

# NATURAL STATE NEWSLETTER

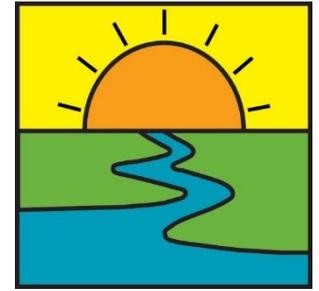
Consultancy, project management and native vegetation management services. We understand the client's needs, and deliver high quality results; on time and on budget.

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NATURAL STATE



## Welcome to the Natural State Newsletter for 2015/16



**Photo 1:** The new bird hide and outdoor classroom built amongst the forest on our property. Activities for school groups include bushfoods, native flora and fauna and renewable energy.

### New refreshed Natural State Website

Over the past year I have been busy developing the new Natural State website.

Natural State currently offers five categories of core [Services](#) which include: [Consultancy](#), [Environmental Education](#), [Natural Area Restoration](#), [Native Landscaping](#) and [Revegetation](#).

On the website, all of the services pages describe the activities that we offer and also feature recent project case studies and photos.

We will also be publishing our annual Sustainability Report on our site to show some local leadership on how to reduce our ecological footprint, but also to encourage and hopefully inspire others to take action to reduce their impacts as well.

Please take a look at our new website [www.naturalstate.com.au](http://www.naturalstate.com.au) and pass on the link to anyone who may benefit from engaging our services.

If you have any suggestions for how to improve the website please feel free to let me know. Please let me know if you have any difficulty in navigating the site or in accessing or downloading content.

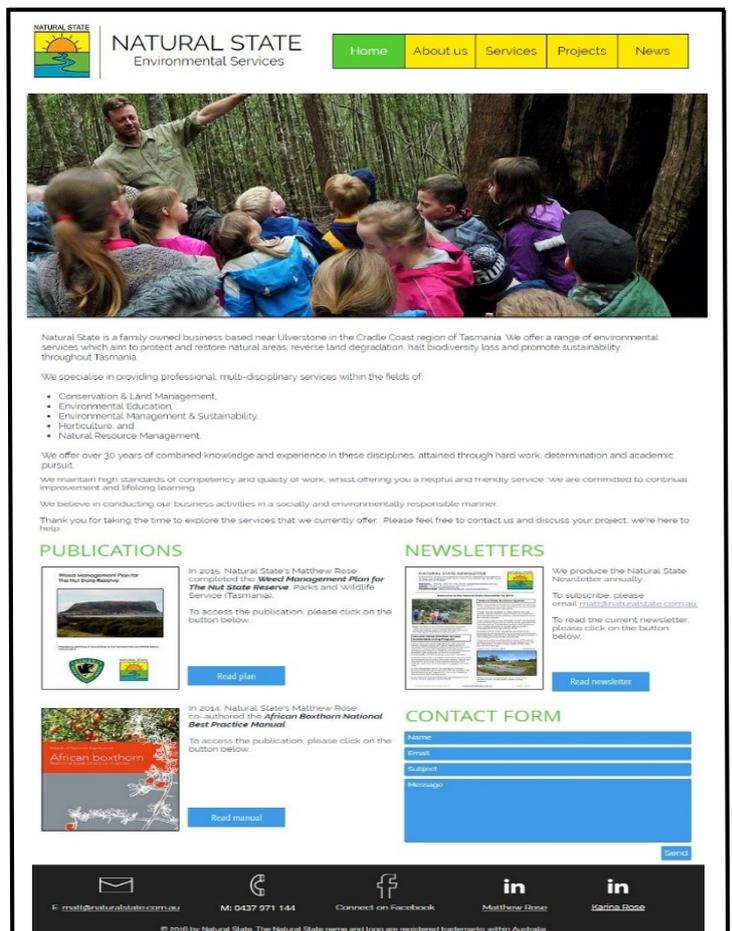
### Natural State Business Update

Welcome to the latest Natural State Newsletter.

I started studying a post Graduate Diploma of Environmental Management at UNSW in 2015. My studies went well, I achieved High Distinctions for my courses - Tools for Environmental Management and Fundamentals of Environmental Management. Balancing family, business, property and study commitments was a challenge.

