

AIMA-ASHA CONFERENCE PROGRAM 2018



The poster features a central graphic of a neon sign. At the top, the words "AIMA ASHA" are written in large, glowing orange letters. Below this, a white rectangular sign with a red border and orange lights around it contains the text "THE CLEARING HOUSE" in bold black letters. To the left of this sign, the word "MUSEUM" is written vertically in a glowing cyan font. Below the main sign, the text "BROUGHT TO YOU BY" is written in green, followed by the logo for the University of New England (UNE). Below that, the year "2018" is written in a glowing cyan font with a large arrow pointing to the right. At the bottom of the poster, there are two red line-art icons: a gear and a stack of books. Below these icons, the dates "= 27-28 SEPT =" are written in purple, and the location "PARRAMATTA" is written in blue. At the bottom left, there is a small blue icon of a ship and the text "AUSTRALASIAN INSTITUTE FOR MARITIME ARCHAEOLOGY". At the bottom right, there is a logo for ASHA (AUSTRALASIAN SOCIETY FOR HISTORICAL ARCHAEOLOGY) with the text "SPONSORED BY" above it.

AIMA ASHA

THE
CLEARING HOUSE

MUSEUM

BROUGHT TO YOU BY

UNE
University of
New England

2018 →

= 27-28 SEPT =
PARRAMATTA

SPONSORED BY

AUSTRALASIAN INSTITUTE
FOR MARITIME ARCHAEOLOGY

ASHA
AUSTRALASIAN SOCIETY FOR
HISTORICAL ARCHAEOLOGY

Welcome to *The Clearing House*, the 2018 combined conference of the *Australasian Society for Historical Archaeology* and the *Australasian Institute for Maritime Archaeology*. On behalf of the societies the organising committee welcomes you to the conference.

Registered participants will be provided with a hard copy summary of papers, but this program should be downloaded to your phone or device should you wish a detailed guide. The downloadable program will also be updated with any late changes to speakers and events.

The conference meets on the lands of the Burramattagal people, a clan of the Darug Nation. We pay our respects to the traditional owners of the land and their Elders past and present.

The settlement of Rose Hill (later renamed Parramatta) was established in 1788 as the second township of the colony of New South Wales. It has retained a rich archaeological heritage from both the Aboriginal and colonial pasts which has seen the area become one of the most important archaeological landscapes in Australia. This archaeological heritage will be celebrated during the tours, Welcome and sessions.

Further information on the history and heritage of Parramatta can be accessed at:

<https://www.cityofparramatta.nsw.gov.au/living-community/history>

Advice on transport to the conference venues is available at: <https://www.cityofparramatta.nsw.gov.au/living-community/getting-here>

If you need to contact the organisers, our email is: conference@asha.org.au

MAP OF VENUES



WEDNESDAY

Registration will be available at the UNE Campus, first floor, 232 Church St. Parramatta.

9:00	VENUE OPENS – Registration commences – UNE Campus, 232 Church St, Parramatta
10:00-3:00	ASHA ARTEFACT WORKSHOPS – UNE Campus (register and pay via ASHA website)
1:00-2:00 & 2:30-3:30	Tour of Australian National Maritime Museum Conservation Labs Tickets via Eventbrite: [link on conference webpage]
12:00-3:30	Free Archaeological Tour of Parramatta - Dr Siobhan Lavelle (Free - register via conference website)
4:00-5:00	Tour of City of Parramatta Heritage Centre Collections and Storage - Dr Jennifer Jones (Free - register via conference website)

5:30 - 6:45 Welcome and Conference Speaker

UNE Campus - 232 Church St, Parramatta

Dr Fred Hocker – Curator of the Vasa Museum

Vasa: from wreck to national treasure



In 1628, the most powerfully armed warship in the world departed on its maiden voyage from Stockholm, Sweden. Gustav II Adolf's Vasa made it only 1300 meters before a gust of wind heeled it over so far that water ran in through the gunports and the ship sank before thousands of onlookers. Initial salvage attempts failed, but most of the guns were recovered in the 1660s. In 1956, the wreck was relocated, and after nearly five years of preparation, successfully raised. Excavation of the interior and the surrounding bottom produced over 40,000 objects revealing every aspect of life and death aboard a 17th-century warship. This lecture will present the history of the project, current research being carried out at the Vasa Museum, and discuss the place of Vasa in both the national consciousness of Sweden and the public perception of maritime archaeology.

7:00-8:00 CONFERENCE Welcome Drinks

SKYE (Philip Ruddock Heritage Centre) - 45 Macquarie St, Parramatta

Includes an open archaeological display of an 1800s convict hut and the cellar of the 1801 Wheatsheaf Hotel.
[<https://www.crowngroup.com.au/parramattas-untold-history-unearthed/>]

(Free with registration - RSVP when you register for conference)

THURSDAY

Registration will be available at the UNE Campus, first floor, 232 Church St. Parramatta.

THURSDAY - ROOM 1		THURSDAY - ROOM 2	
<p>9:00 - 10:30 Session: Parramatta Chair: Martin Gibbs</p>		<p>9:00 - 10:30 Session: Artefacts Chair: Sean Winter</p>	
9:00-	Mary Casey - <i>Casey & Lowe</i>	9:00-	Denis Gojak- <i>Uni. of Sydney</i> *Student*
9:10	<i>Female Labour & Manufacturing: Australia's first two Female Factories in Parramatta</i>	9:15	<i>British export clay tobacco pipes for the Australasian market</i>
<p>The first two female factories in Australia at Parramatta provide insight into the British purposes of colonial settlement and how and why they produced early textiles and maritime products and reveal the little known growing of flax in New South Wales. Examining the products they manufactured provides new insight into the 'Heads of a Plan' and how little known aspects of this were implemented during early British settlement.</p>		<p>Most clay pipes found in Australia and New Zealand arrived with little regard for, or agency from their eventual users. The main exception is a small but poorly understood group of pipes that targeted Australasian consumers, among the first items to be specifically made for an Australian and New Zealand market. While a few of these pipes have been noted archaeologically - particularly the Squatters Budgeree, moulded kangaroo and Cooley pipes - systematic research has identified a much greater diversity and extent of attention being given by pipe-makers to producing Australasian themed pipes than was previously believed. We know clay pipes displayed class, politics and ethnicity, but how did they express Australianness? And to what end? I argue that Australasian themed pipes can be understood at a hierarchy of levels, offering insight into 19th and 20th century clay pipe production, and the role of material culture in creating and affirming identity.</p>	
9:10-	Rhian Jones - <i>Casey & Lowe</i>	9:15-	Christine Williamson - <i>Christine Williamson Heritage</i>
9:20	<i>The Parramatta Female Factory: Real and Imagined</i>	9:30	<i>Consultants</i> <i>A Church House, Gin House; A School House, Out House</i>
<p>The Parramatta Female Factory was the first purpose-built Factory in Australia, constructed between 1818 and 1821. Commissioned by Governor Lachlan Macquarie, designed by Francis Greenway, and based on a plan provided by Reverend Samuel Marsden, how did these men imagine the purpose of the Factory system? Were their intentions reflected in the physical layout of the complex? In 2016-2017, Casey & Lowe undertook the first systematic archaeological testing across the site to determine the survival and significance of three key Factory buildings, demolished in the 1880s. The Factory was only operational for 30 years, meaning any evidence of the occupation by the convict women is obscured by 170 years of subsequent use by the later mental health institutions, including the Parramatta Lunatic Asylum, the Hospital for the Insane and the still operational Cumberland Hospital. Only by comparing the archaeological record with historic plans and contemporary accounts can we begin to reconstruct the Factory in both imagination and reality.</p>		<p>A significant proportion of the artefacts recovered from excavations undertaken by Extent Heritage within the grounds of Parliament House, Melbourne can be tied to two chronologically discrete but related phases of site use. Between 1849 and 1860 the site contained a school house and associated outbuildings. In 1860 this school was rebuilt and in 1874 the site was handed over to the State Government. Deposits from one cess pit relate to the pre-1860 school and those from another were probably deposited in 1874. The artefacts from these two samples will be used to explore the increasing institutionalisation of the school in the 1870s the expanding division between the life of the school and the private realm of those living at the site.</p>	
9:20-	Carol Liston - <i>Western Sydney Uni.</i>		
9:30	<i>Rethinking convict women's lives</i>		
<p>Most detailed research on convict women is undertaken by family historians. The women they research are rarely the drunken hags or prostitutes of popular imagination, though statistically they are not the 'mothers of the nation.' In a landscape of control such as Parramatta with its Female Factory and convict barracks, how might we rethink the options for convict women?</p>			



