Australian Government

Woomera Prohibited Area Advisory Board

Annual Report 2017-2019



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Acknowledgement of Country

Defence respectfully acknowledges the Traditional Custodians of the land – both past and present. Defence also acknowledges the services of Aboriginal and Torres Strait Islander men and women who have contributed to the defence of Australia and its national interests.

Image warning

Aboriginal and Torres Strait Islander people are advised that this document may contain images or content referring to deceased persons. It may also contain words or descriptions that are culturally sensitive.

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Cover image:

Royal Australian Air Force officer, Group Captain Jerome Reid, Director Plan Jericho (centre) and Leading Aircraftmen Steve Scurr (left) and Chad Bray, Airfield Defence Guards at No. 3 Security Forces Squadron, discuss drone video, here with an Aeryon R70 surveillance drone (left) and DJI Phantom IV drone during SpaceFest 2019 at the Woomera Test Range in South Australia.

Woomera Prohibited Area Advisory Board

Annual Report 2017-2019

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Chair's Report

This Woomera Prohibited Area (WPA) Advisory Board Annual Report covers the period from 1 July 2017 to 30 June 2019 and fulfils the Advisory Board's requirement to report on the balance of interests in the WPA.

This combined report for the two financial years 2017-18 and 2018-19 takes into account the conduct and substantial work of the Coexistence in the Woomera Prohibited Area 2018 Review (the Review) that spanned the reporting periods.

This period saw the appointment to the Advisory Board of:

- The Hon Amanda Vanstone, Chair, for a period of two years
- The Hon Paul Holloway, Deputy Chair, re-appointed for a period of two years
- Mr Richard Price, ex-officio member and Chief Executive of Defence SA
- Mr Peter Tesch, ex-officio member and Deputy Secretary Strategic Policy and Intelligence, Department of Defence.

Significant engagement was undertaken with Dr Gordon de Brouwer PSM, the independent lead of the Review, and with Review team members. The Review's findings and 12 recommendations that were released by the Commonwealth Government on 29 March 2019 were welcomed by the Board. In particular it was pleasing for the Board to note the Review's main finding that overall, coexistence is working well.

The 12 Review recommendations are being implemented through a strong collaborative approach between Commonwealth and South Australian Government agencies and the Advisory Board to ensure the continuing success of the WPA coexistence framework. The implementation of all recommendations will take time and the commitment of all parties to achieve. The Board looks forward to the pace of implementation stepping-up in the forthcoming reporting period to strengthen existing relationships with key stakeholders and to develop a more dynamic and flexible regulatory framework for the WPA.

The Board particularly supports the Review's emphasis on building strong relationships between the Commonwealth and South Australian Governments and balancing Defence's evolving capability needs with the growing demand for natural resources and other economic interests in the WPA. The Review also considered the future role and responsibilities of the Advisory Board, ways to strengthen existing relationships with WPA stakeholders and to promote greater visibility and understanding of the Board's role with the wider WPA community.

Defence's testing in the WPA during the 2017-19 financial years was in line with the previous reporting period. The $300 million remediation program of the Woomera Test Range complex and systems upgrade is currently underway, and the construction of the new Range Operations Centre and Maintenance Support Facility was completed during this reporting period. The fit-out and systems upgrade of the Operations Centre to support the introduction of Defence's new air and electronic warfare capabilities remains in progress. These projects mean that Defence's use of the WPA across all zones is expected to increase now and in coming years.

In relation to the resources sector, three of the WPA's four established mines were in operation, with one mine later entering administration and care and maintenance, and another suspending operations, during the reporting period. Renewed interest in minerals and resources combined with the recent South Australian Government aerial geophysical survey of the WPA will likely generate an increase in the sector seeking to access the WPA.

The Board was also pleased with the signing of the Cooperation Agreement between the Maralinga Tjarutja people and Defence on 25 June 2019. This is the first formal agreement of its type and marks a significant accomplishment in the management of the WPA and Defence's relationships with the traditional owners. Defence continues to work with the other Aboriginal groups to progress similar arrangements.

Amanda Vanstone
Chair
Woomera Prohibited Area Advisory Board
November 2019



Maralinga Tjarutja People and Royal Australian Air Force personnel gather for a group photo following the Cooperation Agreement signing ceremony at Maralinga Airfield in remote South Australia.

Executive Summary

The Woomera Prohibited Area (WPA) is Australia's most important military testing range. The complexity and volume of capability trials conducted in the WPA will increase in coming years with the introduction of new Defence capabilities, supported by recent upgrades to the infrastructure and systems of the Woomera Test Range. The recently completed construction of the new Range Operations Centre and Maintenance Support Facility is a crucial step in supporting the testing of new capabilities now and into the future.

Mineral exploration and resource production (mining) continue to provide the highest economic value among non-Defence activities in the WPA despite the current trend of modest resource sector activity. At the start of the reporting period, there were three mines operating in the WPA: the Challenger gold mine, which later went into administration and care and maintenance; the OZ Minerals Prominent Hill copper-gold mine; and the Cu-River Cairn Hill iron ore mine, which suspended operations in August 2017. These mines employed over 1,500 people, contributed $2,257 million in production sales for export and around $98 million to South Australia in royalties during the reporting period.

As of 30 June 2019, 137 resource exploration licences granted through the South Australian Department for Energy and Mining remained current, with 27 resource exploration permits granted by the Department of Defence to access the WPA remaining current and covering a number of exploration licences.

Most significantly during this period, the report on Coexistence in the Woomera Prohibited Area Review 2018 (the Review) was released on 29 March 2019. The Review involved extensive engagement between the Department of Defence; the Department of Industry, Innovation and Science; the South Australian Department for Energy and Mining; and Defence SA, as well as a range of stakeholders with interests in the WPA. The Review's findings recognised the success of the current coexistence framework and provided 12 recommendations to ensure coexistence endures in the WPA and remains contemporary and fit for purpose.

Additionally, while the Review found that the existing coexistence arrangements are working well and the *Woomera Prohibited Area Rule 2014* is fundamentally sound, there is always scope for improvement. The Department of Defence and the South Australian Government, in collaboration with other Commonwealth Government agencies, will continue to look for innovative ways to enhance coexistence in the WPA, balanced with any growth in resource sector activities and Defence's evolution in testing over the next decade.

Advisory Board

Membership

The WPA Advisory Board was established in October 2012 and includes five ex-officio members from Commonwealth and South Australian Government stakeholder agencies. The independent Chair and Deputy Chair are appointed in accordance with Commonwealth Government guidelines. Ex-officio members relinquish membership on cessation of their substantive appointments within their respective departments.

As at 30 June 2019, the Board's membership was:

Commonwealth Government appointees

The Hon Amanda Vanstone
Chair

The Hon Paul Holloway
Deputy Chair

South Australian Government ex-officio members

Dr Paul Heithersay PSM
Chief Executive
Department for Energy and Mining

Mr Richard Price
Chief Executive
Defence SA

Commonwealth Government ex-officio members

Air Marshal Gavin (Leo) Davies AO, CSC
Chief of Air Force

Mr Peter Tesch
Deputy Secretary Strategic Policy and Intelligence
Department of Defence

Mr Mike Lawson PSM
Deputy Secretary
Department of Industry, Innovation and Science

Roles and functions

To meets its Terms of Reference, the Advisory Board is to:

- Monitor and recommend amendments to coexistence policies and procedures;
- Develop high-level relationships between Defence and WPA Stakeholders, including but not limited to: Aboriginal groups; pastoralists; and the resources sector;
- Mediate complex negotiations between Defence and non-Defence users;
- Report annually on the balance of interests in the WPA; and
- Conduct a review every seven years on the balance of interests in the WPA.

Support

The Advisory Board is supported by the WPA Coordination Office. The WPA Coordination Office is a joint Commonwealth and South Australian Government office established to administer non-Defence use of the WPA and is responsible for policy and regulation.

