

McArthur River mine: the making of an environmental catastrophe



[Originally published as *McArthur River Mine: Monumental Regulatory Mess* in *Land Rights News* – Northern Edition, January 2015](#)

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The land and its people

The McArthur River rises in the Barkly Tableland and flows about 240 kilometres north to its mouth in the Gulf of Carpentaria. In the dry season the upper part of the river becomes a chain of pools but during the mighty northern monsoon the river becomes a great torrent, carrying about 4.2 cubic kilometres of water into the Gulf. The landscape is harsh but provides refuge for native species, many of them significant, vulnerable or endangered, such as the orange horseshoe bat, ghost bat, Gouldian finch, purple crowned fairy wren, Carpentaria grass wren and hooded parrot. One vulnerable species, the freshwater sawfish, Australia's largest freshwater fish, inhabits the middle and upper reaches of the river and finds refuge in the river's dry season pools. There are also flora values of international and national significance in the region.

The Sir Edward Pellew Islands, an archipelago of five large islands and myriad of islets covering more than 4000 km² of land and sea, lie opposite the mouth of the McArthur River. These bare, rocky islands provide a refuge for fauna that has disappeared from the mainland. The endangered Carpentarian antechinus, once widely distributed on the mainland, is found nowhere else. The shallow seas at the mouth of the river shelter dugong, flatback turtle and green turtle. The nationally endangered little tern occurs here and the inshore waters provide essential habitat for migratory wading birds from the northern hemisphere. The Pellew Islands and surrounds were listed on the former National Heritage register because of their outstanding natural values.

The McArthur River region is the traditional country of the Yanyuwa, Garawa, Mara and Gurdanji people. They hunt and forage over the land, fish in the rivers and sea, use the natural resources of the country and protect its sacred sites. They have resisted European invasion since the violence and dislocation of the "Wild Times" brought by the Queensland overlanders in the 1880s.

The McArthur River mine is one more chapter in the history of that invasion, although now the weapons of the coloniser are the *Mining Management Act*, mining management plans and special legislation. The McArthur River ore deposit and the mine have been central to government policy and action in the region for almost 40 years. Determined to see a mine go ahead, successive governments have suppressed, by whatever means were at hand, the attempts of Aboriginal people to control their traditional land and sea country. Aboriginal traditional owners have been subject to governmental pressure, obstruction and chicanery at almost every turn. They now face a new fight to protect their river and its natural habitat from an environmental disaster caused by miners and governments.

Land claims and legal chicanery

The HYC (Here's Your Chance) lead-zinc deposit on McArthur River station near Borroloola was discovered by Mount Isa Mines in the 1950s. It was reportedly the largest lead-zinc deposit in the world but was uneconomic to develop with existing technology. Nevertheless, Mount Isa Mines developed proposals for a railway from the mine and a town and a port in the Sir Edward Pellew Islands.



Against this background the first land claim under the new *Aboriginal Land Rights (Northern Territory) Act (ALRA)* was launched in 1977 by Yanyuwa claimants to unalienated Crown land surrounding Borrooloola and to the Sir Edward Pellew Islands. The land claim was actively opposed by the Northern Territory government and Mount Isa Mines. Evidence from the claimants was heard before a largely hostile audience of local Europeans and government and mining representatives in a hall at Borrooloola. There was little effective use of interpreters. There were no site visits to the islands under claim. The claimants found the process an ordeal¹.

In 1978 the Aboriginal Land Commissioner, Justice Toohey, recommended a grant to the traditional owners of the land around Borrooloola and to West Island and Vanderlin Island at the western and eastern extremes respectively of the Sir Edward Pellew Islands archipelago. He refused to recommend the grant of the islands in the centre of the archipelago: Southwest Island, Centre Island and North Island, on the ground that the Yanyuwa lacked sufficient strength of traditional attachment to this part of the claim area. These islands were the core of the claim and were most accessible to the Yanyuwa. The part of the claim excluded from the recommendation was land Mount Isa Mines planned to use for a railway, town and port.

