



Australia's National  
Science Agency

# Inyarrimanha Ilgari Bundara The CSIRO Murchison Radio- astronomy Observatory Management Plan

MROSE-03

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# Document Control

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# Definitions

ACMA	Australian Communications and Media Authority
ARQZWA	Australian Radio Quiet Zone WA
ASKAP	Australian SKA Pathfinder
DISR	Department of Industry, Science and Resources
EDGES	Experiment to Detect the Global Epoch of reionisation Signature
SKA	Square Kilometre Array
SKAO	SKA Observatory
JTSI	Department of Jobs, Tourism, Science and Innovation
IGO	Intergovernmental Organisation
MROCC	MRO Coordination Committee
MWA	Murchison Widefield Array
ILUA	Indigenous Land Use Agreement
REMP	Radio Emissions Management Plan
RFI	Radio Frequency Interference
RNTBC	Registered Native Title Body Corporate
WA	Western Australia
WYAC	Wajarri Yamaji Aboriginal Corporation

# 1 Background

CSIRO, with the backing of the Australian Government and the Government of the State of Western Australia (WA), established Inyarrimanha Ilgari Bundara, the CSIRO Murchison Radio-astronomy Observatory (the Observatory) as one of the world’s best locations for radio astronomy for the purpose of attracting the Square Kilometre Array (SKA). The SKA is a \$3 billion global project to build the world’s largest and most advanced radio telescopes.

In 2012 Australia and South Africa were selected to host an SKA telescope; SKA-Mid will be in South Africa and SKA-Low will be built on the Observatory. The SKA telescopes will revolutionise our understanding of the Universe and operate for at least 50 years.

The Observatory comprises the former pastoral property of Boolardy Station, approximately 350 km north east of the coastal town of Geraldton, WA (Figure 1). The Observatory is held by CSIRO under a Crown Lease for the primary purpose of radio astronomy and under an Indigenous Land Use Agreement (ILUA) with the Wajarri Yamaji Traditional Owners and native title holders.

In 2021 the Australian Government signed a Hosting Agreement with the SKA Observatory (SKAO, an intergovernmental organisation established by an international treaty) under which it committed to provide access to the Observatory and other facilities. CSIRO was named as the organisation that would manage the Observatory on behalf of the nation and work with DISR to deliver the Australian Government’s obligations under the Hosting Agreement. CSIRO formed the Observatory Site Entity to undertake this role.



Figure 1 – Location of the Observatory.

## 2 Purpose of the document

This document introduces aspects of managing the Observatory of which all those working on the Observatory need to be aware. It also provides an overview of how the Site Entity works with the broader CSIRO, SKAO, other telescopes on the site, and other stakeholders, to manage the Observatory.

## 3 Traditional owners

CSIRO acknowledges the Wajarri Yamaji as the Traditional Owners and native title holders of the Observatory. As part of the ILUA, on 5 November 2022, we were gifted a traditional name for the Observatory: Inyarrimanha Ilgari Bundara, which means ‘sharing sky and stars’ in the Wajarri language.

The Wajarri Yamaji community and its forebears have lived with, cared for, and been occupiers and custodians of this land for thousands of years. Their living culture and unique role in the life of the region is acknowledged. Anyone who comes to the Observatory, whether to work or to visit, must recognise and acknowledge the enduring connection between the Wajarri Yamaji and their Country and respect the Wajarri Yamaji's right to ongoing access to their land.

Aboriginal cultural heritage is not just about sites and objects but is all that is passed down from one generation to the next. This includes language, stories, places of significance, history, beliefs, and memories. It's what connects the past with the present and what continues to have relevance into the future.

### 3.1 Indigenous Land Use Agreement

Under Australian law, the *Native Titles Act 1993* (Cth), consent must be sought from Traditional Owners to the use of their land for agreed specific purposes, for which they receive certain benefits and compensation. This is all documented in an ILUA: a public document available on the website of National Native Title Tribunal.<sup>1</sup> The ILUA and/or its subsidiary documents also identifies information and provisions related to protection and preservation of Aboriginal Cultural Heritage identified in the area covered by the ILUA.

A registered ILUA is legally binding on the parties to it. The Inyarrimanha Ilgari Bundara / Murchison Radio-astronomy Observatory and Square Kilometre Array ILUA was registered on 4 November 2022 and the parties to it are the Wajarri Yamaji (represented by the Wajarri Yamaji Aboriginal Corporation, WYAC), the Australian Government, the WA Government and CSIRO.

All contractors, employees and visitors to the Observatory are required to undertake cultural awareness training to ensure they understand and comply with the objectives and provisions of the ILUA. This training will be arranged by the Site Entity. More information on cultural training requirements can be found in the **Aboriginal Heritage Protocol (MROSE-15)**.

The Site Entity is responsible for delivery of non-monetary benefits under the ILUA. Oversight of the delivery of these benefits, and of the ILUA in general, is provided by a Liaison Committee and two sub-committees (see **Section 6**).

The Site Entity will engage ILUA Officers who will work with Observatory occupants (**Section 7**) and WYAC to successfully deliver on CSIRO's ILUA obligations.

