Filling in the blanks: the role of new work in interpretation

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Introduction

It is my belief and experience that all of us involved with conservation and new work, whether as architects, heritage consultants, designers, builders or tradesmen, all have a role in the interpretation of a place, whether we realise it or not. If these roles are properly understood, the ongoing care, adaptation, and use of a place can become key components of its interpretation.

New work, whether in the form of repairs, or adaptive reuse can play a very creative role in interpretation. The Burra Charter notes that when carrying out reconstruction, new work should be identifiable as such on close inspection. This ‘identification’ can be done in many ways, from the obvious and ordinary to the creative and inspired.

This paper discusses the role of new work and new structure in interpretation.

What are the possibilities? I will explore this by way of a small number of examples from my own work as an architect, and that of my firm – Design 5 – Architects who specialise in conservation and associated new work. The examples I have chosen progress from the simple to the very complex. These ideas are not new, however many of them are rarely tried here and not well known.

Interpretation and Repair

In the simplest terms, repairs involving reconstruction of part or a whole element, can be dated, detailed, or finished in a way which makes it clear to the observer that they are not original elements, thereby retaining the integrity of the original significant fabric at the same time as ensuring its survival into the future.

Rouse Hill estate

Rouse Hill estate, managed by the Historic Houses Trust of NSW (HHT), has considerable significance for the integrity and completeness of its collection of landscape, buildings, interiors, furnishings and the personal effects of the Rouse family and their descendants. In James Broadbent’s Conservation Plan for the estate, the only conservation processes to be used at the property are maintenance, preservation, and if necessary, repair. Above all, the integrity of the surviving material, both in fabric and finish, is to be respected. As many of the structures are of timber, mostly unpainted, much attention is required to ensure this integrity and that they are not damaged or weakened by termites and the effects of the environment.

When damage does occur and repair is necessary, new elements are carefully finished and date stamped to differentiate them from the original.

In 2003, the Trust carried out repairs and maintenance, as well as preservation in the form of repainting to the summerhouse, an 1870s timber structure, already extensively repaired by Public Works in the 1980s. At that time the structure was in a very poor state of repair and much of the perimeter timber elements were replaced and the whole building repainted in its earlier colour scheme. With the passage of time and deterioration of the paintwork, the new elements had become indistinguishable from the original work. The HHT wanted to take the opportunity to make a clearer distinction between the 1870s and 1980s work and thus strengthen the integrity of the interpretation of the structure. In line with interpretation policies for painted elements elsewhere on the property, the 1980s elements were identified and repainted in an off white "undercoat" colour while the earlier elements, with their remaining cream paintwork, were given a coat of a clear binder to stabilise, but retain exposed, the earlier finish. The result is
a now well protected timber structure which requires very little explanation or detailed inspection to understand what remains of the original 1870s work.

Such a purist approach is not always possible or even appropriate in non-museum situations. However, there are other ways of allowing and even enhancing the ability of a building or place to tell its own story.

This concept of interpreting lost elements in a modern and creative way has the potential to add considerable reuse possibilities to significant sites which might otherwise be regarded as too difficult or too precious to adapt. The key to this approach is understanding very clearly what the history of the place is, what its significance is, and finally, to be inspired by it and respond creatively and positively to it. I believe we should also have fun in this creative process and if this can be reflected in the final product, it may also give enjoyment to the end user.

**White Bay Power Station**

In another example, our firm, in collaboration with Godden Mackay Logan, Context in Melbourne, Hughes Trueman Engineers, Anne Warr, Meredith Walker and others, are preparing a Conservation Management Plan for the White Bay Power Station in Sydney. Built in two stages to provide power to the expanding rail system the power station was commenced in 1912 with the first stage completed in 1917 and the second in 1927. After World War II, the first Boiler House was demolished and replaced in two stages between 1950 and 1958 with the present one. This was part of a major upgrade of machinery with four new boilers and two new turbines. This period also saw a change in ownership from the State Railway Commissioners to the State Electricity Commission. By the 1970s demand for power from White Bay had considerably diminished and it was used mainly as an emergency 'stand by' back-up unit. In 1983 it was shut down permanently and most of its machinery sold and removed.

