

# Friends of Mound Springs

Issue 15 November 2014

ABN 965 837 602

## President's message

This is our 15<sup>th</sup> Newsletter since FOMS was formed in 2006 and the group continues to be active on a variety of fronts, the articles in this issue covering a diverse range of topics and issues relevant to the springs we all value so highly. Late last year I advised members that our patron, Dr Barbara Hardy, had most generously covered the full cost of revising and reprinting the three brochures produced in 2011 for our self-guided walking trails at Strangways Springs and the Peake. The new brochures have been produced and are now in use, the supply at Strangways having been replenished in May this year and at the Peake in July. The tracks at both localities were inspected and minor maintenance carried out. All were in good condition and carrying regular visitor traffic, as reported elsewhere in this Newsletter.

Since her generous financial assistance Dr Hardy has advised that because of her advancing years and multitudinous commitments she must, regretfully, stand down as our patron. Barbara has been patron since our formation in 2006 and with a strong personal interest in the springs she has been very supportive of our efforts. We will miss her and the search is now on for someone of similar commitment and standing to take over the patron's role. I would welcome any suggestions from members.

As FOMS members know, our work is conducted in remote areas of the State well away from any immediate medical help and in recognition of this six of our members, along with representatives from Friends of the Simpson Desert Parks (FOS) and Friends of Innamincka Reserves attended an intensive three day first aid training course earlier this year. The course was organised and funded by DEWNR and we are most grateful for this support. All of our representatives completed the course successfully and came away with formal qualifications in the nationally accredited *Provide First Aid* and *Provide First Aid in Remote Situations*. Shortly after the course our DEWNR contact ranger, Tony Magor (District Manager, Outback), purchased a defibrillator heartstart unit for FOMS at a cost of \$2160. The unit has already travelled to the field with us, and was recently loaned to FOS for its work trip to Dalhousie Springs.

## President's message cont.

The first aid training and provision of the defibrillator represent an important boost to FOMS' capacity to provide emergency medical assistance in the field and we were most gratified to have such important support from Tony. So much so that, taking into account his additional help in financially underwriting the replacement Strangways signs (reported elsewhere in this Newsletter), FOMS nominated him for the Friends of Parks Inc. *Most Supportive Ranger of the Year Award*. And I am delighted to report that he won the Award, against State-wide competition. Congratulations Tony!

Elsewhere in this Newsletter FOMS' Secretary Simon Lewis has reported on the Commonwealth-funded springs management project that FOMS is involved in with DEWNR and we can expect considerable field activity next year as the project gathers pace. Simon is FOMS' team leader for the project and I thank him for his untiring efforts. Our Vice President Anne Jensen and Project Co-ordinator Brendan Lay are supporting Simon in the work and the three of them make up an exceptionally well-qualified and experienced team. It is also worth mentioning in this context that the leader of the project within DEWNR is Travis Gotch, a former Vice President of FOMS.

It all amounts to busy times ahead in 2015 and I urge all of you who can attend to come along to our AGM on 13 November and help support FOMS – your community group for better springs conservation and management.

Colin Harris PSM  
 President

## Support for GABSI Extended

The Australian Government has announced funding of \$15.9 million to extend the Great Artesian Basin Sustainability Initiative (GABSI) for a further three years.

The GABSI program was initiated in 1999 with approximately \$115million allocated over a 15 year period to 2014. The focus of the program has been funding support to repair uncontrolled bores that threaten the long-term viability of the Great Artesian Basin. The program has been delivered through State agencies with major funding support through the Australian Government.

It is estimated that around 650 uncontrolled artesian bores have been repaired over the life of the program so far, saving, according to Australian Government estimates, about 200 billion litres of water annually. The aim of the extended program is to save a further 13 billion litres per year. The Australian Government aims to work with the states and the Great Artesian Basin Community Committee to develop a new Strategic Management Plan for the Basin. The States will be asked to provide matching funding.



*Uncontrolled artesian bores and bore capping infrastructure. Photos courtesy of ABC.*

## Support for GABSI Extended cont.

At a time when many of us are concerned about a declining priority given to sustainability issues by various levels of government, this is good news! Nevertheless, as reported elsewhere in this newsletter there are still industry proposals afoot that could impact heavily upon the GAB and the mound springs.