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<sup>1</sup> Tribunal file N° WI2022/008 available at [www.nntt.gov.au](http://www.nntt.gov.au)

## 4 Site Entity

The Site Entity operates the Observatory on behalf of the nation, delivering relevant obligations of the Australian Government’s under its Hosting Agreement with SKAO.

The Site Entity’s key roles are

- managing the land
- maintaining radio quiet protections
- being an impartial landlord to all tenants
- delivering aspects of the ILUA.

The Site Entity brings together specialist teams into a single source of information and assistance for Observatory occupants and other stakeholders.

The Site Entity is responsible for delivering a functioning radio astronomy observatory for all telescopes on site. Its role is distinct from, and separate to, any of the telescopes and their respective operations.

### 4.1 Organisation and structure

The Site Entity is part of Space and Astronomy within CSIRO, Australia’s National Science Agency, and is thus managed and held accountable through standard CSIRO policies, procedures and practices. The Site Entity is directly funded by the Australian Government to undertake its roles (**Section 4.2**) and is separate from other parts of Space and Astronomy which, for example, operate ASKAP or are involved with the collaboration with SKAO. Being part of CSIRO, the Site Entity has ready access to specialist support teams in such areas as health and safety and property services.

The Site Entity team will consist of approximately 15 personnel (Figure 2).

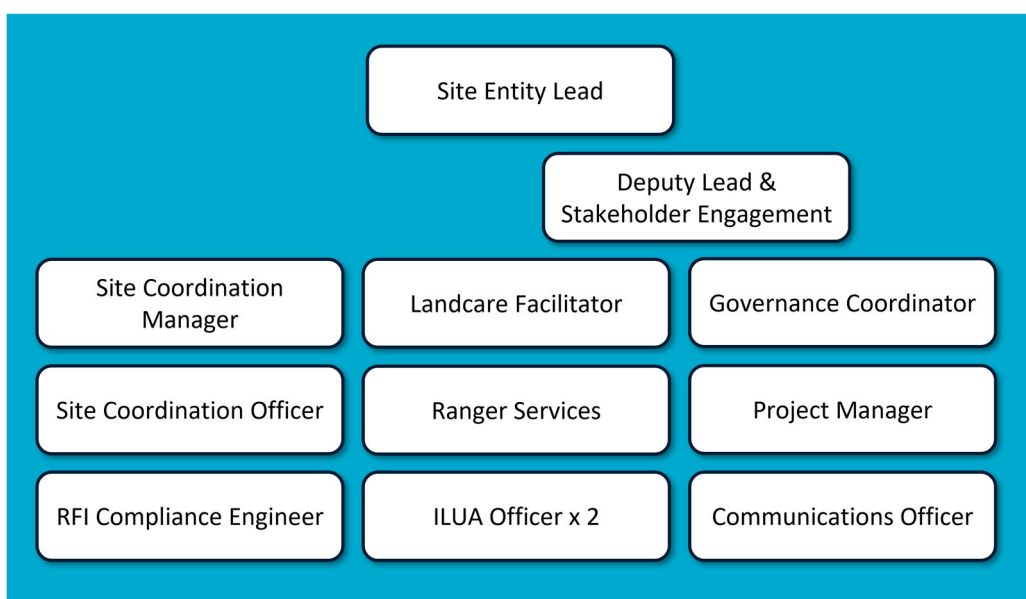


Figure 2 – Site Entity team structure

## 4.2 Responsibilities

The Site Entity is responsible for delivering, on behalf of Australia, a functioning radio astronomy observatory for all telescopes on site.

Roles held by the Site Entity include:

- Land management, including fencing, feral animal control, flora rehabilitation, and water and fauna management.
- Stakeholder engagement (see **Section 5**).
- Coordination of site activities, such as major works, maintenance, and VIP visits.
- Management of the road maintenance agreement with the Shire of Murchison
- Compliance with the requirements of the Australian Radio Quiet Zone WA (ARQZWA) and maintaining radio quiet protections on the Observatory. For example: managing self-compliance by radio astronomy instruments and ancillary activities on the Observatory, assessing applications for new activities or instruments, monitoring of radio frequency interference and providing advice (see **Section 9**).
- Occupant management.
- Provision of common services to tenants and general infrastructure management – non-science related buildings such as accommodation facilities, utilities and private roads.
- Delivery of non-monetary benefits under the ILUA.

The Site Entity is not responsible for operation of any tenant telescopes, however, it is responsible for oversight of tenant telescopes and other facilities meeting their compliance requirements, such as with respect to radio frequency interference (RFI) and Aboriginal Cultural Heritage.

The Site Entity has established policies intended to safeguard each telescope from disruption by activities at neighbouring telescopes and facilities. This includes activities associated with the construction and establishment SKA-Low.

CSIRO recognises the importance of minimising impact on the land. The Site Entity will work with all Observatory occupants to encourage that each ‘treads lightly’ with construction techniques and operations.

Under its Hosting Agreement with SKAO, the Australian Government undertook to deliver new facilities for the SKA project, such as a permanent accommodation facility at the Observatory, an Engineering Operations Facility in Geraldton, and a Science Operations Centre in Perth. The Site Entity also manages delivery of these facilities.

## 5 Stakeholders

An important aspect of the Site Entity’s work is engagement with stakeholders integral to the success of the SKA project in Australia and of the other telescopes at the Observatory (see **Section 7**). Primary stakeholders are identified in the table below.



