definition of 'eligible person'); Opal Mining Act s 7(3).

[141] *Anangu Pitjantjatjara Yankunytjatjara Land Rights Act 1981* (SA) s 29C(3).

[142] Mineral Resource Act s 85; Opal Mining Act s 38.

[143] Opal Mining Act s 31.

[144] Mineral Resource Act s 32.

[145] Mineral Resource Act s 250(1)

[146] Mineral Resource Act s 23(3).

[147] Opal Mining Act s 9(3)(a).

End of Claims

In all three jurisdictions claims can be cancelled where a miner has contravened regulatory requirements.[149]

Rehabilitation

In NSW rehabilitation standards may be set by the Secretary. In South Australia the legislation provides for minimum rehabilitation standards, but these only apply outside a precious stone field.[150] In Queensland rehabilitation does not appear to be a standard requirement, however, permit holders are required to remove any buildings, structures, mining equipment and plant and to restore any pre-existing improvements on the land.[151]

Native Title

In 2015 the Federal Court determined that non-exclusive native title rights existed over the White Cliffs main field. In 2018 the Department suspended the grant and renewal of claims. Negotiations are currently underway with the Barkandji for the making of declaration under s 26C of *Native Title Act 1993* (Cth) that the area is an approved opal and gem mining area.

In South Australia mining is impermissible on native title land unless authorised by a native title mining agreement, indigenous land use agreement or authorised where it will not directly interfere with community life or areas or sites of particular significance of native title holders, and not involve major disturbance to the land.[152] Additional controls exist for mining on Maralinga Tjarutja and APY Lands. In Queensland the grant of permits may be subject to the conditions of indigenous land use agreements.[153]

A feature of the South Australian legislation is that it directs miners to consider their obligations under the *Aboriginal Heritage Act 1988* with respect to protecting aboriginal sites or objects.[154]

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[148] Mineral Resource Act s 93.

[149] Opal Mining Act s 27; Mineral Resource Act s 106.

[150] Opal Mining Act s 28(3).

[151] Mineral Resource Act ss 109, 276.

[152] Opal Mining Act ss 50, 57.

[153] Mineral Resource Act s 81B.

[154] Opal Mining Act s 94(2).

Appendix B – Section 175 Orders

(n2019-3629)

MINING ACT 1992

Order under Section 175 Specifying the Conditions that are to apply to Mineral Claims within the Lightning Ridge Mineral Claims District

I, John Barilaro, Minister for Regional New South Wales Industry and Trade, revoke all previous Orders made under section 175 of the *Mining Act 1992* and make the following Order pursuant to section 175 of the *Mining Act 1992*, specifying the conditions that are to apply to mineral claims granted over land within the Lightning Ridge Mineral Claims District.

1. Classes of mineral claims

The following types (classes) of mineral claims can be granted in Lightning Ridge Mineral Claims District. Claims not fitting into the following classes are not permitted to be granted.

Class		
CLASS A Standard Mineral Claim	**Size:**	Claim area must not exceed 2,500m^2.
	Shape:	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.
	Permitted Operations*:	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.
CLASS 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)	**Size:**	Claim area must not exceed 2 hectares.
	Shape:	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.
	Permitted Operations*:	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.
CLASS C 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)	**Size:**	Claim area must not exceed 2 hectares.
	Shape:	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.
	Permitted Operations*:	Prospecting – Yes Mining and Mining Purposes not permitted.
CLASS D Mining Purpose – Processing	**Size:**	Claim area must not exceed 2 hectares.
	Shape:	Claim must not have any side being greater than 200m in length.
	Permitted Operations*:	Mining – No Prospecting – No Mining Purposes – Yes: "processing" only, subject to 5 (c) below.
CLASS E Mining Purpose – Mullock stockpiling	**Size:**	Claim area must not exceed 2 hectares.
	Shape:	Claim must not have any side being greater than 200m in length.
	Permitted Operations*:	Mining – No Prospecting – No Mining Purposes – Yes: stockpiling or depositing of overburden, ore or tailings only.
CLASS F 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	**Size:**	Claim area must not exceed 2 hectares.
	Shape:	Claim must not have any side being greater than 200m in length.
	Permitted Operations*:	Prospecting – Yes Mining and Mining Purposes not permitted.

CLASS G	Size:	Claim area must not exceed 2 hectares.
	Shape:	Claim must not have any side being greater than 200m in length.
	Permitted Operations*:	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.

2. Restrictions on minerals.

(a) Mineral claims may be granted in respect of opal only.

3. The maximum number of mineral claims that may be held by any one person.

(a) A Class A, B, C and D mineral claim must not be granted to a person if the grant would result in the person holding more than 2 claims (in total) from Classes A, B, C and D at the time of grant.

(b) A Class F mineral claim must not be granted to a person if the grant would result in the person holding more than 2 Class F claims at the time of grant.

(c) A Class G mineral claim must not be granted to a person if the grant would result in the person holding more than 2 Class G claims at the time of grant.

Note: There is no restriction on the number of mineral claims of Class E that may be held by any one person at any point in time.

4. The period for which a mineral claim is to have effect.

(a) Mineral claims of Class A may be granted for a term of up to 5 years and may be renewed for terms of up to 5 years each renewal.

(b) Mineral claims of Class B may be granted for a term of up to 12 months and may be renewed once only for a further term of up to 12 months.

(c) Mineral claims of Class C may be granted for a term of 70 days and will not be renewed.

(d) Mineral claims of Class F may be granted for a term of 70 days and will not be renewed.

(e) Mineral claims of Class F may not be granted over any land which a Mineral claim Class F is in force or has (at any time within the 14 days preceding the day on which the application for Mineral claim Class F was lodged) been in force.

(f) Mineral claims of Class D, E and G may be granted for a term of up to 5 years and may be renewed for terms of up to 5 years each renewal.

5. The Nature and Extent of Prospecting and Mining Operations that may be Carried Out in respect of Mineral Claims.

(a) This clause does not apply to mineral claims of Class C, D, E, F and G.

(b) Subject to (c), a mineral claim holder must not in a mineral claim area:

i. conduct open cut operations,

ii. use a dry rumbler, a wet rumbler or other motorised revolving drum for the purpose of opal puddling,

iii. use power operated equipment or machinery.

(c) In 5(b)iii "power operated equipment or machinery"

i. includes:

- a bulldozer, ripper (whether self-propelled or towed), backhoe, dragline, cable scraper, face shovel, front end or overhead loader, skimmer, grab, bucketwheel excavator, trench cutter, grader, or suction pump,

ii. but does not include any:

- hand held pneumatic or electric pick, hammer or road breaker;
- shaft sinking equipment or machinery or drilling or boring equipment or machinery when used to sink a vertical or near vertical shaft or exploratory shaft, drill hole or borehole;

- windlass winch or elevator for transporting mined or excavated material to the surface; or
- equipment or machinery used to: load and transport previously mined or excavated material to a treatment plant; fill in, make safe or securely protect any shaft or excavation.

(d) The restriction in 5(b) does not apply if operations are conducted in accordance with an approval issued by the Secretary.

(e) Nothing in these conditions prevents a mineral claim holder from carrying out such works as are necessary to comply with any lawful direction issued under any Act or Regulation.

6. Miscellaneous

(a) The holder of a mineral claim must within 14 days of the date of the grant of a mineral claim fix to each picket or post defining the area of the mineral claim a tag on which is legibly stamped the number of the mineral claim.

Dated this 20th day of November 2019

MICHAEL WRIGHT
Deputy Secretary Division of Resources and Geoscience
as delegated by
THE HON JOHN BARILARO, MP
Minister for Regional New South Wales, Industry and Trade

(n2019-3630)

MINING ACT 1992

Order under section 175 specifying the conditions that are to apply to mineral claims within the White Cliffs Mineral Claims District.

I, IAN RAYMOND CAUSLEY, M.P., Minister for Mines in exercise of the powers vested in me by section 175 of the Mining Act 1992, revoke the Order published in the *Government Gazette* dated 20th August 1992 specifying the conditions applying to mineral claims granted over land within the White Cliffs Mineral Claims District and do, by this my Order specify the following as conditions that are to apply to mineral claims granted over land within the White Cliffs Mineral Claims District.

1. *The shape and size of mineral claims that may be granted.—*

Within those parts of the White Cliffs Mineral Claims District affected by Reserves Nos 2684 and 2685 under section 367 of the Mining Act 1992 and Opal Prospecting Area—Gemville, the area of land granted under a mineral claim must be square in shape no greater than 50 metres by 50 metres except where the external boundaries of the land available for grant make such a shape impractical in which case the maximum area must not exceed 2, 500 square metres.

2. *The minerals in respect of which mineral claims may be granted.—*

Mineral claims will be granted for all minerals except coal.

3. *The maximum number of mineral claims that may be held by any one person.—*

by any one person.—

Subject to section 202 of the Mining Act 1992 the maximum number of mineral claims that may be held by any one person or company will be two.

4. *The nature and extent of prospecting and mining operations that may be carried out in respect of mineral claims.—*

In addition to any requirement determined by the Mining Registrar a mineral claim holder must not: Prospect or mine in a mineral claim area, by means of power operated equipment or machinery;

Use in the mineral claim area power operated equipment or machinery for mining purposes or;

Use in the mineral claim area a wet rumbler or other motorised revolving drum for the purpose of opal puddling, unless with the written approval of the Warden, and subject to such conditions as he may require including the lodgement of an additional security deposit. "Power operated equipment or machinery" includes a bulldozer, ripper (whether self propelled or towed), backhoe, dragline, cable scraper, face shovel, front end or overhead loader, skimmer, grab, bucketwheel excavator, trench cutter, grader or suction pump but does not include any:

Hand held pneumatic or electric pick, hammer or road breaker;

Shaft sinking equipment or machinery or drilling or boring equipment or machinery when used to sink a vertical or near vertical shaft or exploratory shaft, drill hole or borehole;

drill hole or borehole;

Windlass winch or elevator for transporting mined or excavated material to the surface; or

Equipment or machinery used to; load and transport previously mined or excavated material to a treatment plant; fill in, make safe or securely protect any shaft or excavation; or carry out any works directed to be done by any Regional Inspector of Mines or Regional Mining Officer.

An underground digger may be used if its use has been approved by a Regional Inspector of Mines.

5. *The Security Deposits to be lodged in respect of the Granting of Mineral Claims.—*

Any security shall be in such amount and form as the Mining Registrar may require.

Also the Mining Registrar on renewing and on transferring a mineral claim may require the applicant/transferee to give security for the fulfilment of the obligations arising in relation to the mineral claim in such amount and form as the Mining Registrar may require.

7. *The Obligations of the Holders of Mineral Claims as to the Rehabilitation of Land on which Prospecting or Mining Operations have been Carried Out.—*

The Mining Registrar when granting, renewing or transferring a mineral claim may impose conditions for the rehabilitation, levelling, regrassing, reforesting or contouring of the land and the filling in, sealing or

contouring of the land and the filling in, sealing or fencing off of excavations, shafts and tunnels.