## Tony Magor wins Friends of Parks Award

Friends of Parks Inc. have recently conducted their annual awards program and we are pleased to report that Tony Magor, District Ranger, Outback, DEWNR, has been selected as the winner of the Friends of Parks Most Supportive Staff Member Award for 2014. Tony was nominated for this award by FOMS and has been our Liaison Ranger for several years, providing outstanding support for FOMS.

Tony has always gone above and beyond what might reasonably be expected from someone in his position. Given the pressures placed on all DEWNR staff by declining budgets it would be understandable for Friends groups to see some decline in the levels of departmental support, but that has not been the case with Tony – in spite of it all he has continued to be accessible and responsive.

Tony has worked closely with FOMS on a number of matters, such as:

- Consultation with FOMS about the new infrastructure at Blanche Cup and the Bubbler in Wabma Kadarbu Mound Springs Conservation Park: Tony consulted at every stage with FOMS, carefully considered our comments and suggestions and made a number of significant changes in response to them.
- Installation of new, revised interpretative signage at the State Heritage listed Strangways Springs Overland Telegraph site on the Oodnadatta Track. By last year the old signage had faded to near illegibility and in response to an approach from FOMS Tony funded a set of six replacement panels which FOMS installed in the course of its most recent work trip to the area (July 2014). Tony was also actively involved in the revision process, facilitating the involvement of senior Arabana people in vetting and approving relevant parts of the text

Tony also organised funding for members of FOMS and other Far North Friends groups to undertake Remote Areas First Aid training and subsequently financed the purchase of a defibrillator for FOMS.

The support outlined above is all the more meritorious when it is appreciated that FOMS is not a conventional Friends group. Unlike most groups it does not focus on a particular park, instead it mostly operates on pastoral lease country, an off park situation. DEWNR is now approaching conservation on a landscape scale in recognition of the fact that conservation needs do not stop at park boundaries and Tony has supported FOMS in exactly the same way that he supports the more conventional Friends groups in his region.



Tony Magor

We consider Tony an outstanding DEWNR officer and congratulate him as a worthy recipient of the Friends of Parks Most Supportive Staff Member Award 2014.

## FOMS Raises concerns about Mining Proposal

The Friends of Mound Springs have written to the SA Arid Lands Natural Resources Management Board to express serious concern about the proposed mining development Arckaringa Large Coal Mine Project and the impact that it would have on the Western Great Artesian Basin and its associated mound springs. FOMS was first alerted to this proposal by David Noonan, Campaigner for The Wilderness Society (South Australia) Inc., and has also conducted its own background research.

FOMS has not seen itself as a frontline lobby group, but it is so concerned about the Arckaringa project that at a general meeting earlier this year it was resolved that FOMS should raise its concerns in whatever way was seen to be appropriate, and the letter to the NRM Board was one outcome of this decision.

The Arckaringa mining proposal, by Altona Energy, involves thirty years of dewatering of the Western GAB at an average daily rate eight times higher than the current rate of extraction for Olympic Dam. There can be no doubt that extractions of this magnitude would have a profoundly adverse impact on the Western GAB and its associated springs, many of which are of high cultural and biological importance.

FOMS' concerns have been heightened by recent hydrogeological research that has demonstrated clearly that the GAB is far from being a relatively well-connected, uniform basin. Of particular relevance for the Arckaringa proposal is the fact that the Western GAB is more or less isolated from recharge inflows to the eastern and central parts of the Basin – there is little current recharge, meaning that the (effectively) fossil waters are being drawn down at a greater rate than the small amount of recharge. What we have is a sub-basin in a state of long-term pressure decline and dewatering on the scale proposed by Altona Energy can only accelerate this decline, with significant adverse consequences.

Altona has suggested that it would reinject GAB water to support mound springs adversely affected by dewatering. This can only be received with scepticism. Earlier experimental reinjection of mound springs near Borefield A by the Western Mining Corporation confirms that this re-injection technique is unproven and high risk.