STAKEHOLDER GROUP	ORGANISATIONS
<b>WA, Mid West and Murchison</b> <b>(Local, regional and State)</b>	Wajarri Yamaji, pastoralists (including neighbouring stations, see Figure 3) Murchison Shire Council, other Mid West councils, Mid West businesses and industry groups, Mid West Development Commission, WA Government, WA Governor, WA Tourism, WA astrotourism sector, education sector, industry partners, local communities and the general public, museums, WA-based media, mining and other industry proponents wanting to conduct activity within the ARQZWA.
<b>National</b>	Australian Government, DISER, senior government officials, funding agencies, business/industry groups, astronomy, science and engineering communities, science communication organisations, education sector, national media, ACMA.
<b>International</b>	SKA Observatory, SKA Council, SKA science working groups, SKA partner institutes (e.g. SARA0, ASTRON, INAF), international science organisations, international business/industry, international astronomy and engineering community, international media, international spectrum management bodies.
<b>Observatory occupants</b>	EDGES, MWA, ASKAP, Horizon Power, SKA, Accommodation providers

## 5.1 Neighbouring stations

The Observatory (formerly Boolardy Station) shares its boundary with nine active pastoral stations as well as the Pia Wadjarri Community (Figure 3).

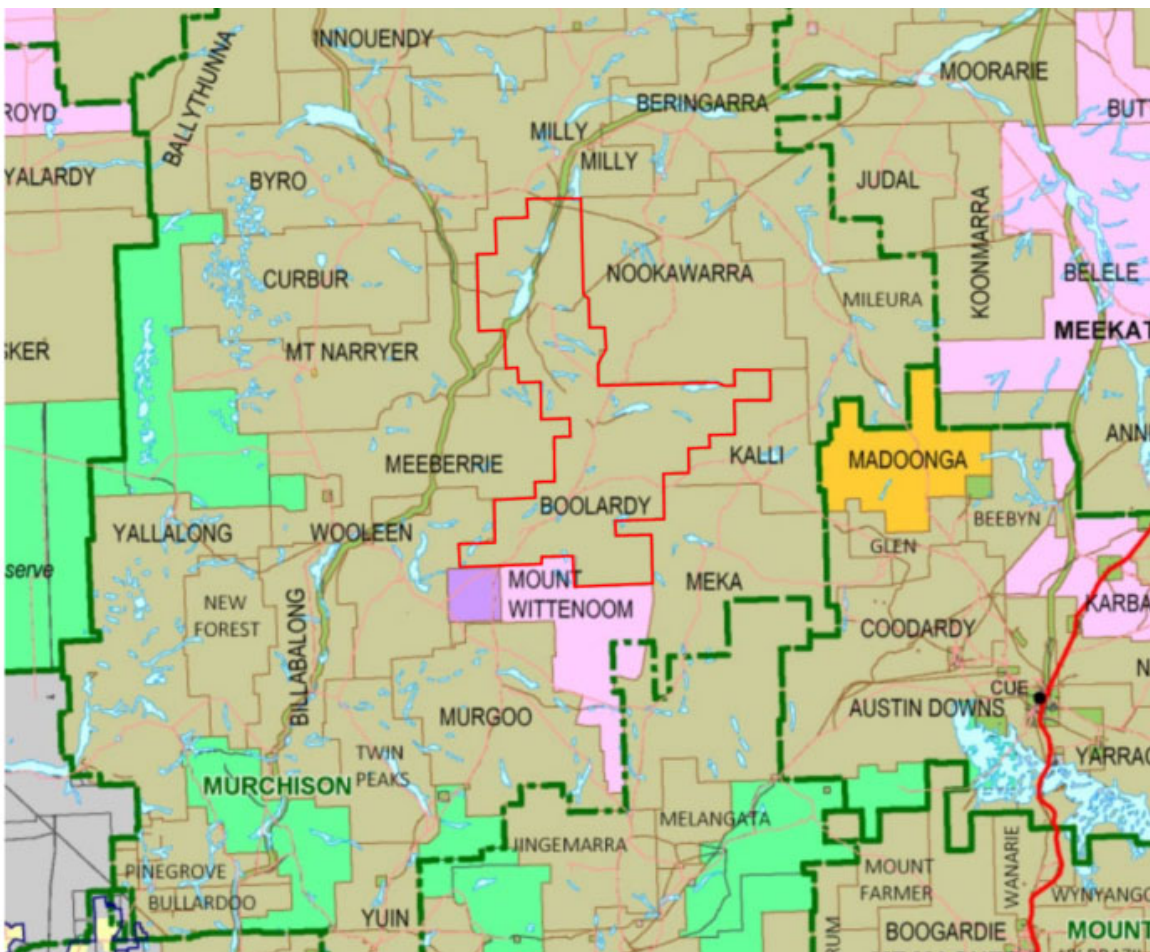


Figure 3 – Pastoral stations near the Observatory, the former pastoral property of Boolardy Station (red outline). The purple box is the Pia Wadjarri community.

It is not possible to prevent cattle moving from one station to another and stray animals are often found on the Observatory, particularly as vegetation rehabilitates after Boolardy was destocked in 2015. The Site Entity works with neighbouring pastoralists to keep cattle off the Observatory, managing regular mustering and overseeing fencing inspections and repairs.