8. *Additional Conditions—*

The Mining Registrar when granting, renewing or transferring a mineral claim may impose such conditions as may be necessary for administrative purposes, or for the protection of private and public interests, for the conservation and protection of the flora, fauna, fish, fisheries and scenic attractions and features of aboriginal, architectural, archaeological, historical or geological interest.

In addition the holder of a mineral claim must within 14 days of the date of the grant of a mineral claim fix to each picket or post defining the area of the mineral claim a tag on which is legibly stamped or written the number of the mineral claim and must ensure that all pickets/posts, trenches/stone walls, board/plate, notice and tags defining the area are properly maintained while the mineral claim remains in force.

Dated this 3rd day of May 1994.

IAN CAUSLEY, M.P.
Minister for Mines.

Appendix C – Wilcox Report

LIGHTNING RIDGE OPAL MINING- REPORT REGARDING REVIEW

--Murray Wilcox AO QC

RECOMMENDATIONS AND PRINCIPAL SUGGESTIONS

Recommendations on compensation payable by prospectors/miners to landholders

(i) As a matter of urgency, the Minister fix rates of compensation for opal prospecting licences and mineral claims, using ss.175 and 223A of the *Mining Act 1992.*

(ii) In the longer term, amendments be made to Division 1 of Part 13 of the Act, enabling the Minister to set compensation rates, from time to time, by notice published in the Gazette.

(iii) The rates initially set by the Minister be $80 plus 10 cents per hectare for opal prospecting licences and $ 50 per annum for mineral claims.

Principal suggestions regarding other issues raised during the review

(iv) The Department of Trade and Investment, Regional Infrastructure and Services should comprehensively plan opal mining activities, not only in new release areas like OPA 4, but also in currently mined areas where new claims will likely be sought. Such planning should include detailed consideration of environmental and Aboriginal heritage issues and the siting and construction standard of access roads.

(v) As part of its preplanning, the Department prepare, and make available to applicants, standard Mining Operations Plans, for adoption and use by them.

(vi) The Department accept responsibility for collection and distribution of compensation payments.

(vii) The Department institute a system of notifying landholders, by email or SMS, about the grant of a mining right over their land.

(viii) The Department establish a webpage for each rural property in the Lightning Ridge mining district and there maintain a record, accessible to the landholder, of all current mining rights affecting that property.

(ix) The Department publicise the rules about access to mining sites and consider issuing identification cards and vehicle stickers.

(x) Dogs not be permitted on mining claims or opal mining prospecting areas.

(xi) The Government consider whether to limit the time during which particular land is available for opal mining.

Mr Mark Paterson AO,
Director-General,
Department of Trade and Investment, Regional Infrastructure and Services.

1. Following preliminary discussions in late 2010, on 28 March 2011 your predecessor, Dr Richard Sheldrake, wrote to me confirming my engagement to undertake the following tasks:

"a. conduct an impartial review and recommend a methodology for establishing appropriate levels of compensation to landholders affected by minerals claims at Lightning Ridge;

b. identify a process that allows on-going assessment of future compensation;

c. meet with local landholders and miners to identify other specific issues of concern, and

d. prepare a report for me outlining your findings for completion by July 7 2011, subject to the trip proceeding as planned in the week of May 9 2011."

2. The trip to Lightning Ridge did proceed as planned in the week commencing May 9, 2011. This is my report.

BACKGROUND

The Lightning Ridge opal fields

3. In a report written in November 1984 for the then Department of Mineral Resources, JJ Watkins said:

"Opal has been mined at Lightning Ridge since 1903. During this time a moderate production was achieved until the late 1950's when production increased markedly due to the introduction of mechanized mining methods. Estimated production over the last 6 years has averaged $13 million per annum. Processing methods, although still water intensive, have become significantly more efficient. Based on rates of water consumption, the extraction (or processing) rate of potentially opal-bearing claystone is estimated at 206 000 tonnes per year.
…

"The estimated life of the existing opal fields at Lightning Ridge is about 50 years. The potential for significant new discoveries of opal which may extend this life is moderate. There is good potential for significant new discoveries in outlying areas particularly in the 'seam country' near Grawin."(1)

4. In the 26 years that have passed since these words were written, new fields have opened. Mechanical extraction and processing have increased, with the use of large and expensive equipment. So it is reasonable to assume that the value of average annual production is now higher than $13 million. However, it is impossible to say to what extent. Because of fear of "ratting" (theft from shafts and claystone piles),

opal miners are notoriously secretive about success. (2)

5. The Lightning Ridge opal fields lie within the Lightning Ridge Mineral Claims District, as constituted by the Governor under s.173 of the *Mining Act 1992* ("the Act") and also the Narran/Warrambool Reserve ("the Reserve").

6. The Reserve was apparently first constituted in 1989, the purpose being to reserve land for opal mining, as distinct from other minerals. As explained in a 2006 publication of the Department of Primary Industries (3), the reservation "ensures that the opal miner, traditionally an individual, will continue to have reasonable access to areas of country for opal prospecting and mining and whose collective resources are more likely to locate opal than limiting titles to a few large mining companies."

7. The area contained within the Reserve was extended in 2001, 2005 and again last year. As now constituted, the Reserve extends from the Queensland border in a south-westerly direction for approximately 110 kilometres, with a width of approximately 30 kilometres. I understand it now contains all the land believed to be prospective for black opal.

8. Pursuant to s.220 of the Act, the Minister has constituted four opal prospecting areas ("OPA"s). In each of those areas, under s.224 of the Act, the Minister has also constituted opal prospecting blocks.

9. OPA 1 includes the township of Lightning Ridge and some nearby areas that have been worked since the early days and now lie outside any Western Lands lease. Some of these areas are now managed by the Land and Property Management Authority ("LPMA") as "Preserved Fields"; that is, areas of land that are deliberately not rehabilitated after the cessation of mining but, rather, retained for their value as historical mementos, tourist attractions and for scientific study. In earlier times, it was common for miners to erect homes--even substantial homes—on their claim areas. Some of these homes remain in the Preserved Fields, and are still occupied. Plans are well advanced for the erection of a $40 million Opal Mining Centre on a Preserved Field close to the township.

10. OPA 1 also includes the whole or part of 17 properties held by private persons under Western Lands leases for farming and grazing purposes. Although there has been some mining activity on many of these properties, extensive activity seems to be limited to only a few of them.

11. OPA 2 runs from the northern boundary of OPA 1 to the Queensland border. It contains some or all of 29 Western Lands leasehold properties used for farming and grazing, including some that are partially in OPA 1. The main mining activity in OPA 2 appears to be in its extreme north, particularly on "Mehi".

12. OPA 3 adjoins OPA 1 to the south. It takes in some or all of 12 farming/grazing leasehold properties. The OPA includes the district known as Grawin, which has been a centre of mining activity for many years, and also an exempted community facilities area called Gumborah.

13. OPA 4 lies to the south of OPA 3. It contains all or some of 26 farming/grazing lease areas, the southernmost of which surround, on three sides, the Narran Lakes Nature Reserve and Narran Lake itself. Narran Lake is an internationally significant wetland protected under the Ramsar Convention.

14. I understand no mineral claims have yet been issued over land in OPA 4. Although some opal prospecting blocks have been constituted in that OPA, and some access routes determined, this process is not yet complete.

The town of Lightning Ridge

15. Lightning Ridge township is situate off the Castlereagh Highway, between Walgett and Goodooga. The town is within the Shire of Walgett and has a permanent population of about 3000 people. There is a large transient population, comprising both opal miners and tourists.

16. Tourists are particularly important to the continuing prosperity of the town. According to the local Visitor Centre, in 2010 some 26,000 people visited Lightning Ridge, to see the fields and absorb something of their history and culture. In discussions with me, representatives of Walgett Shire Council emphasised the local economic and social importance of the opal fields. This importance is illustrated by the recently opened, and most impressive, swimming and diving centre which, I understand, was erected substantially through donations, in cash, kind or labour, by members of the mining community.

Mining at Lightning Ridge

17. In his 1984 report, JJ Watkins noted that opal mining at Lightning Ridge had traditionally been the domain of the smaller miner." He gave three reasons:

   "1. The sporadic occurrence of precious opal.

   2. The small size of the mining tenement, or claim (50 m x 50 m);

   3. The restriction on the number of claims per person (2)." (4)

18. Watkins described the various mining and processing methods used in 1984. Mining methods ranged from hand mining (pick and shovel with hand windlass), through the use of a self-tipping hoist or blower to extract opal-bearing claystone ("opal dirt"), electric or pneumatic jackhammers or underground diggers to break up the claystone to heavy equipment such as Caldwell drilling rigs or bulldozers(5).

19. Watkins noted that, in the Lightning Ridge field, "opal is generally found as nodules (in groups or singly) distributed throughout claystone lenses near their junction with the overlying sandstone."(6) Accordingly, any bulk extraction method must be supported by a secondary process to separate the nodules from the claystone. "Dry puddling" was then occasionally used but Watkins noted its relative inefficiency and the more usual use of wet processing, using a "wet puddler" or an agitator. He described both these appliances as "highly water

intensive", with the result that water availability is "a major limiting factor to mining operations" and "an added disincentive for prospecting in outlying areas." (7)

20. In her submission on behalf of the Lightning Ridge Miners' Association ("LRMA"), Secretary/Manager Maxine O'Brien stated that opal is generally found at depths of between 10 and 30 metres below the surface, in a layer of claystone immediately below a level of sandstone. She said:

"The opal dirt is …removed with jackhammers and/or hydraulic digging machines and transported to the surface either in large buckets on an automated hoist or via a 'blower', which is very like a large vacuum cleaner.

" In areas around Lightning Ridge where opal occurs in 'nobbies' or nodules, the opal dirt is then washed in 'agitators' or converted cement mixer bowls. The opal dirt dissolves in the water, leaving behind the precious and common opal, called tailings.

"The tailings are sorted to identify any precious opal, which is cut, polished and sold to an opal wholesaler.

"The opal bearing clay from areas around Grawin, Glengarry and Sheepyards, south west of Lightning Ridge, is not often washed as the opal occurs in seams and is easily identifiable underground."

21. This description accords with the observations I made during my visit to Lightning Ridge.

The interaction of landholders and miners

22. As mentioned above, most of the Lightning Ridge opal fields lie within Western Lands leases held for farming and grazing purposes. I understand that each of these properties comprises a mixture of flat arable ("black soil") land, used by their owners primarily for the growing of crops, and rocky, vegetated ridges that are useful to them only for grazing. Opals have been found only on the ridges, not on the black soil plains.

23. I was told that many landholders engage in opal mining, sometimes on their own leaseholdings, especially during periods of drought. For the most part, however, the mining is carried out by people who come as strangers to the landholder's property. This fact, and the landholders' legal inability to prevent mining on their properties, or to refuse entry to a particular mineral claim holder, provide fertile soil for any difference to become acrimonious.

24. Unfortunately at the present time, although no doubt some landholders and some miners have a good one-to one relationship, there is considerable acrimony between the two groups. I think there are ways in which the Department can improve that situation.

My visit to Lightning Ridge

25. On Monday 9 May, I travelled to Lightning Ridge in a chartered aircraft, stopping at Maitland to pick up two officers of your Department, Patricia Madden and Victoria Leeman. On arrival at Lightning Ridge, we were met by James Hereford-Ashley, the Departmental Team Leader at Lightning Ridge, and Warwick Schofield, the local Mine Safety officer. They, and all the other local Departmental officers, gave us great assistance throughout our visit.