In short, FOMS is profoundly concerned by the Arckaringa proposal and has joined with the Wilderness Society of South Australia, the Conservation Council of South Australia and other lead conservation bodies in expressing opposition to the project.



Mount Arckaringa

## Friends of Mound Springs Field Trip July 2014

Eight members of Friends of Mound Springs (FOMS) participated in a trip to the Far North in late July 2014. Those in the party were Colin Harris, Bruce Gotch, Alan Williams, Bernice Cohen, Margie Barnett, Brendan Lay, Elizabeth Lay and Simon Lewis.

The main purpose of the trip was to gather information at a number of mound springs on the Peake Pastoral Lease, linking with the major investigation being coordinated by the Department of Environment, Water and Natural Resources (DEWNR) and focussing on the development of clearer management prescriptions for many of South Australia's mound springs. This three year project has major funding through the Australian Government's Caring for our Country program, with FOMS and others supporting DEWNR in the work.

A supplementary purpose of the trip was to install new interpretive signage at Strangways Springs – see separate item in this newsletter.

With the latter task in mind, Colin, Bruce, Alan and Bernice commenced their trip on Friday 18 July, collecting the new signs from DEWNR Port Augusta and reaching Strangways Springs by evening. They then spent Saturday installing the new signs and also checking the Springs Walk, one of two walks established by FOMS in 2011. The Springs Walk was in good shape, although it is clear that most visitors are walking to the cemetery and back rather than doing the whole circuit.

For Margie, Brendan, Elizabeth and Simon the FOMS trip commenced on Saturday 19 July, rendezvousing at Roxby Downs and travelling on to Strangways to join the rest of the party. A cold night ensued but fortunately the firewood supply was adequate.

### Sunday 20<sup>th</sup> July

Before leaving Strangways, the group did a lap of the Wool-wash Walk, the second of the trails installed by FOMS in 2011. Again the trail was in good shape, although apparently subject to limited use. Then it was on to William Creek for fuel and morning tea. From there the group left the Oodnadatta Track and journeyed north on station tracks to our main camp-site on Bulldog Creek.



*The FOMS 2014 field group. From left: Bruce Gotch, Colin Harris, Alan Williams, Margie Barnett, Brendan Lay, Elizabeth Lay, Simon Lewis, Bernice Cohen*

## Friends of Mound Springs Field Trip July 2014 cont.

### Monday 21<sup>st</sup> July

The main business of the trip commenced at Outside Spring. FOMS member and DEWNR scientific officer Travis Gotch had prepared data sheets for use by the group, covering parameters such as vegetation species present in spring vents and tails, percentage cover of each species, level of disturbance by stock and other influences and water quality. Bruce and Alan took on the water quality monitoring role, measuring, pH, conductivity, temperature and total dissolved salts (TDS) with the field laboratory recently transferred to FOMS by the Friends of Simpson Desert group, while the others focussed on vegetation and disturbance measurement.

Outside Spring proved to be very interesting. Within the area fenced in the mid 1980's, *Phragmites* has been dominant for many years, but we have, over the last two to three years, noticed significant die-back of *Phragmites* in the centre of the vent. This die-back was even more pronounced on this trip with very little regrowth occurring. It seems reasonable to conclude that a new vegetation balance is developing at Outside Spring. In terms of management, this spring may be one to leave alone and monitor to see if the trend continues.

The group also surveyed two unfenced vents and tails at Outside Spring, both of which provided an interesting comparison with the fenced spring.

The group then moved on to Twelve Mile Spring, also fenced since the mid 1980's. This is an interesting spring with several vents supporting, predominantly, *Typha* (bulrush) in the top vent and a mixture of *Phragmites* and the sedge *Cyperus gymnocaulos* at several other vents. There is also evidence of vertical leakage supporting *Phragmites*. Twelve Mile Spring was subject to stock intrusion in early 2013 through a faulty section of fence (repaired in mid-2013 by Peake manager Nathan Keogh). Vegetation damage and pugging of spring vents from this incursion was still evident.