<p>9:30- Mike Hincks - <i>Casey & Lowe</i> 9:45 <i>An Archaeology of Idleness and an Experiment in Associative Thinking</i> This paper presents the results of recording mark-making and inscriptions on the exterior of a building at Cumberland Hospital, North Parramatta, in 2018. The building has a 120-year history and was best known as part of No.2 Ward of the Parramatta Mental Hospital and later Parramatta Psychiatric Centre. The marks and scratches are suggestive of agitation, frustration, imitation and idleness. The paper discusses the process of analysis of the marks - and the institutional environment in which they were created - through the methodologies of Scenic Composition and Associative Thinking. The aim of this experiment is to push the interpretive process beyond causal, linear, or traditional historical/technical interpretations that connect poorly with the social experience of space and objects.</p>	<p>9:30- Chris Biagi - <i>La Trobe Uni.</i> *Student* 9:45 <i>The Cost of Living</i> Approximately 15 000 animal bone fragments were recovered from excavations undertaken by Dr Vincent Clark and Associates at the Wesley Church Complex site in Melbourne. This paper compares the faunal samples from two residential locations within this complex. The analysis focuses on the identification of butchery sections, which are used in a meat value analysis to identify trends and differences in the purchasing habits of the occupants of the houses fronting the main street and those along the laneway.</p>
<p>9:45- Jeanne Harris - <i>Uni. of New England</i> *Student* 10:00 <i>A Call for Citywide Perspectives</i> In 2000, five local, State and Commonwealth agencies funded a research plan that would provide a theoretical framework for investigations of historical archaeological resources in Parramatta. The result, The Parramatta Historical Archaeological Landscape Management Study (PHALMS) presents guidelines to facilitate decision making about the conservation of Parramatta’s significant archaeological resource. With the number of archaeological investigations conducted in Parramatta during the last 20 years, the guidelines encourage researchers to conduct cross-site and citywide comparative studies that will broaden the historical themes to be considered. Using Parramatta as an example, this paper is a call for more citywide comparative studies in cities throughout Australia. Presented will be citywide archaeological studies conducted to date and the presentation of ongoing research as examples of the potential these studies can contribute to historical themes in Australia’s cities. As an example, this paper will present the preliminary findings of my PhD thesis, which a case study of 8 Parramatta sites that looks for evidence of 19th century health concerns in the archaeological record.</p>	<p>9:45- Penny Crook - <i>La Trobe Uni.</i> 10:00 <i>The promotion of personal and domestic goods in 19th-century trade catalogues: similarities and differences</i> Nineteenth-century trade and store catalogues are an invaluable source of data about material and consumer cultures. They record in fine detail, small font and recurring lithographs millions of products offered sale to customers around the corner and across the globe. Their utility in historical archaeology has long been acknowledged but rarely exploited. This paper will report on the creation of a dataset of 55,000 items sourced from illustrated catalogues and price lists of major Australian, English, American and Canadian retailers and manufacturers dating from the 1860s to 1907. It will examine similarities and differences in the promotion and pricing of two classes of domestic ware (glass and ceramics) and two classes of personal goods (footwear and jewellery).</p>
<p>10:00- Martin Carney - <i>Aegis-Heritage - AMAC Group</i> 10:15 <i>Recent Excavations, Riverside Site, Parramatta</i> The original assessment of the Riverside Site (also known as “The Lennox” development) promised a multiphase archaeological site with the potential for evidence of aboriginal occupation, the 1790s first Parramatta hospital, convict sites as well as later 19th century development. The site, bounded by the Lennox Bridge, Parramatta Weir/ dam, Church Street, Phillip Lane and Phillip Streets, is set at the junction of a natural ford and early bridge, having significant associations as a fresh water source and fishing for millennia. An initial two stages of comprehensive testing</p>	<p>10:00- Jessie Garland - <i>Underground Overground Archaeology and La Trobe Uni.</i> *Student* 10:15 <i>“A Large and General Assortment” : Fancy Goods, Unusual Rubbish and Victorian Retail Practices in Christchurch</i> The recent excavation of a city block in the heart of Christchurch’s early commercial precinct revealed an 1850s-1870s retail complex, including numerous fancy goods stores, from the Dickensian “Well-Known Little Shop” to the more grandiose “London and Paris House”. The historical and archaeological records for this site, complete with the more than 20 000 artefacts recovered, provided the rare</p>



<p>and salvage excavations were completed under the directorship of Martin Carney, Ivana Vetta and Benjamin Streat in 2016 and 2017 following this original assessment in 2014, with further works programmed. Initial excavations have identified the Parramatta Pleistocene sand body, indigenous sites, two or more phases of historical occupation, and an unexpected survival of parts of the Lennox Bridge extending into the site. Extensive evidence of the scouring and silting caused by several flooding events of the Parramatta River was also revealed affecting the topography of the site and the survival of archaeological features.</p>	<p>opportunity to investigate the material culture of the nineteenth century city from behind the commercial veil, providing an unusual and interesting counterpoint to the used and discarded artefacts found on domestic sites of the same period. The presence of curiously early artefacts, obscure styles and unusual products all point to a rich and far-reaching retail and consumer culture, while the site itself illustrates the ways in which the material journey from manufacturer to consumer can be adversely interrupted.</p>
<p>10:15- Anne Bickford - <i>Archaeology And Heritage Pty Ltd</i> 10:30 *Student* <i>The Archaeology of the Lennox Bridge Parramatta</i></p> <p>Lennox Bridge is a single arch sandstone bridge designed and built by David Lennox between 1836 and 1839. Lennox also designed and built the similar Princes Bridge in Melbourne over the Yarra in 1851. This was demolished about 1887 and replaced. Lennox Bridge Parramatta spans the Parramatta River on Church Street, in a busy part of the city. To assist pedestrians and bike riders to pass beside the river, rather than go up and down many steps and cross the crowded street, it was decided to build a tunnel each side. In 2014-2015 AAH excavated these two tunnels and parts of the bridge deck, while the construction of the tunnels was going on around us. The method used by the engineers was cut and cover. The tunnels were cut between the wing walls several metres deep from the road surfaces through clay and rock fill. We found several surprising features including remains of the 1804 previous bridge, a hidden sandstone temporary east wall, the remains of the original western wall hidden by the doubling of the width of the bridge in the 1930s, and a unique or very rare drainage system with deep shafts inside the sandstone walls.</p>	<p>10:15- Bronwyn Woff 10:30 <i>Imitation is the sincerest form of flattery: ceramic decorations and their imitations</i></p> <p>Ceramic wares were produced in huge numbers during the nineteenth century. Decorations technologies and styles too, blossomed during this time. And yet excavations across three nineteenth century domestic sites in Melbourne have uncovered ceramic artefacts with decorations which imitate other decoration types. Why, in a climate of opportunity when it came to ceramic decorations, did potters choose to make ceramic vessels with these imitation decorations? And why did Melbournian residents choose to purchase them? What information can we obtain from these ceramic types about the economic climate in both the United Kingdom and Australia, and about the people who were buying these goods? Were these vessels passable as an outward indication of the owner's wealth? Or were they a glaringly obvious indication of the owner's lack of purchasing power? This presentation uses artefacts from recent Melbourne excavations as examples in its attempts to answer these questions.</p>
<p>10:30 - 11:00 Morning Break</p>	<p>10:30 - 11:00 Morning Break</p>
<p>11:00 - 12:30 Session: Landscapes Chair: Celeste Jordan</p>	<p>11:00 - 12:30 Session: Artefacts cont.</p>
<p>11:00- Martin Gibbs, Richard Tuffin and David Roe – <i>Uni. of New England and Port Arthur Historic Site Management Authority</i> 11:15 <i>Landscapes of Production and Punishment: Convict Industry and Labour on the Tasman Peninsula</i></p> <p>The multi-disciplinary <i>Landscapes of Production and Punishment</i> project explores the industrial nature of the convict system, using as a case study the penal settlement of Port Arthur. Taking a multi-scalar approach, the project studies the macro-geography of resource extraction sites across the Tasman Peninsula as well as the micro-geographies of industrial buildings and workspaces, viewing in parallel the flows of convicts and industrial production through the system. This paper is an update on the research, with special attention to recent work on industrial</p>	<p>11:00- Katerina Karanikas - <i>Monash Uni.</i> *Student* 11:15 <i>The Golden Days of Jones Lane: A Study of the Mid-Nineteenth Century Artefact Assemblage</i></p> <p>Much of Melbourne's history has been built on the back of the Gold Rush during the 1850s. But what is known of the lives of those living in the city's centre, caught in the bustle of it all? This study's analysis is drawn from the archaeological material of an isolated context that can be reliably dated to before 1855, showcasing at least a decade of occupation on this corner of Jones Lane and Little Lonsdale Street. The excavation undertaken in 2017 by Dr Vincent Clark & Associates has unveiled new insight into the lives of some of Melbourne's earliest citizens, and how they fit into Melbourne's late</p>



