



INFORMATION DOCUMENT



Baal Gammon
contamination
entering the
beautiful Walsh
River



Baal Gammon Mine Threatens Walsh River Ecosystem and Community

EVENTS TO DATE

Baal Gammon Mine

Baal Gammon Copper Pty Ltd (BGC) is a 100% owned subsidiary of Monto Minerals Ltd and holds the Environmental Authority and the Mining Leases (MLs) 20388 and 20568 which together comprise the Baal Gammon Copper Project (BGCP). In May 2011, Monto Minerals signed a Mineral Resource Agreement for Kagara Ltd to mine the Baal Gammon site. Mining operations commenced in September 2011 as an open cut operation with the ore being trucked through Herberton and processed at the Mt Garnet processing plant.



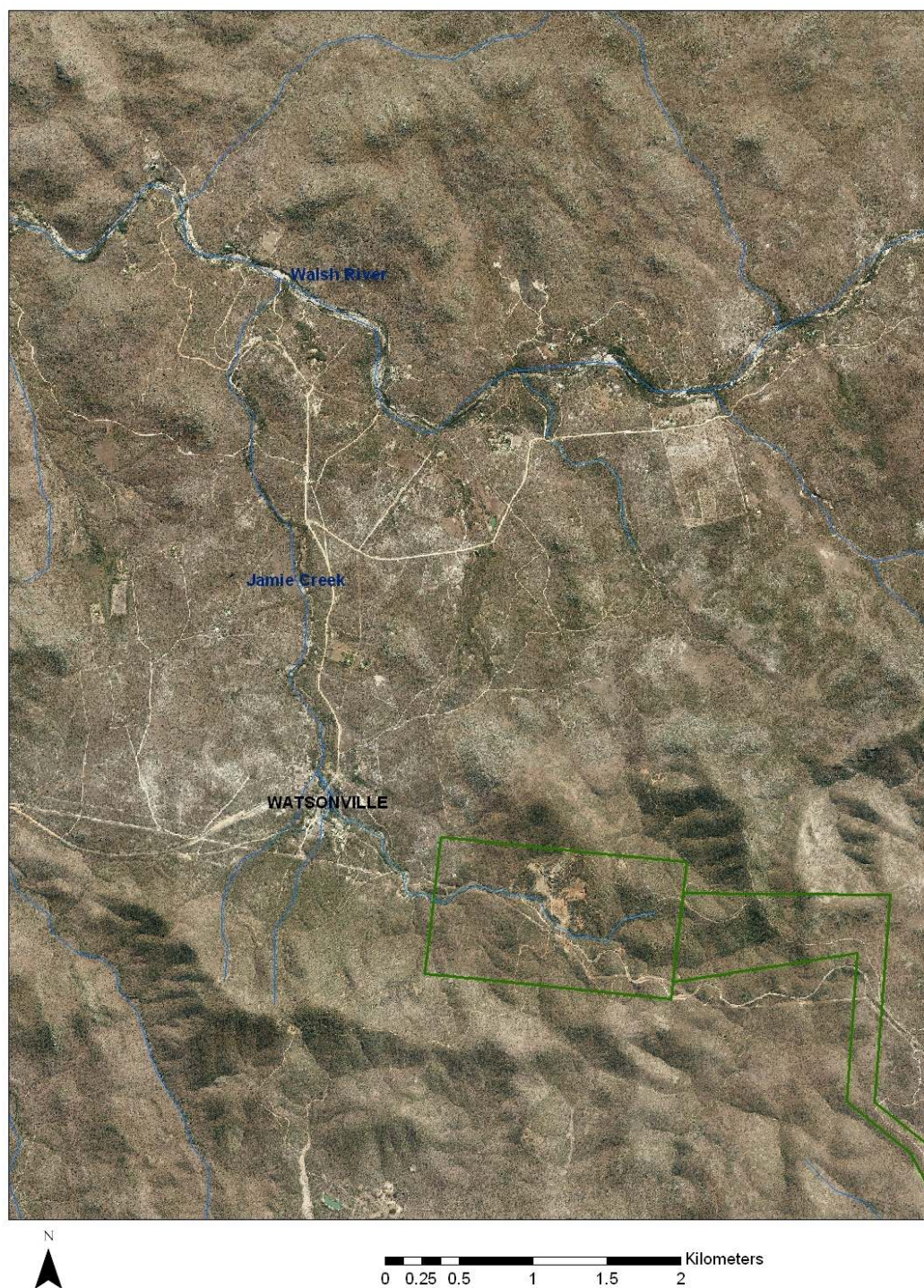
Baal Gammon mine is situated within the water catchment of the upper Walsh River near Watsonville, Atherton Tablelands, Far North Queensland. The Walsh River flows into the Mitchell River, which spans the width of North QLD to ultimately end in the Gulf of Carpentaria.