Remuneration

The remuneration base fee and meeting fee for the Chair of the Board is determined by the Commonwealth's Remuneration Tribunal in its determination: Remuneration and Allowances for Holders of Part Time Public Office, that is amended from time to time. The Minister for Defence determined that the Deputy Chair would be paid 80 per cent of the Chair's base fee.

No remuneration is payable to ex-officio members and their costs are met by their home departments.

Advisory Board meetings

The WPA Board met three times during the 2017-19 reporting period.

27 November 2017 (Adelaide)

The meeting considered the role and function of the Board and its future responsibilities and remit given the forthcoming 2018 Review. It considered measures to improve stakeholder engagement with the Board and the Board's importance as a forum in which stakeholder views could be shared. The progress of Working Level Agreements with Aboriginal groups within the WPA was discussed. An update of the Defence Heritage Management Plan for the WPA was also provided, which is being developed in consultation and collaboration with Aboriginal groups to manage and preserve cultural heritage within the WPA. The Board also noted the continued work to develop a Memorandum of Understanding between Defence and the South Australian Government in relation to respective roles in the administration and facilitation of access to the WPA.

4 July 2018 (Adelaide)

Dr Gordon de Brouwer was invited to address the Board on the progress of the Review, including the key themes emerging such as investment and new technologies, the stakeholder and community engagement undertaken and the future of the Board, with a view to strengthening the Board's role. The Board discussed stakeholder consultation and its role in strengthening and maintaining relationships with WPA stakeholders. The Board also considered an update on South Australia's resource initiatives, including the priority to unlock resources within the WPA and the current resurgence in metals and mining, especially gold exploration, and the increasingly high value of, and demand for, copper.

During the reporting period, out of session communication and coordination continued between the Department of Defence, Woomera Test Range and the South Australian Government, along with informal and formal consultation with stakeholder agencies.

21 November 2018 (by teleconference)

Dr Gordon de Brouwer provided an update on the draft 2018 review report and the main issues arising, noting that Board members had received a draft and had been consulted during the review process. The overall view was that the current coexistence framework was successful in meeting its original intent and was working well, but that enhancements and some new provisions were required to enhance and uphold a contemporary framework going forward.

Review of the Woomera Prohibited Area Coexistence Framework

Overview

On 11 May 2018, the Commonwealth Government commissioned a review of the WPA regulatory framework to consider whether any changes were required to the coexistence arrangements that were introduced with the *Woomera Prohibited Area Rule 2014*. The Review was led by Dr Gordon de Brouwer and conducted by a multidisciplinary team drawn from the Department of Defence, including Air Force representatives, and the Department of Industry, Innovation and Science. The Review was undertaken in close engagement and collaboration with the South Australian Government and other Commonwealth Government agencies.

The Review's Terms of Reference required it to deliver a contemporary coexistence framework for the management of the WPA that:

- Acknowledges that the WPA is a significant national security asset and that its use by Defence and Australia's partners will continue to evolve;
- Balances and responds to evolving Defence and non-Defence use including the economic interests within the WPA;
- Maintains the primacy of Defence use governed by national security and Defence's capability needs while committing to continued coexistence with other stakeholders to maximise the economic value of their activities: the resources sector; pastoral operations; Aboriginal communities; and other current and emerging interests;
- Provides for investment access by non-Defence users within a framework that offers current and prospective investors clarity on strategic and national security considerations in granting access; and
- Provides for public and private consultations to inform stakeholders and their submissions that will contribute to the review.

Through an extensive public consultation program, the Review allowed stakeholders the opportunity to contribute to discussions and make submissions on the future of the WPA and inform the Commonwealth Government on the suitability of the current arrangements under the legislative framework. Meetings were hosted in Adelaide, Woomera, Roxby Downs, Port Augusta, Coober Pedy, Brisbane and Canberra.

Consultations included all Aboriginal groups with an interest in the WPA, the resources sector, pastoralists, railway operators, opal miners and extractive mineral lease holders, industry peak bodies, tourism representatives, local councils, South Australian Government representatives and Commonwealth Government agencies. The Review also undertook a focussed program of engagement with international counterparts in the United States of America and the United Kingdom.

Report

On 29 March 2019, the Commonwealth Government announced its response to the Review and released the report.

The report made 12 recommendations and found that overall, coexistence in the WPA is working well. The Review was underpinned by extensive stakeholder engagement. Fourteen public submissions were received, with eight authorised to be publicly released.

The Commonwealth Government is committed to continued coexistence, but the report noted the WPA will remain of enduring importance to national security and that this must remain an overriding concern in considering access requests by non-Defence users and commercial proponents.

The report provides guidance to non-Defence users seeking access to the area. Security measures and safeguards will be used to manage this access. The report also recognised the considerable value the area holds for Aboriginal cultural heritage, mineral resources, pastoral operations, and other stakeholders. Defence is working with other Commonwealth agencies, the South Australian Government and the broader stakeholder community to implement the recommendations of the Review.

Implementation

Defence is in close collaboration with the Department of Industry, Innovation and Science and the South Australian Government to implement the recommendations of the Review. Considerable planning has been required in the initial stages, with a focus on governance and security, to ensure a strong basis to take forward implementation over the years ahead. Defence, the Department of Industry, Innovation and Science and the South Australian Government are also establishing strategic communications to build stronger links with the broader WPA community. The Advisory Board will play a key role in enhanced stakeholder engagement. In the first year of the Review implementation, Commonwealth and South Australian Government agencies are collectively focusing on:

- Signing the Memorandum of Understanding regarding Coexistence Arrangements with the South Australian Government and Defence (completed October 2019);
- Developing a flexible green zone arrangement and the associated codesign and consultation program, building on the input and feedback received at an initial resources-focused workshop held on 19 June 2019 in Adelaide;
- Developing the Advisory Board strategic forward work program and enhanced Terms of Reference;
- Finalising a geophysical survey of the Gawler Craton area, including the red zone, to better understand the minerals prospectivity for the WPA;
- Providing enhanced guidance to the mining sector on security and access requirements;
- Assessing and mapping business needs and proposed content of a new digital platform; and
- Developing a Land Management Plan which will present options for managing land no longer suitable for pastoral activity due to Defence testing.

The high level longer-term implementation timeline is shown at Figure 1.

Implementation timeline

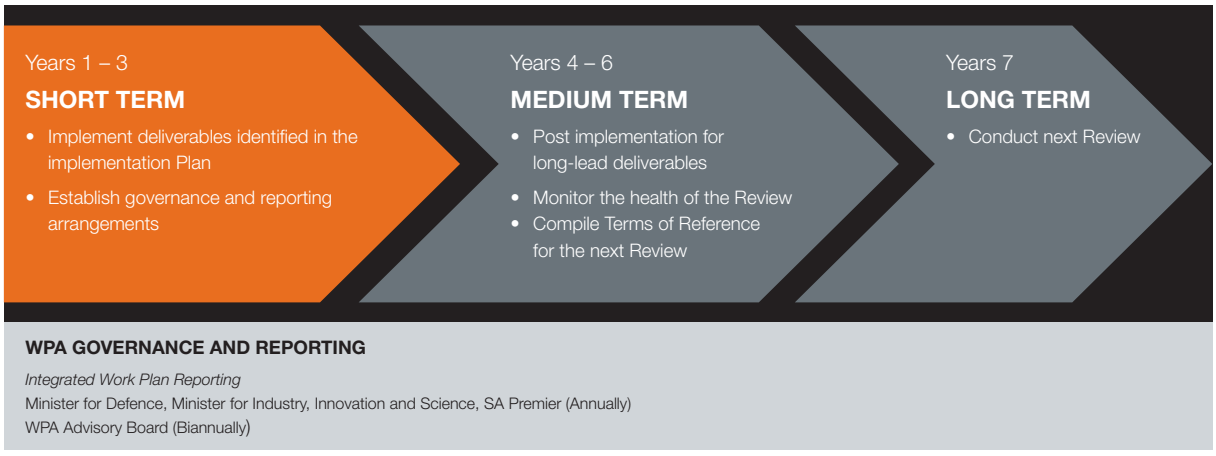


Figure 1: High-level government and reporting sequencing of Review implementation

Stakeholder Use of the Woomera Prohibited Area

Overview

As highlighted by the Review, a strong framework to support coexistence is essential, as Defence is one of many stakeholders with interests in the WPA. While Defence's national security requirements in the WPA should continue to take precedence, this needs to be balanced with non-Defence user access. The coexistence model includes a focus on strong and productive relationships with stakeholders, as well as on sound legal and policy frameworks.