<p>landscapes including timber-extraction sites and tramways via LiDAR , as well as the first results from the ‘Bells, Bricks, Boots and Blocks’ materials analysis sub-project.</p>	<p>nineteenth century context. This analysis provides evidence of a thriving home life during this period in Melbourne's development, intriguingly located a block from the infamous Little Lon district.</p>
<p>11:15- Daniel Leahy – <i>Uni. of New England</i> *Student* 11:30 <i>Aerodromes of democracy: the archaeology of Empire Air Training Scheme flying schools during WWII</i></p> <p>The Empire Air Training Scheme was one of the largest defence training initiatives of World War II, taking place in Australia, Canada, New Zealand, Southern Rhodesia (now Zimbabwe), and South Africa. Over 37,000 members of the Royal Australian Air Force were trained as part of the scheme. Servicemen to be trained as pilots experienced their first taste of flying at Elementary Flying Training Schools before continuing their career on more advanced aircraft at Service Flying Training Schools. In Australia, such schools were established across all six states, often in fields which could easily be mistaken for farming paddocks. A recent project investigated the archaeology at such sites around the world to determine what level of coordination existed between the Commonwealth air forces in regards to airfield design. Despite training being conducted under the joint identity of ‘Empire’ and employing standardised equipment, results of this project suggest that each nation approached airfield design differently.</p>	<p>11:15- John McCarthy – <i>Flinders Uni.</i> *Student* 11:30 <i>The Ship Shapes Project: 3D capture of 17th and 18th century Dutch ship models</i></p> <p>The Ship Shapes Project is the first attempt to 3D scan the 20 surviving contemporary scale models of Dutch East India ships held in various museums across the Netherlands, including the collections of the Rijksmuseum and Scheepvaartmuseum. These incredibly detailed models were built at the same time as the ships and have much to tell us about ship construction in this period. Techniques for scanning include photogrammetry, CT scanning and endoscopy. The resulting scan data will be used in 3D reconstructions, animations and virtual reality simulations and will also support a study on the changing characteristics of Dutch East Indiamen in the seventeenth/eighteenth centuries, with a focus on relevance for the VOC wrecks in Australian waters. The project is run by PhD candidate John McCarthy and Associate Professor Wendy van Duivenvoorde of Flinders University and is financially supported by the Embassy of the Kingdom of the Netherlands in Canberra.</p>
<p>11:30- Irini Malliaros - <i>Silentworld Foundation</i> 11:45 <i>We had to watch our footing; the hatchlings had no concept of humans, nor did the fish in the shallows’: Wrecked on paradise – shipwrecks of the Pitcairn Islands, South Pacific Ocean</i></p> <p>Part of the Pitcairn Islands group, Oeno Island is a natural oasis that has seen little to no human presence in the last few decades. Of the eight known late 19th – early 20th century shipwrecks at the Pitcairn Islands, five have occurred on the reef surrounding. In October 2017, SWF undertook fieldwork to inspect a number of shipwreck sites. This paper presents the results of initial investigations on the shipwreck resource of the Pitcairn Islands, of which only one site has been previously archaeologically investigated. Local knowledge and research undertaken prior to the voyage, assisted in locating and documenting three sites at Oeno Island and two at Pitcairn. This fieldwork has provided a starting point for further investigations of the maritime heritage of this remote island paradise and, concurrently proved to be an ideal opportunity to field test the feasibility of using satellite imagery to locate shipwrecks on isolated coral reefs.</p>	<p>11:30- Jennie Lindbergh - <i>AMBS Ecology & Heritage</i> 11:45 <i>The Waterloo Station Site: The importance of detailed research in the identification of archaeological potential</i></p> <p>This paper explores the importance of preliminary research and analysis in identifying the archaeological potential within one of the Sydney Metro City & Southwest; Chatswood to Sydenham stations. AMBS Ecology & Heritage was invited to join the John Holland CPB Ghella Joint Venture tender team and as part of the due diligence some preliminary investigations were undertaken to avoid risks to the project timing. As there is very limited documentary evidence for the early history of the Waterloo station site additional research following award of the contract was essential. The importance of the additional detailed research was demonstrated in the presence of intact archaeology associated with the excavation of a number of houses yielding an extraordinary quantity of artefacts. The scale of the excavations and quantity of artefacts is such that this paper can only provide very preliminary results of the excavations.</p>
<p>11:45- Anne Wiggan 12:00 <i>Bungonia: bypassed and forgotten</i></p> <p>Set in a 19th century landscape of large rural grants, the village of Bungonia retains its original layout, determined by</p>	<p>11:45- John Pickard - <i>Macquarie Uni.</i> 12:00 <i>Mine’s older than yours ... wire fences in colonial Australia</i></p> <p>Post-and-wire fences are ubiquitous in all agricultural and pastoral regions across Australia. Although they are relatively</p>



<p>Surveyor Hoddle in 1830. Europeans had recorded visits from as early as 1818. Bungonia was the first settlement on the original Argyle track southwards from Sydney to the coast and noted for early agriculture, mining, for commerce, Inns, convicts, bushrangers and centre for policing, governance and religion. Steep gradients in the surrounding Bungonia Gorge country, moved both rail and road corridors westwards. Isolated from major change, Bungonia retains both significant built heritage 1830/40's and its occupation deposits. There's a "paucity of written records", write Jennifer Lambert Tracey and Michael Tracey in their seminal Archaeological Report on the Bungonia 'Williams Property' 2003. The short-lived pre-eminence of Bungonia makes it an extremely interesting time capsule for archaeological investigation. We would welcome archaeologists to share our sites, research and support.</p>	<p>simple technology (vertical posts holding horizontal wires as a barrier), they embody significant technological development in steel production and metallurgy. But where did they come from, and when were they first used in colonial Australia? The first wire fences were erected in Pennsylvania (USA) in 1816, and in Britain in the early 1820s where "invisible" wire fences started to replace iron fences in the 1840s. By 1850, the structure of post-and-wire fences had stabilised in Britain and they were increasingly adopted. Previous research indicated that the first Australian wire fences were erected on Phillip Island (Vic) in 1842, but they are now recorded from South Australia in 1840. The first ads for fencing wire were in Adelaide in June 1840 for "Iron standards and wire for fencing" imported on spec. The rapid adoption of wire at the same time that the technology was being developed in Britain shows that Australian landholders have always been innovative, and closely connected with developments overseas. This pattern was repeated in the early 1880s after the invention of barbed wire in the USA.</p>
<p>12:00- Crystal Phillips – <i>Uni. of New England</i> 12:15 <i>From punishment to paradise: the evolution of power in convict landscapes</i> From 1788 to 1840, the Colony of New South Wales depended upon the transportation of convicts and the free labour they provided. This labour force was responsible for the building of roads, establishing towns, and feeding many people in the colony. However, archaeological studies of convict society as an economic system dependent on free labour continue to be underrepresented. The study of the cultural landscapes of convict settlements provides the opportunity to better understand convictism and the power dynamics within this system, as landscapes embody the social actions of those who create them. Using Port Macquarie (1821-47) as a case study, this research observes how the social actions of power and control were present in the convict landscape to understand the social power dynamics of convict society and how these evolved over time.</p>	<p>12:00- Lain Flannery - <i>Biosis</i> 12:15 <i>Archaeological investigations of the Explosive Detection Dog cemetery, Moorebank</i> In 2016 archaeological Excavations were undertaken at the decommissioned School of Military Engineering at Holsworthy, NSW. Part of the archaeological programme included investigations of a dog cemetery in the old Explosive Detective Dog training area. The archaeological excavations revealed some surprising results and have made the archaeologists involved rethink the relationship between these military dogs and military personnel.</p>
<p>12:15- John A. Adeney - <i>Uni. of Western Australia</i> <i>*Student*</i> 12:30 <i>The archaeology of a Western Australian battlefield site from the South African War (1899-1902)</i> Numerous small poorly or unrecorded battles involving Aust. Mounted Infantry units occurred during the South African War (1899-1902). Battlefield archaeology provides an opportunity to present a primary account of military encounters not otherwise recorded in history. One such battle was the successful defence of what is became known as 'West Australia Hill' on 9 February 1900. The hill, south east of Colesberg, will be examined to determine firing locations, the role of artillery, and the routes used by the Boers to attempt to dislodge the West Australians from their defensive positions. The site will be assessed archaeologically using GPS ground-truthed field survey and, for the first time, metal detecting, which requires a special permit under South African heritage law. This field data will</p>	<p>12:15- 12:30 <i>EARLY LUNCH OPTION</i> <i>People wishing to attend the 'In the Trenches' lunchtime workshop or who are on the ASHA Editorial Board may want to collect their lunch early. The conference lunch venue is directly across the road from the conference in the UNE courtyard.</i></p>



<p>analysed via 'Battlefield Pattern Recognition' as pioneered at the Little Bighorn Battlefield Monument, Montana, USA, to understand how 30 West Australians were able to defend a small hill against as many as 400 Boers.</p>	
<p>12:30 - 1:30 LUNCH & MEETINGS *ASHA Editorial Board (Meeting Room)</p>	<p>12:30 - 1:30 LUNCHTIME WORKSHOP <i>In the trenches: how do we respond to gender inequality and sexual harassment in archaeology?</i> Presenter: Anna Davis, Director Working Women's Centre (NT)</p> <p>Anna Davis is an expert in gender inequality and industrial relations. This presentation will explore the emerging issue of harassment in archaeology and provide guidance to participants on relevant workplace laws and policies.</p>
<p>Thursday Cont. - ROOM 1</p>	<p>Thursday Cont. - ROOM 2</p>
<p>1:30 - 3:00 Landscapes Cont. Chair – Denis Gojak</p>	<p>1:30 - 3:00 Artefacts Cont. Chair – David Steinberg</p>
<p>1:30- Nicholas Pitt – <i>Aust. Nat Uni.</i> 1:45 <i>Scales of Waste – an exploration into the reclamation of Sydney Harbour</i></p> <p>Over 11km² of land now exists in areas that were part of Sydney Harbour before British colonisation. Names such as 'Glebe Island' and 'Garden Island' are well-known, but confuse visitors and locals alike. This practice of land-forming, of 'reclamation' was part of a much larger pattern that was repeated around the world during the 19th and 20th centuries, from Tokyo to Toronto. Land reclamation is well-known to both maritime and terrestrial archaeologists. However, explanations for this process are typically limited to simple economic or material arguments. This paper considers the broader motivations behind this practice, including the moral and social connotations of land 'reclamation'. It moves from the small-scale decisions made on an individual site, to the large-scale impact on the entire Sydney Harbour. The framework for this paper is self-consciously interdisciplinary, combining archaeological excavation reports, and historical discourse, valuing social and ideological motivations, while not neglecting material realities.</p>	<p>1:30- Catherine Tucker - <i>La Trobe Uni.</i> 1:45 <i>A Victorian institution: Pentridge Prison and its material culture.</i></p> <p>Pentridge Prison is one of Victoria's most well-known and identifiable mid-nineteenth century institutional complexes. Archaeological excavations were conducted in 2008-9 as part of a series of investigations of the prisoner burial ground. This paper is not about the burials. Instead it looks at the other archaeology that was identified during the excavations, especially the contents of several rubbish pits that relate to the transition of the prison from a small stockade to the massive institution that still stands today. This paper focuses upon the large artefact assemblage, and how it can be used to explore research into the way the prison is administered, and how the material culture can reflect phases of change and transition that mirror the broader history of mid-nineteenth century Pentridge.</p>
<p>1:45- Melissa Carter – <i>Uni. of New England</i> 2:00 <i>The catastrophic decline of the Sydney mud oyster (Ostrea angasi): Can we detect the effects of human predation and environmental modification within historic archaeological assemblages?</i></p> <p>Is the documented mid -19th century decline and later (1880s) decimation of <i>Ostrea angasi</i> (mud oyster) populations along the eastern coastline of Australia visible in the historical archaeological record of shellfish consumption in Sydney? Does the archaeological evidence support the theory that widespread "skinning" of Mud oyster between the 1850s and 1870s led to the eventual decimation of this species? Alternatively, does the archaeological record lend support to the theory that environmental factors, such as</p>	<p>1:45- Fiona Starr & Hilary Davidson - <i>Sydney Living Museums and Uni. of Sydney</i> 2:00 <i>Passing as free men?: government control, convict subversion and the non-uniformity of convict slop clothing in NSW, 1788-1848</i></p> <p>Two striped shirts found at Hyde Park Barracks (HPB), Sydney's principal convict establishment (1819-1848), are among the most iconic artefacts surviving from Australia's penal era - but what other 'slop' clothing survived in the underfloor assemblage, and what does it reveal about convict lives? This paper unravels new threads in the story, based on analysis of over 200 previously unstudied convict textile scraps excavated from HPB. Historical images and documents, combined with close material analysis of shirt, trouser and frock fragments,</p>