*Twelve Mile Spring: top vent with Typha, whereas Phragmites is predominant elsewhere at this spring*

The fenced area at Twelve Mile is quite complex in terms of vents and vegetation and further thought will be needed to determine whether some form of management trial could or should be implemented.

## Friends of Mound Springs Field Trip July 2014 cont.



*Bruce Gotch (right) and Alan Williams taking water samples at Twelve Mile Spring for chemical analysis*

The final inspection for Monday 21<sup>st</sup> was the Fountain Spring. Like Outside, this spring has become dominated by *Phragmites* since fencing in the 1980's and, also like Outside, there is now evidence of die-back of *Phragmites* in the main vent. Just as for Outside Spring, a thick mat of *Phragmites* rhizomes remains which, presumably, may take many years to break down. Physical removal of portion of this rhizomatous mat at one location may be worth considering to see what effect this has.



*The Fountain: grazed versus ungrazed*

## Friends of Mound Springs Field Trip July 2014 cont.

### Tuesday 22<sup>nd</sup> July

After another cold night the group split into two for the day's activities. Colin and Alan headed north to the Peake Overland Telegraph Station heritage site to check the walking trails and top up the FOMS brochure supply. As for Strangways, they found the walking trails to be in good shape. Both of the Peake walking trails appear to be popular with visitors.

The remainder of the group travelled south to Hawker Springs, via a stop-over at Levi Springs. At Levi, we looked at the spring nearest the track and rock formations and concluded that it could be of interest to fence this spring and monitor the outcome. The spring has no mound and presumably would not be particularly difficult to fence. Currently it appears to be free of *Phragmites*. Alternative watering points (other springs and a bore) are nearby.

Hawker Springs comprises a large group of around 100 spring vents. The group is unfenced, is roughly circular and we were interested to test the hypothesis that outer spring vents would be more affected by cattle than springs further into the group. The aim was to look at springs on the outer edge of the group and some towards the centre of the group. The difficult terrain meant that we would only access a small sample of the springs.

Our observations tended to support the hypothesis. Outer springs were more significantly pugged and grazed than springs further into the group. Of particular interest was an extensive, apparently spring-fed watercourse towards the centre of Hawker Springs, with some *Phragmites* but also a lot of open water. The vegetation of the springs was quite varied, some springs with mainly *Phragmites*, others with *Cyperus gymnocaulos* and others with other sedges such as *Juncus*.



Hawker Springs: Left: one of the outer springs at Hawker, heavily impacted by cattle; Right: Spring-fed drainage line, Hawker Springs. This spring, towards the centre of the Hawker group, is much less impacted by cattle

## Friends of Mound Springs Field Trip July 2014 cont.

### Wednesday 23<sup>rd</sup> July

After a warmer but slightly drizzly night, Simon headed south to catch a plane home from Olympic Dam. The remainder of the group continued to survey springs on the Peake lease – the Vaughan Spring, Fanny Springs and Big Perry. The Vaughan has been a useful comparison for many years as it is an unfenced spring quite close to the fenced Outside and Twelve Mile springs.

Big Perry has been fenced since the late 1980s. Although the fence was rabbit-proofed originally, the colony inside the fence was not eliminated at the time and in any case the netting has not been maintained to a rabbit proof standard. It is not clear what impact the rabbits are having on the vegetation. The spring is dominated by *Phragmites*, while the tail is dominated by *Typha*. There is no flow at the spring vent. However, there is seepage or very low flow visible in the tail. Overall, the flow at Big Perry appeared to have diminished significantly since the previous inspection about two years ago. Because the spring has been fenced, there is no evidence of recent stock grazing or pugging, but there is some evidence of past stock impact.

Seven springs were also visited in the Fanny Springs cluster. All are unfenced and heavily impacted by current cattle grazing pressure. In some cases, the travertine spring structure is collapsing – a natural process, but most certainly being accelerated by cattle. Dominant species are *Cyperus gymnocaulus*, *Typha* and *Cyperus laevigatus*. One spring is dominated by a 'bonsai' form of *Phragmites*.