26. We spent Monday afternoon touring the town and nearby opal fields and meeting local business people. They left me in no doubt of the importance of opal mining to the town and its residents.

27. Tuesday had been set aside for interaction with the farmers. In company with some local farmers and the Chief Executive Officer of the New South Wales Farmers' Association, Matt Brand, we visited five farming/grazing properties, "Wyoming", "Roxburgh", "Rexene", "Malabar", and "Llandilo". In each case, the relevant landholder was on hand to speak of his or her concerns.

28. At my request, public meetings at the local bowling club had been convened for the Tuesday and Wednesday evenings. Although anyone was welcome to attend, the idea was that the Tuesday meeting would concentrate on the farmers' concerns and the Wednesday meeting on those of the miners.

29. The Tuesday evening meeting was attended by some 50-60 people. It went on for two and a half hours. Much ground was covered.

30. Wednesday was devoted to a tour of places selected by the miners. The itinerary was devised by LRMA and the Grawin, Glengarry and Sheepyards Miners' Association ("GGSMA"). There was some overlap with the properties visited on the previous day but we also spent a considerable time on "Muttabun", a property heavily affected by opal mining. Also, we looked at different issues, including what is being done, co-operatively between miners, by way of open cut mining, "wet puddling" and the stockpiling and disposal of mullock. I was shown several examples of the final ("secondary") rehabilitation that takes place after all the claims in a particular area have expired or been relinquished; it then being assumed there is no longer much likelihood of further mining activity in that area.

31. On the Wednesday evening we held another public meeting. About 30 people attended. The meeting lasted for about two hours and focused on the miners' viewpoint about the contentious issues.

32. On Thursday morning I met with board members of LRMA and GGSMA. I indicated my tentative reaction to the main issues and we had a constructive and helpful discussion. After a sandwich lunch with Walgett Shire Council representatives (Mayor Ian Woodcock, Deputy Mayor Bill Murray, Councillor David Lane and General Manager, Don Ramslad), I held a telephone conference meeting with Mr Brand of the Farmers' Association to advise him of my current thinking.

33. Dr Sheldrake had informed me of his wish to facilitate a "whole-of government" approach to resolving the problems between the miners and farmers at Lightning Ridge. Accordingly, at my request, Ms Madden arranged a meeting, on the Friday morning, with the local representatives of several New South Wales government agencies. Those in attendance were: Pam Welsh (Regional Director of your Department), Superintendent Bob Nolan and Inspector Mark Hoath (New South Wales Police), Shaun Barker (Crown Lands Division of LPMA), Michael Kneipp (LPMA), Barry Alston (Business Development Manager, State and Regional Development). Peter Downes, of the Planning and Infrastructure section of your Department was unable to attend but he sent me a letter urging my support for the "Camps on Claims Scheme", under which the Department has legitimated the residential use of particular Preserved Area mineral claims.

34. We flew home on the Friday afternoon.

THE LEGISLATION

Various mining titles

35. Consideration of the Mining Act is complicated by amendments that were enacted by Parliament in 2008 but have not come into force. As it is uncertain when, if ever, the amendments will come into operation, I will ignore them for the moment.

36. The Act provides for the issue of various types of mining rights. Several of those types can have application to opal mining but only two are important to this report: opal prospecting licences and mineral claims.

Opal prospecting licences

37. Section 226 of the Act entitles any person to make application, in writing, for an opal prospecting licence over an opal prospecting block. There are some restrictions on the grant of an opal prospecting licence (s.227) and certain grounds upon which a licence may be refused (s.228). If the licence is granted, it will be subject to conditions specified in the Act, including adherence to any registered access management plan (s.229(c)), and also any conditions specified by the Minister by an Order published in the Gazette (s.223A).

38. An opal prospecting licence has effect for the period stated on the map relating to the relevant opal prospecting block—usually 28 days or three months. During that period, the holder has an exclusive right to prospect for opals on that block (s.232(2)). There is no limit on the number of exploration holes the prospector may drill. The Director-General has power to cancel an opal prospecting licence if the prospector has contravened any provision of the Act, or Regulations made under the Act, or any licence condition (s.233).

39. Given that land at Lightning Ridge over which an opal prospecting licence is granted will almost always be land within a Western Lands farming/grazing lease, there is a likelihood of interaction, and a possibility of friction, between the prospector and the landholder. However, I gather that prospecting rarely causes friction. Exploratory drill holes may be numerous but they are usually small and easily filled. The most common interpersonal problem seems to arise out of damage to vegetation caused by drilling trucks.

Mineral claims

40. Part 9 of the Act deals with mineral claims. Mineral claims may be granted only for land in an area constituted by the Governor as a mineral claims district (s.180(2)) and are subject to any special conditions specified by the Minister in an Order published in the Gazette (s.175). The only limitation upon the persons to whom a mineral claim may be granted is that an individual must be at least 18 years of age (s.207). A company may hold a mineral claim and, I understand, this is not uncommon.

41. Mineral claims in the Lightning Ridge mineral claims district must not exceed 2,500 square metres and, where practicable, are to be squares 50 metres by 50 metres: see Ministerial Order gazetted on 18 December 2009. No person may hold more than two mineral claims at a time. However, by using a multiplicity of companies, a particular individual may gain control over many claims. There is at least one example of this having been done—to enable the creation of a substantial open cut mine in OPA 2.

42. Mineral claims remain in force for such period as the Director-General may determine (s.193). They may be renewed indefinitely (s.197). With the approval of the Director-General, they may be transferred to another person (ss.200-201).

43. Section 195 of the Act gives the holder of a mineral claim, in respect of a particular mineral, the right to prospect for and mine that mineral, in accordance with the conditions of the claim. Subject to those conditions, and in connection with the authorised prospecting or mining, the holder may erect buildings and structures, exercise rights in the nature of easements, remove from the claim area any timber, stone or gravel and carry out any mining purpose.

44. Section 211 applies where the mineral claim holder is entitled to a right of way that has been indicated or described in the manner prescribed by the Regulations. In such a case, the mineral claim holder "must ensure that substantial gates or grids" (or, if the landholder so requires, both) "that comply with subsection (4), are placed wherever fences are intersected by the right of way." Subsection (4) requires any gate or grid to "be of a design and construction that is adequate to prevent stock from straying."

45. The Director-General is authorised by s.203 of the Act to cancel a mineral claim under certain circumstances, including the holder's contravention of

any provision of the Act or Regulations or conditions of the claim.

COMPENSATION: THE STORY SO FAR

The statutory compensation provisions

46. Section 267(1) of the Act provides that, upon the granting of an opal prospecting licence, "a landholder becomes entitled to compensation for any compensable loss suffered, or likely to be suffered, by the landholder as a result of the exercise of the rights conferred by the licence."

47. The term "compensable loss" is widely defined, by s. 262 of the Act, as "loss caused, or likely to be caused, by:
    (a) damage to the surface of land, to crops, trees, grasses or other vegetation (including fruit and vegetables) or to buildings, structures or works, being damage which has been caused by or which may arise from prospecting or mining operations, or
    (b) deprivation of the possession or of the use of the surface of land or any part of the surface, or
    (c) severance of land from other land of the landholder, or
    (d) surface rights of way and easements, or
    (e) destruction or loss of, or injury to, disturbance of or interference with, stock, or
    (f) damage consequential on any matter referred to in paragraph (a)-(e),

    but does not include loss that is compensable under the *Mine Subsidence Compensation Act 1961."*

48. Section 266(1) confers a right, similar to that under s.267(1), upon the granting of a mineral claim..

49. Sections 266(2) and 267(2), respectively, of the Act say that the compensation in relation to a mineral claim and opal prospecting licence consists of:

    . such amounts as may be determined by agreement between the mineral claim holder (or opal prospecting licensee) and the landowner;

    . such amounts as, in default of any such agreement, may be assessed by the Land and Environment Court, on application by either party; and

    . such amounts as may be payable pursuant to an order of the Land and Environment Court, being amounts payable out of a fund established by the mineral claim holder (or opal prospecting licensee) with the Court, the quantum of which may be fixed by regulations, in order to compensate a landholder who could not initially establish an entitlement to compensation but does so at a later date.

50. No relevant regulation has yet been made and there has, so far, been no determination of compensation by the Land and Environment Court.

51. Subsection (3) of ss.266 and 267 authorise the Land and Environment Court, instead of assessing compensation in respect of a particular mineral claim (or opal prospecting licence), to assess compensation in relation to all mineral claims (or opal prospecting licences) within a mining division or any particular group of claims within a division. In that event, the Court "may assess compensation as a fixed amount per mineral claim (or licence) or as an amount per mineral claim (or licence) to be calculated at a fixed rate."

52. Subsection (4) of each of the two sections contains an important prohibition: the holder of a mineral claim (or opal prospecting licence) "must not exercise any right conferred by the claim"(licence) unless:

   . he or she has first served on the landholder notice of intention to exercise those rights; and

   . there is in place a compensation agreement between the mineral claim holder (opal prospecting licensee) and the landholder as to the amount of compensation *or* the compensation determined by the agreement or the Land and Environment Court has been paid to the landowner or into court; and

   . the holder has paid into court any prescribed sum in relation to possible future claims for compensation.

53. There is a curious gap in each of the subsections; probably a drafting error.

54. The scheme of each subsection (2) is that the amount of compensation will be determined either by an agreement between the mineral claim holder (or opal prospecting licensee) and the landowner or by an order of the Land and Environment Court. In the latter case, it is clear that the compensation must be actually paid, either directly to the landowner or into court, before work is commenced on the land. One would have expected a similar requirement in a case where the amount of the compensation has been agreed between the parties. However, paragraph (b) of subsection (4) uses the word "or", to convey that it is enough if either subparagraph (i) or (ii) is satisfied. The first of those alternatives is that an agreement has been made; therefore it is not necessary to comply with the requirement of payment contained in the second alternative. As the section currently stands, there is no requirement of payment in a case where the parties have agreed the amount of compensation.

55. It is also important to note that neither s.266 nor s.267 empowers the Minister or the Director-General to fix the amount of compensation, whether in a particular case or more generally. The Land and Environment Court may do this, but not any member of the Executive. The only role of the Executive, under this section, is to specify by regulation the amount, or method of determination, of the miner's payment into court, for the purpose of establishing a fund covering compensation for future events relating to the claim or licence.

The power to specify special conditions

56. I have already mentioned sections 223A and 175 which empower the Minister, by Order published in the Gazette, to specify conditions that are to apply, respectively, to any opal prospecting licence or mineral claim granted over land in a specified opal prospecting area or mineral claims district. Each section lists conditions that may be specified in such an order. They include, by s.223A(2)(e) and s.175 (2)(g) respectively, "the compensation payable in respect of the carrying out of prospecting operations under opal prospecting licences" (or "prospecting and mining operations".)