The mine is situated on a steep hillside of arsenic soils which has Jamie creek running along the bottom. This creek flows approximately 5km before it enters the Walsh River. This area has high runoff, with creeks and rivers flooding quickly and is subject to

torrential wet season rains and tropical cyclones.

Baal Gammon mine potentially impacts waterways from Jamie Creek, the Walsh River, Collins Weir, and the water supplied to downstream irrigators which produce export crops and grazers producing export beef. The Walsh River supplies domestic water and some drinking water to many property owners living in the Watsonville area.

Jamie Creek and Walsh River



Baal Gammon Mine, Jamie Creek and the Walsh River

Baal Gammon Contamination

For the first time, during the 2011 – 2012 wet season, residents living downstream from the mine saw their river run red. It was visible from driving past the cleared mine site after the rain, that the red silt was coming from runoff and erosion on the site.

"I have lived on this river for 20 years and I have never seen the river this red colour in my entire time I have lived here" says resident Sarah Fraser, "Normally when flooding the Walsh River is a milky green colour, not red"



Jamie Creek flooding downstream from Baal Gammon before and after mining



Jamie Creek flooding 09/02/2012

Where Jamie creek enters the Walsh is the most popular recreational swimming spot in area, known by locals as the “beach”. It is especially favoured by families because of its accessibility and its great sandy beach which makes playing safe and easy with young children. Normally a hot spot for locals and visitors alike, the Summer of 2011-2012 saw it eerily deserted, with the onflow affects of the mining activity making this recreational area virtually unusable.

“I have come to the beach countless times over the 20 years that I have been living in the tableland area, for kid’s birthday parties, picnics with my other friends with kids, camping on school holidays and quick swims after school. The last time I went there (mid January, 2012), it was horrible, the normally white sandy bottom was covered in a thick layer of silt, there were pools of yucky red water and where the floods has subsided there were hard red silt covering the rocks and sand. I have not been back since.” Monique Beattie

In February 2012 residents began to see more than just a red river and silt deposits, they also began to find dead fish. The community immediately contacted DERM and made official complaints to the mine itself.

The Environmental Services section of DERM (now in the new Department of Environment and Heritage Protection), which licenses mining under the Environmental Protection Act, took upstream and downstream water quality samples on 8 occasions between 23 February and 3 April 2012. They found levels of contamination in Jamie Creek below the mine for Arsenic, Cadmium, Copper, Manganese, Nickel and Lead that variously exceeded:

- Drinking water standards for humans by as much as 25 times for Arsenic & Cadmium
- Livestock drinking water standards for Cadmium, Copper and Manganese; and
- Some locations even exceeded the safe levels of Arsenic and Cadmium for swimming at the time of sampling.

Although Jamie Creek had already contained high levels of some contaminants as a result of historical mining activities – this spill significantly increased the concentration and type of contaminants found in Jamie Creek.