The Yanyuwa claimants, bitterly disappointed by the partial failure of their claim, lodged a repeat claim in 1979 (permitted under the ALRA subject to certain criteria) over the islands excluded from Justice Toohey's recommendation. The Northern Territory government tried to defeat that claim by declaring the area to be the "Town of Pellew" ("land in a town" was exempt from claim under the ALRA), although at the time the only artificial structure in the area was a meteorological observation facility, and, in an apparent attempt to bolster the "land in a town" argument, by purporting to sell vacant blocks on the land under claim on Centre Island. The consent of the claimants was not sought nor were they consulted about these steps. The government's attempts were later defeated by a decision of the High Court holding that land under claim could not be alienated or removed from the jurisdiction of ALRA before the determination of the claim².

The repeat claim was heard in 1992 on the Pellew Islands. One of the Northern Territory's own witnesses described the port as "mythical". The claim was successful but Yanyuwa traditional owners had to wait until 1996 for the Land Commissioner to recommend the grant of their land to them. After a further 10 years of negotiation and delay, largely due to the need to resolve the interests of the Centre Island "owners", the land was granted to the Yanyuwa in June 2006.

The mine goes ahead

In 1992 Mount Isa Mines announced it was going ahead with the McArthur River mine. In early 1993 the Northern Land Council, acting on behalf of the Yanyuwa traditional owners of the McArthur River mouth and the Pellew Islands and the Gurdanji traditional owners of the mine site, wrote to the Northern Territory and Commonwealth governments seeking to be heard on aspects of the proposal, particularly social impacts on the Aboriginal people at Borrooloola and environmental impacts on the McArthur River. The letter was ignored.

The Keating government did not respond until the Northern Land Council wrote again, threatening to challenge the validity of the mining approvals based on a claim of native title (recognised by the High Court a few months before in the *Mabo* decision). The Commonwealth government, reportedly determined to reassure foreign investors after the Guratba/Coronation Hill decision, then decided to "fast track" the proposal and a team of senior officials from the Department of Prime Minister and Cabinet were appointed for the purpose.

The Commonwealth offered inducements to the Aboriginal groups not to oppose the mine: Bauhinia Downs pastoral lease was purchased for a group of the Gurdanji traditional owners, a 25% interest in the ore trucking business run by Burns Philp was purchased for the benefit of the Aboriginal

¹ John Bradley, *Warnarrwarnarr-Barranyi (Borrooloola 2) Land Claim Submission*, Northern Land Council, 1993.

² *R v Kearney; Ex parte Northern Land Council* (1984) 158 CLR 365.

community at Borroloola with funds borrowed from the ATSI Commercial Development Corporation and there were some Aboriginal employment guarantees.

Aboriginal people were divided about whether to oppose the project. The Yanyuwa, in particular, whose traditional country included the lower reaches of the McArthur River and the Pellew Islands were concerned about potential environmental impacts on the river and asked for continuing and public environmental monitoring of the impact of the mine on the McArthur River. The Northern Territory government and Mount Isa Mines refused to consider this.

The Commonwealth and Northern Territory governments ratified the mining approvals with special legislation and the underground mine went ahead. The “mythical port” was never used and the ore was trucked to a barge at Bing Bong on the mainland and then to ships offshore.

The open pit proposal is rejected on environmental grounds

In 2002 McArthur River Mining (by now owned by Xstrata) proposed open cut mining. It wished to mine the ore body by diverting the river and digging an open mine pit in the bed of the river. The river was to be diverted by a giant 5.5 kilometre channel around the pit and a levee wall 80 to 100 metres wide and 6 to 60 metres high constructed to keep out the McArthur River’s huge wet season flow.

On 23 February 2006 Marion Scrymgour, the Environment Minister in the Martin Labor government, refused to recommend the river diversion to the Minister for Mines and Energy. Her press release, referring to an assessment by the Northern Territory Environment Protection Agency (EPA), said:

The assessment concludes that there are significant uncertainties over the long term environmental impact associated with diverting the McArthur River and managing an open mine pit in the river flood plain. The proposal does not therefore meet the test of sustainability – the EPA’s assessment provides a compelling argument for caution. That is the basis of my decision.