**Reconstruction and Adaptation**

**Establishment - former George Patterson House**

When this building in George Street Sydney was substantially damaged by fire on January 2nd 1996, the upper floors of the building were removed in the days which followed as a result of safety concerns leaving the building as a roofless, mutilated ruin. In 1998 a new owner saw the potential for retaining evidence of this disastrous event as an integral part of his new hotel development - 'Establishment'. As architects on the project for the conservation and related new work, our firm used a number of different methods to retain this story in a way which was as self evident as possible, as well as adding richness to the visitor and user experience.

The area most damaged from the fire, an open crater like hole in the centre of the building, was rooted over in glass to protect it, but left open and unpainted, with charred remains of joists, joinery and plaster stabilised in situ. For the rest of the building where the walls had been broken down following the fire, a row of red bricks was used to visually separate the original wall from the reconstructed. The new work rises above it in a similar proportion but with simplified details and a slightly lighter brick. Window openings retained the same proportions but were executed with steel frames instead of timber. On the George Street elevation, fire and smoke stains were retained and for those who care to look up, the story of the fire is still clearly evident. No signage is required.

These are not new ideas. Many have done this before. For the red line, I was inspired by a fine red line of tiles used in the post war repairs of mosaics in the Byzantine churches in Ravenna, Italy. There it was used to differentiate between original and repaired work and I was intrigued that it did not detract from the appreciation of the whole.
Fortunately, a decision had already been made that while other metropolitan power stations would go, White Bay would remain and as part of this a complete "slice" of the power generating equipment would be retained in situ. It was the longest serving power station in Metropolitan Sydney and is now the only one to retain a full slice of its power generating machinery. The building's configuration, form and massing responds directly to the machinery and industrial process which it housed. It is a clearly readable diagram of the process of power production. The site is now owned by Sydney Harbour Foreshore Authority.

Our team found that not only does the power station retain historic and technical significance, it is highly valued as an iconic landmark industrial structure in its urban context by both local residents and the wider Sydney community. While 25 years ago it was despised as a major source of pollution, it is now regarded with great affection for its aesthetic qualities and its connection with the local area's industrial past. Our analysis also confirmed that it has quite unique and awe-inspiring spaces, both externally and internally, rich in raw industrial textures. The buildings are both complex and extensive and while the machinery cannot be moved, another 'Power House' type museum for the whole site is not feasible.

However, without a viable new use, the former Power Station will be doomed to demolition and its extraordinary significance lost with it. Viability is a key issue here as there are significant areas and structures on the site where there is very limited potential for adaptation due to the presence of significant machinery or the nature of the element, such as the steel chimney stacks. The loss of any of these elements would adversely affect the significance and landmark qualities of the place, so some means of not only funding their conservation and retention must be found, but also a way of integrating these elements into sustainable new uses and celebrating their existence. This viability and sustainability is important both in terms of ongoing uses and also conservation of the significant values of the place.

Some means of not only funding their conservation and retention must be found, but also a way of integrating these elements into sustainable new uses and celebrating their existence. This viability and sustainability is important both in terms of ongoing uses and also conservation of the significant values of the place. For this to be really successful, any new structure or adaptation must therefore support the significance of the place and take a responsible role in its interpretation. If it were simply a foreign unrelated object or function, ‘camping’ on the site or in the buildings, it adds nothing to the meaning or understanding of the place. In such a case the significant fabric is redundant in that it is dormant or 'dead' to the new function. I believe there should be a mutual dependence or ‘dialogue’ between the two, without irreversible damage or loss of significance.

Of the external spaces, one is the now vacant site of Boiler House No 2, built 1923-1927 and demolished 1976. Our guidelines suggest that it would be highly desirable, in terms of reinstating the physical and visual bulk of this boiler house, to construct a new building on this part of the site to aid interpretation and to restore the visual symmetry and balance of the original power station design. This new structure would be approximately 50 metres long, 32 metres wide and 35 metres high. This bulk of new building could provide substantial floor space to accommodate functions not appropriate on more sensitive parts of the site and could potentially provide revenue to help fund the conservation work. It has the potential to not only restore visual balance and bulk but also provides an opportunity to signal the new use. A new and exciting modern layer over the existing, similar in concept to the light box on top of the Tate Modern in London, another redundant Power Station.

Other significant, but now lost elements, such as the structure which bridged over the rail lines between the boiler houses and the chimney stacks, supporting the precipitator and ash handling units, could also be interpreted as new structure adding access and servicing possibilities to the existing structures around it.

