



# Murujuga Rock Art Strategy: Government response to the Interim EQC

May 2025

The release of the **Interim Environmental Quality Criteria** (Interim EQC) marks a major milestone for the implementation of the Murujuga Rock Art Strategy and protection of the rock art at Murujuga.

The Interim EQC set the initial levels of airborne substances which are considered safe for the rock art. In the final years of research, the scientists will refine and determine final EQC, against which monitoring results will be compared to ensure the long-term protection of the rock art.

The Strategy commenced in 2019 and set out the management framework that would be implemented to provide a transparent, risk-based and adaptive framework for monitoring and managing environmental quality to protect the rock art on Murujuga from emissions (ie. anthropogenic emissions).

The ultimate environmental objective under the Strategy is the maintenance of environmental quality and to ensure the long term preservation and protection of the rock art, such that weathering of petroglyphs is not accelerated beyond natural rates by anthropogenic emissions.

These Interim EQC provide the first important steps toward setting the benchmarks (expressed as ‘guideline’ criteria and ‘standard’ criteria) against which environmental monitoring data are compared, to determine the extent to which environmental quality objectives are being met, and whether a management response is required. See our **Frequently Asked Questions** (below) for more information on how this works.

The interim guidelines and standards are based on the first two years of studies and will be refined over time as more data and information becomes available. The results and data from monitoring studies in years three and four will inform the final, scientifically robust guideline and standard values that support implementation of the management framework.

The *Murujuga Rock Art Monitoring Program: Monitoring Studies Technical Report 2024*, and Interim EQC provide a robust information source on the current state of air quality in the Murujuga airshed and rock art condition. The monitoring data shows that current ambient concentrations of nitrogen dioxide, sulphur dioxide and ammonia meet (are below) the interim guidelines recommended by the scientific team. The WA Government has confidence that there is an acceptably low risk of impact on the rock art from current industrial emissions.

Regular reporting against the Interim EQC commences in 2025. The WA Government, in partnership with the Murujuga Aboriginal Corporation (MAC), will continue routine monitoring and assessment of ambient air quality. This work includes monitoring for any emerging trends and continuing to prepare for the establishment of the longer-term monitoring program, including establishing the reporting processes and methods under regulations, as well as

supporting MAC to lead the delivery of the ongoing monitoring program. As long as ambient air quality continues to meet the interim guidelines, other management responses are not required.

The obligations of approval holders under Part IV and Part V of the *Environmental Protection Act 1986* (WA) and under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) continue unchanged.

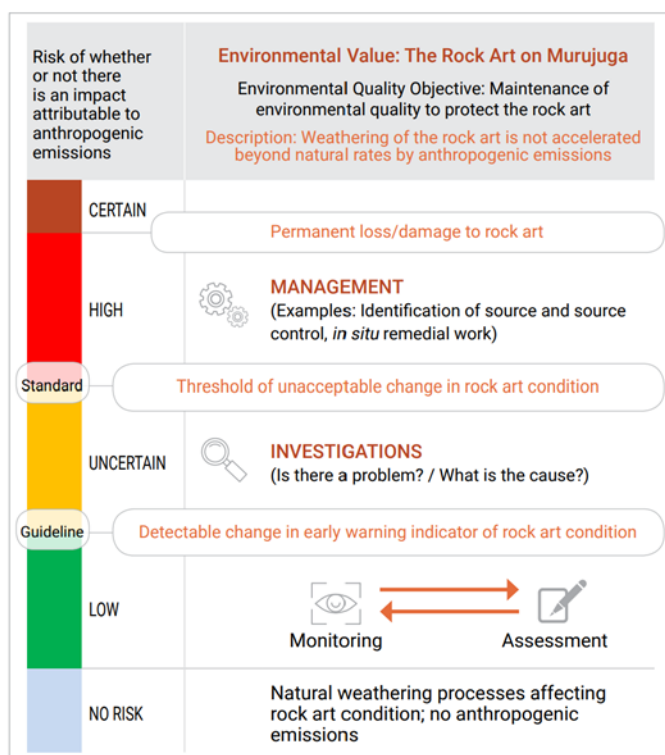
## Frequently asked questions

### Murujuga Rock Art Strategy management framework and Interim EQCs

#### How does the Environmental Quality Management Framework work?

The management framework is set out in the **Murujuga Rock Art Strategy**. It provides managers and decision-makers with information to support the implementation or amendment of management actions before permanent loss or damage to the rock art occurs.