<p>increased sedimentation and siltation in estuaries, or mudworm outbreaks from translocated New Zealand oysters, were largely responsible for the disappearance of mud oysters? This paper addresses these and other questions by examining the archaeological shell assemblages from several historical sites across Sydney. It aims to highlight the potential of historical faunal remains for both identifying and distinguishing between anthropogenic and environmentally induced change within the post-colonial setting.</p>	<p>were used to identify examples of imported striped cotton and felted wool and flax linen 'Parramatta cloth' manufactured at the Female Factory, Parramatta. The analysis raises broader questions about the supply and demand of colonial textiles, the supposed 'uniformity' of convict clothing, government control through the marking of clothing, and similarities with the clothing of free working men. Evidence suggests that there was no convict 'uniform' and that slop clothing was not always the agent for demarcation and control the government desired.</p>
<p>2:00- Timothy Russell & Maddy Fowler - <i>James Cook Uni. and Queensland Museum Network</i> *Student* <i>Archaeological investigations of commercial dugong fisheries, North Queensland</i></p> <p>Archaeologists have not previously focused their attention on commercial dugong fisheries in Queensland. Dugong fishermen occupied islands on the Queensland coast in the late nineteenth to early twentieth centuries to procure and process dugong and sell products to local and interstate markets. The Newry Island Group, located near Mackay, provides a suitable case study to further archaeological research into this industry, as the nearby seagrass habitat attracted sufficient dugongs to support the livelihoods of several fishermen. Archaeological surveys undertaken in the area reveal that the evidence in this industry is ephemeral. Adopting a seascapes approach, however, presents multiple interpretations which draw on the value on intangible heritage and allow a more nuanced understanding of how these fishermen situated themselves in the landscape.</p>	<p>2:00- Celeste Jordan – <i>Uni. of New England</i> *Student* <i>Tan lines and sole mates- Convict leather and shoe production on the Tasman Peninsula 1830–77.</i></p> <p>This paper will focus on convict production of leather and shoe manufacturing in Tasman Peninsula and Port Arthur, in Van Diemen's Land from 1830 to 1877. Although there has been extensive exploration of Britain's penal system, global convictism, and free and unfree labour practices, there have been few studies in Australia on specifics of holistic convict manufacturing processes and the implications for the economy of the penal system in the period. By investigating the historic and archaeological leather shoe remains from the period, a brief economic analysis will be undertaken based on the differing construction methods, production statistics, number of convicts manufacturing the goods and the effects on the budding Australian colonial economy.</p>
<p>2:15- Ania Kotarba-Morley - <i>Uni. of Wollongong and Uni. of South Pacific, Fiji</i> <i>Maritime archaeology and anthropology of resilience, sustainability and adaptation. Case study of a low coral atoll of Abaiang, Gilbert Islands, Kiribati in Remote Oceania</i></p> <p>Recent fieldwork (June 2018) on islands of Kiribati aimed to examine the lifeways and adaptive strategies—both past and present—of people inhabiting the coastal landscapes of the central Pacific Micronesian archipelago, in the face of rapidly changing environmental, landscape and climatic conditions. With 3.5 million km² of marine jurisdiction and only 800 km² of land in 33 atolls, this island nation is entirely dependent upon its maritime resources, which also form the basis for the inhabitants' social identity. This paper focuses on the past relationships between people and coastal ecosystems and builds on emerging knowledge of climatic and environmental shifts across the case study region, generating long-term historical datasets that explicate human impacts on environments and resources crucial for contemporary management, policy making and sustainability of coastal resources. This is of critical importance as, on a global scale, human impact on the world's oceans via over-exploitation, urbanisation, industrialisation and pollution leads to significant habitat loss, global warming, sea level</p>	<p>2:15- Michael Lever - <i>Artefact Heritage and Uni. of Sydney</i> <i>Recreational Archaeology of Illegal Recreation (a homage to the late Alister Bowen)</i></p> <p>Opium smoking has a long history in Sydney and its historical depictions reveal much about Australian social attitudes to different forms of recreational drug use. Recent archaeological excavations in Sydney have recovered modified bottle push-ups that A Bowen had previously described as associated with opium smoking. I agree with Bowen that these bottles are likely opium related, but I differ on how they may have been used for this purpose. Using a recreational archaeology approach I present an alternative understanding of how these bottles might have been used in opium smoking.</p>



<p>change and the introduction of exotic species into vulnerable ecosystems. Given these environmental threats there is an urgent need to learn (both by scientists and local communities) from past adaptation strategies to understand the processes by which adaptation takes place and the limitations of the various agents of change. It is also crucial that local communities gain more insight into scientific know-how regarding the recording and protection of their own heritage and become involved in the process.</p>	
<p>2:30- Rebecca Mirams - La Trobe Uni. *Student* 2:45 <i>The early historical development of coastal Northern Territory: past research and present themes</i></p> <p>The Maritime Cultural Landscape of the Northern Territory has a strong historical connection with that of Maritime Southeast Asia. This is visible through both the historical and archaeological records of European navigation, British garrisons, the Macassan trepang industry, and the influx of Chinese as contracted indentured labourers at Port Darwin and beyond. From the 1960s onwards, archaeologists have focused on specific sites or groups of sites in the Northern Territory, consciously and subconsciously strengthening the historical ties with our northern neighbours; with a common thread of the 'shared landscape' continuing over the years. In discussing aspects of my dissertation (in progress), this paper provides an overview of the importance of past research when collated together as themes that cover the historical development of coastal Northern Territory up until 1911. The result will be a demonstration of a cultural landscape of maritime communities inextricably linked with Maritime Southeast Asia.</p>	<p>2:30- Omaira Ahmed Eldeeb - Flinders Uni. *Student* 2:45 <i>Ancient shipwrecks along the Alexandrian Coastline, Comparative study based on the amphorae evidences</i></p> <p>Alexandria is the second largest city in Egypt and one of the largest seaports on the Mediterranean. It was an important maritime base for the various imperial powers that ruled Egypt since its founding; and a centre of political, economic and cultural power, whose influence continues to this day. This impressive maritime heritage so far has been underrepresented by archaeological finds from or related to, the sea—especially shipwrecks. The vast majority of shipwreck sites are identified by their prominent amphorae mounds which have proven to be invaluable archaeological objects for dating shipwreck (and other) sites and their associated materials, illuminating trading connections (whether direct or indirect) and possible route itineraries of the wrecked ships that were transporting them. This paper will give a detailed overview of the amphorae remains located along the Alexandria coastline to investigate temporally the region's changing commercial ties and trade networks.</p>
<p>2:45- Peta Longhurst - Sydney Living Museums 3:00 <i>Sydney's North Head and the Maritime Landscape of Quarantine</i></p> <p>As a maritime quarantine station, Sydney's North Head was intentionally isolated, cut off from the outside world in order to prevent the spread of contagious disease throughout the nineteenth and twentieth centuries. However, despite the apparent sealed nature of the institution, to fully understand the practice of quarantine it must also be viewed as part of a maritime landscape that operates across a number of scales. Far from being strictly confined by the boundaries of the institution, the landscape of quarantine extends outwards into the seascape beyond, and is enmeshed in a network of connections across the seas, connecting ports and quarantine stations via the movement of ships, people, goods, and disease. In this paper, I consider North Head Quarantine Station as part of a broader maritime landscape and consider the implications this has for our archaeological understanding of the institution.</p>	<p>2:45- Fatma Hammad - <i>The Egyptian Textile Museum</i> 3:00 <i>The Roman Myos Hormos to Islamic Quseir al-Qadim harbour, Excavation & management</i></p> <p>The site of Myos Hormos or Quseir al-Qadim lies about 80km to the south of Hurghada, Red Sea. Recent discoveries and excavations at Quseir al-Qadim, have revealed a wealth of evidence in the form of papyri, ostraca and archaeological data, which now prove that the Roman harbour of Myos Hormos is the Islamic Quseir al-Qadim. The site was abandoned for a millennium from early Roman era, the first century B.C., and then reoccupied in the late 11th or 12th centuries A.D.</p>
<p>3:00 - 3:30 Afternoon Break</p>	<p>3:00 - 3:30 Afternoon Break</p>
<p>3:30 - 5:00 ASHA AGM</p>	<p>3:30 - 5:00 AIMA AGM</p>