The final spring visited was the Vaughan, an unfenced spring subject to heavy grazing pressure. The two vents were dominated by *Typha*, with greater diversity in the tails, mainly *Cyperus laevigatus* in the tail of vent No. 1 and *Cyperus gymnocaulus* in the tail of vent No. 2. Cattle impacts were moderate to high.

The return to camp provided some surprises, strong winds throughout the day having blown many items around and damaged two of the tents.

### Thursday 24<sup>th</sup> July

The Wednesday surveys marked the end of the scheduled spring work for this trip. The group decamped from the Bulldog Creek site and journeyed back to William Creek. Then on to Coward Springs Camp-ground for a courtesy visit to Greg and Prue before moving on to the Borefield Road turn-off at Bopeechie. At that point Brendan, Elizabeth and Margie continued on to Arkaroola via Marree, while Colin, Bernice, Bruce and Alan headed south via Roxby Downs, Bruce and Alan completing the long haul back that day while Colin and Bernice broke the return trip with a night at the Eldo Hotel in Woomera.

All in all, a very successful trip – very convivial group, good weather (for the most part) and scheduled work accomplished. Many thanks to all involved for their contributions!

## New signs at Strangways Springs

Visitors to Strangways Springs on the Oodnadatta Track will come away with an improved understanding of the site's historical, cultural and ecological significance after six new interpretive signage panels were installed in July. As reported above, the new signs were installed by FOMS volunteers during the field trip of July 2014.

The result of a partnership between the volunteer group Friends of Mound Springs (FOMS), the Arabana people and the SA Government, the new signs replace their aging and badly faded predecessors to tell the stories of the Overland Telegraph and the mound springs. FOMS members revised and updated the signage text while Natural Resources SA Arid Lands worked with Aaron Stuart, then Chair of the Arabana Aboriginal Corporation, to ensure the wording appropriately reflected the Arabana community's traditional and ongoing association with the site.

The new signs were installed by FOMS members Bruce Gotch and Alan Williams on a bitterly cold July day when maximum temperatures over the inland struggled to reach double figures. The new replacement panels were funded by Natural Resources SA Arid Lands and it is hoped that they will remain serviceable for the next six to eight years.

FOMS and Natural Resources SA Arid Lands would also like to acknowledge S Kidman & Co for the considerable funding and effort they invested in the 1990s to fence the mound springs and the ruins of the repeater station.



*FOMS President Colin Harris and FOMS members Alan Williams and Bruce Gotch with four of the newly installed signs.*

## Progress Report: Mound Springs (Desert Jewels) Management Project

In our previous newsletter (Spring 2013) we reported on a major project to examine options for improved management of South Australia's mound springs. Natural Resources, SA Arid Lands has secured \$1m through the Australian Government's Caring for our Country Investment program for the project.

This three-year project, described as the Desert Jewels Project, is investigating, amongst other things, improved grazing management of springs, management of reeds (especially *Phragmites*) that have proliferated at some fenced springs, weed management (e.g. date palms and polyopogon at Dalhousie) and fire management.

The funding application was developed in close consultation with the Friends of Mound Springs. The Friends group developed a project brief which has been incorporated into the much larger Board application.

Progress on this project includes the following:

- A Desert Jewels Project Officer (Sam Gitahi) has been appointed to work full-time on the project under the direction of Travis Gotch. In addition, an Arabana Springs Cultural Officer (Shannon (Sam) Stuart) has been appointed to help coordinate the involvement of Arabana people in the project at springs of interest to the Arabana. Both Sam Gitahi and Sam Stuart commenced work in October 2014.
- A national Mound Springs Data Base is being developed.
- Fish surveys have been undertaken at Dalhousie and potential burn sites have been identified. A remote sensing project is also to be undertaken at Dalhousie – reviewing remote sensing data from the last 20 to 30 years to assess changes in open water habitat.
- As reported elsewhere in this newsletter, the FOMS trip of July 2014 gathered data at a number of mound springs (Outside, Twelve Mile, Fountain, Big Perry, Hawker and Fanny Springs), with observations also at Levi Springs. FOMS members Brendan Lay and Simon Lewis have also met with S Kidman and Co's General Manager Greg Campbell prior to the FOMS trip to discuss the project.