On the 9th of March Kagara warned affected residents on Jamie Creek and the Walsh River not to drink the water. They were also warned not to use the water for showering or to let their animals drink the water.

Rob Ryan, the MRWMG Treasurer and a mining geologist of many decades experience, visited the site and spoke to Kagara. He was told that the discharge was due to an exceptional rainfall event occurring before earthworks on diversion banks around the disturbed area of the mine had been completed.

The run-off from this rain event ran through the mine area and carried the contaminated red mud material off-site to Jamie Creek. Kagara told DEHP that the contamination occurred 6:00pm on the 5th March but private water tests taken on the 2nd of March show arsenic levels 5 times over Australian drinking water guidelines in the Walsh River downstream from the mine and indicate that the mine was contaminating the creek before the official date Kagara claims. In further support of this, photos of dead fish found in the river were taken on the 15th of February.



Fish found dead in
Walsh River
15/02/2012



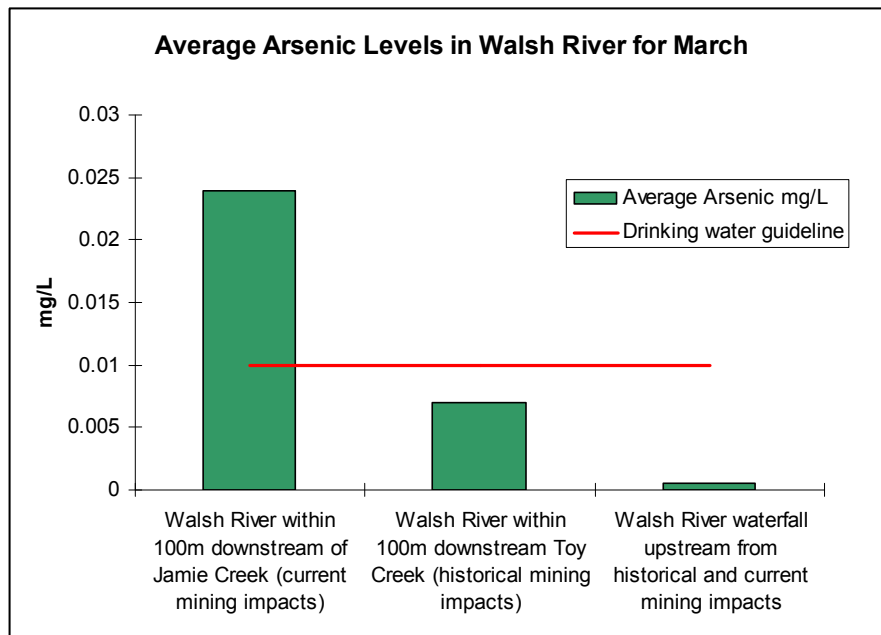
Surface water objectives to protect aquatic life in Australia, for 99% protection from arsenic is 0.0008mg/L. Arsenic levels in the Walsh River downstream from Baal Gammon on the 2nd of March were 0.051mg/L, that's 62 times over the limit. Cadmium levels were recorded 0.0023 mg/L and copper 0.3 mg/L on the 8th of March both incredibly over water quality guidelines for aquatic life.

	99% protection mg/L	95% protection mg/L
Arsenic	0.0008	0.013
Cadmium	0.00006	0.0002
Copper	0.001	0.0014

Australian and New Zealand Water Quality Guidelines 2000 for protection of aquatic life

Residents have observed that there is still no aquatic animal life to this day.

The affects of the contamination were felt as far as Collins Weir. Eye witnesses were shocked to find hundreds of dead fish on a fishing trip to Collins Weir shortly after the contamination. Resulting water tests revealed high levels of arsenic in the weir four times over drinking water standards on the 14th of March.



Average arsenic levels in the Walsh River taken from water tests from DEHP, Queensland Health and Private sources for the month of March

Health Risks associated with Arsenic and Cadmium

For residents who use this water for both drinking and domestic use there is concern about the health risks posed by Baal Gammon.