57. I think these provisions are potentially important to the present review.

The McMahon decision

58. In July 1990, and pursuant to a ministerial direction, Chief Warden JL McMahon held an Inquiry under the *Mining Act 1973* in respect of compensation to be paid by holders of claims and opal prospecting licences within the Narran/Warrambool Reserve. Apparently the direction was given because the 1973 Act was to be amended, on 1 August 1990, in such a manner as to require holders to pay compensation in advance; if compensation was not paid, the Mining Registrar was to become obliged to cancel the mining right. It was apparently thought that, except where the mining right holder and landowner had agreed about compensation, unless Mr McMahon made an immediate assessment of compensation, claim holders would not be able to pay their compensation before the new amendments took effect; with the result that the Mining Registrar would then have to cancel their mining rights.

59. With these matters in mind, Mr McMahon undertook an urgent Inquiry into the desirable level of compensation to be paid, as a minimum obligation, in respect of all opal mining rights. After taking evidence, and hearing some submissions, he wrote an interim report in which he ruled that compensation should be set as follows:

   . $50 per opal prospecting licence, together with 10c per hectare; $25 of which was to be held in a Compensation Suspense Account for rehabilitation work and the balance to be paid to the landholder: and

   . $25 per mineral claim on grant or renewal; half of which was to be held for rehabilitation and the other half paid to the landholder.

60. Mr McMahon's interim report was adopted by the acting Minister on 1 August 1990. Presumably payments were promptly made and cancellations averted.

61. Mr McMahon subsequently submitted a final report to the Minister in which he explained his reasoning:

"I would envisage that $12.50 of this figure go directly to the land holder and that the remaining half being $12.50 go into a fund to be appropriately

named—perhaps it could be called Compensation Suspense Account. All payments are to be made by the claim holder to the Registrar who is to disburse the payments to the land holders within a reasonable time and is to hold the remainder in his Suspense Account until establishment of the Board. Should any particular holder feel that further loss has occurred, she or he has the right to make an application under Section 126 for further compensation to be paid and in the event of any land holder making himself unavailable to the claim holder to enable compensation to be paid, payment to the Registrar shall be deemed to be satisfactory compliance by the claim holder with the provisions of the Act."

Problems arise

62. Although the matter of compensation was discussed at meetings of the Lightning Ridge Mining Board in 1991 and 1992, it seems the course devised by Mr McMahon was followed, without much demur, for some years. However, in December 1997 the Board decided to increase the standard compensation payment to $40 per mineral claim per year: $10 of this sum being allocated to road maintenance. Although the Board was a purely advisory body without executive power, it seems most claim holders abided by this decision and paid their $40 either directly to the landholder or to the Mining Registrar.

63, The situation is not fully clear to me but I gather the Board did not operate on the basis that each landholder would receive $30 for each claim on his or her land. Apparently, the Board thought those landowners with many claims should receive a lesser amount per claim and those with few claims a higher amount per claim. This led some landholders, who were apparently aware that the Board's decision lacked legal force, to opt out of the Board scheme and to make their own arrangements with holders of claims over their land.

64. In October 2006 the NSW Farmers' Association asked the Board to increase the standard rate. It argued that the rate of $40 had been calculated on the basis that grazing land in the mining area was worth about $4 per acre, whereas it was now worth $9. LRMA rejected this argument and asked the Board to establish a committee to review the compensation scheme. The Board did not accede to either request.

65. The Farmers' Association then requested the Minister to fund an inquiry into compensation but the Minister did not do so. Apparently, the Department took the view that the Minister had no power to determine a standard rate.

66. Mr Hereford-Ashley informed the November 2008 Board meeting that the compensation fund had become insolvent; roads expenditure had been exceeding income for some time. The Board set up a subcommittee to examine the position. At its February 2009 meeting, the Board resolved to cease collecting roads money and that, from July, mineral claims applicants would be asked to pay compensation on a "$30 in, $30 out" basis; that is, all the compensation to go to the relevant landholder.

67. At about this time, the Mining Warden's Court was abolished. Its jurisdiction over mining compensation was transferred to the Land and Environment Court. The Mining Registrar at Lightning Ridge had previously received the portion of the compensation that was payable to the landholders and disbursed it amongst them. Now, however, there was no Mining Registrar; so, initially, the Department took over the banker's role. However, doubts arose regarding the Department's authority to do this. Legal advice was sought.

Legal advice

68. In an Advice dated 12 October 2010, the Crown Solicitor explained the situation:

> "At the time when the 1990 Assessment was made, mining registrars had a kind of dual role in being both registrars of the Warden's court and also ordinary public servants employed by the Department with certain functions of dealing with title applications etc. That registrar arrangement continued until the position of Warden and Warden courts were abolished in changes made late in 2008 to the *Mining Act* by the *Courts & Crimes Further Legislation Amendment Act 2008.* There is also a distinction between the Warden's administrative functions (under the 1973 and 1992 Acts) of conducting inquiries at the request of the Minister etc and sitting as Warden's court (the former capacity being what led to the 1990 Assessment).
>
> "The Land and Environment Court ('LEC') was given what used to be the Warden jurisdiction, with the specific exception of Warden administrative and inquiry type matters. The Court's jurisdiction under the 1992 Act would clearly seem to include determining any compensation dispute.
>
> "Nothing in the transitional & savings provisions to the 1992 Act seems to perpetuate or transmute any previously-Warden-related role of mining registrars or any associated payment-in arrangement." (8)

69. After a detailed examination of its provisions, the Crown Solicitor concluded "the 1973 Act did not allow the Chief Warden to make the blanket assessment in the way he did." (9) Nonetheless, "the parties can choose to treat the 1990 Assessment as governing the compensation payable in 2010 but they are not obliged to do so…" (10)

70. The Crown Solicitor went on to consider the proper person to receive payments of compensation under the 1973 Act, and under the current (1992) Act, concluding as follows:

> "Pursuant to Part 13 of the 1992 Act, amounts of compensation in respect of both mineral claims and opal prospecting licences can be paid either to the person entitled to them or into the Land and Environment Court.

"I can see no role for the Department in receiving or collecting compensation payments. Any role the Mining Registrar might have had in receiving or collecting payments would have been in his capacity as an officer of the Warden's Court and any reference in the 1990 Assessment of the Mining Registrar, should now be read as references to the Land and Environment Court

...

"The Mining Registrar and/or the Department has no role under the current provisions of the Act in receiving or collecting compensation payments from applicants for grants or renewals of mineral claims or OPLs." (11)

The Land and Environment Court's position

71. During the latter part of 2010, there were discussions between officers of the Department and the Land and Environment Court about the possibility of that Court taking over the role of banker. However, the Chief Judge pointed out that the function of the Court was to resolve disputes; any administrative services it provided must be ancillary to that function. The Court could not be required to provide administrative services to people who had no case before the Court.

72. As I understand the situation, it was because of this impasse that Dr Sheldrake commissioned me to conduct this review.

The current position regarding compensation

73. During my visit to Lightning Ridge, Ms O'Brien handed me a copy of a members' information document listing nine landholders with whom LRMA and GGSMA currently had agreements concerning compensation. Eight of these landholders are private persons, the agreed figures being $40 per grant or renewal of a mineral claim and $60 plus 10 cents per hectare for opal prospecting leases. The ninth landowner is the Lightning Ridge and Surrounding Opal Fields Management Reserve Trust which has agreed to accept only $30 for mineral claims.

74. The document stated that LRMA and GGSMA had no agreement with a further nine named landholders and suggested that relevant members send them money orders for sums calculated on the basis of $25 per mineral claim and $50 plus 10 cents per hectare for opal prospecting licences. During my visit, I was shown letters from some of these landholders returning money orders calculated on this basis and demanding higher sums, up to $100 per mineral claim.

75. The compensation system has substantially collapsed. Only a handful of landholders have current agreements with the miners working on their land. There is no consensus about the appropriate compensation rate and no accepted mechanism for payment of compensation. No doubt most miners would prefer to have an agreement, or an independent assessment, about a fair compensation rate but some miners seem not unhappy about the fact that, for

the moment, they pay nothing at all. On the other side of the argument, while some landholders are being co-operative and reasonable, some have behaved in an aggressive fashion over compensation, leading to much ill-will.

OTHER ISSUES OF CONCERN

The task

76. As narrated above, Dr Sheldrake asked me to identify to him other issues of concern, whether to landholders or miners, that might be raised with me in connection with Lightning Ridge opal mining. A number of issues were indeed raised during my visit to the district; many were later further developed in submissions and discussions. Some issues seem to be of more concern to some people, especially landholders, than is the appropriate amount of compensation.

77. It is my task to identify and explain these concerns, not necessarily to resolve them. However, as I have given thought to all the concerns raised with me, I will comment about each of them, for what my comments may be worth in your consideration of them.

Two preliminary observations

78. Before detailing the particular concerns, it is worth noting that many of them seem to have arisen out of the Topsy-like way that Lightning Ridge's opal mining has developed. It is clear from the old records, particularly Ion Idriess' book *Lightning Ridge* (12), that, in the early days, there was minimal control over miners' activities. Over the years, the degree of control has increased but it seems the Department, and its predecessors, have always been in the position of reacting to miners' actions and demands rather than engaging in advance planning for future demands. Many of the complaints made to me by landholders seem to arise out of inadequate preplanning.

79. OPA 4 offers the opportunity of "getting it right", undertaking sufficient preplanning, and making the necessary sensible decisions, to ensure that the problems of the past do not recur in this new area. But there may also be parts of OPAs 1, 2 and 3, where it is evident there is likely to be significant future activity, in which it would be desirable to undertake the same preplanning, especially in respect of environmental and heritage issues and access arrangements.

80. My second preliminary comment concerns the need for enforcement of whatever rules the Department may make. A constant refrain, during my discussions with farmers and their representatives, was the Department's alleged failure to police the conditions that governed the miners' activities. I need not go into details or make any judgment about the claimed failure. It is enough to make the obvious observation that there is no point in imposing conditions that the Department is unable or unwilling to police.

The landholder/miner relationship

81. As already suggested, the grant of an opal prospecting licence or, particularly, a mineral claim, over land held under a Western Lands lease by another person necessarily creates a relationship between the landholder and the prospector/miner. The relationship is an unusual one because of the lack of choice, at least on one side. The landholder and prospector/miner may previously have known each other, but ordinarily that will not be so. Moreover, the landholder has no say, either as to whether any prospecting licence or mineral claim shall be granted or as to the acceptability of the particular applicant. The grant will entitle the grantee to come onto the Western Lands lease, regardless of the wishes of the landholder, and there exercise the rights given under the grant. The grant may apply to an area that is remote from the lessee's homestead and otherwise of little interest to him or her; but it may not. It may cover an area that is sufficiently close to the homestead, or important in the operation of the property, as to make the grantee's presence and activities a continuing irritant or concern to the landholder.

82. It has long been a principle of New South Wales law that mining rights are granted by the Government over private land irrespective of the wishes of the landholder. Nobody has suggested to me this principle ought not to apply at Lightning Ridge. Nobody has argued that Western Lands leaseholders should be allowed to veto the grant of a prospecting licence or mineral claim, either generally or to a particular person. However, the farmers' representatives do suggest the position in which farmers are placed ought to be remembered when considering the substance of their concerns.