It is essential to the success of the Observatory that its radio quiet qualities are preserved as far as possible. CSIRO acknowledges the long history of pastoralism in the region and that existing stations have the right to continue operations. The Site Entity may not unreasonably impinge on its neighbours' usual activities so endeavours to maintain close coordination to minimise the impact of pastoral activities on radio astronomy.

## 6 Governance

As part of CSIRO, the Site Entity is subject to CSIRO's standard governance processes and procedures. As its funding flows from the Australian Government, the Site Entity is also required to report back on its activities in line with the funding agreement(s).

The Site Entity facilitates, or is responsible to, several committees, as outlined below.

### 6.1 MRO coordination committee

The MRO Coordination Committee (MROCC) is a monthly coordination meeting of representatives of all Observatory occupants.

MROCC allows all occupants to share information with the goal of:

- minimising impacts on each other
- reporting incidents and sharing lessons learned
- celebrating achievements
- maximising opportunities for joint contracting and achieving economies of scale
- communicating needs
- sharing opportunities for outreach or stakeholder engagement.

MROCC's terms of reference are at **Appendix A**,

### 6.2 ILUA Liaison Committee

The ILUA Liaison Committee is a consultative committee which each quarter brings together representatives of the parties to the ILUA: CSIRO, the Australian Government, the WA Government and the Wajarri Yamaji, and subject matter experts, as required.

The functions of the ILUA Liaison Committee include receiving/providing information on and, where required or considered appropriate, making recommendations regarding matters such as:

- procurement, contracting and employment opportunities for members of the Wajarri Yamaji
- education and training opportunities

- access by members of the Wajarri Yamaji to their land
- implementation or operation of any programs or projects as part of the benefits under the ILUA
- environmental and land management
- applications for mining tenements and mining and exploration activities proposed for the inner zone of the Australian Radio Quiet Zone WA (see **Section 9**).
- delivery, content and organisation of the cultural awareness training program.

### 6.3 Land Committee

Under the ILUA, Land Committee(s) comprised of Wajarri Yamaji with connection to the Observatory may be formed. At the moment there is one: the Minangu Land Committee. CSIRO is not a party to this committee.

The Land Committee(s) roles include:

- Appointing representatives to the Heritage Protection Committee (see below).
- Consulting with WYAC or the heritage service provider about whether heritage notices and/or heritage surveys are needed for a given activity.
- Consulting with and providing reasonable directions to the heritage service provider as to which members of the Wajarri Yamaji should undertake heritage surveys or be heritage monitors.

### 6.4 Heritage Protection Committee

Under the ILUA is a Heritage Protection Committee which meets quarterly to inform WYAC and the Wajarri Yamaji of what is happening, and planned to happen, on the Observatory to ensure Aboriginal Cultural Heritage is respected and protected.

At its meetings, the Heritage Protection Committee will, for example:

- Discuss how activities are being managed and identify improvements to ensure Aboriginal Cultural Heritage is protected or avoided, while having regard to construction timelines. Should avoidance and protection not be reasonably practicable, to minimise and mitigate harm to Aboriginal Cultural Heritage.
- Discuss and improve implementation of the Cultural Heritage Management Plan and make recommendations in regard to potential amendments.

This committee comprises representatives from the:

- Board of WYAC
- Land Committee(s) (as above)
- Heritage Service Provider(s)
- Site Entity
- Australian Government.

The **Aboriginal Heritage Protocol (MROSE-15)** contains more information about preservation of Aboriginal Cultural Heritage.

## 6.5 Collaborative Agreement Advisory Committee

CSIRO, the WA Government and the Australian Government are signatories to a Collaborative Agreement which aims to ensure that all parties work together and meet their obligations in delivering a functioning radio astronomy observatory for SKAO and current telescopes on the site and in returning benefits to WA.

Each party has equal representation on the Advisory Committee, which meets quarterly to provide advice on matters such as:

- strategic issues that may impact on the successful delivery of SKA-Low or other radio astronomy activities at the Observatory, such as the continued protection of radio quiet and proposals for new activities on the Observatory.
- what activities will be undertaken as Project Agreements, their scope and funding.

The Committee will monitor and report on the progress of Project Agreements. It will also make recommendations, as necessary, in regard to the functioning of the Agreement including any potential amendments.

## 6.6 Host Country Agreement Monitoring Committee

SKAO and the Australian Government are signatories to the Host Country Agreement, which details, among other things, the site, infrastructure, assets and other obligations that Australia agreed to provide SKAO as host of its SKA-Low telescope. As CSIRO delivers many of the Australian Government's obligations under this Agreement, the Site Entity is an observer at meetings of the Host Country Agreement Monitoring Committee, which are currently held quarterly.

The primary purpose of the Host Country Agreement Monitoring Committee is to provide high-level monitoring of the relationship between Australia and SKAO through discussion of key deliverables and risks. Matters that may be considered by this Committee include any impact the implementation of SKA-Low may have on other telescopes on the Observatory or on the Wajarri Yamaji.

# 7 Observatory occupants

The Observatory has established occupants undertaking world-leading scientific research or providing related infrastructure.