The NT government rejected the proposal. MRM and contractors mounted a noisy publicity campaign to reverse the decision. Prime Minister John Howard wrote to Chief Minister Clare Martin demanding that the mine be allowed to go ahead. The Labor government quickly caved in and invited MRM to enter further “discussions” and to submit an amended proposal. The EPA remained critical of the proposal:

... the proponent had adopted a similar approach to that taken in the previous EIS and Supplement. That is, rather than taking action to minimise longer-term environmental impacts of operations, it proposes to wait to see what impacts occur and then take remedial action. This is not best practice... taking a precautionary and best practice management approach will potentially raise the level of capital investment required to commence operations.... The proponent places a high value on avoiding/deferring such expenditure.... There is likely to be a significant regulatory cost for Government to ensure that the on-going performance of post-operations systems is adequate. The proponent’s approach of remediating environmental issues if and when they arise rather than investing in comprehensive preventative measures has the potential to shift the risk associated with dealing with any long term environmental damage from the proponent to Government.

The EPA noted that the removal of 5 km of natural riverine vegetation would create a barrier to the movement of wildlife and a highly visible scar in the landscape. There was a significant risk that it would not be possible to revegetate to mitigate these risks. There was a significant risk that contaminated seepage from the mining and milling operations would enter regional groundwater. The indigenous population of Borroloola remained strongly opposed to the river diversion despite commitments by the company to invest in community infrastructure.

The Environment Minister considered the amended proposal. She noted that the proposed tailings facility would not be accepted in Victoria or Queensland. She recommended, if the open pit was approved, that there be conditions for a substantial environmental bond, a properly researched and managed program for revegetating the river, proper management of contaminants from the mine site and tailings facility well beyond the projected life of the mine, the establishment of a mine

funded monitoring and regulatory agency and a legal agreement or legislation to provide social benefits for the Gulf community.

On 13 October 2006 the NT Minister for Mines and Energy, Chris Natt, approved the conversion of the mine to an open pit. The new mining management plan incorporated the conditions recommended by the NT Environment Minister, including independent monitoring of the mine's environmental impacts. On 17 October the Commonwealth Minister for Environment and Heritage, Liberal Senator Ian Campbell, exercising his statutory responsibilities for the freshwater sawfish, a listed threatened species under the *Environment Protection and Biodiversity Conservation Act*, granted approval to operate an open cut mine.

In 2006 a leaked NT Treasury document showed the mine had never made a profit or paid a royalty to the NT Government. The leaked document also revealed that the NT Government had given MRM a subsidy of \$5 million a year for electricity since the mine commenced in 1995 and that the subsidy was expected to worth almost \$100 million over the life of the mine.

NT Supreme Court declares the open pit approval is invalid

The Gurdanji, Garawa, Yanyuwa and Mara people almost immediately challenged the validity of the NT mines minister's open pit approval in the NT Supreme Court on a number of grounds including that the *Mining Management Act* required a new mining authorisation rather than a mere amendment of the mining management plan. This argument succeeded and the court found the approval was invalid³. The NT Government and MRM appealed.

Rather than wait for the outcome of the appeal the Martin Labor government immediately passed legislation to overturn the Supreme Court decision. The invalid authorisations and mining management plans were declared valid for all purposes, retrospectively and prospectively. The legislation closed off the further challenge to the mine approvals on any ground including the insufficiency of the environmental approval process. Support for the legislation was not unanimous within the Martin government. Three Aboriginal MLAs crossed the floor and voted against the bill: Malarndirri McCarthy, a Yanyuwa woman from Borroloola, and Karl Hampton and Alison Anderson.

The Full Court of the NT Supreme Court allowed the appeal but only because the special legislation declared the approvals were valid and could not be challenged in any court. It followed that the appeal must succeed.