83. Some farmers suggested it is not satisfactory that any person may obtain a prospecting licence or mineral claim. They claimed there had been cases where farmers had found people with serious criminal records –even for murder-- working on their properties. They expressed concern for the safety of their families. These farmers submitted the law should be changed so as to require a police check of applicants for prospecting licences and mineral claims; people having a criminal record of specified seriousness should be ineligible for a grant.

84. I understand the concern that lies behind this submission. However, the price of its acceptance would be an additional step in the processing of applications for prospecting licences and mineral claims, with consequential expense and delay. Whether those results are worth incurring is a matter for political judgment.

85. Virtually all of us face the possibility that a person with a serious criminal record may come to work, or reside, near us. Whether the circumstances of landholders affected by opal mining are sufficiently different to justify special protection is a matter I pass on for consideration by you and/or the Minister.

Creation of the relationship: the miners' problems

86. I found dissatisfaction on all sides about the procedures related to the grant of prospecting licences and, particularly, mineral claims.

87. Many miners complained that the procedure for obtaining the right to work a claim is unduly complex and time-consuming. A standard mineral claim may now be granted for up to two years (13) but, as I understand the situation, they are mostly granted for one year at a time. A person who applies for a one-year mineral claim currently pays a total sum of $185. This sum comprises an Application Fee of $130, which goes to Consolidated Revenue, an Environmental Levy of $20, which is reserved for "rehabilitation and environmental maintenance work on areas not currently under mineral claim" (that is, secondary rehabilitation of old workings), a Roads Levy of $25, used for "establishment of new roads, maintenance of roads; purchase, installation, repair of grids, gates, access signage" and a Mullock Levy of $10 for "maintenance and environmental rehabilitation work on stockpiles of mullock" (14)

88. In addition to this payment, an applicant for a mineral claim must provide $700 security, in cash or by bond. The bond is to cover any cost incurred by the Government that may arise out of any breach by the mineral claim holder of a condition imposed by the Act, the Regulations or the claim—the most likely breach being failure to clean up the claim area and/or carry out primary rehabilitation.

89. The payments made at the time of application do not, currently, include compensation to the landholder. This is regarded as something for the miner to arrange. However, at present, this mostly is not done. Even when they are disposed to do so, miners often have difficulty in engaging the landholder in serious discussion about compensation. By general consensus, it is not a viable option for miners to have the Land and Environment Court assess a compensation fee. Therefore, most miners are not entitled to commence mining. Yet they do.

90. During their discussions with me, the miners expressed a strong and unanimous view that it would be preferable for an applicant for a mineral claim to be able to pay a specified, appropriate compensation sum to the officer of the Department who receives the Application Fee and levies, leaving the Department to account to the relevant landholder. This would not only save miners what is sometimes a time-consuming task, it would avoid poisoning the landholder- miner relationship, at its outset, with a dispute about compensation.

91. The conditions laid down for OPA 4 require a claim holder, prior to mining work commencing, to appoint a Mine Operator for the claim, and to ensure, first, that this person has completed the Department's Mine Operators' Workshop and, second, that all people who will work

on the claim have also completed the Department's Safety Awareness Course and Environmental Awareness Course.

92. I found no opposition to these requirements but there was concern about another requirement: the obligation (15) to prepare, and obtain approval of, a Mining Operations Plan. It was pointed out to me that many miners have limited education and/or skill in the drawing of plans and completion of formal documents. Although it was accepted there ought to be a Mining Operations Plan, it was argued it would be desirable for the miner to have the option of adopting a standard plan prepared in advance by the Department. After all, the argument ran, there is not much room for innovation on a claim area only 50 metres square. Most miners follow the same methodology, so why make everybody prepare their own document? And why impose on the miner the delay of waiting for the Department's Environmental Officer to come up from Dubbo to assess the plan?

93. I think there is force in this argument. There is indeed a high degree of similarity in the methodology adopted by holders of Class A mineral claims. Anybody who wishes to do something different, such as open cut mining or the processing or storage of materials, in any event needs a different class of claim.

94. As I see the situation, it is the responsibility of the Department to determine whether a particular area is to be opened up for mining and, if so, the limits of any excluded areas. In making that decision, the Department should consider all the matters listed in ss. 237-239 of the Act and also issues of Aboriginal heritage. The Department should then create a Management Plan, along the lines of that prepared for "Wyoming" in 2007 (16). This would include a comprehensive access road system and identification of trees etc that are to be left untouched by miners. It would then be relatively easy for the Department to prepare a standardised Mining Operations Plan, relating to claims in that release area, that would be made available for adoption by grantees of mineral claims. Those attending the Department's Environmental Awareness Course should be taken through all these documents and made to understand the importance of complying with them.

95. In suggesting the desirability of a standard Mining Operations Plan, I do not exclude the possibility of a particular applicant preparing a different plan and putting it forward for approval, as now. I only wish to simplify life for the vast majority of grantees who are happy to adopt the methodology they see all around them.

Creation of the relationship: the landholders' problems

96. I found widespread dissatisfaction about the quality of communications between the Department and landholders affected by the grant of prospecting licences and mineral claims. Mr Hereford-Ashley assured

me his office sends a letter to the relevant landholder each time a mining right is granted. I accept the assurance; nonetheless there is clearly a problem. Perhaps many landholders do not have a satisfactory system for storing this information, perhaps problems arise because they lose track of when a particular claim will expire. Whatever the reason, it is clear that many landholders reach the stage where they have little idea about the number of current claims over their land and the identity of the people who hold those claims and/or are authorised to work on them; and who, therefore, are entitled to access. I was shown correspondence in which solicitors for landholders had sought information of this nature under the *Freedom of Information Act*. In each case they received a list of names, in return for Departmental charges exceeding $200, but the list was of little value—it did not indicate which mineral claims were extant, where on the property they were, or how the listed people might be contacted.

97. This situation is totally unacceptable, especially in the digital age. It ought to be possible for the Department to establish on its website a page for each property affected by opal mining activity. There ought to be a plan of the property upon which is marked the location of each opal prospecting licence and mineral claim and the name and contact details of the holder. Desirably, I suggest, there ought also be a list of the people authorised to work on that claim, being people who have completed the Safety and Environmental Awareness courses. The landholder should have access to that page at any time. Whether there should be wider access is another question. I do not see why not; but the Department would have to consider any privacy implications.

98. Even though I envisage that the landholder could inspect the webpage relating to his or her property at any time, it would be courteous, and I think easy, for the Department automatically, at the time when the claim is granted, to send an email or SMS notifying the landholder of that event. This would give the landholder advance knowledge of the new person coming to his or her land and an opportunity to make personal contact with the newcomer. Many of the current problems would be mitigated by earlier and better personal contact between landholders and the miners on their land.

Unauthorised persons

99. Several landholders complained about the number of people coming to claims on their land. They said these were not confined to workers on the claim; people came there to camp, or even to participate in nighttime parties. I have no way of evaluating these allegations but, if they are correct, this behaviour is wrong. A mineral claim holder is entitled to access someone else's property only for the purpose of carrying out mining operations. The claim holder is entitled to invite, or permit, another person to enter, or remain upon, the property only if that person is entering or remaining for that same purpose. I recommend the Department draw these limitations to the notice of all Lightning Ridge

claimholders and warn them that any contravention may lead to cancellation of their claim. If the Department does that, it needs to be prepared to make good its threat, to investigate any complaint of contravention that may be made to it and, where satisfied of the contravention, cancel the claim.

100. The suggestion was made to me that it would be desirable for each claim holder to identify to the Department the people who would be working on his/her claim area and for those people to be given an identification card, and perhaps a sticker for their vehicles. This would assist a landholder in sorting out who was, and who was not, entitled to be on his/her land pursuant to the claim. I recommend consideration of this suggestion.

Access tracks

101. Issues arising out of miners' access to their claims were, by far, the most numerous complaints made to me by farmers.

102. During my inspection tours, I saw many instances where a track to a mining area had become unusable in wet weather, so vehicles had been driven over a different route, creating a second, sometimes even a third, track. The effect was to leave a significant area of churned up country, substantially without grass and susceptible to erosion. The reason, of course, was that the track had not initially been adequately constructed. Perhaps a bulldozer or grader had passed along its route but little or nothing had been done by way of drainage works; after rain, water ponded on the track and drivers avoided the pond.

103. Further, vehicles can carry on their tyres seeds of invasive weeds. The greater the ground area over which miners' vehicles run, the wider the possible distribution of weed seeds.

104. I thought the farmers' complaints about this situation to be entirely justified. It is one thing to require farmers to permit access by miners to their claims, it is another thing to expect them to suffer this sort of damage to their land.

105. The answer is clear: access roads must be planned, and properly constructed, before any area is opened up for mining. There should be an access management plan, under Part 10A of the Act, which should deal, amongst other matters, with those set out in s.236D (1) (a) and (b), namely:

> "(a) the rights of access that the holder of a small-scale title has in relation to the land to which the plan applies, including rights in relation to:
> (i) access points to the land, and
> (ii) routes of access across the land, and
> (iii) the manner in which, and the times at which, rights of

access may be exercised,

(b) the conditions to which the holder of a small-scale title is subject in relation to his or her exercise of any such right of access, including conditions in relation to:
   (i) maintaining routes of access, and
   (ii) preserving the safety of persons and stock, and
   (iii) avoiding interference with the land management practices being adopted in relation to the land affected by the right of way, and
   (iv) environmental protection."

106. The term "small-scale title" is defined by the Dictionary to the Act as meaning a mineral claim or an opal prospecting licence.

107. I make clear that I am not suggesting sealed roads to every claim area, or even intensely constructed gravel roads; but there need to be tracks that are sufficiently formed and drained to remain easily usable after rain, so that drivers will not feel the need to head off elsewhere.

Grids

108. Another access issue arises out of the fact that miners prefer grids, rather than gates, at the intersection of access roads and fences. There is then no need for them to stop. Grids have the advantage, from the landholder's point of view, that there is then no problem about gates being wrongly left open. However, a grid must be regularly cleaned. If it fills with soil, stock can easily cross over.

109. Landholders, naturally enough, do not see why it should be their job to clean grids on mining access roads. LRMA and GGSMA apparently agree; they are prepared to accept responsibility for keeping the grids clean. However, it seems there is often delay in this being done.

110. I do not see any great problem about grid cleaning. LRMA and GGSMA perhaps need specifically to inform both miners and landholders about their position and to set up a procedure whereby they respond promptly to any report that a particular grid needs attention. A regular inspection routine may be advisable.

Unregistered vehicles

111. Many farmers complained to me about the use, on their land, of unregistered vehicles. If a vehicle is not registered, it may not have recently been inspected for roadworthiness and it may be without third party insurance. Both these possibilities are matters of legitimate concern to the farmers on whose properties they are used. However, it is not an offence for a person to use an

unregistered vehicle on private land; the offence occurs only when the vehicle is driven on a public road.

112. I raised the matter of unregistered vehicles with the police officers who attended our Friday morning discussion with New South Wales government officers. They said unregistered vehicles were often used in rural areas, especially by farmers on their own properties. The officers agreed such vehicles are sometimes driven—they thought only for short distances—on public roads and that this is an offence. They undertook to instruct their local officers to be more vigilant.