I've taken a 'gap year' to focus on building the business, updating the Natural State Website and finishing a couple of projects at home.

Keep an eye out for the Natural State branding on our Navara ute, feel free to come and have a chat if you see us out and about.



**Figure 1:** The new refreshed Natural State Website.

## Our Sustainability Report for 2015

Since 2009 we have been measuring our families' environmental impacts through an Environmental Management System. This approach involves measuring specific aspects to help evaluate our environmental performance. Here is our combined business and household (3 people) performance for 2015 :

- Rainwater use 120,250 Litres
- Electricity consumption 1008 kWh
- Gas consumption 144 Litres
- Transport (2 vehicles) 45,333 Km
- Firewood consumption 12m<sup>3</sup>
- Waste (30% recyclables) 1,150 Litres

Behaviour change is a vital aspect of sustainable living particularly if we are to reduce our ecological footprint and live within the biological limits of our planet.

We have adopted practical measures such as investing in renewable energy & energy efficiency, rainwater harvesting, double glazing, insulation, recycling and composting.

Through a combination of behaviour change and effective use of technology we have reduced our consumption of electricity, firewood, diesel fuel, waste and water.

According to the [Australian Government Energy Made Easy](#) website a typical 3 person household in the Ulverstone area uses 27.2 kWh / day, we use a mere 2.75 kWh / day. Experts suggest that energy consumption in Australia needs to fall by between 75% - 90% to avoid catastrophic climate change.

We can all still do more! Over the next few years we aim to further reduce our transport impacts and to also develop a food production area at home.



**Photo 4:** Discussing some of the principles of Weed Management to the participants of the CCNRM Small Landholder Property Management Planning Program 2016. Photo credit Tom O'Malley - CCNRM.



**Photos 2&3:** Top – Our battery bank which powers our house and business. 48 Volt wired in series with a 6 Kw inverter charger and 240 Volt output. Bottom – Some of our photovoltaic solar panels.

## CCNRM Small Landholder Property Management Planning Program

On Sunday 29<sup>th</sup> May 2016, I was engaged by Cradle Coast NRM to deliver two presentations on the topics of 'Weed Management' and 'Biodiversity on Farms' for participants of the Cradle Coast NRM Small Landholder Property Management Planning Program.

Tom O'Malley the CCNRM Landcare Facilitator presented an informative and passionate talk on Soil Health and Managing Soils. It was a great day.

One of the benefits of our property management planning service is the fact that we are also landowners, we've experienced many of the challenges raised by our customers. We understand the pressures associated with managing a property for multiple objectives, for us it is currently biodiversity conservation, sustainable recreation and hobby farming.



**Photo 5:** Phillip Milner discussing his observations and the natural values of his wet sclerophyll forest during the field day. Photo credit Robin Garnett – CLT.

## Conservation Landholders Tasmania

On Saturday 27th February 2016, I facilitated the 'Managing wet sclerophyll forest' field day for the Conservation Landholders Tasmania group at the Lower Barrington Hall in North West Tasmania. We attracted 39 attendees from across Tassie.

Presentations were delivered by:

Fred Duncan – Features of wet sclerophyll forest.  
 Myself – Managing wet sclerophyll forest.  
 Phillip Milner – Natural values and observations in his wet sclerophyll forest.

If you are a landowner with an interest in conservation or want to learn more about managing the natural values on your property you may be interested in attending a free field day or workshop organised by CLT. Check out the CLT website – [www.clt.asn.au](http://www.clt.asn.au).

## Major flooding again.....what the?

The major floods which occurred on 14<sup>th</sup> January 2011 were supposed to be a 1 in 100 year event.

The 6<sup>th</sup> June 2016 flood which was more powerful and which peaked higher on the Leven River was another reminder of our need to try to better adapt to the frequency and extent of these severe events.

We've been restoring our riparian areas since the last flood in 2011 using a range of techniques learnt whilst studying Streamside Restoration Principles in NE Victoria several years ago.

Areas further away from the high velocity zone were very successful at holding up to the recent flooding. They captured sediment well and built up the soil, as was originally planned. However, the high velocity zone which copped the full force of 53,885 ML at its peak, will require further investment in earthworks, environmental engineering and stabilisation works to protect infrastructure (in our case access roads) and to prevent further soil erosion. Several hundred tonnes of topsoil, vegetation, cobble, river silt and clay eroded from our frontage alone.