Oak Valley Primary School children gather for a group photo in front of the RAAF King Air at Maralinga Airfield in remote South Australia.



Royal Australian Air Force No. 3 Squadron F-35A Lightning II aircraft in flight over the Australian outback.

Defence

At over 122,000 square kilometres, the WPA is the largest land-based test range in the Western world. The WPA provides Defence with a unique capability for the testing and evaluation of new and emerging technology due to its size, remoteness, low population density and quiet electromagnetic environment. It is the only land mass available with an instrumented range capable of safely developing and testing 'next generation' weapons systems to its full extent within its land borders and associated airspace. These may include manned and unmanned aircraft and associated systems; electronic warfare and counter-measure systems; hypersonic engines; missiles; munitions and explosive ordnance; and ground-based weapons systems.

The strategic, operational and tactical value of the WPA's unique capabilities to Australia's future long-range weapons testing programs is vital for national security. As Defence acquires new weapons systems that require large, safe and secure areas for testing and weapons systems research that includes development, simulation and evaluation over long periods of time, the WPA's importance to national security and Defence's interests will only grow.

The WPA is also critical to the testing and evaluation of technologies and weapons systems already in service within the Australian Defence Force (ADF) and for providing direct support to current military operations, including force preparation and training for ADF personnel pending deployment overseas.

Defence use of the WPA in this reporting period was consistent with the previous reporting period, with the majority of activities conducted within the Defence Continuous Use (Red) Zone. All zones were activated for exclusion periods at some point during the reporting period. Trials conducted during 2017-19 included long-range air to surface weapons, unmanned aerial systems, electronic warfare self-protection and explosive ordnance disposal.

Defence has invested $300 million in advanced instrumentation and enabling infrastructure, with construction of the new Range Operations Centre and Maintenance Support Facility being completed during the period. Within the fit out of the Range Operations Centre, upgraded progressing and test range systems are also being delivered. Significant investment into the WPA testing capability and infrastructure is expected over the next decade to ensure continued support for the testing of new and emerging technologies.

The operational tempo for the Air Force Test Ranges Squadron will increase as new and upgraded systems come online. The Squadron will commence training on the new systems in late 2019 and will then support further testing and evaluation. This will ensure the upgraded test range and its systems are well placed to realise full operational capability in 2021.

Looking forward, increased Defence activity levels are anticipated from mid-2019 onwards with the introduction of next generation weapon systems and increased testing requirements for war materiel within the WPA. These activities will also require Defence to suspend access to a section of the Stuart Highway and to evacuate an operating mine early in the next reporting period.



Australian Army protected mobility vehicles including the Thales Bushmaster and Hawkei join the Rheinmetall medium heavy capability truck, during testing with the Protected Mobility Integration and Capability Assurance program near Woomera in South Australia.

In addition to upgrade works already underway, there are a number of other smaller projects that will upgrade and remediate infrastructure, facilities and other equipment, reflecting the importance that the Commonwealth has placed on the WPA and the services and facilities that support Defence's operations. In the medium term, the Woomera Range Complex (part of the WPA) is programmed for additional investment to undertake redevelopment projects involving major works to facilities and services infrastructure, including water supply and electricity. The projects are currently in their early planning stages with construction anticipated to commence around 2023, subject to Commonwealth Government and Parliamentary approvals.

Defence has also undertaken significant planning over the reporting period to fulfil the Commonwealth Government's commitment to support the Japan Aerospace Exploration agency's Hayabusa2 space capsule return to Earth within the WPA in December 2020. Work has been undertaken in collaboration with the Defence Science and Technology Group, Air Force Test Ranges Squadron, the WPA Coordination Office, Defence Legal, the Australian Space Agency and other Commonwealth Government agencies. Further planning and stakeholder engagement will continue in the next reporting period.

Woomera also hosts events that provide an opportunity for new and existing stakeholders to learn about Defence activities in the WPA. The Annual Air Force Stakeholder Day is usually held at the Woomera village. Uniformed and civilian Defence personnel are available to answer any queries. The day also provides the opportunity for stakeholders to meet each other and learn about other WPA user group experiences under the coexistence framework.

Exclusion periods for financial years 2017-18 and 2018-19

The WPA is declared a Prohibited Area for the testing of war materiel. So that Defence may conduct tests and uphold safety and security, non-Defence users and permit holders may be excluded from the WPA access zones following the determination of exclusion periods and the receipt of notice within the prescribed timeframe. The exclusion period instrument is published on the Federal Register of Legislation website at: www.legislation.gov.au.

Defence also notifies WPA stakeholders in relation to the Amber Zone 1 and Amber Zone 2 exclusion periods, which are communicated every March for the forthcoming financial year. Notice is also given for Green Zone exclusions, the notification period of which varies according to the form of permit or permission held by the affected non-Defence user.

Wherever possible, Defence will maintain exclusion periods in the WPA Amber and Green zones only for as long as is required to conduct the weapons testing and to ensure safety and security. This means that exclusion periods may be revoked where tests do not proceed as originally planned, or when the exclusion period durations are reduced once the test is completed. Sometimes revocation or cancellation may take place at short notice, which limits the amount of notice Defence may be able to give affected non-Defence users and stakeholders.

Tourist permits are not issued during planned or promulgated Amber Zone exclusion periods, which mainly affects the Anne Beadell Highway. Tourists requesting permits for these periods are generally advised to plan their access outside of the promulgated exclusion periods or to consider travelling on alternative routes.

Tables 1 and 2 of Annex A detail the exclusion periods by WPA access zone during the reporting periods 2017-19, and the final status of those exclusion periods.



Australian Army Gunner Hanna Boddy from 16th Air Land Regiment prepares to fire the RBS-70 from a tactical firing point during Exercise Remagen Bridge 19 at Woomera Test Range.

Exclusion periods planned for financial year 2019-20

The exclusion periods for Amber Zone 1 and Amber Zone 2 for financial year 2019-20 were published in March 2019 by a legislative instrument on the Federal Register of Legislation. The *Woomera Prohibited Area Rule 2014* also requires that notice must be given at least three months before the beginning of the financial year in which the exclusion period begins.

Exclusion period information is published on the WPA Coordination Office website www.defence.gov.au/woomera. Defence also writes to all stakeholders regarding the exclusion periods so they can plan their activities accordingly. Stakeholders are also notified when exclusion periods are varied or cancelled.

The Federal Register of Legislation website www.legislation.gov.au should always be consulted for the latest published or amended exclusion period Instruments.

Table 3 in Annex A shows the planned financial year 2019-20 exclusion periods.

Aboriginal groups and cultural heritage

Defence acknowledges and respects that Aboriginal people are the custodians of their cultural heritage and that the WPA overlays traditional lands that contain many sites of cultural heritage and significance.



Oak Valley artist Cindy Watson stands next to her artwork on the bonnet of an Air Force Test Ranges Squadron compliance patrol vehicle. The Aboriginal artwork is called Tali Tjuta my Munda 7 Sisters meaning the sand hills in her country.

