Port Arthur Historic Site—penitentiary precinct conservation project

The penitentiary structure at the Port Arthur Historic Site in Tasmania is arguably Australia’s most significant and recognisable convict ruin. The building has recently been subject to a $7m stabilisation project that saw it closed for most of 2014. The stabilisation is part of a larger Penitentiary Precinct Conservation Project, which will see the installation of interpretative elements in and around the penitentiary structure.

Port Arthur is one of the 11 sites included in the Australian Convict Sites World Heritage property, which was added to the World Heritage List in July 2010. The 11 sites are: in Tasmania—the Port Arthur Historic Site, Coal Mines Historic Site, Cascades Female Factory Historic Site, Darlington, and Brickendon-Woolmers Estates; in New South Wales—Hyde Park Barracks, the Great North Road, Old Government House and Cockatoo Island; on Norfolk Island—the Kingston and Arthur’s Vale Heritage Area; and in Western Australia—Fremantle Prison.

The Port Arthur Historic Site Management Authority (PAHSMA) has responsibility for three of the Tasmanian sites—the coal mines and Cascades female factory as well as Port Arthur. As with all heritage sites, there can be challenges—but we found ourselves somewhat stunned when our engineering consultants advised us in 2013 that the majority of the penitentiary structure was less than 30% compliant for Australian standards for certain loadings, and less than 10% in some places. In short, we had a flagship structure, albeit a ‘ruin’, in danger of collapse.
Background

Following the endeavours of previous management bodies, PAHSMA has consistently undertaken maintenance of the penitentiary structure, and completed a number of larger conservation initiatives and investigations within the penitentiary precinct. One of our primary work objectives since 2010 was monitoring the internal structural bracing system, which provided both mechanical support and multi-level pedestrian access through the building. At 30 years old it had reached the end of its effective life.

In addition to this, in July 2011 Port Arthur experienced a one-in-40-year weather event resulting in three metre waves breaking over the front seawall and total inundation of penitentiary footings.

In 2011–12 PAHSMA initiated a major conservation project, the Penitentiary Precinct Conservation Project, to resolve a number of structural investigations and upgrade visitor experience to give the precinct the presentation it deserves as one of the most recognisable convict structures in Australia with significant cultural values. However, it was the engineering assessments during the first stage of work which indicated the ruin was below accepted loading standards, making the project an urgent priority.

Following consultation with PAHSMA and the local community, a vision for the precinct was created along with structural mitigation options. Significant consultation with government, visitors, tourism operators, media and the community was also required as construction work meant the penitentiary would be closed to the public for more than 10 months.
Stabilisation

The first stage of the project, the stabilisation work, was undertaken by HPA Consultants, a Sydney-based consultancy which also took on the role of Project Superintendent. HPA introduced a highly qualified and experienced team, which included structural and heritage engineers from Mott MacDonald and Hyder.

For the first time since its establishment in 1987, PAHSMA was faced with relinquishing management of a major conservation project to an outside body and it was with some trepidation we handed the whole building site over to the successful contractor, Hansen Yuncken. However, our fears were groundless and working with the team of skilled sub-contractors, we soon realised that it is not only heritage professionals who care about conservation and the protection of heritage values and significant fabric.

The stabilisation solution relied on the installation of a series of steel columns connected to sub-surface concrete footings. It also involved the installation of helibar (a twisted metal rod that is reminiscent of fusilli pasta)—a total of fivekms of various lengths throughout the walls of the structure, together with a 50mm-thick stainless steel top-plate installed under the capping stones. The final and perhaps most structurally delicate stage of the works involved precision drilling, both vertically and horizontally, to allow for the insertion of grout-injected socks and metal anchors. The deepest drill hole was in the vicinity of 11m.

The outcomes of the project however, have been more than a suite of engineering applications. Prior to the stabilisation work, PAHSMA undertook a substantial archaeological research program that provided data and evidence of the full history of the precinct—from its earliest workshops to the partial collapse of the penitentiary in the great bush fire of 1895. One of our challenges, has been interpreting the pre-penitentiary life of the structure as a flour-mill and granary.