The values assigned as interim guidelines and standards are used to compare against environmental monitoring data. How the monitoring data compares will determine the management response, as indicated in the following figure:



## What are ‘guidelines’ and ‘standards’?

There are two types of EQC: environmental quality ‘guidelines’ and environmental quality ‘standards’.

Guideline values are set to provide early warning of potential environmental effects; while standards are set further along the pressure/response (cause/effect) pathway, and are used to indicate when the level of risk is no longer acceptable, triggering a management response to prevent potential environmental harm.

With the risk-based approach, several standards are expected to be established following further research from the Murujuga Rock Art Monitoring Program, which will give greater certainty of whether an effect has or has not occurred (multiple lines of evidence).

## Why do we only have ‘interim’ criteria?

When the Murujuga Rock Art Strategy (the Strategy) was developed, there were no existing or default guideline ‘trigger values’ for protecting engraved rock art from anthropogenic emissions that could be adopted as Environmental Quality Criteria (EQC).

This is why the Strategy initiated a staged approach to the design and implementation of the Murujuga Rock Art Monitoring Program. The current research phase is focused on laboratory and field based studies to develop guidelines and standards based on the best available scientific information. This will then enable implementation of the Environmental Quality Management Framework and inform the design of the ongoing monitoring program.

The monitoring studies report has provided enough initial data for scientists and Government to develop ‘Interim EQC’ as a preliminary measure. The EQC will be further refined as more information becomes available from the research. The application of the precautionary principle outlined in the objects of the *Environmental Protection Act 1986* is relevant to the consideration of a management response with the best available scientific information at this time.

It is anticipated that the interim guidelines and standards will be refined over the final years of the study period. As more data and information become available, the interpretation of the monitoring data against the criteria will be an important step in refining the criteria where there is a significant degree of uncertainty. If criteria are too stringent, they may trigger unwarranted concern; if too lax, they may fail to identify problems before they become very difficult or too late to rectify. Incorporating a feedback process is an important outcome of monitoring and assessment.

## Are the EQC enforceable?

It is important to note that criteria define the scientifically-based limits of ‘acceptable’ change to environmental quality. They do not represent pollution levels that trigger enforcement action if exceeded; nor do they infer it is acceptable to ‘load up’ the environment to these levels.

Avoidance and minimisation strategies should always be adopted, and the WA Government encourages continual improvement in emissions management wherever practicable.

Pollution levels which do trigger enforcement are set out in the conditions of approval granted under Part IV and Part V of the *Environmental Protection Act 1986* (EP Act, WA) or under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) (Cth).

The WA Government's management response to exceedances of the **final guidelines or standards** will be in accordance with the Environmental Quality Management Framework set out in the Strategy. The Environmental Quality Management Framework does not replace the requirements of individual approvals granted under Part IV and Part V of the EP Act (WA) or under the EPBC Act (Cth).

## How does the WA Government regulate pollution emitted by industries at Murujuga?

Existing and proposed industry operating on Murujuga is regulated under the *Environmental Protection Act 1986* (EP Act).

Approvals under Part IV of the EP Act for operations at Murujuga have included conditions to protect the rock art, including to ensure that no air emissions from the proposal have an adverse impact accelerating the weathering of rock art within Murujuga beyond natural rates.

Emissions and discharges from prescribed premises listed in Schedule 1 of the *Environmental Protection Regulations 1987* are also regulated through works approvals and licences under Part V Division 3 of the EP Act. Works approvals and licences are subject to conditions that aim to prevent unacceptable impacts to the environment and public health.

When necessary, DWER undertakes licence reviews (as outlined in the [Guideline: Industry Regulation licence reviews](#)) to ensure the licence remains up to date with current regulation and relevant policy, and continues to effectively identify and manage the contemporary potential risks of activities authorised by the licence to the environment and public health. DWER may amend a licence at any time to:

- vary the conditions which apply to a licence;
- remove redundant conditions; or
- impose new conditions and requirements where necessary.

It is an offence under the EP Act to fail to comply with the conditions of Ministerial Statements, works approvals and licences. The WA Government actively monitors compliance with conditions and responds to non-compliance under its [Compliance and Enforcement Policy](#).