A further legal challenge in the Federal Court

At the time of the challenge to the mining authorisation in the NT Supreme Court the Yanyuwa, Gurdanji, Garawa and Mara people also challenged the approval of the open pit mine proposal by the Commonwealth Minister for Environment and Heritage in the Federal Court. Their grounds included that the Minister was required to take into account the conditions imposed by the Northern Territory for independent monitoring but failed to do so. The Aboriginal applicants were initially unsuccessful⁴ but their appeal to the Full Court was upheld. On 17 December 2008 the Full Court quashed the Minister's decision and ordered that the decision must be made again according to law⁵.

Work on the open cut stopped.

On 22 January 2009 Peter Garrett, the Labor Federal Minister for Environment and Heritage, re-exercising the statutory power invalidly exercised by his predecessor, Senator Campbell, gave conditional approval to the open cut proposal, subject to a 10 day consultation period. The Northern Land Council urged him to reconsider the entire approval process in view of its serious shortcomings.

³ *Lansen v NT Minister for Mines and Energy* (2007) 20 NTLR 6, [2007] NTSC 28.

⁴ *Lansen v Minister for Environment and Heritage* (2008) 102 ALD 558, [2008] FCA 903.

⁵ *Lansen v Minister for Environment and Heritage* (2008) 174 FCR 14, [2008] FCAFC 189.

He rejected that submission and approved the open cut on 20 February 2009 subject to further conditions in relation to monitoring freshwater sawfish and migratory birds.

Work at the mine resumed.

Mine management fails to remedy persistent environmental problems

The annual independent monitoring reports imposed as a condition of the open pit approval began in 2008. The reports, initially prepared by Environmental Earth Sciences Pty Ltd, described increasingly complex and persistent environmental problems at the mine. Some serious problems such as seepage from the tailings storage facility (TSF) have remained unrectified over years. The December 2008 report highlighted the need to monitor and assess seepage from the TSF into Surprise Creek, one of the tributaries of the McArthur River. The August 2009 report described the same problem which was now said to require “urgent investigation”. The August 2010 report described the TSF seepage “migration” as “significant” which required “corrective action”. Excess water storage in the TSF was said to pose a risk of overtopping and embankment failure. The October 2011 report “strongly recommended” rectification of seepage from the TSF and said that the volume of water stored in the TSF created an “extreme risk” of the failure of the TSF embankment. Further, the “visual method” of classification of non-acid forming (NAF) and potentially acid forming (PAF) waste rock was said to require “immediate action” as it posed the potential for misclassification. The report noted that progress was slow on revegetating the McArthur River diversion and the inadequacy of reporting of many routine monitoring programs. The October 2012 report noted “key areas of concern” as seepage from the TSF into Surprise Creek, the volume of water stored in the TSF, the revegetation of the McArthur River diversion and the identification and management of the PAF rock waste. There was no report in 2013.

Northern Territory approves mine expansion

In 2013, despite this unsatisfactory environmental record, after an Environmental Impact Assessment process under the *Environment Assessment Act* (NT) the Northern Territory government approved the so-called Phase 3 expansion of the McArthur River mine. The expansion will more than double the mining rate from 2.5 million tonnes to 5.5 million tonnes of ore per annum, expand the footprint of the pit from 1.45 km² to 2.1 km², increase its depth from 210 m to 420 m, expand the TSF and expand the waste rock dump to store an additional 530 million tonnes of rock, a total of 715 Mt for the life of the mine to 2036. The waste rock dump will cover more than 11 square kilometres, be 80 metres high and become a permanent part of the landscape⁶.

In February 2014 MRM put forward its proposed mining management plan for 2013 – 2018. The mining management plan included a reclassification of the waste rock from less than 25% PAF, with the remainder being NAF, to more than 50% PAF with total PAF and AMD (acid and/or metalliferous and saline drainage) waste rock constituting up to 89%⁷ of the total waste rock mined.