They are:

- CSIRO's Australian SKA Pathfinder (ASKAP) radio telescope.
- The Murchison Widefield Array (MWA), operated by Curtin University on behalf of an international consortium.
- The Experiment to Detect the Global Epoch of reionisation Signature (EDGES), an instrument managed by Arizona State University.
- Horizon Power, operator of the ASKAP power station.

- Prototyping activities for SKA-Low.

A joint venture between Wajarri Enterprises Limited and Pacific Services Group Holdings provides accommodation and pastoral management services.

Telescopes and other infrastructure not owned by CSIRO, such as the existing power station, occupy the land under site licence agreements and SKAO is constructing, and will operate, SKA-Low under a site licence.

Proposals for new facilities or activities require approval, see **Section 11**.

## 7.1 Occupancy agreements

Working closely with CSIRO's specialist property services group, the Site Entity is responsible for facilitating the creation of occupancy agreements for telescopes and other facilities on the Observatory. Occupancy agreements typically take the form of site licences.

Occupancy agreements will include the conditions of occupation, as well as rights and obligations of all parties, and be consistent with the terms of the Observatory lease from the WA Government and with the ILUA. The agreements will also cover cost obligations for occupants.

## 7.2 Occupant site operations management plan

Site licence holders are required to submit an annual operations management plan to the Site Entity outlining their intended compliance with the requirements of their licence.

This plan will identify key contact personnel and identify major site activities for the year and include how the tenant demonstrates:

- Health, safety and environmental management
- Cultural heritage protection management
- RFI management and compliance
- Governance of the area subject to the site licence.

## 7.3 Land management

### **Clearing and rehabilitation**

Under the ILUA, a maximum of 1000 Ha may be cleared at any given time. This includes existing telescopes and site infrastructure. However, the total will have regard to land which has been rehabilitated after clearing. CSIRO is responsible for ensuring this limit is not exceeded. As detailed in each site licence, occupants must report annually to the Site Entity on their clearing and rehabilitation activities.

The Site Entity is responsible for seeking clearing permits on behalf of occupants. Any occupant seeking to obtain a new or additional clearing permit must provide the Site Entity with all the information required to submit the application, such as environmental surveys. Occupants should be aware that the Site Entity may need to seek further approvals for land clearing.

Rehabilitation is an important requirement of the Lease and the ILUA; the aim is to return the land to a sustainable condition comparable with that prior to it being disturbed. Baseline surveys (such as those required for a clearing permit application) will be used by the Landcare Facilitator in assessing whether rehabilitation has been successful, or if further action is required. When developing a rehabilitation plan, occupants must consult the Landcare Facilitator to determine the best method of rehabilitation for the area in question. Occupants should be aware that the Site Entity may need to seek further advice on rehabilitation and that the determination of whether land has been successfully rehabilitated vests with the Site Entity's Landcare Facilitator.

## **Water**

Access to water is strictly controlled by the WA Government and CSIRO is responsible for ensuring that requirements are met. Occupants may not create or access any natural or artificial water sources (including waterholes and turkey's nests) without written approval from the Site Entity. Occupants should be aware that CSIRO may need to seek further approvals for water access, and that annual reporting on usage is required by the WA Government on registered manmade water sources.

## **Biosecurity**

As Leaseholder, CSIRO has responsibilities under the *Biosecurity and Agricultural Management Act 2007 (WA)*. Observatory Occupants are required to comply with biosecurity measures that, for example, prevent the spread of declared weeds and diseases that may affect livestock on neighbouring properties (see Section 5.1).

Any earthmoving vehicles or equipment arriving at site will be inspected for foreign plant material and soil in a designated quarantine area. For example, at the SKA-Low construction camp and the lay down area near the SKA-Low core.

All occupants are encouraged to report sighting declared weeds and pest or feral animals, or their tracks or dropping, to the Landcare Facilitator.

# 8 Induction and conduct

Every person visiting or working on the Observatory is to take all reasonable steps to ensure the safety of themselves and others, protect the land, prevent harm to the environment (including the radio quiet environment) and show respect for Wajarri Yamaji heritage.

The Observatory's conduct requirements (detailed in **Induction and Conduct MROSE-13**) based on CSIRO's Code of Conduct and covers the following areas:

- appropriate behaviours
- Aboriginal Cultural Heritage protection obligations
- HSE requirements
- contractor responsibilities
- RFI compliance.

A person visiting or working on the Observatory who refuses to abide by the requirements detailed in **Induction and Conduct (MROSE-13)** will be asked to leave as soon as it is safe to do so. Continued refusal to abide by these requirements may result in the person being barred from the site.

It should be noted that HSE requirements within site licenced areas are under management control of the licence holder.

## 9 Australian Radio Quiet Zone WA

The Observatory is in an area of very low population density; the Shire of Murchison has a population of approximately 120 in an area the size of the Netherlands (population 16.5 million) and relatively sparse economic activity, which results in exceptional radio quiet qualities (minimal RFI) making it ideal for radio astronomy (Figure 4).