Exposure to Arsenic increases prevalence in skin lesions even at exposure levels in the range of 0.005–0.01 mg/l. Water samples from the Walsh River downstream from Jamie Creek have been recorded at 5 times that level in March 2012 after the contamination. Chronic effects of arsenic exposure via drinking water include skin lesions, neurological effects, hypertension, peripheral vascular disease, cardiovascular disease, respiratory disease, diabetes mellitus, and malignancies including skin cancer.

In humans, long-term or high dose exposure to cadmium can cause serious kidney dysfunction. Other effects can include softening of the bones. According to current knowledge, renal tubular damage is probably the most critical health effect of cadmium exposure - and WHO research indicates it is also a human carcinogen. On the 8th of March Cadmium levels in the Walsh River were recorded above safe drinking levels.

Action by Authorities

The Department of Environment and Heritage Protection (EHP) issued a series of Orders and Notices as follows:

- 🌿 9 March 2012, Environmental Protection Order (EPO) – to remedy the breach associated with the release of contaminated water into Jamie Creek which flows through Watsonville then into Walsh River.
- 🌿 29 March 2012, EPO – to remedy the breach associated with release of contaminated sediments into Jamie Creek which flows through Watsonville then into the Walsh River.
- 🌿 18 April 2012, Environmental Evaluation (EE) Notice – to establish the environmental values of the downstream environment, to investigate sources of contamination and to propose options to remediate the issues prior to the 2012/13 wet season.
- 🌿 14 June 2012, EPO – to remedy the breach associated with the capacity of the mine water dam by 1 November 2012.
- 🌿 16 October 2012 EPO – to ensure the site is prepared for this years wet season

In response to these orders, Baal Gammon finally finished the waste water dam. That was 4 months after they started hauling ore and at the very end of the wet season. On the 30th of May 2012 the waste water dam was already 83% full, that's only approximately one month since it was built and highlights the sheer amount of contaminated water which was not contained on site over the wet and its inadequacy of the waste dam to handle a normal wet season. This clearly demonstrates the irresponsibility of the mining company and how little their concern is for the environment and the local community.

One former employee of Kagara, who would prefer not to be named, believes it was the rush to get ore to Mt Garnet that led to proper infrastructure installation, environmental, and health controls being compromised.

"It was well-known on site by employees and contractors alike that we had commenced operations before the site was ready and had appropriate infrastructure in place. Many contractors were working for months before their on-site office and equipment arrived. There was also a lack of qualified personnel, with geologists and surveyors working double shifts to keep the mine operational."

The reason? Purely financial. The former employee went on to say;

"Management openly advised employees and contractors that this was due to flagging supply of ore in Mt Garnet, the future of the company, we were told, relied on us getting copper ore to Mt Garnet as soon as possible."