FRIDAY

FRIDAY - ROOM 1	FRIDAY - ROOM 2
<p>9:00 - 9:45</p> <p>'The Clearinghouse Speed Trials' Chair: Caiti D'Gluyas</p> <p><i>3 minutes to tell us about your interesting, odd and/ or exciting objects / sites/ ideas/ experiences.</i></p> <p><u>Just 3 slides,</u> <u>3 minutes,</u> <u>1 count-down clock.</u></p>	<p>9:00 - 10:30</p> <p>Session: Rivers Chair: Brad Duncan and Meaghan Aitchison</p> <p>9:00- Fred Hocker – <i>Vasa Museum</i> 9:15 <i>The Clydesdale Plantation vessel: an 18th-century pilot boat buried in a tidal rice bank</i></p> <p>The lower stretch of the Savannah River, between Georgia and South Carolina in the USA, is a shallow, tidal waterway developed in the 18th century for rice culture. Damage to the man-made banks which allowed the tide to be used to flood and drain the rice fields had to be repaired quickly, and one expedient was to sink an old vessel in a breach as cribbing, and quickly fill the hull with clay shovelled by teams of slaves [enslaved labourers]. One such vessel was discovered in 1991 during a survey to assess the effects of altering the tidal flow of the river. Excavation in 1992 revealed most of the hull of a small, locally-built vessel shaped for fast sailing, buried behind the remains of the pier which once serviced the main plantation residence. This paper will present the excavation and analysis of the find, as well as the measures taken to protect the site from further erosion.</p> <p>9:15- Brad Duncan - <i>NSW Heritage Division</i> 9:30 <i>Sweet Dreams are Made of This - Archaeological and Anthropogenic Signatures of Sugar Cane and Maritime Industries in the Clarence River Valley, Northern Rivers</i></p> <p>Sugar cane growing has long dominated the NSW Northern Rivers region, transforming the landscape and rivers as the industry grew. Recent inspections of the Clarence River Valley have revealed a previously unconsidered wealth of archaeological sites associated with the sugar cane, timber and rock quarry industries, where 100 sites were inspected in 5 days. Fieldwork revealed new insights into types of riverine archaeological signatures that characterise the growth and significance of the sugar cane industry and other ancillary industries in the Clarence River Valley. Extensive graveyards of similar types of vessels in the study area provided the opportunity to compare and contrast vessel construction and repair techniques, as well as study the evolution of sugar industry vessel design. Moreover, repeated dumping of distinct vessel types offered commentary on the drivers for transformation in the sugar cane industry and also led to anthropogenic change that shaped the nature of the rivers themselves. Undertaken as part of the NSW Rivers Project, this project provides a starting point for examining archaeological and cultural landscapes of the sugar industry in the north-eastern regions of Australia.</p>



'The Clearinghouse Speed Trials' Cont.

9:30- Cosmos Coroneos - *Cosmos Archaeology*
9:45 **Maritime archaeological investigations of the Former Windsor Wharf, Hawkesbury River, NSW.**

In July and August 2018 Cosmos Archaeology undertook an underwater excavation of the remains of the former Windsor wharf on the Hawkesbury River, NSW. The settlement was established in the late 1790s to encourage the growing of food for the colony. During the 1810s a number of efforts were made to construct a wharf from which to deliver produce to Sydney. Three great flood events in that decade saw the all attempts washed away. In 1820 the wharf was finally built based on plans prepared by Francis Greenway, then Acting Colonial Architect. The wharf lasted until the 1870s when it was rebuilt.

Maritime archaeological investigations in 2008, 2012 and 2016 identified the bed logs and associated ballast of at least two phases of the early 19th century version of the wharf. The 2018 excavations focused on understanding how these substantial and rare structures were constructed.

9:45 - 10:30 Session: Collections Chairs – J. Jones-Travers and D. Roe

9:45- David Roe, Sylvana Szydzik, Jeanne Harris - *Port Arthur*
10:00 *Historic Sites Management Authority, Urban Analysts and Uni. of New England*
A rich legacy? Understanding and managing old collections for new research

Long claimed to be of international significance but rarely used, the Port Arthur Historic Site Management Authority's archaeology collection is the result of over 40 years of research, conservation and monitoring projects at Tasmania's oldest historic reserve. This paper describes the Authority's recent and continuing work to better understand the value(s) of its legacy collection. This work is informed by a strategic rationale for the development of more effective management systems of curation and research facilitation. It is founded primarily in a pragmatic approach that accepts and addresses some uncomfortable facts about the realities of managing an archaeological collection for new research. We suggest that the daunting task of making legacy collections more accessible may not be as gargantuan as might be imagined – but only if we accept that management systems may have to be substantially different than research tools.

9:45- Meaghan Aitchison - *Uni. of New England*
10:00 **The Last Navigable Portion – The Maritime Cultural Landscapes of the uppermost extremes of the Murray River**

Since the early nineteenth century, the Murray River has played an important role in the pastoral, economic and industrial development of Australia. The short lived historic riverine shipping industry was integral to this development. Limited archaeological studies were undertaken with regards to the maritime landscape of historic shipping on the Murray during the early 1990s. Those studies conducted since have primarily focused on the lower regions of the Murray's maritime landscape and relics from this period. This maritime landscape, however, extends almost 3,000 kilometres from river source to river mouth and is defined not only by aquatic relics of the past but also by those terrestrial structures that administered, powered and in turn were powered by this historic shipping industry. This paper examines new and known terrestrial archaeological sites that reveal the maritime cultural landscape of historic shipping on the Murray's uppermost extreme, its last navigable portion.

10:00- Sylvana Szydzik & David Roe - *Port Arthur Historic Sites*
10:15 *Management Authority*
Buying time: some practical approaches to data salvage from degraded and degrading collections

The Port Arthur Historic Site Management Authority's archaeology collection project has highlighted a number of degradation issues that managers must confront. Whether working with 40 year old research archives or recently excavated assemblages, the inevitability of degradation and data loss pose significant technical and budgetary challenges. In this paper we discuss how PAHSMA is using existing

10:00- Susan Lawrence, Peter Davies, Jodi Turnbull, Ian
10:15 Rutherford, James Grove, Ewen Silvester, Darren Baldwin & Mark Macklin - La Trobe Uni., Uni. of Melb., Rivers and Wetlands and Uni. of Lincoln UK
The Bucket Dredging Industry and its Impact on Rivers

The introduction of bucket dredges from New Zealand in the 1890s provided a much-needed boost to the mining industry in south-eastern Australia.. At least 101 bucket dredges worked in Victoria during the 20th century, and more than 60 in New South Wales. The dredges, however, had a devastating effect on river valleys and soon became known as 'desolating dredges'. This paper presents a general synthesis



<p>technologies of X-ray, CT scan, low oxygen storage, and records digitisation to develop cost-effective systems for slowing collections decay, salvaging critical research data, and identifying objects worthy of expensive conservation treatments.</p>	<p>of the bucket dredging industry from an environmental perspective. In particular we consider the effect of dredging on waterways and the efforts by local communities and authorities to limit the damage.</p>
<p>10:15- Caiti D'Gluyas – <i>GML Heritage</i> *Student* 10:30 <i>Accessible Archaeology: Improving the visibility of historical archaeology in NSW</i></p> <p>Existing artefact and record repository systems in NSW can be described as varied, including any combination of private client lodgement, small scale centralised repositories, digital options and each individual archaeologists' preferences. This paper examines the NSW system for managing archival records, artefact and post excavation report lodgement for public access, perpetuity, research or other sustainable intentions. The paper will review what we consider the key criteria for repositories and exploring current platforms for access to archaeology. Case studies into finding existing artefact and archaeological data are presented to better understand the relative accessibility and longevity of options. A number of recommendations are made for the individual archaeologist, consultancy, repository managers and regulatory bodies to improve the consistency and long-term success of accessing historical archaeological repositories and data management systems.</p>	<p>10:15- Greg Jackson and Pam Forbes – 10:30 <i>Oyster Farming on the Georges River</i></p> <p>Along the Georges River oysters were a favourite food of the indigenous population with their shells well represented in the many middens along the river banks. However, the first documented use by European, reported from 1812, was burning the shells to make lime for building in limestone poor Sydney. After 1860 oysters became a fashionable food in the oyster bars in Sydney. The Georges River supported a successful and sustainable oyster industry till it was decimated in 1995 by the QX virus. Today the landscape of the lower Georges River is still littered with the industry's remains. This paper interprets the archaeology in terms of the changing workforce and technology of the oyster industry.</p>
<p>10:30 – 11:00 Morning Break</p>	<p>10:30 – 11:00 Morning Break</p>
<p>Session: Collections cont.</p>	<p>Session: Technologies Chair: Matt Carter</p>
<p>11:00- Jennifer Jones-Travers – <i>GML Heritage</i> 11:15 <i>An Archaeological Management Framework for Parramatta—Capturing and Sharing Archaeological Data for the Future</i></p> <p>Archaeology's relationship with the collections it creates is complex. We want our collections kept in perpetuity for future researchers, but they rarely if ever appear while our artefacts and data sit on shelves in boxes left unopened for decades. Parramatta has a highly significant archaeological resource, as the 'cradle of the colony' and with stratified deposits providing some of the earliest dates for Aboriginal habitation on the Eastern seaboard. The City of Parramatta has a large archaeological collection resulting from salvage excavations completed in the 1980s through 2000s within the early colonial heart of Parramatta. Assessment of this archaeological collection identified a range of issues common to 'legacy' collections, namely a loss of excavation data, artefact attrition, and poor understanding of the collection contents. To respond to some of these issues, GML Heritage has been working with City of Parramatta to create an 'Archaeological Management Framework' for the local government area. It explores ways to bring new life to our archaeological collections and data while retaining their research potential and improving access. It aims to increase the visibility of archaeological excavation results and</p>	<p>11:00- Matt Carter - <i>ARCHAEOTechnic & La Trobe Uni.</i> 11:15 *Student* <i>Getting technical: Underwater archaeology in the age of 'deep' exploration</i></p> <p>Recent advances in technical diving equipment and image-based mapping software offers the potential for the archaeological analysis of thousands of previously inaccessible shipwrecks. However, what is becoming clear is that the exploration and research of this new frontier will require unprecedented collaboration between maritime archaeologists and technical divers. A recent Explorers Club Expedition to record the M-24 Japanese Midget Submarine off Sydney provides a case-study of how such partnerships can work to achieve archaeologically useful information while also strengthening relationships between maritime archaeologists and the technical diving community.</p>