The research excavations clearly established the location of the mill house and water-wheel pit, and ancillary infrastructure such as drainage. They also showed the structural adjustments that were imposed to convert a purpose-built industrial building to allow for a totally disconnected use for the prison. This stage of the work also provided essential information on sub-surface conditions, which was used to shape the design outcomes and contribute to risk-reduction responses.

Using architectural features we have also been able to reimpose a sense of how people moved and were controlled in the building. This has included the reinstallation of internal ground-floor corridors and the recreation of the front muster-yard area—an incursion into a surrounding landscape that is otherwise a swathe of green lawn. Perhaps one of the most extraordinary legacies of the project has been aesthetic, with the inside of the structure stripped of its earlier bracing structure and elevated walkways to allow for uninhibited views down the length of the structure and an enhanced appreciation of the ground-floor cell layout and design.

The remaining component of the project, for which planning is currently underway, will include the conservation work associated with interpretation and additional external landscaping to reintroduce the industrial aspects that were once a crucial element of the penitentiary precinct. The latter will be a further manifestation of our engagement with the surrounding lawn to reintroduce some sense of the activity, noise, bustle and toil that characterised this area. It is proposed that this work will be staged over a number of years.

Funding

The project is by far the most extensive and expensive in PAHSMA history. A price-tag in the vicinity of $7m, the urgency of the work, the consequences of no action, and the World Heritage status of the Port Arthur Historic Site as one of the components of the Australian Convict Sites all reinforced that PAHSMA would require financial support. The Tasmanian Government subsequently contributed $3m and the Australian Government close to $2m. PAHSMA is extremely grateful for this response and the recognition of the valuable outcomes of the provision of this funding. The remainder of the costs have been met directly by PAHSMA.

Although visitors could access the building by 19 December 2014, the Penitentiary structure was formally re-opened on 21 January 2015 by the Hon. Greg Hunt, Minister for the Environment, and the Hon. Will Hodgman, Premier of Tasmania. PAHSMA is confident that the end result is one that is world-class and internationally cutting-edge in terms of research, response methodologies and conservation outcomes and we look forward to opportunities to share both the journey and the end results with colleagues and visitors.

Jane Harrington
Director Conservation & Infrastructure
Port Arthur Historic Site Management Authority
A special day for Fraser Island World Heritage area

On 24 October 2014 a special sitting of the Federal Court of Australia was held ‘on country’ to award Native Title to the Butchulla People over K’Gari (Fraser Island). This was a special day indeed, and saw a gathering of Butchulla People greater than any seen in more than a century.

This day was a long time coming and its beginnings go back over 18 years. The consent determination endorsed by the Federal Court in October 2014 concluded two years of negotiations with the relevant respondents, which included the State of Queensland, Fraser Coast Regional Council, Telstra Corporation Limited, and King Fisher Bay Resort Village.

The Honourable Justice Collier handed down her judgment determining that native title exists and that the Butchulla People hold in common, native title rights and interests over land and waters on K’Gari (Fraser Island). Justice Collier summarised the legal procedures and explained the major points of law whilst also conveying the gravity and importance of the decision.

The culmination of the legal proceedings led to an outpouring of jubilation and some relief, followed by a welcome and smoking ceremony by traditional owners. The location and lunch was hosted by the King Fisher Bay Resort Village. The clearing adjacent to the beach and overlooking the magnificent Korrawinga (Sandy Straits) was soon overflowing with colour, movement and energy of Butchulla People of all ages participating in many traditional dances.

Guests at this special day had much to understand and even more to absorb. Like much that is special, it was also a bittersweet day. The Butchulla People’s knowledge, feeling of connection and belonging to K’Gari was already known, had always been known to them and had never been questioned and never forgotten. However, this decision (acknowledgement of connection and of belonging) was now enshrined in law, could no longer be lost or ignored, and best of all, it could now be shared.

While some may have lamented a seemingly small step, many more have been heartened by this day as a meaningful beginning and a new opportunity for K’Gari and its people.

Andy Quirk
Fraser Island Executive Officer
World Heritage Management
Queensland Department of Environment and Heritage Protection
Working together to save the mala (rufous-hare wallaby)

Uluru-Kata Tjuta National Park is home to one of the largest remaining populations of mala (rufous-hare wallaby) on earth. Native to the desert country of central Australia, this small wallaby is now all but extinct in the wild. World Heritage listed Uluru is home to one of the largest remaining populations with more than 200 animals.