The Maralinga Tjarutja and Anangu Pitjantjatjara Yunkunytjatjara peoples hold freehold title over large areas of the WPA. The Antakirinja Matu-Yankunytjatjara, Arabana, Gawler Ranges and Kokatha peoples have non-exclusive Native Title rights over the remaining area. Defence legislation provides that Aboriginal persons and traditional owners may enter and remain within the WPA subject to the requirement to exclude people for safety or security reasons during Defence's testing of war materiel.

Over the reporting period, Defence personnel attended a number of meetings in Port Augusta, Coober Pedy, Woomera, Ceduna, Adelaide and Maralinga with Aboriginal groups to discuss existing access arrangements and the proposed introduction of 'Working Level Agreements' or similar arrangements. These agreements seek to formalise the existing access arrangements for Aboriginal people and address communication protocols, mutual responsibilities and notification requirements for Defence testing and exclusion.

On 25 June 2019, the Maralinga Tjarutja people and Defence entered into the first formal agreement of this type, known as a 'Cooperation Agreement', marking a significant day in South Australian history and for Defence's relationships with traditional owners and the management of the WPA. Defence continues to work with the other Aboriginal groups to progress similar arrangements.

For the June 2019 agreement signing, a ceremony involving the traditional owners and Defence was held at Maralinga, a former nuclear test site located 400 kilometres north-west of Ceduna, on Maralinga Tjarutja traditional lands. These lands were also formerly within the boundary of the WPA until November 2014 when the area known as Section 400 was returned to the Maralinga Tjarutja people. Maralinga Tjarutja Council chairperson Jeremy LeBois signed the instrument of agreement with Air Commodore Phil Gordon, Senior Australian Defence Force Officer in South Australia and Commander Air Warfare Centre on behalf of the Minister for Defence.

Defence, through its Estate and Infrastructure Group, is also working closely with each Aboriginal group to prepare an updated WPA Heritage Management Plan. The plan will provide information on how Defence can best identify, protect and manage Aboriginal cultural heritage places and values during its activities in the WPA.

Defence has also continued to promote the Air Force's Reserve Compliance Team Officer Program among the WPA Aboriginal groups. This program supports Compliance Monitoring Team operations and Defence's engagement with Aboriginal groups. As of 30 June 2019, there were eight Aboriginal members from four local areas working with the Air Force Test Ranges Squadron Compliance Monitoring Team after having successfully completed their training courses.

Pastoralists

There are 26 pastoral leases lying wholly or partly within the WPA boundary. The leases are administered by the South Australian Government under the *Pastoral Land Management and Conservation Act 1989* with access for safety and security controlled under the *Defence Force Regulations 1952*. The Pastoralists are represented by the Pastoral Board of South Australia, which operates from the Department of Primary Industries and Regions South Australia.

During the reporting period, Defence met with several pastoral leaseholders to discuss relevant matters, including periods of exclusion and the upgrade of infrastructure in support of the Woomera Test Range Remediation project.



Field Day hosted by the SA Arid Lands NRM Board at Glendambo, July 2018; Credit: Department for Environment and Water, Government of South Australia.

South Australian Government

Tenements and licences - mineral, petroleum and geothermal exploration



Photo courtesy of Oz Minerals

As at 30 June 2019, there were 137 mineral exploration licences active in the WPA held by junior explorers and major mining companies including BHP Billiton, OZ Minerals and FMG Resources.

Annex B details the numbers of mineral and petroleum exploration tenements that were current in the WPA during the reporting period, with the relevant Defence permits detailed in Annex C. No drilling, seismic or other forms of surface exploration occurred in the petroleum, geothermal and gas storage tenements in the WPA region.

Upon the granting of a mineral exploration licence (EL) by the South Australian Government, the holder of an EL has authority to conduct low impact exploration activities that include geophysical surveys, soil and rock chip sampling, mapping, Indigenous heritage surveys and other noninvasive exploration techniques. This licence is also subject to a Defence permit being granted and persons authorised to access the WPA.

Low impact exploration activities must be conducted in accordance with the Generic Program for Environment Protection and Rehabilitation (PEPR) for Low Impact Exploration Activities in South Australia. Prior to the use of drilling and earthmoving equipment that is required for the search for and delineation of mineral deposits, explorers are required to submit a PEPR for state government assessment and approval.

In the reporting period 2017-19, 17 PEPRs were approved covering 30 ELs in the WPA. These PEPRs involve drilling programs, with a total of about 250,000 metres of drilling proposed for exploring iron oxide, copper and gold targets. Other exploration activities included Aboriginal heritage surveys, ground sampling and mapping programs, geophysical surveys, and site rehabilitation works.

PACE Copper

The Plan for Accelerating Exploration (PACE) Initiative is South Australia's highly successful and internationally renowned initiative that focusses on the provision of the most contemporary and accessible precompetitive geoscientific data and information through various programs involving direct government and industry collaborations. Its final program, PACE Copper has delivered transformational mineral exploration opportunities and activities, critical in driving exploration investment and discovery of new high-quality copper resources.

PACE Copper includes a high resolution airborne geophysical survey of Gawler Craton aimed at bringing forward:

- New discoveries of copper, gold, uranium, mineral sands and groundwater resources through the provision of high resolution magnetic, radiometric and terrain mapping; and
- Regional engagement with traditional owners/claimants on access to land for exploration.

The PACE Copper Gawler Craton airborne survey (GCAS) acquisition – the largest of its type in Australia – concluded in mid-2019 with completion of data release planned for December 2019.

The survey captured about 1,660,000 line kilometres of new magnetic, radiometric and digital elevation data over an area of about 295,000 square kilometres. This new data surpassed the previous patchwork of historical surveys and provides a single, internally consistent dataset that will be fundamental in reinterpreting the geological structure of the Gawler Craton. The geophysical data were captured by fixed-wing aircraft flying about 60 metres above the ground along flight lines spaced 200 metres apart.

Ten of the 16 GCAS survey regions intersect the WPA (Figure 2). Data from 13 of the 16 GCAS regions is scheduled for release in November 2019, with the final three regions, 5, 6 and 9B (which intersects the WPA Red Zone) planned for release in December 2019.

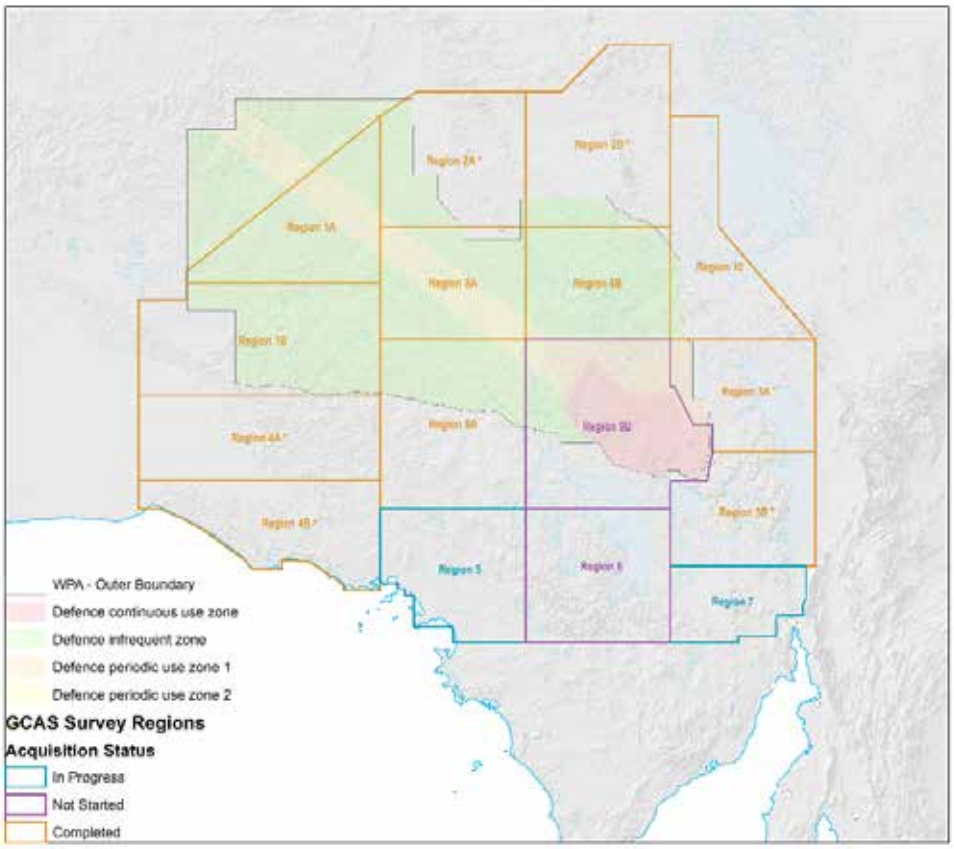


Figure 2: Map showing the Gawler Craton Airborne Survey regions in relation to the WPA

The status of the survey can be viewed on the Mineral Resources PACE Copper website found at http://energymining.sa.gov.au/minerals/gcas.