113. I accept that the use of unregistered vehicles is widespread throughout rural areas. I do not see the need for any special, Lightning Ridge, rule about it. The problem is self-limiting; there is only a certain amount of off-road work for a miner to do. If farmers find significant, blatant, use of public roads by unregistered vehicles, they should draw the matter to the attention of the local police.

Rehabilitation of claims

114. The rehabilitation of claim areas is a two-stage process. The first stage involves the mineral claim holder filling the mining shafts with mullock, closing all their openings to the outside world, piling mullock over the openings and removing all other materials and rubbish from the area. If the job is well done, nothing should be left except pyramids of mullock at the former openings.

115. The second phase is usually performed by LRMA or GGSMA, on behalf of the Department and remunerated out of the Environmental Fund. A contract usually involves an extensive area of land, comprising many individual claims. The work includes removal of any remaining materials and mullock, except the pyramids over the shafts, breaking up all compacted areas, such as roads and former storage sites, replacement of topsoil, where possible, and perhaps some planting of native trees and bushes. The idea is that, in time, casual observers, at least, will not realise the area was ever mined.

116. I was shown secondary rehabilitation sites that met this standard. Sufficient time had elapsed for regrowth of trees and bushes. Because the mullock pyramids remained, it was possible for a careful observer to discern the extent of the previous mining activity; however, the pyramids were not obvious or intrusive.

117. Nonetheless, in the short term, the mullock pyramids are visually intrusive. This is a point of grievance to many landholders. They argued it would be preferable for the material placed on top of the old shaft openings to be left level with the surrounding land;

thereby making it immediately difficult to see that mining had taken place.

118. The problem, however, is that the fill material placed within the shafts subsides, with time and the entry of water. Whatever is placed over the former shaft opening will then also subside, creating a hole at ground level. The hole will present a danger to persons and stock who walk over that site.

119. No doubt there are occasions when the mineral claim holder does not do a good job in first phase rehabilitation. In such a case, the remedy is for the landholder to contact the Department and request that it not release the mineral claim holder's bond until the job is carried out satisfactorily. If there is a problem about second phase rehabilitation, the landholder again has a remedy, by contacting the Department, upon whose behalf the job was done.

120. I see no need to change the rules or remedies about rehabilitation. However, I pass on the observation of Mr Brand, of the NSW Farmers' Association, that some farmers might welcome the opportunity to tender for secondary rehabilitation work on their properties.

121. To the extent that landholder rehabilitation dissatisfaction is a complaint about the practice of leaving mullock pyramids over former shaft openings, I disagree. In the interests of safety, this is essential.

Dogs

122. A number of landholders complained about miners' dogs. Two landholders each claimed to have shot more than one hundred untagged, uncontrolled dogs on their property. I was shown photographs of sheep that had been savaged by dogs.

123. There was a tendency, amongst some landholders, to attribute all uncontrolled dogs to miners. That seems unlikely. Some may have been brought to the property by miners, but it is impossible to know how many.

124. I do not think it is necessary to quantify the problem of miners' dogs. The issue can be resolved by reference to principle. There is no need for any miner to bring a dog onto a landholder's property. The only arguable justification for doing this is so that the dog can guard the miner's property while the miner is underground. However, it is easy enough for the miner to bring along a lockable receptacle and store in it any transportable, valuable item of equipment.

125. Paragraph 12 of the Class A conditions applicable to OPAs 1, 2 and 3 prohibits the claim holder from keeping, or allowing to be kept, on the claim area more than one dog. It says, if the claim is not fenced, "the dog must be chained up or kept under effective control." I saw no fenced claim area during the course of my inspections; if the condition is to be observed, the dog would have to be chained up all the time. No dog owner is likely to do that.

126. The Class A conditions for OPA 4 (para. 25) forbid the bringing of any dog onto the claim area or areas in its vicinity. This is the preferable rule. It should be adopted for all areas. It is apparent from my discussion with the boards of LRMA and GGSMA that such a change would not be controversial.

Longevity of claims

127. During the Tuesday public meeting, it was suggested there ought to be a "sunset clause" for claims; that is, a limit upon the number of years during which a particular area of land could be the subject of a mineral claim. Many landholders supported this idea. They argued it was unreasonable for them to be required to suffer the inconvenience of mineral claims over their land indefinitely, year after year; often while there was only occasional activity on the claim by the mineral claim holder. The people putting this argument urged that the law be amended so as to ensure that no land was subjected to claims for more than, say, five years; some said ten years.

128. Some landholders may not mind the renewal of mineral claims over their land, year after year, for many years; provided they receive adequate compensation upon each renewal of a claim. Some properties are so affected by mineral claims that annual compensation payments, if received, would constitute a significant proportion of the landholders' income. Those landholders might not welcome a "sunset clause".

129. However, other landholders see mining activity as being a net disadvantage to their property; if they had a choice, they would say "no" to mining and forego the compensation revenue. For people in that situation, it must be galling to have claims renewed indefinitely, particularly where there is only intermittent activity on the claim and the holder seems to have no program for working out the claim in an efficient, planned way.

130. During my two days of inspections, I saw hundreds of claim areas. I saw mining activity in only two of them. I was surprised at the lack of the activity, particularly having regard to the time

of year. I was told that many mineral claim holders prefer not to work in the summer heat; activity builds up with the advent of cooler weather in autumn. My inspection was in May, the weather being fine and mild.

131. However, this year, there has been good rainfall and extensive local flooding. There is plenty of water and farming activity. The wider economy is booming and employment is readily available to most people. Many miners come to their claims, for lack of alternative work, in dry times or periods of economic downturn. Those people would not be coming this year. It might be a mistake to assume activity on the claims is always as limited as during my inspection tours.

132. I have considerable sympathy with the call for a limitation on the number of years during which particular land may be subjected to mineral claims, especially if the holder of that land seeks a limit. However, there would not be any point in imposing a limit upon the number of times one miner could renew his/her mineral claim if, after the expiration of the last renewal, it were open to someone else to take out a claim over that same land. A "sunset clause" makes sense only in the context of a rule rendering that land then off limits to everyone. Whether the Government would be prepared to adopt such a rule, I do not know; it would seem to go against the New South Wales tradition that mining trumps all other land uses. Nonetheless, this is a matter warranting consideration.

Landowner legal liability

133. Several landholders raised concern about the position in which they might find themselves if an accident occurred on their land. They supposed a case where a mineral claim holder had left an obstruction on the ground, or had inadequately filled a shaft, and this resulted in an injury to someone or damage to property. They worried that it might not be possible to identify the mineral claim holder responsible for the problem, or that person might be untraceable or insolvent; so the potential plaintiff would look to the landholder, arguing that the landholder had, or should have, become aware of the danger but had failed to eliminate it.

134. In the absence of appropriate legislation, I think this concern would be justified. However, s. 383A of the Act seems to cover the situation. That section says:

> "(1) The landholder of land within which any person (other than the landholder) is authorised to exercise any power or right:
> (a) by or under this Act,or
> (b) by any authority, mineral claim, opal prospecting licence or permit under this Act,

is not subject to any action, liability, claim or demand arising as a consequence of that person's acts or omissions in the exercise, or purported exercise, of such power or right.

(2) In this section, landholder includes a secondary landholder."

135. The word "landholder" is defined in the Dictionary to the Act so as to include the holder of a lease under the *Western Lands Act 1901* over the land.

136. In the light of s.383A of the Act, I do not share the concern about legal liability that was expressed to me.

Preservation Areas

137. I received from the Australian Opal Centre in Lightning Ridge a letter dealing with Preserved Areas. The letter said the opal field landscape of the Lightning Ridge district "represents a mining heritage that is totally authentic, continuous, dynamic and functional. …the Lightning Ridge opal fields are of state and national significance, rating very highly on all standard criteria for mining heritage assessment…"

138. The letter referred to the rehabilitation requirements of your Department. It concluded:

> "At present there are no moves to preserve any sites that are more recent than 1987. This means that evidence of workings that have been enormously productive and integral to the economic and social development of this district in the past 25 years—indeed, the last in situ evidence of some of the greatest black opal finds in the history of humankind—will be obliterated…
>
> "Reversion of deregistered mining ground back to 'marginal grazing' does not always improve ecological outcomes, is not always economically rational and is conducted without due consideration of the principles of Economically Sustainable Development. When many other values apply to the workings, and many new uses are feasible and readily available, the environmental and financial benefits of complete rehabilitation are dubious. It may be prudent to review the standard of required rehabilitation works, not only for future mining areas but for current sites and leases both within and outside of the Preserved Fields. If areas can be stabilised, secured and preserved with minimal disturbance and without major and costly 'reversion' work, there will be long-term benefits for all stakeholders, including the landholders."

139. The value of this letter is that it squarely invites the Government to consider the importance of the existing Preserved Areas and the question whether they ought to be extended—especially to include

areas mined out during the last 20 years. However, the letter tends to gloss over the important distinction between land in private ownership and land in public ownership. It is possible strongly to argue that, over time, the Government should accumulate a selection of workings, preferably representing different eras of activity, in order to protect them and make them available to visitors and for scientific study. There may be a case to select one or more areas mined during the last 20 years. However, it seems to me fundamental that, as in the past, the Government then be willing to purchase the relevant Western Lands lease. It would not be fair to require a private landholder to preserve a mining field in an unrehabilitated state. Whatever the interest of that field to some, it is not clear that it would return significant income to the landholder. If mining structures on land are to be preserved in the public interest, then the public should meet the costs of doing this.

140. I see a problem about using the notion of preservation to argue for a general reduction in rehabilitation standards. I believe the proper approach is to select a limited number of the best examples of a particular era or area, and acquire and preserve those examples; but to require all other sites to be thoroughly rehabilitated and restored to the use of the Western Lands leaseholder, in a condition as near as possible to its condition at commencement of mining. Any general reduction of rehabilitation standards will simply mean mess, and loss of production, over a large area.

141. In the context of Preserved Areas, I mention that I was handed copies of correspondence concerning the proposed purchase of land at Grawin from Mr Adrian Newton. Apparently the proposal has been under negotiation since at least 2005 and a price was agreed in 2009. But Mr Newton has not yet succeeded in persuading the Government to settle the matter.

142. It is no part of my task to investigate the reason for the delay in settling this transaction. I mention the matter only because the delay is notorious in the district and is damaging the Government's reputation for fair dealing. The longer it goes on, the harder it will be for the Government to negotiate the purchase of other properties required for Preserved Areas and otherwise.

Effect of opal mining on Aboriginal heritage

143. One of the matters raised at the first public meeting was the effect of opal mining upon the Aboriginal heritage in the area. One of the speakers, Richard Lake, subsequently sent me a letter, on behalf of the Dharriwa Elders Group, in which he itemised past effects. He said places of Aboriginal cultural significance have already been destroyed by opal mining in OPAs 1,2 and 3. He argued "this destruction needs to be identified, recognised, apologised and compensated for and the places restored if possible." Also, measures

should be put in place to ensure this destruction does not occur again. Mr Lake urged “preventative measures, including prosecution, miner education, surveys to properly determine where mining can and cannot safely occur, marked no-go and buffer zones, on-ground supervision of mining and monitoring of the environmental and cultural features.”