To keep these animals safe from predators, such as foxes and cats, in 2005 the park fenced off a 170 hectare paddock. Its success has been obvious, with numbers quickly multiplying from the 30 mala that were originally placed in the paddock.

Unfortunately there is one feral animal that continues to pose a threat—rabbits. Competing with mala for food, rabbits also quickly outbreed the mala, ensuring they become a dominant species in the environment.

Despite the park’s many efforts to keep rabbit numbers down in the mala paddock over the years, they kept coming back. Late last year, in an attempt to eradicate the rabbits once and for all, Uluru’s rangers introduced a new concept—a volunteer team of environment workers from around the country, to come in and ‘blitz’ the problem.

Over two weeks, rangers and volunteers mapped and fumigated every rabbit warren in the paddock, dispensed carrots laced with calicivirus (harmless to the mala, but deadly to rabbits) and constructed reinforced fencing designed as an extra protection from reinvasion by the rabbits from the outside.

Follow up monitoring by rangers, looking at rabbit scats, tracks and using remote cameras, has seen fantastic results. There has been more than a 90% decrease in rabbit signs. As a bonus, rangers have had to use substantially less ‘top-up’ food in mala feeding sessions—clearly they are now getting more to eat naturally now that the rabbits have gone.

While the blitz has not led to total rabbit eradication in paddock, its success lies in the clever use of resources, including volunteers’ time and energy, to improve the mala’s chances. In recognition of this, Australia’s Department of Environment awarded an innovation prize to two of the park’s rangers.

Rangers will continue the good work this year, targeting any rabbit burrows that have been reopened or redug. A new type of feeding station is being trialled, one that suits rabbits and not mala, in a bid to bait any remaining rabbits.

Parks Australia
www.parksaustralia.gov.au

Mala (rufous-hare wallaby)
Image courtesy of Parks Australia
Rescue mission for Kakadu’s threatened species

The Australian Government is ramping up action to bring threatened species back from the brink of extinction in Australia’s largest national park, Kakadu.

It’s been a tough decade or two for Kakadu’s rare plants and animals. Across much of northern Australia threatened species populations have seen sharp declines, and World Heritage listed Kakadu is no exception. Over recent years, Kakadu has partnered with many of Australia’s top scientists to find out what is driving the problem.

Last year, the research converged to provide a clear picture of the causes, with feral cats and too-frequent fires named as the most likely culprits.

In Kakadu, teams of people are rolling up their sleeves and turning these findings into action. Top scientist John Woinarski has developed a threatened species strategy for the park with actions that aim to halt the decline of these at-risk plants and animals, and the Australian Government is providing an extra $750,000 into Kakadu to kick start the work.

Four projects are gearing up, which will tackle some of the most urgent tasks:

- Intensive work to target threats from fire, weeds and feral animals in crucial habitat, extending from Kakadu’s Stone Country to the lowland woodlands.
- Creating a wildlife refuge on Gardangarl (Field Island) for species struggling on the mainland including small mammals and goannas.
- Expanding the ‘toad smart’ quolls project, building on the highly successful research conducted in Kakadu since 2010.
- Seedbanking and propagating threatened plant species, many of which occur nowhere else in the world.

The work will be done by rangers, Kakadu’s Aboriginal owners and researchers from across the country. The strategy runs for a decade, with the on-ground action beginning this year.

There’s no doubt tackling the decline is a big job, and it will take many years of sustained effort to see results. However, armed with comprehensive data, an action plan and a feeling of renewed hope, Kakadu is well on its way.

Parks Australia
www.parksaustralia.gov.au
The Gathering in The Gully—conserving nature and culture in the Greater Blue Mountains World Heritage Area

In the lead up to the World Parks Congress in November 2014, more than 300 Indigenous people from five continents and 43 countries gathered in the Blue Mountains to share knowledge about conserving nature and culture. The Gathering was held in The Gully, Katoomba, a declared Aboriginal Place managed by the Blue Mountains City Council and The Gully Traditional Owners. The Gully is in the heart of the Greater Blue Mountains World Heritage Area.