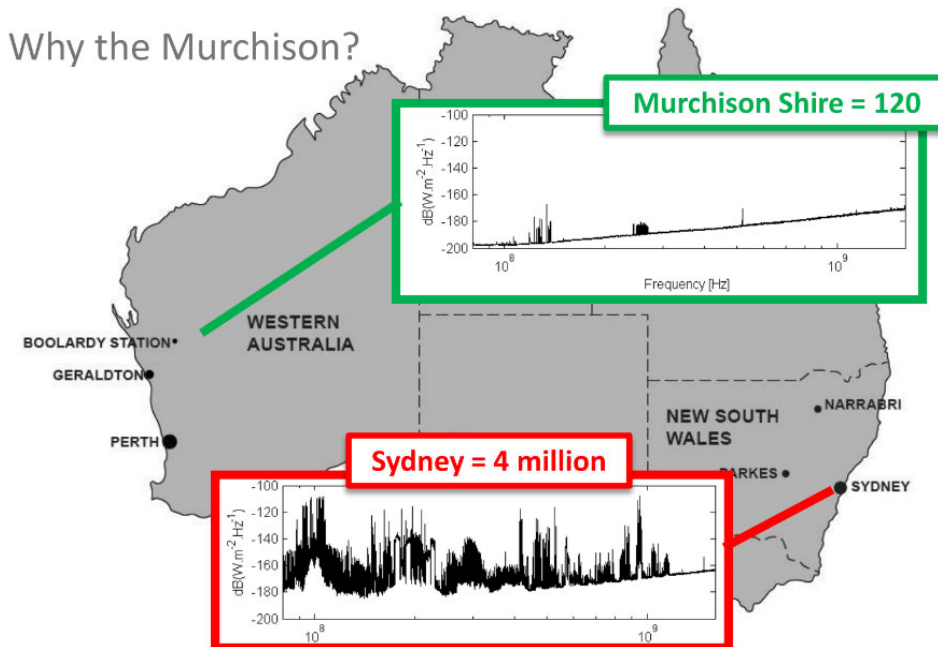


Figure 4 – Comparison of radio noise between Sydney and the Shire of Murchison.

The future scientific success of SKA-Low and the existing telescopes on the Observatory is dependent on maintenance of the Observatory's radio quiet qualities.

The Australian and WA Governments established the Australian Radio Quiet Zone WA (ARQZWA) to provide an area where radio telescopes could be protected from harmful interference, while also allowing for opportunities for co-existence with other activities within the ARQZWA (Figure 5).

The ACMA Radiocommunications Assignment Licensing Instruction MS32 (ACMA RALI MS32) specifies levels of acceptable RFI on the Observatory. Licensed transmissions covered by Australian regulation and policy need to be operated in a manner consistent with Australian regulations and policy.

These regulations apply to radio astronomy activities as well as the general community. Everyone who works on or visits the Observatory has an obligation to help maintain radio quiet on the site and must comply with radio quiet protections.

The Site Entity monitors RFI on the Observatory and coordinates management of incidental and deliberate radio transmissions from telescopes and other Observatory infrastructure to be within acceptable limits. Any activities that may cause interference to a telescope on the Observatory should be notified in advance via MROCC to help ensure any potential impact can be minimised.

The Site Entity's RFI team provides expert advice to ACMA and the WA Government on the impact to radio astronomy of proposed activities within the ARQZWA and in relation to applications made under RALI MS32.

Further details are provided in the **RFI Management Plan MROSE-07**.

Another mechanism that helps protect radio quiet is a 'Section 19' exemption area established by the WA Government under the *Mining Act 1978* (WA). This exemption area (Figure 6) covers the Observatory and nearby regions within which no new mining tenements will be issued (except by Ministerial exception).

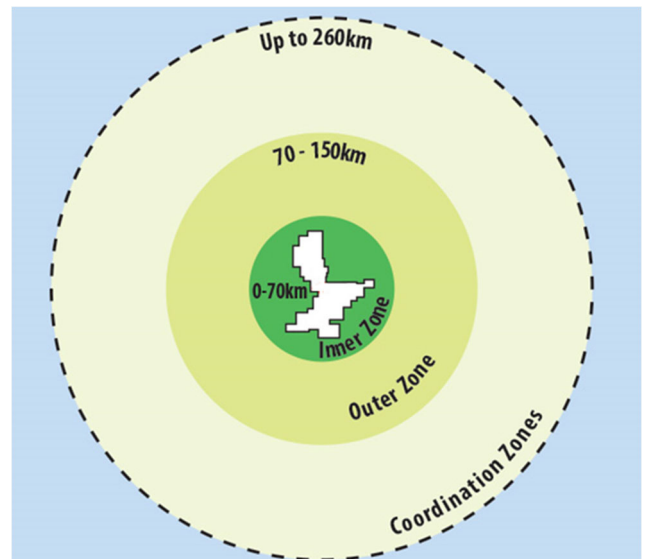


Figure 5 – The ARQZWA is centred on the Observatory. A series of concentric zones extending out 260 km provide different levels of protection. Within the inner zone, radio astronomy has primacy.