Resource Sector

The WPA overlaps a major part of South Australia's significant minerals and energy resources potential, covering about 30 per cent of the Gawler Craton (Figure 3), one of the world's major mineral domains and host to the world-class Olympic Dam Iron Ore Copper Gold deposit, and the Arckaringa, Officer and Eromanga Basins that contain conventional and unconventional hydrocarbons and coal.

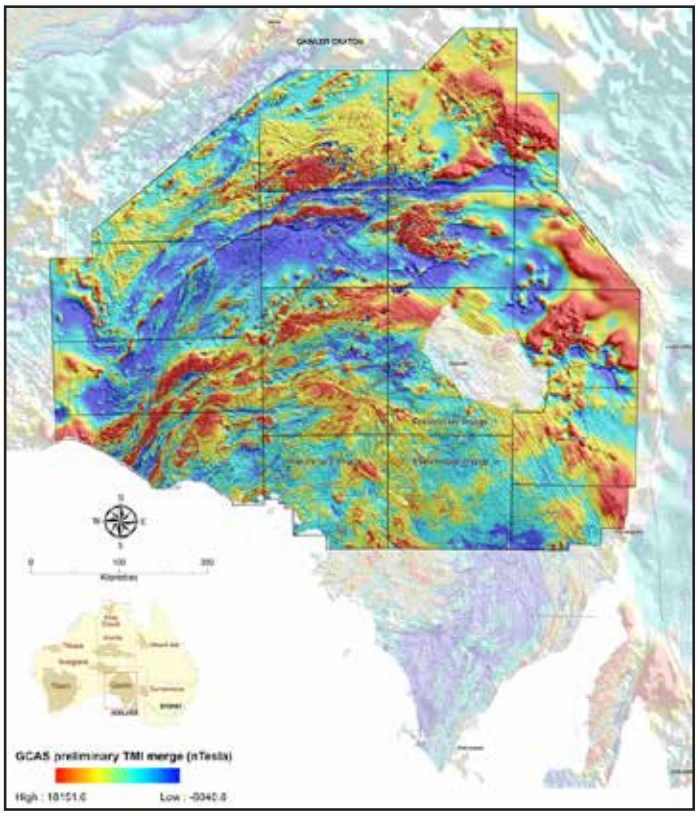


Figure 3: Topographic map of Gawler Craton airborne survey

Geoscience Australia (Mineral and petroleum resources and potential of the Woomera Prohibited Area, 2018) estimated that 62 per cent of Australia's known copper resources, as well as 78 per cent of the country's known uranium resources, are located within the WPA and its immediate surrounds. In addition, the Coober Pedy Proclaimed Precious Stones field covers about 5,000 square kilometres, about half of which falls within the WPA.

Minerals, energy resources exploration and mining continue to be the highest economic value among non-Defence user activities in the WPA. Four major mines are located in the WPA: the Prominent Hill copper-gold mine, the Challenger gold mine, the Cairn Hill magnetite iron ore mine and the Peculiar Knob iron ore mine. These mines have over the longer-term contributed approximately $1.2 billion in terms of capital expenditure that has supported local jobs and businesses. Moreover, South Australia has received about $215 million from these mines as royalty payments since the *Woomera Prohibited Area Rule 2014* came into effect.

Despite the global downturn in the commodities market from 2011 to 2017, mineral exploration continued in the WPA and expenditure totaled more than $250 million. Exploration and resource evaluation activities undertaken during this time included ground and airborne geophysical surveys, geochemical surveys, environmental and cultural surveys, 595,000 metres of drilling and drill site rehabilitation. Commodities sought include copper, gold, iron, nickel, heavy mineral sands, uranium, lead and zinc.

There are currently 27 current Resource Exploration permits active in the WPA, covering 137 mineral exploration licences. These are shown at Figure 4 and detailed in Annex C.

Mining



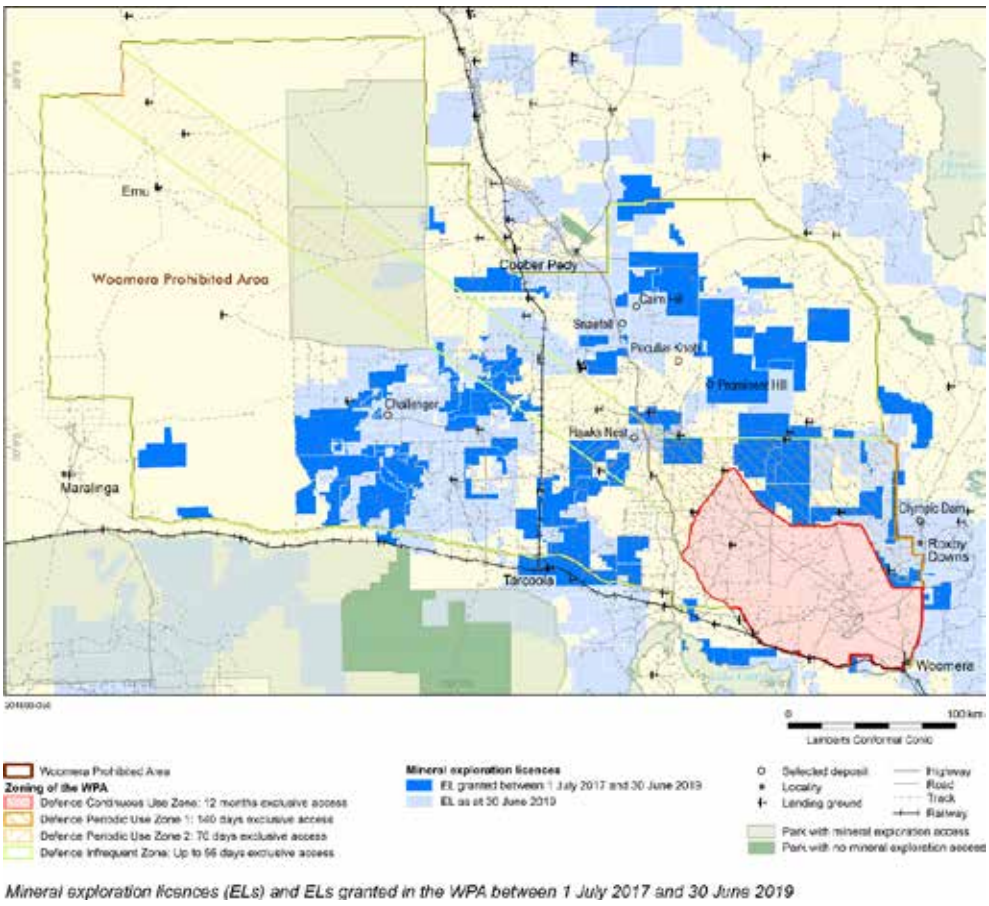
Photo courtesy of Oz Minerals

Minerals and energy resources exploration and mining remain the highest economic value of non-Defence activities in the WPA. Despite the continuing subdued commodities market, there has been a resurgence of resource activities in the WPA, particularly in the mineral rich Gawler Craton geological region.