The Gathering provided an opportunity for a range of groups to network separately before the Congress, including: the Australian World Heritage Indigenous Network, the New South Wales (NSW) Aboriginal Joint Management Custodians, and the International Consortium of Community Conserved Areas (ICCA).

The Gathering began with a warm Welcome to Country from the Gundungurra and Darug peoples, and included field trips across the Blue Mountains, exchanges with local Aboriginal Peoples, dance performances and a series of dialogue sessions. The dialogue sessions were a great opportunity to exchange knowledge on key issues affecting Indigenous communities around the world. A statement from the participants was taken to World Parks Congress as part of the preparatory work for Stream 6 (governance).

Many of the key points and recommendations made in the statement are now reflected in the outcomes of the World Parks Congress—see Stream 6 and 7.

The event was supported by many groups around the world. Key sponsors included the Girringun Aboriginal Corporation, Kimberley Land Council, CSIRO, the ICCA and the World Indigenous Network.

Locally the NSW National Parks and Wildlife Service, Blue Mountains City Council, The Gully Traditional Owners and volunteers sponsored and supported the event, including field trips, cultural experiences and logistics. Local film makers also volunteered and provided recordings of the event, which we hope to have available online soon.

It was an honour and a unique experience to support this exchange. It was wonderful to see Indigenous and Aboriginal people from so many different countries deep in conversation about protecting their country and cultures.

Heritage Section
NSW National Parks and Wildlife Service
Office of Environment and Heritage

Jacqueline Reid, Executive Officer; Dr. Mohammed Taghi Farvar, President ICCA Consortium; Emma Lee, Australian World Heritage Indigenous Network; Aunty Sharyn Halls, Gundungurra Elder—overlooking the Three Sisters Aboriginal Place, Katoomba, NSW
Australian Fossil Mammal Sites World Heritage area turns 20

Two decades ago the Outstanding Universal Value of the Riversleigh and Naracoorte fossil deposits was recognised in a serial World Heritage listing. The Australian Fossil Mammal Sites (Riversleigh/Naracoorte) celebrated its 20th anniversary on 17 December 2014. Separated by over 2000 kilometres, the two sites, Riversleigh (Queensland) and Naracoorte (South Australia) celebrated the anniversary in their own way.

Riversleigh

At the Riversleigh Community and Scientific Advisory Committee meeting in November, Henk Godthelp provided an overview of Riversleigh’s World Heritage inscription and achievements. Henk played a large role in the paleontological team which initially unearthed the significance of the remote Riversleigh fossil fields and were instrumental in its subsequent World Heritage listing. Henk has also been a member of the Advisory Committee since its inception. In December 2014, the Department of Environment and Heritage Protection (EHP) hosted a seminar in Brisbane where Henk’s audience came to appreciate the history, the controversy, the politics, and significantly, the science behind the World Heritage listing process for Riversleigh. Henk explained that Riversleigh was first placed on the National Heritage List, was then declared a National Park and was inscribed on the World Heritage List in 1994. The seminar was well attended by university staff and students, staff from the Queensland Museum and EHP.

In addition to the contribution made to our understanding of the evolution of mammals, Riversleigh achievements include:

- More than 50 PhD students have either fully or partially based their research on Riversleigh.
- Sixty honours students have worked on Riversleigh.
- British, Canadian, American and Argentinian students have undertaken PhDs at Riversleigh.
- David Attenborough’s first episode of ‘Life of Mammals’ focussed on Riversleigh.
- Four documentaries made on the Riversleigh fossil fields.
- Fifteen conferences have focussed just on Riversleigh.

Riversleigh's credentials as a world class fossil deposit are well established and research continues to expand on the remarkable diversity of animals and plants fossilised in the limestone of the region. Advances in radiometric dating and new high resolution imaging techniques are enabling scientists to ask and answer more sophisticated questions.
Naracoorte Celebrations of the 20th World Heritage anniversary for the Naracoorte Caves focused on the local community as long-term supporters of the World Heritage site. On 21 November 2014 the Naracoorte Lucindale Council coordinated a day of activities in the Naracoorte Town Square and Town Hall for school children and families.