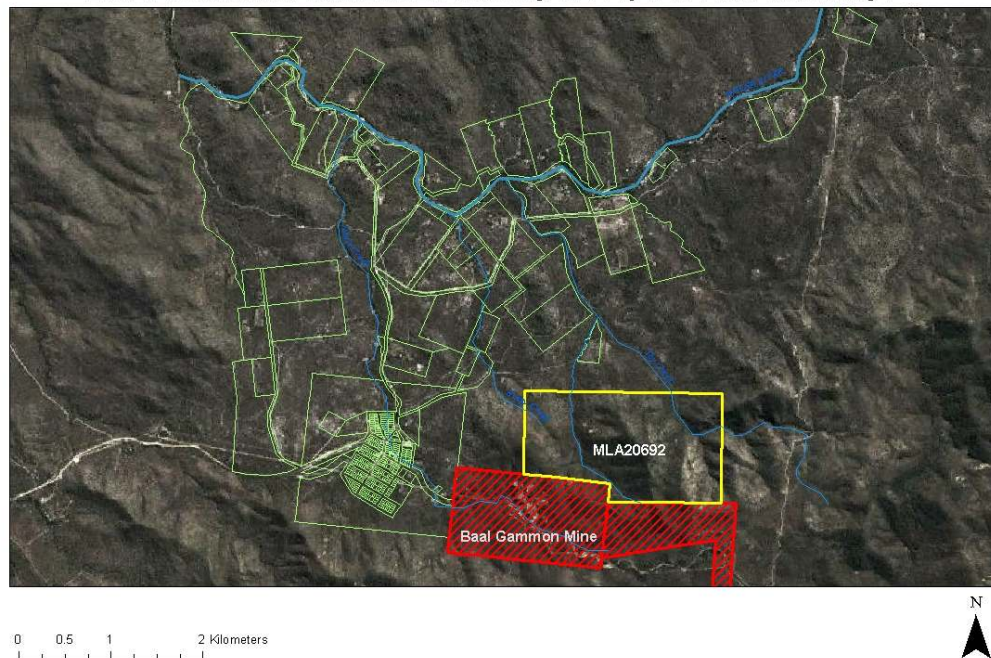
On Monday 30th April it was announced that Kagara had gone into voluntary administration, leaving many local businesses and contractors unpaid. The site was placed under care and maintenance with some 49,851t of ore hauled to Mt Garnet; and 12,043m³ of topsoil in stockpiles; and 1,119,129t of Potentially Acid Forming (PAF) waste and 1,082,545t Non-Acid Forming (NAF) waste located in the Mine Waste Dump.

One of the major concerns that arose due to the spill and high risk of ongoing contamination of Jamie Creek and the Walsh River, was the apparent failure of Kagara to lodge a \$3,750,572 financial assurance under the conditions of the environmental authority. This financial assurance, by law, must be in place before any mining has occurred just in case the mining company responsible goes into financial hardship and is incapable of rehabilitating the site. Fortunately Kagara was funded by Investec and on Friday the 31st of August and the financial bond was finally paid.

Baal Gammon Plans for Expansion

In November 2011, Monto applied for an additional area (MLA 20692) which is immediately to the north in the Toy and Bussy Creek tributaries of the Walsh River and contiguous with the existing BGCP with the intention of mining the copper, tin and silver resources in this area. The new lease brings mining activities into closer proximity to homes and affects the Walsh River, upstream from current contamination, potentially tripling the number of homes whose domestic water supplies are affected. The mining activity on the new mining lease will dramatically increase visual impacts, noise and dust pollution, detrimentally affecting the quality of life of local residents. The closest freehold property is only 500m from the mining lease boundary.

Baal Gammon and MLA20692 Proximity to Properties and Waterways



“One of my biggest concerns for my family and the families around us is that there is no real time method for detecting contamination so there will always be a time period from when the contamination occurs, till when it is severe enough to be noticed and water tests taken. In the meantime I will be unknowingly exposing my 8 month year old baby and 6 year old daughter to dangerous toxins.” says local mother and property owner, Jasmine Spring.

81 people have objected to the new mining lease and are currently involved in a court case with the mine. Very little information has been supplied to objectors about what is planned for the site except that it will be a level 2 code compliant operation. Worse yet, due to the size of the mining lease, they are not required by law to do an environmental impact assessment.

The steep terrain, the arsenic levels in the soil, the hydrology and the climate combine to create a very difficult to contain mine site. The fact the site in question forms the water catchments of two creeks, and is in close proximity to homes highlights the unsuitability of this location for mining. Although there is a record of old historical mining activities on the new lease, modern scale mining operations will have the potential to dramatically increase the risk and scale of water contamination. It is for this reason that many local Watsonville, Herberton and surrounding regional communities believe that, coupled with the fact the mining company has shown very little regard for the environment and the local community, the new mining lease application should not be granted. Or at the very least, the special circumstances and values of this area should require an environmental impact management plan, social impact management plan and cultural heritage management plan be undertaken before approval and the mine should be subject to rigorous conditions and monitoring to ensure that the environment and the community is protected.