144. Mr Lake’s letter argued the need for thorough heritage studies, made in accordance with both State and Commonwealth legislation and involving the local Aboriginal comminity, before decisions are made about the areas to be made available for opal mining. He thought it unrealistic to expect individual prospectors and miners to have sufficient knowledge to recognise places and items of Aboriginal heritage value; if those places and items are to be protected, this must be because the Department has taken meaningful steps to that end; mining must be kept away from important Aboriginal sites.

COMPENSATION RECOMMENDATIONS

Blanket v. individual assessment

145. As already noted, the Act presently provides for individual assessment of compensation—either as the outcome of an agreement made between the particular landholder and mineral claim holder or as a determination of the Land and Environment Court in litigation between those two parties. On the other hand, the practice, overwhelmingly, has been for a “blanket” approach. In 1990 Mr McMahon selected an amount that he envisaged would be paid by all mineral claim holders to their respective landholders. That is what happened. Even when the figure was varied, the variation was to the blanket sum. Some people opted out and made their own arrangements but there is no indication that any arrangement turned on the degree of damage or disadvantage expected to be suffered by the particular landholder because of the activities of a particular miner. It seems the opting out landholders sought to extract their preferred sum from every miner on their land.

146. This practice indicates two things. First, an industry belief that there is not much difference in the amount of compensation that ought to be paid by one mineral claim holder as against another; each claim causes the landholder much the same degree of damage and disturbance. That belief is not surprising. The claim areas are all the same size and the mining methods adopted by the various mineral claim holders are all much the same. No doubt some claim holders are more considerate and tidy than others, but that would not usually be knowable in advance, when compensation is being assessed. Anyway, if there is proper rehabilitation, those matters are not important in the long term.

147. Second, there is no appetite for court assessment of the level of compensation. In over 20 years, nobody has thought it worthwhile incurring the trouble and expense of court action in order to procure an individual assessment of compensation. That is telling, although not surprising, bearing in mind the smallness of the compensation sums that have been paid, even sought.

148. Continuing to allow parties to agree the amount of compensation sounds attractive. However, the legislation must provide an alternative to agreement; otherwise the landholder would acquire an effective veto over the grant of the claim.

149. Once the need for an alternative is recognised, a blanket approach becomes inevitable. There is no point in the legislation continuing to rely on a mechanism, individual assessment by a court, that people will not use. Compensation must be handled administratively, using a blanket approach.

150. A blanket approach has the advantage of being easily manageable. The Departmental officer receiving the application for a grant or renewal of a prospecting licence or mineral claim would already know the amount of the compensation payment and be able to collect it, along with the Application fee and the levies.

151. Of course, this would not prevent the landholder and miner making any private arrangement they wished. But that would not be the concern of the Department.

The legal mechanism for a blanket assessment.

152. As I have already noted, neither s.266 nor s. 267 of the Act presently allows the Minister, Director-General or any other administrative officer to assess the compensation that must be paid by a particular prospector or miner to a landholder.

153. Those provisions would be repealed if the 2008 amendments were brought into force. There would then be a substituted s.266, and a new s. 266A and s.266B, that would give the Minister the power, by Gazette order, to declare "the amount of compensation that is payable under section 266 by the holders of small-scale titles in an area specified by the order" or "the manner in which that amount must be determined" (s.266A(1)).

154. However, the power granted to the Minister by s.266A is heavily qualified by the final words of the subsection: "in accordance with the Land and Environment Court's assessment under this section or section 266B(2)(b)."

155. The first of those situations arises where the Court's assessment is a response to a request by the Minister "to assess the compensation that

is payable or determine the manner in which the amount is to be determined." (s.266A(2))

156. The second situation arises where an individual landholder or holder of a small-scale title has applied to the Court for an assessment of compensation and, with the consent of the Minister, the Court has decided to "assess the amount of compensation payable by all or a group of holders of small-scale titles in the area concerned and recommend to the Minister that an order varying the amount of compensation payable under an order under section 266A be made in respect of the holders affected by the order."

157. It will be seen that the second situation arises only where there is already an order under s.266A. So the question arises whether it would be desirable for the Government to arrange for the commencement of the 2008 amendments and then use the new s. 266A to achieve a blanket determination by ministerial order.

158. Assuming there are no other issues concerning the 2008 amendments, the answer to this question depends on the desired role of the Land and Environment Court. If the 2008 amendments were to be used, the Minister would need to request the Court to make an assessment and the Court would need to conduct an inquiry, no doubt after appointing people or organisations to represent the respective interests of landholders and miners/prospectors. The Court would then need to agree to make a blanket determination and do so.

159. There is an urgent need for the Minister to put into place a fair and workable compensation scheme. Currently, most landholders are missing out on income they ought to receive and which may be important to their financial health. The compensation issue is also having a detrimental effect on landholder-miner relationships. It is important that it be swiftly resolved. I worry that, if the Minister decided to bring the 2008 legislation into effect, and then request the Land and Environment Court to conduct an inquiry, the process might take much longer than is desirable.

160. A further disadvantage about using the 2008 amendments is that any variation of the Land and Environment Court's determination would only be possible after a further inquiry, involving yet more expense.

161. In considering alternatives to using the 2008 amendments, it is desirable to distinguish between the best long term action and what should be done, as a matter of urgency, in the short term.

162. In relation to the long term, I recommend that Division 1 of Part 13 of the Act be amended in such a manner as to allow the Minister to fix compensation rates without the necessity for a determination of the Land and Environment Court. This means that it would not be

appropriate simply to commence the 2008 amendments; they should be ignored and s.266 revised in such a manner as to provide for a ministerial order, published in the Gazette, but without the prerequisite of a determination by the Land and Environment Court.

163. Ordinarily, I would strongly argue that a decision relating to the rights, between themselves, of two private persons should be made by a court, not by a member of the Executive Government. However, it is necessary to keep a sense of proportion. Nobody suggests that the amount that should be paid by way of compensation for a mineral claim should exceed $100 per year. Nobody suggests it should be less than $30. Any argument relates to what figure, in a range covering only $70, should be selected. It is simply not worth anybody's while to litigate such an issue. The Minister is well equipped to make a determination about the figure and to revise it as necessary from time to time.

164. The short term issue arises because, as I assume, it would take some months to get any further amendment of s.266 through the Parliament. It is highly desirable to spare the stakeholders such a delay. One method of doing this would be to use the powers conferred by s. 175(2)(g) and s.223A(2)(e) of the Act.

165. It will be recalled that s.175(1) of the Act empowers the Minister, by order published in the Gazette, to "specify the conditions that are to apply to mineral claims granted over land within any specified mineral claims district." Subsection (2) lists various types of conditions that may be specified in such an order. They include:

> "(g) the compensation payable in respect of the carrying out of prospecting and mining operations;"

166. Section 223A provides a similar power, in relation to the grant of opal prospecting licences within a specified opal prospecting district. Envisioned conditions include those specifying:

> "(e) the compensation payable in respect of the carrying out of prospecting operations under opal prospecting licences."

167. It is not ideal that the matter of compensation be dealt with, in the long term, by an order made pursuant to the Minister's special conditions power, rather than by the provisions of Part 13 of the Act concerning "Compensation". However, ss. 175 and 223A are there, and they each contain a term that would enable the Minister to move swiftly to fix appropriate mineral claim compensation payments within the Lightning Ridge Mining District and opal prospecting licence payments within each of the opal prospecting areas within that district. I recommend these powers be used, without delay, so as to get a compensation regime into place.

The amount of the compensation payments.

168. It is not possible arithmetically to demonstrate that any particular sum is the appropriate compensation for an opal prospecting licence or mineral claim. In the past, some people have attempted to relate the matter of compensation to the value of the leasehold land over which the mining rights are granted. On that basis, the compensation would be minute. Mineral claims in the Lightning Ridge mining district must be limited to 2500 square metres—one quarter of a hectare. If four claims were granted over a hectare, at a rate of, say, only $10 per claim, that would yield the landholder $40 per hectare— an annual income much more than the capital value of ridge land.

169. More importantly, calculation by reference to the capital value of the Western Lands lease would be unfair to the landholder. It might compensate landholders for what they have lost, the use of part of their land, but not for what they have gained: a stranger on their property whose activities are likely to cause them inconvenience or worse. The primary reason for granting compensation, in my opinion, is because of the adverse effect of prospecting and/or mining activity on the landholder's management, and enjoyment, of the property. That is something, like pain and suffering in a personal injuries case, that cannot be calculated. The selection of an appropriate amount has to be a matter of judgment but, as with pain and suffering, informed by past practice.

170. In the past, when mineral claim blanket compensation has been assessed, the selected figure has been about $30-$40, although the picture is complicated by the diversion of some of this money for rehabilitation work now covered by a levy. In recent times, a number of landholders and miners have agreed on $40 per year. This provides some guidance in the selection of a blanket figure. However, $40 has been used now for some years and the Minister would presumably wish to avoid needing soon to vary his figure. So, to take account of inflation, I would be inclined to adjust the $40 figure upwards, to $50 per year.

171. One way of testing this figure is to consider the position of a landholder who has multiple mineral claims on his or her property. Ten claims may cause little interference with the running of the property, so a fairly nominal $500 per year seems reasonable. One hundred claims will be significant to the landholder, justifying significant compensation. Of course, much depends on the circumstances of the particular property but $5,000 ($100 per week) seems about right.

172. Historically, the compensation payable in respect of an opal

prospecting licence has been more than for a mineral claim. An opal prospecting licence certainly affects a greater area of land, although for a shorter period and, perhaps, in a less intrusive way. I would keep the idea of a higher sum, with the total figure depending on the area covered by the licence, and suggest a compensation payment of $80 plus ten cents per hectare. In the fairly typical case of a licence covering about 200 hectares, this will mean a total payment of about $100.

Murray Wilcox 6 July 2011

REFERENCES

p

(1) New South Wales Geological Survey Report GS 1985/119, in Abstract.

(2) This is not a new phenomenon. See the *Report of the Royal Commission into the Opal Industry at White Cliffs* dated 10 July 1901.

(3) *Opal mining in the Narran Warrambool Reserve- A Code of Practice for Landholders and Opal Miners and Prospectors* (second edition, 2006) at page 2.

(4) Watkins, *op.cit.* at pages 3-4.

(5) *ibid.* at pages 5-6.

(6) *ibid.* at page 6.

(7) *ibid.* at page 7.

(8) Advice: Re Statutory Compensation Relating to Mineral Claims paras. 3.5 to 3.7.

(9) *ibid.* at para. 5.15.

(10) *ibid.* at para. 6.6.

(11) *ibid.* at paras. 8.5 and 9.4.

(12) Angus and Robertson, 1940.

(13) See Order under s.175 of the Act dated 25 November 2009 published in NSW Government Gazette no.207 of 18 December 2009 at para. 4.

(14) *ibid.* at para. 7.

(15) Class A-OPA 4 Conditions published by the Department.

(16) See *Wyoming Access Management Plan,* prepared by Environmental Resources Management Australia on behalf of the landholder, Kevin Parkins.