Palaeontologists, cavers, artists and associates of the Naracoorte Caves hosted hands-on activities for children ranging from crafting megafauna sculptures and fossil sorting to engaging talks about how to become a palaeontologist and the thrills of exploring caves in search of fossils. Entertainment was provided by Professor Flint, a singing and dancing palaeontologist, with songs that celebrate and raise awareness of Australian’s unique fossil faunas, including animals found at Riversleigh and Naracoorte.

The day’s activities concluded with a panel discussion hosted by Professor Flint. The panel comprised respected and well-known associates of the Naracoorte Caves: Professor Rod Wells, A/Professor Gavin Prideaux, Dr Liz Reed, Dr Grant Gartrell and Site Manager Deborah Craven-Carden.

The celebrations continued with an anniversary party at the Naracoorte Caves on 26 November to acknowledge the contribution and support of the local community and long-term associates of the Naracoorte Caves. Invited guests included former and current staff of the Naracoorte Caves and South Australian Department of Environment, Water and Natural Resources, current and former research associates including PhD and Honours students, contractors, the Friends of Naracoorte Caves group and other community members. The Caves Café provided fresh and tasty tapas and Mount Gambier band Squizzy and the Outlaws entertained with their jazz and rockabilly sounds. A giant cake featuring an image of Thylacoleo was jointly cut by Mayor Erika Vickery and Director, National Parks John Schutz.

The week of anniversary celebrations concluded with a float in the Naracoorte Christmas Parade which featured a model of Procopont and Thylacoleo, and staff wearing hand-crafted masks of Australian animals. It was a wonderful opportunity to celebrate the anniversary, emphasising the important place of the Naracoorte Caves within the broader Naracoorte community as a site of education, recreation, reflection, tourism and science.

Any anniversary prompts a reflection on where we have come from and where we are heading. The recent appointment of an Executive Officer at the Naracoorte Caves and increased partnership with Riversleigh over the last 12 months highlights a renewed invigoration for Australian Fossil Mammal Sites. At Naracoorte Caves this is reflected in the establishment of an Interagency-Community Reference Group and progress towards ensuring that the World Heritage principles are integrated into the strategic planning and daily operations of the site.

Jean Balson
Australian Fossil Mammal Sites—Riversleigh Executive Officer
World Heritage Management
Queensland Department of Environment & Heritage Protection

Dr Amy Macken
World Heritage Executive Officer
Australian Fossil Mammal Sites—Naracoorte
South Australia Department of Environment, Water and Natural Resources
Mapping Wet Tropics in 3D

A unique participatory method of mapping Aboriginal knowledge is being adopted in the Wet Tropics World Heritage Area through a partnership between the Wet Tropics Management Authority (the Authority) and Mandingalbay Yidinji people. The project which was funded under the International Union for Conservation of Nature (IUCN), Global Environment Facility: Inspiring Protected Area Solutions (GEF – IPAS) program, aims to empower Traditional Owners as sole architects and practitioners in mapping their traditional knowledge of country in the Wet Tropics.

Using Participatory 3 Dimensional Modelling (P3DM), Mandingalbay Yidinji youths, Elders, men and women are creating 3D scale models and depicting their cultural heritage using paint, strands of wool and pushpins.

The process is being facilitated by the Authority using participatory methods, however Mandingalbay Yidinji people decide what knowledge to map, how to display it, and who has access. “Doing this P3DM exercise has given the control back to us as traditional owners. Our country is now recorded by us and in a way that will help us to educate our young ones about their culture” said Traditional Owner Dale Mundraby.

The P3DM exercise also aligns with the Authority’s strategic goal to ensure that Rainforest Aboriginal people are supported in expressing their knowledge, culture and management practices in the World Heritage Area. Program manager Paul Chantrill said “collaborative projects such as these demonstrate the Authority’s ongoing commitment to facilitating practical and meaningful opportunities for rainforest Aboriginal people”.