<p>significant artefacts to members of public and research archaeologists.</p>	
<p>11:15- Jane Rooke – <i>Casey & Lowe</i> 11:30 <i>The Ghost of Curation Past, Present and Future</i></p> <p>Archaeological collections are an important tool, offering the opportunity to inform upon, and reconnect with, the past. The creation of archaeological collections through excavation, and the simultaneous lack of resources and facilities for managing and caring for these collections has created a curational crisis, with professional and moral responsibilities contributing to an abundance of under-utilised collections. Looking at a collection from the 2004/5 excavation of Rotten Row, the officers’ quarters on the 1843 Cascades Probation Station in Tasmania and a recently excavated assemblage from a commercial excavation at Parramatta, this paper will discuss the need to re-examine the curation crisis with more vigour and direction for future archaeology.</p>	<p>11:15 - Pam Forbes 11:30 <i>The Uses of PTM’s (Polynomial Texture Mapping) in Archaeology</i></p> <p>Polynomial texture mapping (PTM), or Reflectance Transformation Imaging (RTI), is a technique of imaging and interactively displaying objects to reveal surface texture. The method was originally developed at HP Labs in 2001 in order to generate enhanced 3D computer graphics but it has since been adopted for cultural heritage applications. This paper considers five years’ experience of imaging in Australasia. Looking at a range of subjects from large scale stone engraved memorials to stone tools and other small artefacts, what factors effect success? How has the technology evolved and how may it be used in the future?</p>
<p>11:30- Sarah Hayes - <i>Alfred Deakin Institute for Citizenship and Globalisation, Deakin Uni.</i> 11:45 <i>Assemblages, Heritage and Public Engagement</i></p> <p>How can the public access historical archaeology assemblages? Site tours, media stories during a dig and in-situ interpretation as part of development are becoming increasingly common outcomes for archaeological excavations. But what about legacy collections and the future heritage value of past and current assemblages housed in museums, repositories and archaeologists sheds? What is their value as a heritage resource for the general public as opposed to a research resource for archaeologists? This paper will look at some examples and possibilities including social media, repository tours, legacy exhibitions, radio interviews, podcasts, interactive web pages and more drawing on the speaker’s recent research and examples from around the world.</p>	<p>11:30- James Hunter & Irini Malliaros – <i>Aust. Nat. Maritime Mus. and Silentworld Foundation</i> 11:45 <i>A Matter of Closure: The Effort to Solve the Riddle of HMAS AE1, Australia’s First Wartime Naval Loss</i></p> <p>The discovery of Australia’s first submarine, HMAS AE1, in December 2017 solved the 103-year-old mystery surrounding its fate and final resting place. However, questions remained regarding what caused it to sink in the first place, as well as the submarine’s state of preservation and how it might be best managed in future. In early 2018, an opportunity arose to conduct a detailed, 3D photogrammetric survey of AE1. Because the site is located in over 300 metres of water, the survey had to be conducted from a remotely-operated vehicle and utilise camera equipment specially designed for use at great depth. This paper addresses the methodology and equipment used to locate AE1, as well as in the follow-up effort to document the site with still and video imagery, and photogrammetric recording. It also outlines archaeological evidence of the catastrophic chain of events that resulted in the submarine’s loss.</p>
<p>11:45 - Dr Fiona Starr - Sydney Living Museums 12:30 <i>Are artefacts priceless or can we ‘add value’? The pros and cons of financial valuation of archaeological collections</i></p> <p>Museums have a long tradition of valuation of their collections for insurance and auditing purposes and to assist with collection management obligations such as stocktaking and security. Now, archaeological assemblages managed by government museums are placed under the same scrutiny, in the interests of fulfilling the organisations’ total asset management policies. But the valuation of irreplaceable cultural heritage is a notoriously thorny issue, with concerns about how cultural value can be reconciled with economic or market value. This paper presents the processes undertaken</p>	<p>11:45- MacLaren North and Tom Sapienza – Extent Heritage 12:00 <i>A Geospatial Approach to Modelling the Number of Interments in Historical Cemeteries</i></p> <p>Unmarked graves are common features in historical cemeteries and cemeteries enveloped by urban development. In an investigation of a particular reused urban former cemetery site in Sydney, it was known that most of the burials were removed prior to development a century ago. However, later development through the 20th century turned up forgotten graves, and it seemed likely that still more interments remained at the site. The question arose as to the potential volume and density of undisturbed graves in an area to be impacted by future works, as the number of</p>



by Sydney Living Museums to establish valuations of the archaeological assemblages in its care, including the development of criteria for identifying 'A-list' iconic artefacts. The pros and cons for valuation are considered, including whether 'priceless' artefacts can indeed benefit from having values assigned to them. Would A-listing and valuation of finds 'add value' to their potential, increasing their visibility and status and enabling greater public engagement with archaeology? Might it also encourage a new generation of bottle hunters?

graves remaining there would directly affect the complexity of heritage management and mitigation. Answering this question was particularly important in this circumstance, which had several problematic factors: a low confidence in the documentary record regarding disinterments, scepticism as to the thoroughness of historic disinterment techniques, and little opportunity for physical testing prior to mitigation. In this paper, we discuss a non-invasive methodology for predicting the number of interments remaining in this cemetery in GIS through a combination of historic map analysis, geospatial modelling, and comparative analysis of grave patterns at other cemeteries. This provides a cost-effective method of grave density estimation which can be used to guide other investigative techniques (e.g. testing, remote sensing) and allow for a risk-based approach to site management.

Collections Workshop

12:00-12:15 Brad Duncan, Irini Malliaros & Paul Hundley - *Uni. of New England and Silentworld Foundation*
And Then the Waters Covered Everything, and the Forest Was Gone: Drowned Landscapes in Lake Mulwala, Southern NSW/ Victoria

In 1939, the Murray River was dammed to form Lake Mulwala as part of the Murray-Darling Irrigation Scheme. Raising the water levels by 6m, the river valley was effectively drowned, the flood waters encapsulating a moment in time. In May 2018, the water levels were lowered by 4.5m, revealing extensive evidence of the inundated forest, shipwrecks and other riverine infrastructure. The draining revealed historically known but previously unrecorded drowned features, as well as new sites. It also presented the opportunity to document paleo-river channels using drone and other remote sensing technology. The increased accessibility to an otherwise inundated landscape was conducive also to the study of the former biological diversity along the river banks and across the wider area. Part of the NSW Rivers project, the aims of this collaborative research venture were to demonstrate how paleo-biological diversity studies can contribute to and affect the understanding of riverine systems and cultural landscapes and vice versa. Through this process, and as a secondary aim, the efficiency of the chosen remote sensing techniques in identifying sites was assessed.

12:15-12:30 Peta Straiton, John Naumann, Dr. Shirley Sorokin and Dr Qi Yang – *Flinders Uni. *Student**
Interdisciplinary investigations into Rapid Bay, South Australia

Combining tourism, archaeology, and marine biology this presentation will discuss the various social and scientific implications of the resources at Rapid Bay, South Australia. This presentation will discuss the historical importance of Rapid Bay to the early South Australian colony, the development of infrastructure, its transition into a popular maritime tourism destination, then finally how its unique marine life could provide a cure for cancer. Each of these



	<p>various disciplines values and examines Rapid Bay from a unique perspective, and it is not until each of these are combined that researchers can fully understand how this site impacts the local community and possibly society at large.</p>
<p>12:30 - 1:30 LUNCH</p>	<p>12:30 - 1:30 LUNCH</p>
<p>1:30 - 3:30 Session: Management, Interpretation, Education and Community Chair: Kylie Seretis</p>	<p>1:30 - 3:30 Session: Sites Chair: Peta Longhurst</p>
<p>1:30- Jane McMahon – <i>GML Heritage</i> 1:45 <i>Interpreting Archaeology-Theory and Practice</i></p> <p>Formal onsite heritage interpretation and integration of heritage content is generally a standard requirement of statutory approvals for any new development in NSW. The integration of heritage interpretation is generally understood to provide an opportunity for the informal introduction of archaeological content and stories to the public. This happens as part of new or restored public spaces, and without the captive audiences of formal education environments such as schools or museums. This paper aims to continue the discussion about the 'what' and 'why' of archaeological interpretation. It will look at the assumptions embedded in the current approach to permit based interpretation outcomes and consider issues which arise when compliance and practicality meet. It will explore what, if anything, can be learned from the theory and practice of formal learning environments, for application within the consulting context.</p>	<p>1:30- Rick Bullers & Irini Malliaros – <i>Heritage South Australia and Silentworld Foundation</i> 1:45 <i>Search and Discovery of the Early Free-Settlement Immigration Ship South Australian</i></p> <p>In April 2018 a collaborative research project between the Silentworld Foundation, SA Department for Environment and Water (Heritage SA), SA Maritime Museum, Aust. National Maritime Museum, Flinders Uni. and MaP Fund, discovered the wreck of the South Australian. Originally a packet with the Post Office Packet Service and then the Royal Navy, South Australian was acquired by the South Australian Company and brought some of the earliest free-settlers to found the colony of South Australia in 1836-37. After arriving, it became a depot ship and 'cutting in' vessel for the new shore whaling station at Encounter Bay. On 8 December 1837, the vessel broke its cables in a violent south easterly gale and was wrecked, becoming the earliest recorded shipwreck in South Australia. This paper discusses the history of the vessel, the results of fieldwork to date and discusses future research opportunities.</p>
<p>1:45- Edwina Kay - <i>Alfred Deakin Institute, Deakin Uni.</i> 2:00 <i>Obscuring dark histories: the reuse of former institutions as benign heritage sites</i></p> <p>Dark tourism sites such as Port Arthur and Old Melbourne Gaol attract visitors with tales of punishment and hardship. The interpretation of difficult histories at institutions subject to adaptive reuse is less straightforward. This paper presents a virtual tour of Abbotsford Convent in Melbourne, an institution with a dark history, discussing how the past has been interpreted for visitors in such a way that the site appears as a collection of benign historic buildings in beautiful grounds. Former institutions can be difficult to sensitively adapt for modern purposes, and there is frequently a tension between their dark history and contemporary use. The interpretation of the institution can obscure the history and undermine the very heritage values that protect the site from destruction. This paper argues that glossing over uncomfortable histories of former institutions is particularly problematic in contemporary Australia because of the continuing and controversial use of institutions today.</p>	<p>1:45- Paul Hundley, Irini Malliaros, Kieran Hosty - 2:00 <i>Silentworld Foundation and Aust. Nat. Maritime Mus.</i> <i>Indian Ships & Jettisoned Emus: Searching for the wreck of the Royal Charlotte</i></p> <p>20 June 1825. The Indian-built Royal Charlotte ran aground on a reef in the Coral Sea with the men and families of the 20th, 46th and 49th battalions, the crew and two emus aboard. After the ship became a total loss, they abandoned it for a small, bare, sandy cay to which they clung for 6 long weeks. What ensued during that time is a remarkable tale of survival, the story of which bears testament to the importance of the need for discipline in the face of chaos. In January 2012 a collaborative Silentworld Foundation and Australian National Maritime Museum expedition discovered, surveyed and positively identified the Royal Charlotte wreck site. A survey of the sand cay was also undertaken to search for signs of the survivor's encampment. Despite the dynamic reef environment, an extremely rare survival was identified among the underwater finds – a section of the timber keel of the vessel. The paper outlines the results of this research, which have wider implications for the investigation of Indian built vessels and shipwreck survivor camps.</p>