NT Environment Protection Authority calls for new EIS

After the reclassification of the waste rock the NT Environment Protection Authority (NT EPA) decided that a new Environmental Impact Assessment was required for the disposal of the waste rock. It was also given information by the NT Department of Mines and Energy (DME) suggesting that MRM had already placed 10.2 million m³ of non-benign rock below the 100 year flood levels⁸.

⁶ *Overburden Emplacement Facility Management Plan*, Metserve Mining and Energy Technical Services Pty Ltd, Jan 2012, p 1, mrmindependentmonitor.com.au/downloads/, accessed 23.12.14.

⁷ Northern Territory Environment Protection Authority, *Terms of Reference for the preparation of an Environmental Impact Statement – McArthur River Mine Overburden Management Project*, September 2014, www.ntepa.nt.gov.au/environmental-assessments/assessment/register/mcarthur-river-mine-overburden, accessed 1.1.2015.

⁸ Northern Territory Environment Protection Authority, *Statement of Reasons – McArthur River Mining Overburden Project*, 10.7.2014, www.ntepa.nt.gov.au/data/assets/pdf_file/0019/353440/statement_reasons_mrm_overburden.pdf,

In June 2014 a delegate of the Commonwealth Minister for the Environment decided that the waste rock disposal was a controlled action and would require assessment and approval under the *Environment Protection and Biodiversity Conservation Act*.

After visiting the mine site on 16 July 2014, the NT EPA found⁹ there were significant risks associated with the following:

- significantly increased volumes of problematic waste rock;
- the inappropriate design of the existing waste rock dump to adequately contain the problematic material;
- insufficient quantities of suitable material available to encapsulate the problematic waste rock and to cap the overburden emplacement facility (OEF), and to construct the expanded TSF and water management containments; and
- significant water management challenges associated with exposure of problematic waste rock during Wet seasons.

In September 2014 the NT EPA published comprehensive terms of reference for the new EIS which recognized the very serious environmental risks posed by the mine¹⁰. The terms of reference expressly required consideration of the early closure of the mine.

MRM has not been given a time limit for completion of its EIS.

In the midst of this surprising and alarming turn of events the management of the NT EPA issued a media release, "NT EPA engages with clients and partners", referring to its visit to the mine site and meeting with mine management on 16 July 2014. The media release described the matters relevant to the mine in the following terms:

... the members of the NT EPA found the tour of the mine operations to be very informative.

The MRM senior representatives demonstrated a strong commitment to environmental management at the site, and its associated facilities and surrounds. They also demonstrated an enthusiasm to engage and to share ideas ...¹¹.

Surprisingly the media release contained no hint of the real purpose of the visit to the mine site: an assessment of the consequences of the dramatic failure of the previous waste rock classification and OEF design by MRM and the profound risk that failure posed to the environment. The internal responses of the NT EPA to the waste rock reclassification, the requirement for a new EIS and the development of comprehensive terms of reference for that EIS have been appropriate. However, the soothing tenor of the media release and subsequent failure of the NT EPA to publicly acknowledge the seriousness of the issues it identified at the McArthur River mine are disturbing. The NT EPA and the elected members of the Northern Territory government have failed in their responsibility to properly inform the public, particularly the people of Borroloola, about the risks posed by the mine and to explain how those risks will be addressed. This gives rise to a suspicion that there are elements in government who view this responsibility as subordinate to the interests of MRM and the mining industry.

The 2014 Independent Monitor Report

The grave problems at the McArthur River mine were not made public until the release in October 2014 of the Independent Monitor Environmental Report by the ERIAS Group. The report catalogued the serious and persistent environmental problems at the mine and MRM's failure to remedy them.

accessed 29.12.14. Placing of PAF waste rock below 100 year flood levels is environmentally undesirable and might be expected to be a breach of mining management plans. The plans are not made public.

⁹ Above n7.

¹⁰ Ibid.

¹¹ www.ntepa.nt.gov.au/news/2014/nt-epa-engages-with-clients-and-partners, accessed 29.12.14.

