

## FORUM

# The survival of archaeology in the design of future cities?

Natalie Vinton\*

Ironically, when given the opportunity to respond to J. J. Carver's thought-provoking article 'The Challenges and Opportunities for Mega-Infrastructure Projects and Archaeology' and thinking I had plenty of time in which to do so, I was suddenly thrust back into two, all-consuming major Sydney infrastructure projects, which currently sit in the category of 'confidential', meaning not yet fit for public consumption and dare not breathe a word of the detail. In short, what this means is that the timeframes are impossibly short, the budgets are even tighter, the crystal ball is working overtime and the select few staff signed to work on these projects are working around the clock to deliver succinct documents that are required to be pragmatic, avoid archaeological 'speak' and provide certainty about the archaeology, its extent, nature, significance, timeframes and budget estimates for managing the known and potential archaeological resource. Surely, such easy tasks to deliver on?

Needless to say, as a result, I found myself in the unfortunate situation of begging for more time to complete my contribution, citing 'major, unexpected workloads'. Had I had more time in the last two months, I would have read Carver's article much earlier and taken great comfort in the fact that

the challenges being faced by archaeologists working on major urban/infrastructure projects in London mirror those being faced by archaeologists worldwide, whether it be dealing with the ruins of the Roman Empire in London, or potential Aboriginal or non-Aboriginal archaeology in downtown Sydney, Australia.

Setting aside the comfort factor of Carver's article, one of the key messages that I take home, and strongly support, is that archaeology needs to be proactively managed, identified, justified and planned for from the very initial phases of any major urban development, whether it be a commercial redevelopment across several city blocks, or a major State or local infrastructure works project. By 'normalising' the requirement for regular archaeological input during the concept planning, detailed project design and then construction program, the inherent risks in managing known and unknown archaeological resources will usually be greatly reduced. As stated by Carver, the consistent involvement of archaeological experts for those projects (where the significance of the potential archaeological resource warrants it), from the commencement of a project through to the end, is crucial for ensuring that the dialogue between the design and/or construction team (project team) and the archaeological team remains transparent and open. The building of mutual trust and understanding between both teams, through this ongoing dialogue invariably leads to vastly improved

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\* Archaeology Manager, Godden Mackay Logan, Heritage Consultants, AUSTRALIA  
[nataliev@gml.com.au](mailto:nataliev@gml.com.au)

opportunities to ameliorate the impacts of major urban redevelopments on archaeological resources.

I've been lucky enough to have dealt with numerous major infrastructure and city redevelopment projects that have occurred in New South Wales, Australia from many different perspectives, including as the city archaeologist for Sydney City Council, during the crucial final years leading up to the 2000 Sydney Olympics (where key projects were being planned and delivered at a rapid rate in order to meet the immovable Olympics deadline), to State Government, where I was responsible for assessing major development applications for State and locally significant archaeological sites, in accordance with the Heritage Act 1977 (New South Wales 1977), through to my current role at Godden Mackay Logan (GML), as a manager responsible for the delivery of key archaeological projects on behalf of the development proponents, in order to enable the redevelopment of key urban sites and to assist in the delivery of major infrastructure projects. With this experience in mind, I would like to use some of the lessons I've learnt to add to the key points raised by Carver. In particular, I would like to add some additional perspectives, with respect to the need for effective prediction of archaeological resources, communicating archaeological requirements to project teams and promoting the discoveries.

### **Effective Prediction of Archaeological Resources**

Often due to the magnitude of the scale, complexity and overall cost involved in the delivery of major infrastructure and major urban renewal projects, there is an underlying, and generally realistic, expectation that compromises will need to be made across the board. Invariably though, this is where archaeology, if not managed cleverly by either the archaeologists, proponents or consent authorities (both State and Local), becomes hopelessly compromised before the first design option even hits the drawing board.

However, when proponents are encouraged to invest in some initial physical testing of the archaeological resource to ground-truth and/or inform the predictive archaeology models being developed in the early phases of these projects, as part of the rest of the initial geotechnical and other physical testing programs, the tangible results obtained during this process help to cement the need amongst non-archaeologist project members that there is a definable and significant resource, that will be required to be managed.

The testing for the presence or absence of an archaeological resource along the route of a major infrastructure project can, for example, generally be done in tandem with other geotechnical and other forms of geological and/or service infrastructure testing, because the required owner and/or consent authority approvals for all such testing activities can be obtained at the same time, and the proposed impacts can occur as part of the same program. The ability to provide more accurate predictions with respect to the extent, nature, depth and intactness of the archaeological resource, through an initial program of testing (ground-truthing) has helped to ensure that potential impacts on key sites can be more proactively mitigated through redesign and avoidance early on in the process, or through setting aside realistic budgets for the investigation, removal and innovative interpretation later on in the development process.