<p>2:00- Helen Nicholson - <i>Kalliope Consultancy</i> 2:15 National Archaeology Week: taking historical archaeology into the classroom</p> <p>School students love archaeology and this can range from being able to spell such a big word in early years to understanding what archaeology can tell us about the past in later years of school. Archaeology is usually associated with the teaching of History but with the current emphasis on STEM subjects it has a place in the Mathematics syllabus too. This session provides suggestions and examples for engaging primary and secondary students in the classroom. In 2019 the National Archaeology Week Committee will be encouraging archaeologists to speak about the work they do in schools.</p>	<p>2:00- Matt Carter, Greg Jackson, Pam Forbes - <i>La Trobe Uni.</i> 2:15 *Student* A comparison of ship construction on the Australasian maritime frontiers 1792-1850</p> <p>Between 1792 and 1850 wooden sailing ships were built in increasing numbers throughout the maritime frontiers of Australasia. A statistical analysis of a sample of these ships has revealed a number of differences in the quantitative parameters of those vessels built in Australia compared to those in New Zealand. Additionally, the archaeological excavation of three pre-colonial New Zealand shipyards has provided insights into the operation of such industrial sites on the eastern side of the Tasman. By combining the data from the statistical and archaeological analyses, theories are posited as to what factors influenced the construction of these vessels and what this can tell us about life during this formative period of our collective histories.</p>
<p>2:15- Stirling Smith - <i>Heritage Division, OEH</i> 2:30 "New life that's come from a tragedy", the challenges of opening the M24 Midget Submarine wreck to the diving public</p> <p>Opening archaeological sites to the public can be challenging, but particularly so when it's a highly significant and high profile shipwreck, that is also a war grave for Japanese submariners. Since the M24 Japanese Midget Submarine was found in 2006, permits to enter the Historic Shipwreck Protection Zone and dive the site have only been granted on a limited basis for archaeological and scientific purposes. However in 2017, to coincide with the 75th anniversary of the Midget Submarine's attack on Sydney Harbour, the site was opened to the public for the first time. It was the culmination of six years of work and negotiations between the NSW, Commonwealth and Japanese governments. This paper will explore the challenges of holding the trial diver day, both political and logistical, and the future of public access to this significant site.</p>	<p>2:15- Peter Taylor 2:30 Digging into the Port Phillip lime economy</p> <p>A number of studies, concerning limeburning in Victoria, have been undertaken by various academics (Harrington 1996, 2,000, Pearson 1990, Moloney 1986, McCarthy & Varman 1982). While covering a great deal of the history and archaeology of kiln sites, there was no particular attention paid to the lime-craft that transported the product within the confines of Port Phillip. This paper partly addresses this vacuum with the excavation of a lime-craft, found in March 2017 on the south-eastern shore of Port Phillip, at Safety Beach.</p>
<p>2:30- Anita Yousif, Graham Wilson & Lorna Cooper - Extent 2:45 Heritage The Stories from Ceilings and Cellars</p> <p>An integral part of almost every archaeological dataset are artefact collections. The movable tangible objects that have been made and used by people in the past form the focus of any research that tries to find answers to an object's purpose. Post excavation analysis usually involves a detailed laboratory analysis and high level of deductive reasoning to find answers to many question that historical documents do not provide. Once brought into the daylight, artefacts have an enormous ability to tell various stories. This presentation will showcase a range of artefact contexts that have been explored through several archaeological excavations across Sydney's Metropolitan Area, and their potential to provide unexpected information about sites and people. In a number of instances this has included direct links between artefacts and</p>	<p>2:30- Liam Phillips - <i>Flinders Uni.</i> *Student* 2:45 Sailing for the VOC: A Preliminary Investigation of the Archaeological Rigging Material from Batavia, Vergulde Draak, Zuiddorp and Zeewijk</p> <p>The four Verenigde Oostindische Compagnie (VOC) ships, <i>Batavia</i>, <i>Vergulde Draak</i>, <i>Zuiddorp</i> and <i>Zeewijk</i>, which wrecked along the Western Australian coast have all been excavated and extensively researched. Yet no real concise analysis of the rigging assemblages has been conducted. In addition to this, most studies thus far relating to VOC rigging configurations during the seventeenth and early eighteenth-centuries have been based on archival records, contemporary documentation and iconographic evidence. The material from these wrecks, may yet provide valuable information for Dutch rigging practices and technologies during the time of the VOC. By examining the archaeological material and primary sources which directly relate to the rigging of these wrecks, pieces of the puzzle can finally be placed back</p>



<p>occupants of a site. The evocative side of artefacts, letters, personal diaries and other records of past life can have a powerful impression on current and future generations. The heritage interpretation helps convey stories from the past to present.</p>	<p>together. These findings will then be compared with archaeological material from other shipwreck sites, ship treaties, nautical dictionaries, boat models and historical ship depictions.</p>
<p>2:45- Caitlin Allen – <i>Uni. of Sydney</i> *Student* 3:00 <i>It's Archaeology But Not As We Know It: The Making of Meaning at the Sydney Conservatorium of Music Archaeological Site</i></p> <p>The in situ conservation and presentation of archaeological sites has been happening around the world for many years. But do archaeologists and other professionals who create these places really understand how people use them to make meaning of the past in their everyday lives and how the presence of in situ archaeology impacts people's experience of place? What are the public benefits that arise from these interactions and what impact might a better understanding of the experience of site users have on the future of this particular type of heritage management response? My current research at The University of Sydney is focussing on precisely these questions, using interviews and survey work with heritage professionals and site users at a number of conserved and interpreted archaeological sites in Australia. This paper will focus on recently collected data from students, staff and visitors to the Sydney Conservatorium of Music, which has been yielding some surprising results.</p>	<p>2:45- Gary Vines - <i>La Trobe Uni.</i> 3:00 <i>The origins of water-powered flour mills in Victoria</i></p> <p>The earliest flour mills in Victoria took advantage of all available power sources, including steam, wind, water and animal power. Many of the mills of the 1840s and 50s in Victoria, were erected by millers, millwrights and other entrepreneurs who, in the most part, came directly from Britain and brought with them a pre-existing knowledge and set of skills gained from either practical experience in local village mills, or through knowledge handed down within long standing milling families. Individual millers have been traced to their origins in Surrey, Gloucestershire, the Isle of Man, Yorkshire, and the Scottish counties of Dumfriesshire, Dumbartonshire and East Lothian. Previously I have presented on the methodology for assessing potential technology transfer between Britain and Australia. This talk will focus on the results of research and site surveys of the donor mills in Britain. About 20 mills were recorded which appear initially to be remarkably similar to their counterparts in Victoria. The analysis however, needs to distinguish between what is universal practice, and what might represent the defining technological characteristics that might distinguish the mill Victorian designs from the range of possible variants and technological alternatives that might have been available. The paper therefore considers what elements of the donor mills are most valuable for comparison with the recipient mills.</p>
<p>3:00 - 3:30 Afternoon Break</p>	<p>3:00 - 3:30 Afternoon Break</p>
<p>3:30 - 5:00 Session: Management, Interpretation, Education and Community, Cont.</p>	<p>3:30 - 5:00 Session: Sites Cont.</p>
<p>3:30- Andy Viduka - <i>Uni. of New England</i> *Student* 3:45 <i>Gathering Information via Recreational and Technical (GIRT) Scientific Divers– progress report</i></p> <p>In 2017, I presented a talk at the Australasian Institute for Maritime Archaeology annual conference canvassing whether a conservation focussed citizens' science project could simultaneously deliver public good and positive heritage management outcomes for underwater cultural heritage. This concept has now grown into a project that forms a basis of my PhD research. Because the implications of any public engagement strategy has the potential to touch many individuals within their work and voluntary roles, I have decided to give a brief update on the current pilot project and discuss the synergistic linkage between GIRT and AIMA/NAS that will ideally reciprocally benefit both programs into the future.</p>	<p>3:30- Geoff Hewitt - <i>La Trobe Uni.</i> 3:45 <i>An Archaeology of the Right Battery, Williamstown, Victoria</i></p> <p>Renovation of the 1930 grandstand at the Williamstown Cricket Ground revealed structures from a coastal gun battery constructed in 1861 as a key to the defence scheme for Hobsons Bay in the north of Port Phillip. Temporal changes in strategy and technological advances caused the Right Battery, armed with 68-pdr smooth-bore guns, to remain unchanged until its abandonment during the 1880s. Survival of an unmodified arrangement is very unusual for defensive infrastructure and the Right Battery is highly significant. Investigation of the Right Battery has allowed the original plan to be modelled and then archaeologically tested. Discovery of the Right Battery has prompted new researches into Victorian colonial approaches to defence and</p>