The report identified unrectified problems from previous years: uncontrolled seepage from the TSF, risk of failure of the TSF embankment and the failure of revegetation and continued erosion of the McArthur River diversion. In addition there were new problems: spontaneous combustion of the pyrite (iron disulfide) in the waste rock (which has remained burning for a year or more), sending toxic sulphur dioxide fumes into the atmosphere and affecting the inhabitants of a nearby Aboriginal outstation, and high levels of mine derived lead found in fish near the mine.

The most serious problem described in the report was the one identified by DME and the NT EPA: the failure of MRM, predicted in the October 2011 Independent Monitor's report, to correctly classify the PAF waste rock. In a dramatic escalation of risk assessment the Independent Monitor's report described the risk to the environment from the mine's waste rock and overburden dump as "extreme" with "likely" "catastrophic" consequences involving severe and regional scale environmental impact, local species destruction, extensive clean up involving external resources and lasting for a geological long term of more than 100 years¹².

The report described how MRM's original plan was for the PAF and AMD overburden to be "encapsulated" in benign rock and capped with a layer of clay to prevent water infiltration and erosion. Water infiltration and erosion will likely cause acid, saline and metalliferous drainage. This has the potential for long term damaging impacts on groundwater quality and terrestrial and aquatic ecosystems in the region. Alarming, most of the clay cap failed when tested by the Independent Monitor.

DME, which is the regulator of the mine, responded to the 2014 Independent Monitor's report as follows:

... there is insufficient non-AMD producing material available to construct the waste rock dump as per designs to effectively encapsulate the AMD producing material. It must be noted that at this time MRM does not have a cover design that DME would consider adequate to manage infiltration and erosion over an acceptable time period (hundreds of years). This ... may result in a geotechnically unstable landform with impacts on groundwater, terrestrial and aquatic ecosystems over an extended time period into the hundreds of years.¹³

The environmental risk could hardly be described in more dire terms yet MRM immediately distributed so-called "fact sheets"¹⁴ to the residents of Borroloola and placed large advertisements in the main Darwin newspaper, *NT News*. These were misleading, gave false assurances about the safety of the mine and downplayed the seriousness of the waste rock problem¹⁵.

Need for independent public inquiry

Successive Northern Territory and Commonwealth governments have failed in their responsibility to avoid the risk of environmental damage from the McArthur River mine. This has been the result of deliberate and reckless political choices, ignoring scientific and expert advice. The McArthur River mine has the potential to cause catastrophic environmental damage. The Independent Monitor identified a high risk that MRM's security bond would be inadequate, causing a significant financial impact on the Northern Territory government.

The effectiveness of the Environmental Impact Assessment process in the Northern Territory is doubtful. The history of the McArthur River mine shows that governments are willing to sacrifice the

¹² Independent Monitor Environmental Report 2012 -2013, Schedule 2, p 425, mrm-independentmonitor.com.au/downloads/, accessed 23.12.14.

¹³ *Departmental Response to the Environmental Performance Report*, Department of Mines and Energy, September 2014, p 3, www.nt.gov.au/d/Minerals_Energy/Content/File/news/MRM-DME_Response_Report_2012-2013.pdf, accessed 23.12.14.

¹⁴ www.mcarthurriverrivermine.com.au/EN/Publications/Community%20Info/Independent%20Monitor%20Report%20-%20Fact%20Sheet.pdf, accessed 3.1.15.

¹⁵ These are the subject of a complaint of misleading and deceptive conduct to the Australian Competition and Consumer Commission by the NT Environmental Defenders Office on behalf of Borroloola traditional owners.

health of the environment and of those directly reliant on it, such as the Aboriginal people of the region, to the mining industry and economic interest.

A public commission of inquiry should be set up immediately by the Northern Territory and Commonwealth governments, with an independent and appropriately qualified expert panel, to consider whether the McArthur River mine can be made safe and at what cost. Appropriate rehabilitation measures must be identified. Until then mining should stop.