Exploration activities on the new mining lease have already posed contamination risks to Toy Creek. Residents have informed EHP who in turn required Monto Minerals to get a sediment and erosion plan in place and the drillings sites remedied before November the 1st 2012.

Scientists and naturalists have walked the proposed expansion and identified a number of rare and endangered flora and fauna such as the Northern Quoll and the Mareeba Rock Wallaby.

The Northern Quoll

The Northern Quoll, *Dasyurus hallucatus* are classified as Endangered by the Commonwealth Environment and Biodiversity Conservation Act 1999 due to



the massive population declines that they have suffered over the past 200 years. Quolls are predatory and omnivorous marsupials which potentially play an important role in the ecosystem by controlling insect and rodent

pests, and by dispersing the fruits of some shrubs.

In Queensland, the northern Atherton Tablelands, including the upper Walsh River area, are one of only a handful of sites at which this endangered species is still common. The reason for the endangered status of quolls is due to the devastating impacts by Cane Toads, and because they only live for one year, it means that a single failed breeding season due to disturbance or degradation of habitat can send a local population extinct.

Scott Burnett, a university professor, has studied the Northern Quoll for many years and has conducted studies within the proposed mining lease area. He is confident that a widespread search would find quolls throughout the lease area and that the proposed mine development, depending on the intensity of the mining activity, could be a disaster for the local quolls populations.

During the late dry breeding season access to standing water within the Toy Creek (and other channels) is absolutely critical for successful rearing of young quolls. Loss or contamination of this water would be potentially devastating. During the breeding season, in particular, females drink regularly and will travel considerable distances if they have to (perhaps up to 0.5 – 1km) to access standing water.

Finally, any removal or disturbance to vegetation including ground cover and tree cover, or of rocks and boulders (used for foraging and denning), is likely to have a considerable impact on the quolls residing within the lease area. Quolls are territorial, therefore, as all territories are likely already occupied displacement = death.

However it is difficult to predict what this would mean to the wider quoll meta-population without detailed studies of dispersal, population size and extent and genetic ecology of the quolls in this area.

Flora

As far back as 1980, the Toy Creek area is recorded as having special and unique environmental characteristics: especially the floristic composition and concentration of many plant species listed as conservation significant under Commonwealth and Queensland legislation.

Toy Creek is an unusual and special refugial area where the influence of weeds, landscape modification and alteration to the vegetation's physiognomy

is not evident. Because of the fire-proof refuge, the area supports numerous species of plants listed under Commonwealth and Queensland legislation.

Any changes to the current high levels of natural integrity are likely to result in significant and irreversible environmental impacts - not least of which would be the loss of critical habitat for at least three species of vulnerable plants, and the possibility of the permanent loss of one population of a species listed as critically endangered (*Prostanthera clotteniana*).

It is strongly recommended that a detailed and comprehensive environmental survey is undertaken of the Toy Creek area, and that an assessment is also completed of the potential impacts that could be caused by mining operations.

This site could well be the largest intact population of *Acacia purpureopetala* to be found anywhere. For that reason alone the site and surrounding area warrants total protection.

Latest Developments

On the 18th of September objectors to the new lease MLA20692 met with BGC and EHP for mediation. During mediation the parties agreed the following:

- that any further negotiations associated with MLA 20692 would be adjourned until February or March 2013.
- the objectors would closely observe the measures undertaken by the BGC (and Kagara) to address the three EPOs.
- Dr Geraldine McGuire would undertake site visits to BGCP and the Confederation exploration areas (MLA 20692) and provide a report of recommendations to BGC to address Care and Maintenance for the 2012/2013 wet season.

Since mediation representatives from the objectors are visiting the Baal Gammon site once a month and meet with the EHP via teleconference weekly to stay informed and represent objectors and community concerns.