Observations made since the 2011 flood highlight the important role of the local *Lepidosperma* species for stabilising soil within flood prone areas. These species can be hard to germinate in a nursery. One of the triggers for germination is flooding. We have, and will continue to encourage this species through dividing and planting the clumps.

Luckily over the past 7 years we've been pretty active at photo point monitoring and recording our restoration works along the river. We continue to learn what has worked and what hasn't so we can share this information and learn together.



**Photo 6:** The aftermath of the June 2016 flood event showing the eroded topsoil, holes and exposed roots within the high velocity zone.



**Photo 7:** Once the water level drops and the emotions settle, the clean-up begins. The water level was 1m higher than the vehicle.

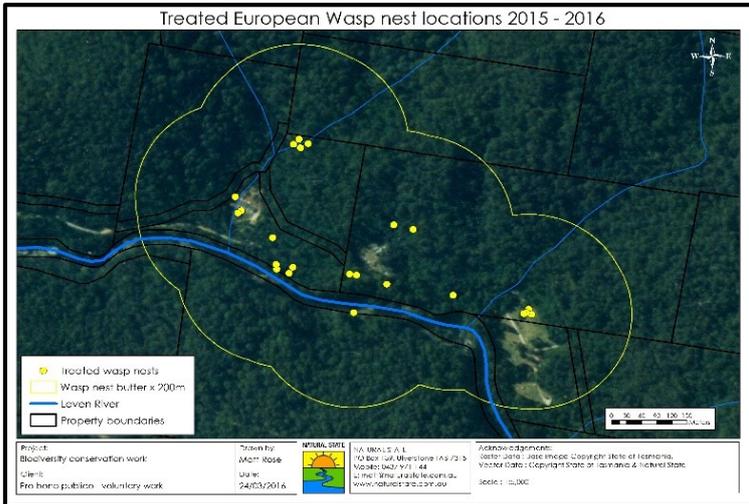
## Managing European Wasps

Over the past few years we've noticed an increase in European Wasps on our property. Last season the wasps were terrible. Rather than sit back and watch on in disbelief, we choose to actively manage this threat to our local biodiversity.

We've researched literature, conducted our own wasp control experiments, and documented nest locations and effective treatments.

In late July 2016, I delivered a presentation in Burnie open to the general public which focused on 'Managing European Wasps'. The evening attracted around 35 people. Afterwards an interview was recorded for the ABC Country Hour, to listen visit the News page of our website and press play <http://www.naturalstate.com.au/news>.

Over this coming summer we'll be working with our neighbours to encourage an integrated and strategic response to these invasive pests.



**Figure 2:** Treated nest locations and a 200m buffer zone. European Wasps forage within 200m of their nest. Native caterpillars, butterflies and invertebrates within this zone are most at risk from predation whilst the nests are most active between late Summer and Autumn.

## Monitoring and evaluation

Experience has taught me to be open to learn from my mistakes and to pass on what I've learnt to help prevent others wasting their time or money also.

Whilst no organisation likes to admit it, not all projects are successful or have the intended outcomes. We can learn a lot from these situations and it can drive us to improve and change our approach.

We value continual improvement and lifelong learning so we invest our time and money in ongoing monitoring to evaluate the results of our project sites.

Some of the factors which can make or break a project include : adequate planning, adapting to the seasonal conditions, being flexible enough to postpone the project if the results are likely to be compromised, unrealistic expectations or time pressures, lack of ongoing resources, and follow up maintenance.

Most of the revegetation work that we have delivered since 2002 has been in the low rainfall South Australian mallee region. For the past few years we've travelled back to SA to monitor some of our previous projects.

Throughout late August 2016, I was able to revisit 15 revegetation sites around the Lower Lakes and Coorong region to take notes and update our photo monitoring records. It's great to see the large scale revegetation work occurring throughout the Lower Murray since the Millennium drought.



**Photo 7:** Over 6,000 seedlings planted with primary school students over 8 consecutive years for National Tree Day at the Pangarinda Botanic Garden, Wellington, SA.



**Photo 8:** One of our shelterbelts established through machine direct seeding on farmland in the SA Mallee.