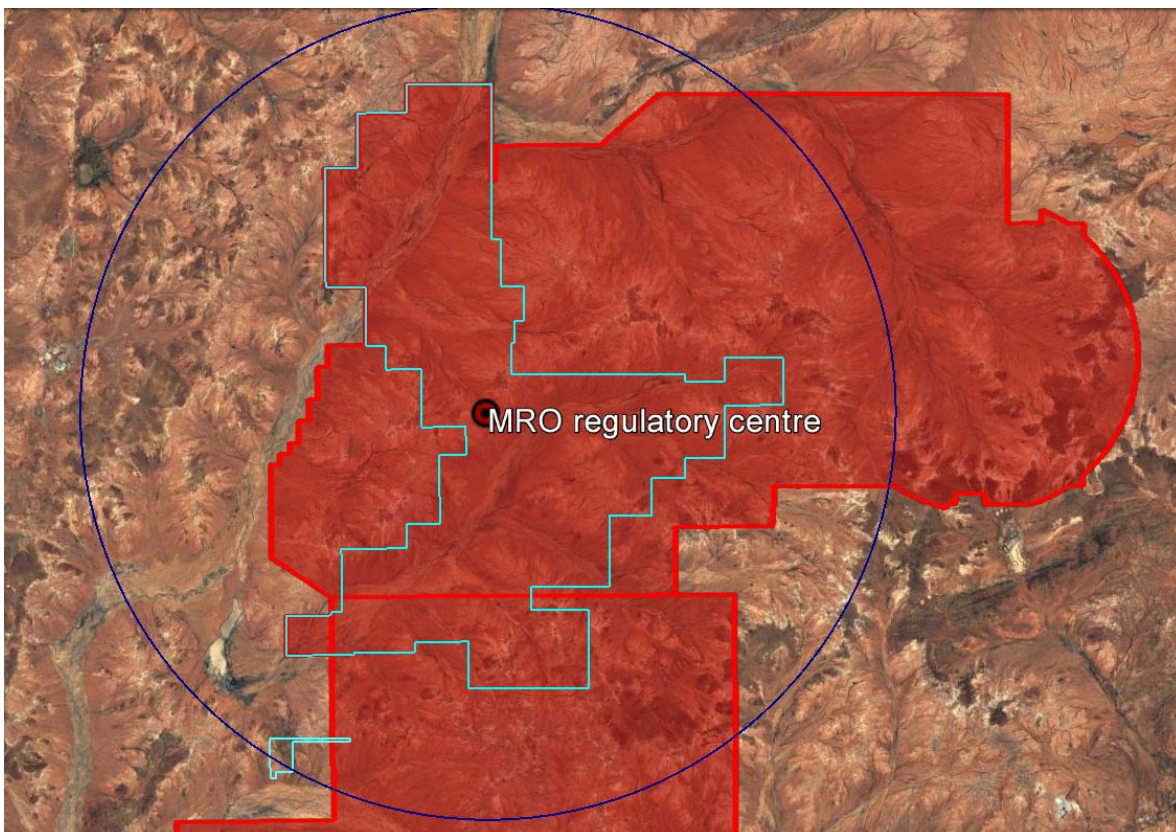


Figure 6 – Section 19 zone around the Observatory.



## 10 Health, safety and environment

Preservation of the health and safety of visitors and workers on the Observatory, and of the natural environment (health, safety and environment, HSE), is paramount. As a CSIRO site, the Observatory's HSE policy (**HSE Management Plan MROSE-10**) is based on CSIRO's HSE policies and procedures. While each occupant is responsible for establishing HSE policies specific to their site licence areas, the Observatory's HSE Management Plan provides a framework for each occupant's policies to work with each other.

This section provides an overview of the **HSE Management Plan (MROSE-10)**.

All activities conducted on the Observatory are to be undertaken in compliance with relevant HSE policies, procedures, plans and legislation. This applies for all types of work undertaken by staff, contractors, consultants, service providers and transport operators and it applies to visitors.

No activities are to be undertaken on the Observatory unless worksite inductions have been completed. All personnel undertaking activities on the Observatory are to be adequately supervised and must be suitably qualified and trained to perform the activities they are undertaking.

Prior to any work commencing, evidence of the following being in place and maintained will be provided to the relevant Occupant contract manager and be available to be inspected by Site Entity personnel on request.

- A commitment to comply with the **HSE Management Plan (MROSE-10)** and the lawful direction of Site Entity staff.
- The contractor's HSE plans. The Site Entity requires a Job Safety and Environment Analysis (JSEA) for all activities and a Safe Work Method Statements (SWMS) for all high-risk activities.
- Workers compensation insurance.
- Accident and personal injury insurance.
- Public liability insurance.
- Professional indemnity insurance, if applicable.
- Any required licences for the work being undertaken.

## 11 New facilities or activities

Proposals for new facilities on the Observatory, or new activities to be performed by a potential new occupant or an existing one (where the proposed activity is beyond the scope of 'business as usual' as defined in the Occupant's operations management plan) must apply to the Site Entity for approval. No on-site activity can commence until written approval from the Site Entity has been received. Applicants are encouraged to consult with the Site Entity early in their planning so appropriate advice may be given.

The level of approval required will depend on the size, nature and potential impacts of the proposed facility or activity. For example, short visits by VIPs or occupant guests, minor modifications to

existing facilities or activities (such as maintenance or replacement of fixtures), can be granted approval by the Site Entity Lead or their delegate.