In November 2014 at the World Parks Congress, a live demonstration of Mandingalbay Yidinji’s P3DM process captured the attention of hundreds of delegates, including Congress Champion, Mr Luvuyo Mandela. The concept for the World Parks Congress demonstration was the result of collaboration between the Technical Centre for Agricultural and Rural Cooperation (Netherlands), the IUCN, the United Nations Development Programme (UNDP) Equator Initiative and the Authority. While delegates gathered around the model, six Mandingalbay Yidinji representatives, supported by the Authority’s project facilitator, shared their knowledge and stories by illustrating them on to the model. Later, at a Congress session on the risks of mapping traditional and local knowledge, Mr Mandela accepted Mandingalbay Yidinji’s completed model on behalf of the Congress and said: “we, as Indigenous people need to learn a language that helps us communicate what we need and who we are in a way that’s digestible to the rest of the community, so this initiative is an incredible one”.

Into the future, the models and mapped information will assist Mandingalbay Yidinji people to manage their Indigenous Protected Area and country within the World Heritage Area. They will also inform tourism planning, be used as educational tools with local schools and for guiding tourists and visitors.

View a short film about the project.

M’Lis Flynn
Wet Tropics Management Authority
www.wtma.qld.gov.au
World Heritage at the IUCN World Parks Congress

Occurring once every 10 years in a different location around the world, the World Parks Congress (WPC) came to Sydney in November 2014. Over 6000 delegates from 170 countries attended the 4th WPC. A once in a lifetime opportunity to attend a WPC in our own country ensured that Australia’s diverse protected area stakeholders, workers and researchers were well represented. As World Heritage sites cover 8% of all the Earth’s protected areas there was a significant focus on the role World Heritage sites play in the protected area arena.

The goals of the World Parks Congress included:

• articulating the vital role of protected areas in conserving nature while delivering essential ecosystem services
• positioning protected areas within goals of economic and community well-being, and
• demonstrating how this can be achieved in practice.

The theme for this WPC was “Parks, people, planet: inspiring solutions.” With World Heritage as one of the cross-cutting themes there were plenty of workshops to keep World Heritage enthusiasts entertained and engaged. Key World Heritage topics during the Congress were the launch of the International Union for the Conservation of Nature (IUCN) World Heritage Outlook program; the exclusion of extractive industries in World Heritage sites; increasing the capacity of developing countries to manage their World Heritage sites; also our own Great Barrier Reef World Heritage area was a main feature of many speeches and workshops.

The move to operationalise Outstanding Universal Value (OUV) in order to increase understanding of, and therefore the conservation of OUV, was also explored at a workshop held in the Protected Planet Pavilion.

Myself and four other speakers presented on the different approaches we have taken towards the operationalisation of OUV for our respective properties in Australia, Germany and France, and this was followed by a discussion and concluding remarks by IUCN. The operationalisation methodology was developed by Jon Day, a former Director with the Great Barrier Reef Marine Park Authority, and it is gaining traction as a useful tool for managing and understanding World Heritage sites around the world.

The Congress is a great opportunity to expand networks and catch up with colleagues from the World Heritage and protected area fields. Staff from the UNESCO World Heritage centre developed badges which helped to identify all those who ‘heart’ World Heritage in the crowd. The ‘cost’ of a badge was contact details so that a greater network of World Heritage practitioners, researchers and workers can be created.

With inspirational speakers, rangers, researchers, a plethora of workshops, world leaders’ dialogues, launches, performers and wilderness rap songs, the atmosphere was electric and I wasn’t the only one to complain about a temporary inability to focus on one thing with so much going on around.

The Promise of Sydney—the congress’s legacy document, highlights key approaches for protected area conservation that should be taken in order to keep inspiring, invigorating and investing in conservation outcomes for protected areas.

Importantly, and as outlined in the World Heritage promise, was that: “World Heritage Sites agreed at the World Parks Congress to secure the highest level of international protection to our most iconic protected areas, and to provide exemplary leadership within the protected areas movement on land and in the oceans”.

Hopefully this is something we can all continue to aim for and achieve.

Further reading and resources:

More on the World Heritage promise.
For a more thorough overview on the WPC, check out the latest Parks journal.
A new report on the ‘Benefits of Natural World Heritage’ report was launched at the WPC.
The IUCN World Heritage Outlook website.
Innovative approaches emanating from the Streams and Themes of the Congress.

Angie Stringer
Principal Project Officer
World Heritage Management
Queensland Department of Environment and Heritage Protection