### Some Clues Emerging

A major area of concern in mound springs management is the proliferation of reeds (*Phragmites*) in springs that were formerly open to grazing but have since been protected. Measurements and observations by researchers and by FOMS personnel suggest that the proliferation of *Phragmites* in protected springs may be linked with the increased nutrient levels introduced during decades of cattle grazing.

It is also hypothesised that, with prolonged exclusion of cattle, nutrient levels will gradually diminish and *Phragmites* abundance may decrease.

### Implications for Springs Management

A primary focus of the Springs Management Project is the development of management prescriptions that, as a general objective, will maximise habitat diversity in the springs and, in doing so, will address the perceived negative effects linked with *Phragmites* proliferation at fenced springs. It is planned that management trials will be implemented to help clarify optimal management prescriptions.

Observations made by FOMS members during the July 2014 field trip (see trip summary elsewhere in this newsletter) and other discussions suggest that the following management trials and related research should be considered.

## Progress Report: Mound Springs (Desert Jewels) Management Project cont.

- **Outside** and the **Fountain** would be useful trial and/or reference areas as both are showing an apparent decline in *Phragmites* abundance. One of these springs (e.g. **Outside**) could be left as a reference area, with a burning trial at the **Fountain**. Burning half a spring (longitudinally) is seen as a good objective, although it may be difficult to achieve. A logistical issue is that summer burning may be optimal and it may be difficult to secure a fire crew at that time, given priorities elsewhere in the State. Burning would test the theory that fire will hasten the depletion of the *Phragmites* rhizomes and therefore hasten the decline of *Phragmites*. A burning trial at **Twelve Mile** could also be contemplated to test this theory. Further discussion is needed to confirm the best timing for trial burns.



*Outside Spring, fenced main vent. The cover of Phragmites in the vent has diminished markedly over the last few years.*

- A noteworthy occurrence at both **Outside** and the **Fountain** is the residual mat of *Phragmites* rhizomes in the spring vents. Even if there is very little growth of *Phragmites* in these areas, the rhizomatous mats could persist for many years. A trial is recommended to remove a section of this mat at **Outside** or the **Fountain** (probably the **Fountain**, if **Outside** is left as a reference).
  - Some concerns have been raised about the proposal to remove a small section of rhizomatous mat. Those concerns focus on two aspects: (a) possible impact upon invertebrate fauna in the spring sediments; and (b) exposure of the spring sediments to air and oxygenation of sulphur compounds in the muds to form sulphuric acid, with flow-on deleterious effects. In relation to invertebrates, it is proposed that only a small proportion of the rhizome mat be removed, meaning that the bulk of the invertebrate population would not be directly disturbed and should re-colonise the area where the mat is removed. The acid-sulphate soil issue warrants further discussion but the intention would be to remove only a small section of mat in a patch where the sediments would remain submerged. This should limit the risk of acidification.

## Progress Report: Mound Springs (Desert Jewels) Management Project cont.

- **Outside Springs** comprise several vents, of which one is fenced. Further fencing could be contemplated at **Outside** to add more information about grazing exclusion in this area.
- At **Levi Spring** fencing of the spring adjacent to the track and rock outcrop would be of interest and could be easily done, as the spring has no significant tail, is on "easy ground" and is currently free of *Phragmites*. This relatively minor work could provide useful information about grazing impacts and cessation of those impacts.
  - In discussion, it has been suggested that fencing of this small spring at **Levi** could lead to prolific growth of *Phragmites*. An alternative suggestion has been to fence a larger area at Levi to include other springs also. Fencing of a larger area would be of interest but could be logistically difficult because of rock outcrops. Fencing of the single spring would be a simple task that could provide useful information. At the moment there is nothing really to suggest that it would be rapidly colonised by *Phragmites*.