	<p>technology. The social and political responses to real threats of raiding and ransom by foreign powers as a result of British diplomatic brinkmanship are also considered.</p>
<p>3:45- Joanne Edney *Student* 4:00 <i>Diving under the radar: Divers and submerged aircraft</i></p> <p>Shipwrecks and submerged aircraft are alluring to divers, and as a result have become increasingly popular diving attractions. However, the potential impacts to shipwrecks and submerged aircraft associated with diving presents challenges for heritage managers, who need to balance site protection and diver access. Understanding actual wreck diver behaviour enables managers to develop more targeted and sustainable site management strategies. This presentation reports on the outcomes of a study of the in-water behaviour of wreck divers at submerged aircraft sites in Chuuk Lagoon, in the Federated States of Micronesia, in 2014. Although most divers behaved responsibly on shipwrecks, diver behaviour on submerged aircraft was markedly different. Contact behaviours were more common on submerged aircraft and more depreciative than those observed on shipwrecks. This is concerning because aircraft are more fragile than shipwrecks. The findings of this study suggest that management requirements for shipwrecks and submerged aircraft sites are different.</p>	<p>3:45- Matthew Kelly – Extent Heritage 4:00 <i>The Excavation of the Macquarie Fields House gate house</i></p> <p>The paper outlines the excavation results from a compliance based archaeology project associated with the construction of a railway interchange near Glenfield in south-western Sydney. The excavation revealed the remains of an unusually configured structure at the entrance way to the significant colonial property of Macquarie Fields House (1820-1840s+). This structure was revealed to be an early gatehouse to the property – possibly the first to be excavated archaeologically in Australia. The work revealed that the gatehouse, at the time of its construction, rivalled the contemporary main house in complexity, showed evidence of domestic occupation and was a critical element in the display of status of the owner, James Meehan, to those passing along the Campbelltown Road. Exact comparative examples in NSW are very rare and the closest comparison to the form and scale of the structure may lie in Ireland. The research indicates that the structure was occupied from the 1820s to its demolition in 1871 and points to a previously unexplored mode of domestic occupation in 19th Century NSW.</p>
<p>4:00- Kevin Rains, Xavier Carah, Cameron Harvey and 4:15 Geraldine Mate- <i>Niche Environment and Heritage and Queensland Museum</i> <i>The Ravenswood Mining Landscape and Chinese Settlement Area Project</i></p> <p>Gold was discovered in Ravenswood in North Queensland in 1868, initiating various phases of gold mining activity which peaked in the early 1900s but still continues. What exists now is the remnant township and a complex archaeological landscape relating to 150 years of gold production and domestic activity. In 2016 approximately 50ha of the area were entered on the Queensland Heritage Register as the Ravenswood Mining Landscape and Chinese Settlement Area (QHR Item ID: 650038). Proposed expansion of existing gold mining operations within the heritage area resulted in the development conservation and archaeological management plans to form the basis of a heritage agreement with the State Government, allowing the development to proceed. Out of these plans have come a raft of mitigation measures including aerial and 3D recording and an extensive archaeological salvage program. This paper outlines the work done to date. The project has been innovative in working closely with the proponent and authorities throughout the planning process and collaborating with the Queensland Museum, University of Queensland and local community in providing long-term education, research and tourism opportunities with the data and artefacts recovered.</p>	<p>4:00- Sean Winter & B'geella Romano - <i>Uni of WA, and Winterborne Heritage Consulting</i> 4:15 <i>Under the Floors at the Fly: An archaeology of a popular live music venue.</i></p> <p>The creation and consumption of live music are universal human social activities, yet their ephemerality means they are often invisible in the material record. Recent archaeological work at the Artillery Drill hall in Fremantle provided a priceless chance to investigate a place with a significant link to modern popular music and performance. Although first constructed in 1895 as a military building, the Drill Hall was eventually repurposed as the music venue the Fly-By-Night Musicians Club from 1986-2015. This paper investigates the Fly-By-Night as a social space specifically devoted to live music, as a place that hosted international performers but which also fostered the development of local grass-roots musicians. It uses archaeological evidence to investigate the importance of music heritage as a form of cultural and social connectedness for disparate groups of people, and in particular demonstrates how audiences shape their own enjoyment of live music.</p>

<p>4:15- Christopher Clark - <i>Uni. of Queensland</i> 4:30 <i>Handling the Heritage of a Non-Event: The Heritage Management of Brisbane's WWII Air-Raid Shelters</i></p> <p>Everyday, residents queue at Brisbane's Teneriffe bus-stop, unaware that they are part of the contemporary life of a repurposed World War II air-raid shelter. This talk focusses on the heritage management of Brisbane's WWII air-raid shelters, the topic of my recent master's dissertation. The recent discovery of multiple shelters in Brisbane demonstrate not only the rich archaeological potential under the city's streets, but also the magnitude of change that these structures constituted within the urban landscape. Solutions to some of the heritage management issues will be discussed, namely how to overcome their obscured cultural significance and their currently unacknowledged social significance. These structures represent a tangible link to a forgotten wartime landscape, standing as unpretentious evocations of a formative era which need proper management not only for the present and future population, but to maintain social memory and to ensure that the generation that survived this difficult period is not forgotten.</p>	<p>4:15- John Pickard – <i>Macquarie Uni.</i> 4:30 <i>The fencing of Wanderowna by Rolf Boldrewood: how much fact, how much fiction?</i></p> <p>From 1864 to 1867 Australian novelist Rolf Boldrewood [Thomas Alexander Browne] managed the Riverina sheep run "Bundidjaree". During this time he fenced the run, but he left penniless after droughts and falling prices broke him. These experiences formed the background to his 12-part serial "The fencing of Wanderowna. A tale of squatting life," published anonymously in the Australian Town and Country Journal from June to August 1873. In 1898 he combined the serial into a novella "The fencing of Wandaroon. A Riverina reminiscence." Scottish gentlemen squatters, brothers Gilbert and Hobbie Elliot transition from shepherding to paddocking sheep. The story includes details of managing a sheep run, decision-making prior to fencing and during droughts, and includes a financial analysis comparing shepherding and fencing. While omitting several details, and with flaws in the financial analysis, the story contains accurate, and often missing information on life on a Riverina sheep run in the 1860s.</p>
<p>4:30- Felicity Barry - <i>Heritage Division, Office of Environment and Heritage</i> 4:45 <i>Assessing Cumulative impact on State significant archaeological resources, a case study</i></p> <p>Archaeological management plans exist for a number of places in NSW identifying potential for State and locally significant archaeology. Parramatta and Port Macquarie are two places with demonstrated evidence of State significant occupation of early colonial administration and ongoing town development. Revisions of these plans have been superseded by the current level of development. This makes an accurate assessment of the cumulative impact to remaining and potential resources difficult. Changes to Planning legislation, particularly the ability to 'switch off' protections under the Heritage Act 1977 means the quantum of these impacts is becoming harder to assess, because approvals and conditions of consent can be managed by professionals without archaeological expertise. This paper revisits existing information and changes over time to obtain an updated assessment of the remaining State significant potential in these early towns. It raises questions about what major pieces of reporting or research frameworks remain desirable to manage these scarce resources appropriately.</p>	<p>4:30- Jaki Baloh - <i>AMAC Group</i> 4:45 <i>On track or off the rails</i></p> <p>Central Station is the beating industrial heart of NSW. Between 2016-2017, excavations at Central revealed the circular brick foundations of four wagon turntables - one of which was considered State significant. All four were dismantled and conserved off site so that at least two may be rebuilt and interpreted. The turntable foundations demonstrate the evolution of technology in use at NSW's main railway station and its exponential growth through the late 19th century. The fate of the turntables was shaped by both the private sector and the state. They have commanded the attention of archaeologists, historians, conservators, stone masons and heritage architects as well as the heritage, archaeology and environmental managers of two government departments. Their story is not over yet, but the turntable foundations are a case study of pros and cons for the management of significant archaeological finds in NSW - both in and out of the ground.</p>
<p>4:45- Stephanie Moore & Belinda Ingpen – <i>ERM Australia</i> 5:00 <i>Australia Hazardous Heritage: Challenges in managing heritage and site contamination</i></p> <p>As the push for space in our major cities intensifies, developers are increasingly looking to former industrial spaces to provide lucrative opportunities for commercial and residential development. These former industrial sites present significant environmental challenges associated with site remediation and the removal of contaminants. These</p>	<p>4:45- Andrew Viduka and Grant Luckman - <i>Historic Heritage Section, Heritage Branch, Dept of the Environment and Energy, Aust. Government</i> 5:00 <i>Australia's Underwater Cultural Heritage Act 2018</i></p> <p>In late 2016 at the International Congress for Underwater Archaeology (IKUWA6) the Hon. Josh Frydenberg MP, Minister for the Environment announced Australia's intent to modernise the Historic Shipwrecks Act 1976. The Underwater Cultural Heritage Bill 2018 is scheduled to be enacted in the Spring Parliamentary Session 2018 and will broaden</p>



challenges were not previously present in long term residential settlements or greenfield sites. As industrial spaces are targeted for redevelopment, the heritage value and opportunities they present is being more carefully considered. While options for adaptive re-use, interpretation and display of objects have become more prevalent in redevelopment plans; for the heritage practitioner the need for remediation represents an increasing challenge. This paper will explore the challenges in balancing the needs of assessment, conservation and excavation with the health, safety and environmental constraints associated with working on contaminated sites. This study will include consideration of adapting methodologies, maintaining best practice, and managing contaminated collections.

protection to sunken aircraft sunken and other underwater cultural heritage sites. The new legislation aligns Australia with the UNESCO 2001 Convention on the Protection of the Underwater Cultural Heritage and elevates Australia's underwater cultural heritage management regime into line with world's best practice. This presentation outlines the development of the legislation and highlights the significant changes to Australia's underwater cultural heritage management regime.

7:00pm

CONFERENCE DINNER

Alex & Co - 330 Church Street, Parramatta

(Register and pay via conference website)