An excellent example of where effective predictive modelling of archaeology should lead to long-term positive outcomes for archaeology is the City of Sydney's 8 billion dollar transformation of a former 278 hectare industrial precinct, just 3.5 kilometres from the centre of Sydney City into a sustainable urban environment (City of Sydney 2013). The development process to date provides an excellent example of how to incorporate and plan for the presence of significant heritage assets, including archaeology, from the onset. In designing the redevelopment of the site, there has been an ongoing and proactive program for archaeology – which has

included archaeological research, the preparation of archaeological management plans and opportunities for a program of testing — to ensure that should significant archaeology be found it can be adequately incorporated within key public spaces of the development, either through in-situ retention if warranted, or through thorough recording, investigation and interpretation.

GML are involved in ensuring that the centre piece of the development, the Green Square library and Plaza (Sydney Morning Herald 2013), will include the adequate recording, removal and then interpretation of the archaeological resource to be impacted upon, within the finalised public spaces for all future residents and visitors to enjoy. This is a direct result of the initial archaeological work being used to inform the brief that architectural tenderers were required to respond to during the international design competition held, by the City of Sydney, for the Green Square library and Plaza.

### **Communicating Archaeological Results to Project Teams**

The fear of the unknown and/or any attempt to put parameters around the time, quantities and budgets required for archaeology, as discussed by Carver, is definitely an issue that plays foremost on the mind of the project teams and archaeologists involved in any of the major infrastructure projects that I've worked on. When building trust with project teams and in explaining how archaeology can be best managed, as part of budgeting and timing processes, it has been very useful to explain that the uncertain nature of the risk-management of archaeology is somewhat similar to that associated with managing the risks associated with site contamination. After all, most major urban redevelopment sites will have various and complex levels of contamination that need to be managed, costed and mitigated in order to enable development to proceed. When sites are positioned in prime urban locations, there are very few sites that fail to proceed to redevelopment, despite the remediation risks and costs that

a site may pose. Instead, an initial program of research and contamination testing is undertaken, budgets are constructed, mitigation options are determined and schedules are set. Invariably, there is always the unexpected contaminant that turns up, yet project teams build the management of these risks into their programs. If archaeologists and project teams alike can start to apply similar risk-management processes for potential archaeological sites, then non-archaeological project teams may become more comfortable with managing and planning for the level of uncertainty that exists at sites that are known to, or are likely to, contain significant archaeological resources.

### **Promoting the Discoveries**

Carver highlights how much can be gained from the promotion, interpretation and sharing of archaeological information as a result of archaeological investigations undertaken during large-scale major developments. Major redevelopment projects, whether they be commercial, residential or infrastructure by nature, usually have the structure, budget and staff resources to be able to provide opportunities for the public to engage with the archaeological results, at a level that small developers often do not have the resources to achieve. Engagement, as discussed by Carver, can be temporary, web-based or permanent and can bring a sense of achievement, pride and a positive public profile to all stakeholders involved. Most recently, GML has been involved in a significant 600 million dollar commercial redevelopment being undertaken by Mirvac, due to the potential archaeological impact on site. The site is located in the Sydney CBD, on the original shoreline of Sydney Cove, where Aboriginal people have lived for thousands of years. It is also one of the earliest locations of European occupation in Australia and first points of contact between Aboriginal and European people. Mirvac have worked proactively with the consent authorities, and GML archaeologists, throughout the entire development process to ensure that the risks of archaeology to the

development program have been minimised, yet adequately mitigated throughout. In particular, Mirvac have promoted the archaeological investigations being undertaken on site, through various forms of media, including the provision of interpretive signage on the external site hoarding and through the posting of regular archaeology stories related to the discoveries on the GML website (Godden Mackay Logan 2013). The community response has been extremely positive, with members of the public who have had relatives or personal knowledge of the history of former activities on site, making contact with Mirvac and the archaeologists to share their stories and to learn more about the archaeological works on site. The experience continues to be positive and rewarding for all involved, and is proposed to include long-term interpretation of the archaeological findings upon completion of works. This will ensure that the money, time and effort spent to date, by the proponent, will lead to a direct and long-lasting positive and engaging public outcome for a site of such significance (GML 2013).

The more we, as archaeologists, are involved in providing opportunities for the public and

proponents to view, enjoy and understand the sites that we discover and investigate, particularly as a result of major urban redevelopment or major infrastructure projects, the more archaeological resources will be valued, conserved and incorporated into the long-term planning and management of urban cities.

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