Three major mines were operating at the start of the reporting period 2017-2019: the Prominent Hill copper-gold mine (OZ Minerals Ltd); the Challenger gold mine (WPG Resources Ltd); and Cairn Hill iron ore mine (Cu-River Mining Australia Pty Ltd). These mines employed over 1,500 people, contributed $2,257 million in production sales for export and around $98 million to South Australia in royalties, which accounts for about a third of the total mineral royalty payments received for the reporting period. During the reporting period the Challenger Gold Mine entered into Administration, stopping production and is currently in care and maintenance. The Cairn Hill mine also suspended operations in August 2017.

Mineral resource exploration expenditure for the two financial years in this report is expected to be more than $22 million based on current available data.

Annex C provides information regarding permits and deeds for the WPA and Annex D provides information about the major mines in the WPA.



Mineral exploration licences (ELs) and ELs granted in the WPA between 1 July 2017 and 30 June 2019

Figure 4: Mineral Exploration Licences Granted 1 July 2017 – 30 June 2019

Opal and Precious Stones

The Coober Pedy Proclaimed Precious Stones field covers about 5,000 square kilometres, half of which falls within the WPA (Figure 5). Prospecting for opal and opal mining tend to be ephemeral activities with a constant turnover of registered tenements. Exceptions to this occur when opal is found, and then tenements tend to be renewed for longer periods.

There are currently 60 registered precious stones tenements within the WPA. Table 2 in Annex C details the Opal Permits granted by Defence. It is estimated from the Opal Production report that the currently registered tenements may produce about $2.1 million worth of opal. In the reporting period, Department for Energy and Mining Opal Fields staff conducted a total of 265 inspections in the area.



Opal from Opal Ridge, Coober Pedy. Image courtesy of Roger Bulovic.

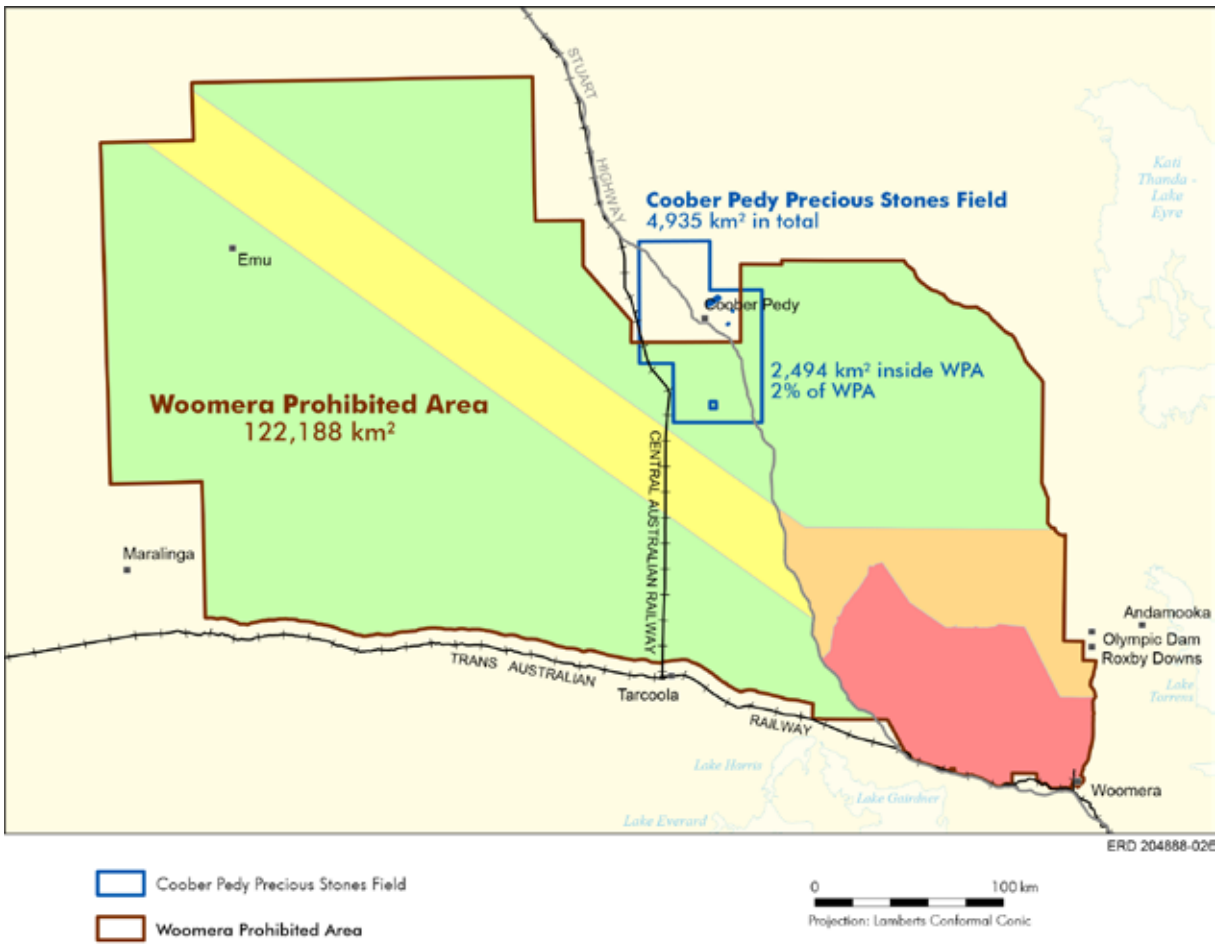


Figure 5: Location Map of the Woomera Prohibited Area showing the Coober Pedy Precious Stones Field

Mining and exploration compliance

In line with the coexistence model for the WPA, both the exploration and mining operators work in close communication with Defence in relation to their operations and the scheduling of activities relevant to the Defence weapons testing program and associated exclusion periods.

Department for Energy and Mining officers conduct regular inspections of mine operations within the WPA. Annual compliance reporting is required from mineral production tenement holders to demonstrate compliance with the Outcomes and Criteria of an approved PEPR for mining operations, including progressive rehabilitation, closure and completion requirements.

During the financial year 2017-18, a joint inspection by officers from the Department for Energy and Mining and Defence resulted in the shutdown of an extractive operation on the WPA due to permit irregularities.

Looking Forward

The 2018 Review made a series of recommendations to ensure that coexistence continues into the future, noting the current and forthcoming changes in Defence and non-Defence use of the WPA. The WPA will continue to be shaped by local, national and global developments. Continuous monitoring and engagement on the changing WPA demands, influences and stakeholder needs is required to make sure that coexistence remains fit for purpose and can respond to Defence's evolving testing requirements.

To implement the Review, Commonwealth and South Australian Government agencies are undertaking a significant body of work to make sure that Defence use of the WPA is balanced with the considerable economic and cultural value of the WPA to non-Defence users.

There are a number of priority areas to support Review implementation over the next year, which include: establishing robust governance arrangements to better manage coexistence; managing the introduction of new technologies into the area by non-Defence users; and offering non-Defence users greater certainty on the options for commercial operations within the WPA.

The role of the WPA Advisory Board will be strengthened to better broker and facilitate complex coexistence matters on behalf of all users. A Memorandum of Understanding confirming the WPA coexistence arrangements will be enacted between the South Australian Government and Defence. The Advisory Board will also start undertaking an annual 'health check' of coexistence and conduct its activities under a strategic forward work program.

Another priority for implementation is ensuring the continued safety and security of the WPA for Defence use. Coexistence goes beyond a 'set and forget' approach when it concerns security and safety particularly given the introduction of new Defence capabilities and the evolving nature of commercial investment and operating models in the WPA. Recommendations 3, 4 and 8 of the Review require Defence and non-Defence users to better understand their security obligations and the unique access requirements for the WPA. Enhanced guidance and engagement will support these requirements.