Appendix D – Final NSW Government Response to the Wilcox Report

Final NSW Government Response to the Wilcox Report into Lightning Ridge Opal Mining

AUGUST 2013, WWW.TRADE.NSW.GOV.AU

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The information contained in this publication is based on knowledge and understanding at the time of writing (March 2013). However, because of advances in knowledge, users are reminded of the need to ensure that information on which they rely is up to date and to check the currency of the information with the appropriate officer of NSW Trade & Investment, or the user's independent advisor.

Introduction

Chief Justice of the Industrial Relations Court and former Federal Court Judge, Murray Wilcox AO QC, was commissioned by the NSW Government to undertake a review into the issues facing the Lightning Ridge community in relation to opal mining, including compensation and access arrangements.

The resulting 'Wilcox Report into Lightning Ridge Opal Mining (the Wilcox Report) was released by the Minister for Resources and Energy, the Hon Chris Hartcher MP, for public consideration on 30 November 2011. 983 submissions were received. The NSW Government released its preliminary response to the Wilcox Report on 30 November 2012 (the draft Government Response) and invited public submissions. 39 submissions were received.

Following consideration of submissions to the draft Government Response, this Final Government response provides a summary of actions being undertaken to address the key issues identified in the Wilcox Report. It also addresses issues that were identified during the course of consultation sessions with stakeholders as well as other issues of relevance to opal mining at Lightning Ridge.

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Compensation to Landholders

The Wilcox Report recommended that:

- the Minister fix rates of compensation for opal prospecting licences and mineral claims;
- the Minister set compensation rates, from time to time, by notice; and
- the rates initially be set by the Minister at $80 plus 10 cents per hectare for opal prospecting licences and $50 per annum for mineral claims.

Following a review of submissions and consultation with key stakeholders, there is uniform agreement regarding the Minister fixing the rate of compensation for opal prospecting licences and mineral claims.

In response to the Wilcox Report, the Minister for Resources and Energy will set the compensation rates as follows:

- $100 plus 10 cents per hectare for opal prospecting licences, and
- $100 per annum for mineral claims.

This rate will be increased in line with the Consumer Price Index.

Legislative amendments will be required to implement this proposal. It is also proposed to amend the legislation to empower the Minister to initiate an independent review of the rate of compensation every five years.

Collection of compensation

The Wilcox Report recommended that the Division of Resources and Energy (DRE) within NSW Trade & Investment collect and distribute compensation payments. The draft Government Response indicated that the NSW Government had commenced consultation with Walgett Shire Council on the establishment of an opal mining rehabilitation and compensation fund to be managed by the Council. However, following a review of submissions and consultation with key stakeholders, this proposal will not be progressed.

The NSW Government will implement a new process for the collection and distribution of compensation payments for all small scale titles and renewals, as outlined below:

1. Miner submits title application to DRE.
2. DRE makes initial assessment of any potential issues and suggests resolution (if appropriate).
3. Miner addresses issues raised by DRE (if any).
4. DRE 'pends' the title application while the miner:
    a. pays the required compensation directly to landholder (miner to retain bank receipt or signed note of other arrangement with the landholder), and
    b. posts the required "notification of entry" to the landholder using Australia Post registered post (miner to retain receipt).
5. Miner returns to DRE with:
    a. bank receipt or signed note from landholder, and
    b. Australia Post receipt.
6. DRE grants title.

This improved process is expected to lead to full compliance of the payment of compensation by miners to landholders. Legislative amendment will be required to facilitate the proof of compensation payment prior to a grant of title by DRE. DRE encourages parties to conform to the new process prior to the commencement of relevant legislation.

Security Deposits

On 28 September 2012, the Minister for Resources and Energy announced that security deposit rates for opal mining would be revised to pre-1 July 2012 levels for small scale titles.

The NSW Government delivered on its commitment. On 1 March 2013, an amendment to the *Mining Regulation 2010* commenced which revised the minimum security deposit rate to its pre-1 July 2012 levels for small scale titles. The rates now are as follows:

Minimum opal field securities (Lightning Ridge)

Security	Pre-1 July 2012 and continuing	
Residential small scale titles	$200	
Preserved fields	$700	**$250**
Other fields	$700	**$250**

**Figures in bold apply to members of industry associations with joint security arrangements.*

Minimum opal field securities (White Cliffs)

Security	Pre-1 July 2012 and continuing
Area A (historic fields)	$0
Area B (inner area – underground only)	$0
Area C (outer area – underground and open cut)	$0

Dispute Resolution

Justice Wilcox observed a general unwillingness to elevate local disputes to the NSW Land and Environment Court.

A number of ways to facilitate ease of use of the Court are proposed:

- Matters may be heard via teleconference;
- Commissioners of the Land and Environment Court may visit Lightning Ridge and sit in the Local Court to hear a matter;
- The introduction of new forms and information to assist participants in opal mining disputes;
- The introduction of a conciliation and arbitration procedure for opal mining disputes based on the existing conciliation and arbitration mechanism applying to environmental planning and protection appeals under the Court's jurisdiction.

The NSW Government continues to support the role of the NSW Land and Environment Court for disputes at Lightning Ridge and encourages opal-mining issues to be brought to the court, as required through the simple processes above.

Legislative amendments will be required to implement the new conciliation and arbitration mechanism for opal mining disputes at Lightning Ridge.

Mining Operations Plans

The Wilcox Report recommended that the NSW Government develop standard Mining Operations Plans for adoption and use by the miners in the Lightning Ridge region.

A review of submissions to the Government Response indicated that all key stakeholders were supportive of the NSW Government's proposal to prepare a draft template for Mining Operations Plans.

The NSW Government continues to support this recommendation. To this extent, DRE has developed a standard Mining Operation Plan for recently opened up areas (OPA4). It is a condition of title to comply with a Mining Operation Plan.

Applicants still have the ability to prepare their own tailored Mining Operations Plans.

Notification to Landholders

The Wilcox Report recommended that DRE institute a system of notifying landholders by email or SMS, about the granting of a mining right over their land. Justice Wilcox also recommended that DRE establish a webpage for each rural property in the Lightning Ridge mining district and there maintain a record accessible to the landholder, of all current mining rights affecting that property.

The NSW Government supports the right of landholders to know when a mining right is granted over their land. DRE is currently implementing a new process to ensure all landholders receive written timely notice of a claim application on their land, as indicated above under 'Collection of Compensation'.

The NSW Government will extend requirements of the notification to include a provision that a miner's notification to the landholder also include a copy of a map or description of the mining title boundaries.

In August 2012, an online Opal Claims System Mapper (OCSM) went live on the DRE website. The OCSM allows landholders to access information about current claims on their properties and provides details related to mining activity on each property in Lightning Ridge.

Access Rules and Identification

The Wilcox Report recommended that DRE publicise access rules to mining sites and consider issuing identification cards and vehicle stickers.

This remains an issue on opal fields. DRE will work with industry and landholders to develop an identification program suitable to the needs of Lightning Ridge.

Illegal mining and related enforcement and compliance issues were not raised in the Wilcox Report but have been raised as a key issue for stakeholders during consultations and in submissions. In December 2012, DRE published an '*Enforcement and Compliance Policy*' on its website. DRE is also currently in the process of reviewing its 'on-the-ground' practices with a view to improving the effectiveness of its current enforcement and compliance framework. The outcomes of the review will be further considered in conjunction with the proposed longer term framework for the regulation of opal mining, as discussed under 'Longer Term Proposal for the Regulation of Opal Mining'.

Dogs on Claims

The Wilcox Report recommended that dogs not be permitted on mining claims or opal prospecting title areas.

The NSW Government supports this recommendation.

DRE will insert a new condition on all new mineral claims, opal prospecting licences and renewals of titles where they are not on *preserved fields* (the majority of those fields that are in close proximity to the township) prohibiting dogs on claims.

Sunset Clauses

The Wilcox Report recommended that the NSW Government limit the time during which particular land is available for opal mining (i.e. a 'sunset clause') to ensure timely extraction of resources.

The proposal in the draft Government Response to include a 'sunset clause' in standard conditions on title was met with strong opposition by a number of stakeholders.

The NSW Government will not be including sunset clauses in conditions of title at this time.

DRE will undertake further analysis as to the application of 'sunset clauses' in Lightning Ridge in conjunction with consideration of a proposed longer term framework for the regulation of opal mining, as discussed under 'Longer Term Proposal for the Regulation of Opal Mining'.

Administrative Levy

The *State Revenue and Other Legislation Amendment (Budget Measures) Act 2012* imposed a new administrative levy on all mining titleholders in NSW, including a term administrative levy of $100 for all small-scale (opal mining) titles.

The main purpose of the new administration levy is to cover the costs of DRE administering and enforcing the *Mining Act 1992*.

As a consequence of the introduction of the administrative levy, provisions allowing for the collection of levies (attached as conditions to a mineral claim or an opal prospecting licence pursuant to an order made by the Minister) were repealed. These conditions – exercised in respect of mineral claims only – imposed a requirement to pay levies for the maintenance and rehabilitation of shared infrastructure outside of mineral claims such as mullock stockpiles as well as the establishment and maintenance of roads ('the former levies'). The NSW Government will consider options for the ongoing maintenance of industry infrastructure in the development of the long term proposal for the regulation of opal mining at Lightning Ridge, as discussed under 'Longer Term Proposal for the Regulation of Opal Mining'. In the meantime, submissions requesting funding from the former Mullock Dump, Road and Environmental Levies may be made to the Director General, NSW Trade & Investment, and should include a detailed proposal (including a

justification) which outlines the exact purpose for which the funds will be used. All proposals must be in accordance with the gazetted purpose for which the levy was collected and will be assessed on their merits. Funds from the former Mullock Dump, Road and Environmental Levies are limited and may only be accessed until the funds have been exhausted.

Comprehensive Planning Process for Mining

The Wilcox Report recommended DRE comprehensively plan opal mining activities. Such planning should include detailed consideration of environmental and Aboriginal heritage issues and the siting and construction standard of access roads.

The NSW Government has considered this recommendation, and in consultation with stakeholders, has identified that this recommendation is not feasible. Due to the nature of opal mining, it is impossible to foresee which areas may have future claims arising.

It is proposed that broad scale planning may be achieved through the following methods:

- the NSW Government has referred the Wilcox recommendation to the Minister for Planning and Infrastructure to be considered in the preparation of any future regional growth plans for NSW;
- Opal Prospecting Blocks (within Opal Prospecting Areas): In relation to opening new opal prospecting blocks on properties, site planning (which includes environmental and Aboriginal heritage issues, and access roads) is considered appropriate; and
- Access Management Plans (AMPs): NSW Trade & Investment will be responsible for drafting a template Access Management Plan to facilitate parties to an AMP having a baseline agreement from which negotiations can proceed.

Longer Term Proposal for Regulation of Opal Mining

The draft Government Response sought to canvass views regarding a proposal to remove the regulation of opal mining from the *Mining Act 1992* and across to the *Environmental Planning and Assessment Act 1979*, similar to the current regulatory framework that exists for small quarries.

Following a review of submissions and further consultation with key stakeholders, this longer term proposal remains unsupported and the NSW Government will not pursue this recommendation in its current form.

The NSW Government will, however, continue to investigate alternative longer term proposals for the regulation of opal mining at Lightning Ridge.