The Baal Gammon site has been working to meet the requirements from the EPO's and get the site ready for the upcoming wet season. The major works they are conducting include:

- Maximising clean water runoff and controlling contaminated runoff
- Digging out the pit to act as a secondary waste water storage
- Contouring the the areas of contaminated land and covering with plastic to minimize contaminated runoff

The site will only operate to ensure care and maintainance over the wet. After the wet season has passed Kagara will reassess the situation and the possibility of recommencing mining operations.

In Conclusion

The majority of the local community is not against mining, nor were they initially against the Baal Gammon mine in Watsonville. However the contamination of the Walsh in conjunction with the proposed plans for expansion into the occupied part of the valley, has sparked concern and left many feeling powerless to protect their waterways and quality of life.

The community has enlisted the expertise of Dr Geraldine McGuire of Sustainable Solutions Global and Naomi Wakelin of Environmental Defenders Office, who have been extremely helpful in keeping the Save the Walsh Action Team (SWAT) on track and helping us wade our way through legal, environmental and mining red tape and comprehension. Unfortunately, with the new State Government fund cuts to the EDO, the loss of Naomi's vital assistance is imminent and members of the Watsonville community are actively involved in trying to raise the funds necessary to pay for legal representation. Anne English from Bottoms and English Solicitors has kindly taken up our case at a discounted rate. Thank you to these three incredible women for your generous support. Special thanks to Scott Burnett, Saeed DeRidder, Micheal Anthony, John Winter and Simon Gleed for sharing your expertise with identifying flora and fauna values.

It is a concern for all Tablelanders, Cairns residents, and Far North Queenslanders alike, and the community would appreciate your support.

What you can do to help

- Sign the petition <http://www.communityrun.org/petitions/far-north-qld-community-against-proposed-mining-lease>
- Send a letter to ministers <http://caf nec.org.au/2012/06/baal-gammon-mine-causes-contamination-of-drinking-water/>
- Donate to Bendigo Bank Account
Account name: Save Watsonville Walsh River
BSB: 633000 ACC: 146633474
- Spread the word
- Contact Jasmine at jasminespring@wildmail.com if you can volunteer your services.

Links

- Save the Walsh River Facebook group
<http://www.facebook.com/groups/346121105426657/>
- Save the Walsh River Information Website <http://savethewalsh.org/>
- Caf nec <http://caf nec.org.au/2012/06/baal-gammon-mine-causes-contamination-of-drinking-water/>
- Petition <http://www.communityrun.org/petitions/far-north-qld-community-against-proposed-mining-lease>
- Environmental Defenders Office of North Queensland
www.edo.org.au/edong/
- Sustainable Solutions Global www.sustainablesolutionsglobal.com
- Mitchell River Watershed Management Group www.mitchell-river.com.au/

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Environmental Evaluation Notice (EE) (2012) Issued to Baal Gammon Copper Pty Ltd and Kagara Ltd by Department of Environment and Heritage Protection on 18 April 2012.

Environmental Protection Order (EPO) #1 (2012) Issued to Baal Gammon Copper Pty Ltd and Kagara Ltd by Department of Environment and Resource Management on 9 March 2012.

Environmental Protection Order (EPO) #2 (2012) Issued to Baal Gammon Copper Pty Ltd and Kagara Ltd by Department of Environment and Resource Management on 29 March 2012.

Environmental Protection Order (EPO) #3 (2012) Issued to Baal Gammon Copper Pty Ltd and Kagara Ltd (Administrators Appointed) by Department of Environment and Heritage Protection on 14 June 2012.

Mitchell River Watershed Management Group(22/05/2012) *Baal Gammon Email Bulletin*
<http://www.mitchell-river.com.au/news-and-issues/BaalGammonEmailBulletin22May2012.pdf>

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S. Gleed (2012) Report on the vegetation and Flora of Toy Creek between Herberton and Watsonville, North Queensland.