Commonwealth and South Australian Government agencies will continue to collaborate with all users of the WPA to successfully implement the Review and to enter a new era of coexistence.

Annex A: Exclusion Periods

Table 1: Exclusion periods July 2017 – June 2018

Access Zone	Exclusion Period Determined by Instrument	Status
Amber Zone 1	1 July 2017 – 7 July 2017	Exclusion exercised
	8 July 2017 – 14 July 2017	Exclusion exercised
	29 October 2017 – 4 November 2017	Exclusion exercised
	5 November 2017 – 11 November 2017	Exclusion exercised
	12 November 2017 – 18 November 2017	Exclusion exercised
	19 November 2017 – 25 November 2017	Exclusion exercised
	26 November 2017 – 2 December 2017	Exclusion exercised
	3 December 2017 – 9 December 2017	Exclusion exercised
	25 February 2018 – 3 March 2018	Revoked
	4 March 2018 – 10 March 2018	Revoked
	11 March 2018 – 17 March 2018	Revoked
	18 March 2018 – 24 March 2018	Revoked
	25 March 2018 – 31 March 2018	Revoked
	13 May 2018 – 19 May 2018	Exclusion exercised
	27 May 2018 – 2 June 2018	Exclusion exercised
	3 June 2018 – 9 June 2018	Exclusion exercised
	10 June 2018 – 16 June 2018	Exclusion exercised
	17 June 2018 – 23 June 2018	Exclusion exercised
	24 June 2018 – 30 June 2018	Exclusion exercised
Amber Zone 2	1 July 2017 – 7 July 2017	Exclusion exercised
	8 July 2017 – 14 July 2017	Exclusion exercised
	12 November 2017 – 18 November 2017	Revoked
	19 November 2017 – 25 November 2017	Revoked
	26 November 2017 – 2 December 2017	Revoked
	3 December 2017 – 9 December 2017	Revoked
	3 June 2018 – 9 June 2018	Revoked
	10 June 2018 – 16 June 2018	Revoked
	17 June 2018 – 23 June 2018	Revoked
	24 June 2018 – 30 June 2018	Revoked
Green Zone	20 May 2018 – 26 May 2018	Exclusion exercised
	1 July – 7 July 2019	Exclusion exercised
	8 July – 14 July 2019	Exclusion exercised

Table 2: Exclusion periods July 2018 – June 2019

Access Zone	Exclusion period Determined by Instrument	Status
Amber 1	1 October – 7 October 2018	Exclusion exercised
	8 October – 14 October 2018	Exclusion exercised
	15 October – 21 October 2018	Exclusion exercised
	22 October – 28 October 2018	Exclusion exercised
	29 October – 4 November 2018	Exclusion exercised
	5 November – 10 November 2018	Exclusion exercised
	11 February – 17 February 2019	Revoked
	18 February – 24 February 2019	Revoked
	25 February – 3 March 2019	Revoked
	4 March – 10 March 2019	Revoked
	11 March – 17 March 2019	Revoked
	18 March – 24 March 2019	Revoked
	25 March – 31 March 2019	Exclusion exercised
	1 April – 7 April 2019	Exclusion exercised
	8 April – 14 April 2019	Exclusion exercised
	15 April – 20 April 2019	Exclusion exercised
	15 April – 21 April 2019	Exclusion exercised
	1 June – 7June 2019	Exclusion exercised
	8 June – 14 June 2019	Exclusion exercised
	15 June – 21June 2019	Exclusion exercised
	22 June – 28 June 2019	Exclusion exercised
	25 June – 30 June 2019	Exclusion exercised
Amber 2	1 October – 7 October 2018	Exclusion exercised
	8 October – 14 October 2018	Exclusion exercised
	15 October – 21 October 2018	Exclusion exercised
	22 October – 28 October 2018	Exclusion exercised
	29 October – 4 November 2018	Exclusion exercised
	5 November – 10 November 2018	Exclusion exercised
	1 April – 7 April 2019	Revoked
	8 April – 14 April 2019	Revoked
	15 April – 21 April 2019	Revoked
	22 April – 29 April 2019	Revoked
Green	1 October – 7 October 2018	Exclusion exercised
	8 October – 14 October 2018	Exclusion exercised
	15 October – 21 October 2018	Exclusion exercised
	22 October – 28 October 2018	Exclusion exercised
	29 October – 4 November 2018	Exclusion exercised
	5 November – 10 November 2018	Exclusion exercised

Table 3: Planned Exclusion periods July 2019 – June 2020

Access Zone	Exclusion period Determined by Instrument	Status
Amber 1	1 July – 7 July 2019	Planned
	8 July – 14 July 2019	Planned
	2 September – 8 September 2019	Planned
	9 September – 15 September 2019	Planned
	16 September – 22 September 2019	Planned
	23 September – 29 September 2019	Planned
	30 September – 06 October 2019	Planned
	07 October – 13 October 2019	Planned
	25 November – 1 December 2019	Planned
	2 December – 8 December 2019	Planned
	9 December – 15 December 2019	Planned
	3 March – 9 March 2020	Planned
	10 March – 16 March 2020	Planned
	17 March – 23 March 2020	Planned
	24 March – 30 March 2020	Planned
	31 March – 6 April 2020	Planned
	7 April – 13 April 2020	Planned
	14 April – 20 April 2020	Planned
	21 April – 27 April 2020	Planned
	28 April – 04 May 2020	Planned
Amber 2	2 September – 8 September 2019	Planned
	9 September – 15 September 2019	Planned
	16 September – 22 September 2019	Planned
	23 September – 29 September 2019	Planned
	26 November – 2 December 2019	Planned
	3 December – 9 December 2019	Planned
	3 March – 9 March 2020	Planned
	10 March – 16 March 2020	Planned
	17 March – 23 March 2020	Planned
	24 March – 30 March 2020	Planned
Green	2 September – 8 September 2019	Planned
	9 September – 15 September 2019	Planned
	16 September – 22 September 2019	Planned
	23 September – 29 September 2019	Planned
	3 March – 9 March 2020	Planned
	10 March – 16 March 2020	Planned
	17 March – 23 March 2020	Planned
	24 March – 30 March 2020	Planned

Annex B: Licences issued or amended by the South Australian Government

Table 1: Tenements and licences 2017 – 18

Tenement / Application	Current	Granted	Renewed	Anticipated over the next 12 months
ELA – Exploration Licence Application	18	-	-	36 ELAs may be finalised and granted
EL – Exploration Licence	143	44	40	Up to 56 ELs may be renewed
ML – Mineral Lease	7	0	2	Up to 2 MLs may be renewed
EML – Extractive Minerals Lease	59	0	0	1 EML may be renewed
MPL – Miscellaneous Purposes Licence	34	0	0	Anticipated to be similar to previous year
MC – Mineral Claim	0	0	0	
RL – Retention Lease	1	0	0	
GEL – Geothermal Exploration Licence	0	0	0	Anticipated to be similar to previous year
GELA - Geothermal Exploration Licence Application	0	-	-	Anticipated to be similar to previous year
GSEL – Gas Storage Exploration Licence	1	0	0	
GSELA – Gas Storage Exploration Licence Application	21	-	-	
PEL – Petroleum Exploration Licence	10	0	0	No PELs are due for renewal in the next year
PELA – Petroleum Exploration Licence Application	19	-	-	