The Site Entity will first conduct an 'in-principle' assessment of proposals to determine the likely level of approval required. The amount of time for this initial assessment may vary from approximately 15 business days for small-scale activities where the expected RFI impact is acceptably low, to at least eight weeks for more major activities, and many months for major new facilities. Proponents should consult early with the Site Entity regarding the likely timescale for the initial assessment of their proposal.

Proposals may be assessed against a range of criteria, including compliance with existing leases and licences, impacts on the land, impacts on existing telescopes and facilities, compatibility with long term planning, and other criteria such as community impacts and benefits. The Assessment of radio quiet impacts will be a common requirement: the **RFI Management Plan MROSE-07** contains details.

While the Site Entity will make every reasonable effort to expedite the approval process, some applications may, of regulatory necessity, require complex assessments. Proponents should also note that the Site Entity is obliged under, for example, the Collaborative Agreement with the WA Government (**Section 6.5**), to consult over proposals for new facilities. Approval should not be assumed.

The procedure to have proposals for new facilities or activities assessed is as follows:

1. Proponent applies to the Site Entity for in-principle assessment of their proposal (**Appendix B**).
2. Proponent is notified in writing whether their proposal can proceed or whether further approvals are required.
3. If further approvals are required, the Site Entity will advise what they are (for example environmental, Indigenous or radio quiet), and what steps the proponent must take to secure them. It is then the proponent's responsibility to acquire all required approvals and provide appropriate evidence to the Site Entity or supply all required information for the Site Entity to seek approvals, for example in the case of clearing permits.
4. Once all approvals are in place, proponents will be notified in writing by the Site Entity that their proposal can proceed. No on-site activity is permitted to take place before written approval is received from the Site Entity.
5. The proponent can then proceed to make necessary arrangements for their activities. Proponents are responsible for ensuring all necessary inductions and training is undertaken before on-site activities commence.

Formal approval is not required for activities to address emergency situations involving preservation of life, potential damage to property or the environment, or urgent repairs to prevent major equipment damage. Communication to the Site Entity of what occurred as soon as practicable is essential, and a summary of such activity will be required after the fact to document any impact.

# Appendix A MROCC Terms of Reference

## Goal

MROCC allows all occupants to share information with the goal of:

- reporting incidents and sharing lessons learned
- celebrating achievements
- minimising impacts on each other
- maximising opportunities for joint contracting and achieving economies of scale
- communicating needs
- sharing opportunities for outreach or stakeholder engagement.

## Terms of reference

- Provide an information forum to advise the Site Entity on matters related to the Observatory, including current and proposed projects, accommodation availability and site security.
- Coordinate productive discussions to strive to achieve consensus on principles and protocols for Observatory use to guide Site Entity decision making and production of regulatory documents.
- Provide a forum to disseminate relevant regulatory or advisory documents related to the Observatory.
- Serve as the official mechanism to bring to the attention of the Site Entity issues that may be impacting operation of the instruments or supporting infrastructure.

## **Appendix B Application form for new facilities or activities**

Proponents of new facilities or activities on the Observatory must apply to the Site Entity using the form that follows on the next page.

No on-site activity can commence until written approval from the Site Entity has been received. Approval should not be assumed.

## Proposal for new facility/activity on Inyarrimanha Ilgari Bundara, the CSIRO Radio-astronomy Observatory

Contact point/submission email address: [mrose@csiro.au](mailto:mrose@csiro.au)

Please fill out the form below and send to the email address above.

Proposed project/activity name:

Applicant's primary contact details. Please provide name, affiliation, phone and email:

Describe the proposed project/activity. Identify the project start date and duration. Does the project consist of activities falling under an existing site licence or sub-licence? If the project/activity is to be undertaken under contract to CSIRO, please identify the contract and requesting officer.

What is the science or engineering case for the project/activity, and why does it need to be on this observatory?

What is your proposed schedule for installation/operations/lifetime of the project/activity? An attachment may be used instead of this text box if required.

Where on the Observatory will the project/activity be located? Please provide a clear description of the location, with latitude and longitude co-ordinates. How much land area will it cover?

Are there existing surveys (such as environmental, heritage or geological) that provide initial information relating to the location of the proposed activity?

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**Additional Information:** Are you aware of any other impacts your project/activity may have on the site? Do you request any equipment, facilities, or manpower support from CSIRO? If so, please describe your request below. Please provide any additional information below to enable the Site Entity to assess your proposal.

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If you already have evidence of compliance with relevant policies and procedures relating to health, safety, the ILUA guidelines and environmental protection please provide evidence with this application. For minor activities, a Job Safety and Environmental Assessment (JSEA) will suffice (if necessary, please contact the Site Entity for an example JSEA). For larger projects, or those involving excavation, building works or the use of heavy equipment, please discuss requirements with the Site Entity.

The result of this assessment will be notified to you in writing. The Site Entity will advise you at that time of any further approvals/assessments that are required. For example, assessment of radio quiet impacts (as detailed in the **RFI Management Plan MROSE-07**).

No activity related to your proposal is permitted to commence on the Observatory before written final approval is provided by the Site Entity.

Office Use only:

Project submission ID number	
Approval Date/Time	
Approver name and signature	
Comments/notes	



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**For further information**

**Inyarrimanha Ilgari Bundara**  
**The CSIRO Radio-astronomy Observatory**  
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