*Spring at Levi – potential candidate for fencing?*

- FOMS' observations at **Hawker Springs** support the hypothesis that grazing impacts are most pronounced at the outer springs of this large group, diminishing towards the centre of the group. A more rigorous research project at **Hawker Springs** would provide useful information about grazing impacts. This could be promoted as a University research project.
- FOMS believes that fencing of some of the springs at **Fanny Springs** should be considered further. This is a fairly linear group of about eight springs and we believe it may be instructive to fence up to half of the springs (within one enclosure) and leave the rest open to grazing.
  - It has been suggested that fencing of some of **Fanny Springs** is not a priority as these are low-flow springs of limited interest. However, FOMS believes this should be considered further. The terrain and linear nature of this spring group means that this is an opportunity to fence on a larger scale than most other fenced springs on pastoral lands and follow-up monitoring could provide useful information for the project.

## Progress Report: Mound Springs (Desert Jewels) Management Project cont.

- The springs at **Finniss Springs** have been free of significant grazing pressure for twenty years or more. They will undoubtedly be good reference areas but may also be suitable for active management trials. FOMS proposes that there should be joint inspections at **Finniss Springs**, as soon as possible and before the end of 2014, to consider the merit of **Finniss Springs** for trials and/or as reference sites.
- An important hypothesis emerging in this work revolves very much around elevated nutrient levels created by cattle access. A good deal of chemical analytical work has been undertaken in the mound springs over the years and this should be reviewed as part of testing the above hypothesis. In addition, a systematic program of nutrient testing is needed in springs with a range of grazing (and non-grazing) histories to help assess the links between cattle grazing, elevated nutrient levels and *Phragmites* incidence and abundance.

FOMS will continue to work closely with DEWNR personnel and others on this project. The next twelve months should prove very interesting as field trials get under way and FOMS volunteers are likely to play an active part in assisting those trials.

### New NRM Plan being developed for SA Arid Lands

Many FOMS members would be familiar with the network of eight Natural Resources Management (NRM) Boards which are responsible for a range of natural resources management programs through an integrated approach to soil, water and biodiversity management across South Australia. The SA Arid Lands NRM Board is responsible for much of the Far North, including all of the mound springs country in South Australia.

The basis for the activities of each regional NRM board is a regional NRM plan that covers matters such as the state of the region and a strategic plan that identifies actions, processes and threats that might jeopardise the sustainability of natural resources in the region. The strategic plan includes short and long-term targets that set the scene for a Business Plan that outlines the Board's planned programs in more detail.

The SA Arid Lands NRM Board's first formal NRM plan was adopted in May 2010. Since that time there have been a number of legislative and administrative changes, and more information has been collected about natural resources in the region, particularly about aquatic ecosystems.

Reflecting this, the Board has initiated a review of its regional NRM plan. The Board is inviting input from the regional and South Australian community about valued features in the region and about NRM issues that warrant attention.

The Friends of Mound Springs will need to consider whether to make a formal submission to this review process. In the meantime, FOMS members and associates would be most welcome to contribute to the plan review at an individual level – about mound springs or any other natural resources topic that may be of interest or concern.

Further information about the review of the regional NRM plan for the Arid Areas region can be found at the following web-site: [www.naturalresources.sa.gov.au/aridlands](http://www.naturalresources.sa.gov.au/aridlands)

## Friends of Mound Springs

If you wish to become a member, please contact FOMS Treasurer Hadyn Hanna –see contact details below. The membership subscription is currently \$20 per household per calendar year.

### OFFICE-BEARERS and RELEVANT CONTACT DETAILS

#### PATRON

<b>PRESIDENT</b>	Colin Harris PSM	08 8331 3571	colin.harris6@bigpond.com
<b>A/SECRETARY</b>	Simon Lewis	0449 952 312	sealewis@bigpond.com
<b>TREASURER</b>	Hadyn Hanna	0488 573 387	Hadyn.hanna@gmail.com
<b>PROGRAM COORDINATOR</b>	Brendan Lay	0430 595 947	brenandbis@gmail.com
<b>PUBLICITY OFFICERS</b>	Sarah Lewis Simon Lewis	0418 560 313 As above	Sarah.lewis@sa.gov.au As above
<b>SAFETY OFFICER</b>	Bruce Gotch	08 8280 7392	bgotch@picknowl.com.au
<b>AUDITOR</b>	Elaine Smyth	08 8332 8019	