Table 2: Tenements and licences 2018 – 19

Tenement / Application	Current	Granted	Renewed	Anticipated over the next 12 months
ELA – Exploration Licence Application	29	-	-	29 ELAs may be finalised and granted
EL – Exploration Licence	137	13	30	Up to 12 ELs may be renewed
ML – Mineral Lease	6	0	1	Up to 3 MLs may be renewed
EML – Extractive Minerals Lease	59	0	0	Anticipated to be similar to previous year
MPL – Miscellaneous Purposes Licence	34	0	3	Anticipated to be similar to previous year
MC – Mineral Claim	0	0	0	
RL – Retention Lease	1	0	0	
GEL – Geothermal Exploration Licence	0	0	0	Anticipated to be similar to previous year
GELA - Geothermal Exploration Licence Application	0	-	-	Anticipated to be similar to previous year
GSEL – Gas Storage Exploration Licence	1	0	0	
GSELA – Gas Storage Exploration Licence Application Pending	21	1	-	
PEL – Petroleum Exploration Licence	10	0	0	No PELs are due for renewal in the next year
PELA – Petroleum Exploration Licence Application Pending	20	-	-	

Table 3: Tenements and licences current at 30 June 2014, 2015, 2016, 2017, 2018 and 2019

Tenements / Licences	30 June 2014	30 June 2015	30 June 2016	30 June 2017	30 June 2018	30 June 2019
ELA – Exploration Licence Application	17	36	25	36	18	29
EL – Exploration Licence	163	165	149	148	143	137
ML – Mineral Lease	5	6	7	7	7	6
EML – Extractive Minerals Lease	60	60	60	59	59	59
MPL – Miscellaneous Purposes Licence	33	34	34	34	34	34
MC – Mineral Claim	4	1	0	0	0	0
RL – Retention Lease	2	2	2	1	1	1
GEL – Geothermal Exploration Licence	3	3	0	0	0	0
GELA - Geothermal Exploration Licence Application	0	0	0	0	0	0
GSEL – Gas Storage Exploration Licence	1	1	1	1	1	1
GSELA – Gas Storage Exploration Licence Application	21	21	21	21	21	21
PEL – Petroleum Exploration Licence	10	10	10	10	10	10
PELA – Petroleum Exploration Licence Application	17	17	18	19	19	20

Annex C: Permits issued or amended by Defence

Table 1: Resource permits issued and access FY 2017 – 18 and 2018 – 19

Permit or Access	1 July 17 To 30 Sep 17	1 Oct 17 To 31 Dec 17	1 Jan 18 To 31 Mar 18	1 Apr 18 To 30 Jun 18	1 Jul 18 To 30 Sep 18	1 Oct 18 To 31 Dec 18	1 Jan 19 To 31 Mar 19	1 Apr 19 To 30 Jun 19	1 Apr 19 To 30 Jun 19	Total
Resource Production Permits issued	0	0	0	0	0	0	0	0	0	0
Resource Exploration Permits issued	0	1	1	0	1	1	0	1	1	5
Resource Exploration Permits refused	0	0	0	0	0	0	0	0	0	0
Resource Exploration Permits amended	0	0	1	0	0	0	1	1	1	4
Resource Exploration Permits surrendered	0	7	1	2	0	0	0	0	0	10
Permit variation refused	0	0	0	1	0	0	0	0	0	1
Research Permit	0	0	0	0	0	0	0	0	0	1
Other Purpose Permit issued	0	1	0	1	0	0	0	0	0	2
Non-compliance (Breaches issued)	1	0	0	1	0	0	1	1	1	5
Access Requests processed	6	8	42	7	30	21	18	37	37	169
Total number of personnel processed on Access Requests	55	16	42	79	30	179	198	218	218	817
Access Requests refused	0	0	0	0	0	0	0	0	0	0

Table 2: Opal permits FY 2017 – 18 and 2018 – 19

Permits	1 Jul 17 To 30 Sep 17	1 Oct 17 To 31 Dec 17	1 Jan 18 To 31 Mar 18	1 Apr 18 To 30 Jun 18	1 Jul 18 To 30 Sep 18	1 Oct 18 To 31 Dec 18	1 Jan 19 To 31 Mar 19	1 Apr 19 To 30 Jun 19	Total
Opal Permits issued	10	0	7	5	8	5	2	5	42
Opal Permits refused	0	0	0	0	0	0	0	0	0

Table 3: Resource deeds and permits current at 30 June 2014, 2015, 2016 2017, 2018 and 2019

Deed or Permit type	30 June 2014	30 June 2015	30 June 2016	30 June 2017	30 June 2018	30 June 2019
Mineral Lease Deed of Access[1]	4	3	3	3	3	3
Resource Production Permit	0	0	1	1	1	1
Exploration Deed of Access[1]	34					
Extractive, Petroleum or Other Purpose Deeds[1]	6					
Resource Exploration Permit[2]	0	36	34	34	24	27
Other Purpose Permit[3]	0	5	5	7	7	7
Research Permit	0	0	2	3	2	1
Opal Permits	25	69	51	23	13	13

(1) No further deeds issued following the commencement of the Woomera Prohibited Area Rule 2014

(2) Includes 24 exploration and petroleum deeds that transitioned to Resource Exploration Permits under the Woomera Prohibited Area Rule 2014.

(3) Includes two extractive deeds, one other purpose deed that transitioned to Other Purpose Permits under the Woomera Prohibited Area Rule 2014.

Table 4: Resource personnel

Resource personnel	1 July 17 To 30 Sep 17	1 Oct 17 to 31 Dec 17	1 Jan 18 to 31 Mar 18	1 Apr 18 to 30 Jun 18	1 Jul 18 To 30 Sep 18	1 Oct 18 To 31 Dec 18	1 Jan 19 To 31 Mar 19	1 Apr 19 To 30 Jun 19	Total
Approved Person applications lodged	288	231	294	179	166	176	45	91	1476
Approved Persons refused	1	2	2	0	0	0	0	0	5
Escorted Person applications lodged	44	55	83	47	29	45	31	46	380
Escorted Person refused	0	0	0	0	0	0	0	0	0

Table 5: Tourist permits

Permits	1 Jul 17 To 30 Sep 17	1 Oct 17 To 31 Dec 17	1 Jan 18 To 31 Mar 18	1 Apr 18 To 30 Jun 18	1 Jul 18 To 30 Sep 18	1 Oct 18 To 31 Dec 18	1 Jan 19 To 31 Mar 19	1 Apr 19 To 30 Jun 19	Total
Number of Tourist Permits issued	183	19	112	171	130	15	80	227	911
Number of tourists authorised on Tourist Permits	246	26	210	311	249	27	114	424	1598
Tourist Permits refused	0	0	15*	0	0	0	0	0	15

*Refused due to submission of incomplete documentation and failure to provide complete details with sufficient notice for entry

Annex D: Major Mines within the Woomera Prohibited Area

Mine Name	Commodity	Company	Status	Term of Mining Lease	Life of Mine[1] (years)	Production[2] FY 2017-18	Production[2] FY 2018-19
Prominent Hill	Copper (Cu) Gold (Au)	OZ Minerals Ltd	Operating Underground (Ankata and Malu). Open Pit mining has ceased.	ML 6228 – 15 years from 2006 to 2021	To 2030	113,363t Cu 127,436oz Au	108,048t Cu 130,619oz Au
Challenger	Gold (Au)	WPG Resources Ltd	WPG Resources Ltd in administration Mine in care and maintenance	ML 6103 – 27 years from 2001 to 2028; ML 6457 – 12 years from 2016 to 2028 (both MLs renewed for another ten years)	Mine in care and maintenance	19,006oz Au	20,270oz Au
Cairn Hill	Magnetite iron ore (Fe3O4)	Cu-River Mining Australia Pty Ltd	Production paused in August 2017	ML 6303 – 20 years from 2008 to 2028 (ML renewed for another ten years)	To 2025	130,885t	Nil ore mined
Peculiar Knob	Hematite iron ore (Fe2O3)	Southern Iron Pty Ltd	Southern Iron Pty Ltd in administration Mine in care and maintenance	ML 6314 – 14 years from 2008 to 2022	Mine in care and maintenance	Nil ore mined	Nil ore mined

(1) Published information based on currently defined reserves

(2) Based on ASX releases and Department for Energy and Mining Records



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