Of the internal spaces, Boiler House No 1 was formerly crammed full of machinery, dust and noise. It housed four massive boilers, each extending from ground level up to the roof, 35 metres above. Only one of these boilers remains at the northern end of a huge space, now filled only with light and the remains of fixing points for machinery around its perimeter. The 'firing floor' or first floor, which supported the main furnace chamber, retains the 3 large voids from the removed machines. Other equipment such as the massive coal hoppers and the main boiler control room, occupy much of the western side of the space.

![Figure 6 View from Anzac Bridge, 2003. (Design 5)](image)

![Figure 7 Site plan showing future development options, including potential new structures. (Figure 5.10.2.1 from volume 2 of White Bay Power Station Conservation Management Plan 2004)](image)
In terms of interpreting this space as a boiler house, there is obviously the need to retain the extant boiler; however its sheer size and enormity is best appreciated from the adjacent void, from an appreciation of the volume its counterpart once occupied. While the existing huge space is awe-inspiring, its significance both as an enormous brick shed previously full of hot noisy machinery, as well as the present open volume, can still be retained with the insertion of new structure. The pattern or character for new structure is set by the extant boiler. Open steel framing, standing free of the exterior walls, allowing daylight to penetrate up and down around the perimeter. The most solid part of the boiler was the main firing chamber, enclosed by steel and asbestos walls, now removed, rising up through the void in the firing floor, and separated from it and other elements around the perimeter by open grated walkways. A multi storeyed furnace box, circled by grated walkways, ladders, stairs, machines, ductwork and light. If new structure were to be inserted within the areas occupied by No 3 & 4 boilers, leaving No 2 as a void and if this new structure was designed as a steel and glass “machine” with multiple levels and the only opaque sections being in the centre of each void where the main firing chamber was, then such structure has the potential to interpret the missing boilers in a creative and invigorating way.

Imagine a new corporate headquarters for some industrial giant in a state of the art steel and glass “machine” within the spaces previously occupied by massive coal burning boilers, looking out across a void to the original boiler. This is new structure or architecture as interpretation. If the process of interpretation were left until after the new structure was conceived and designed or even built, it may well be too late.

Below are some of the guidelines which have been drawn up for the adaptive re-use of this part of the building.

- retain full height space at least in part and particularly within 2.5m of glass curtain wall.
- retain full height view of Number 1 Boiler by retaining void of Number 2 Boiler.
- retain existing void between 1st level and underside of coal hoppers along west side in the positions of Numbers 1 and 2 Boilers.
- retain all walls (especially original 1914 Boiler House wall) as unpainted masonry. Retain all evidence of fixings and signage.
- opportunities for adaptive re-use are available through the insertion of distinctive fabric in the voids in the floors, and for additional floors to be added that respect and enhance the spaces around the extant boiler and associated equipment.

As much of the significant machinery and evidence of evolution and use is confined to the north and west and...
around the perimeter, the huge space they enclose is both an asset and an opportunity. Before the boilers were removed this vast space was full of machinery and open grid walkways. The significance of the space and the machinery could still be retained and respected if some of this void were once again filled with a machine-like structure. To assist interpretation and respect the significant scale and rhythm of the place, these new structures should be of steel and glass with no masonry.

Potential for daylight to penetrate full depth of space where machinery has been removed, particularly between “solid” areas of former boilers to be retained. Surviving obscure glass should be retained and missing panes replaced by matching new glass. New structures inside this building should have a sense and aesthetic of being a machine-like structure.

The intent of any new floor space or structures in these areas should be to interpret the mass and voids of the original boiler machinery and their vertical continuity from floor to roof.

Such use could extend into the massive suspended curved envelopes of the adjacent hoppers and use them as internalised meeting or AV rooms. The new use could explore and enjoy the spaces and structures presented, in such a way that their significance was celebrated and not trivialised or used as a mere backdrop or ‘wallpaper’.

Conclusion

It is important for all of us, in whatever field we operate, to realise that we can and should play a role in interpretation. For architects this is critical, as we are often in the position of making the first and often the most important decisions about the fate of existing fabric, as well as shaping the new work. It is therefore important, indeed essential, for us to listen to the place and understand its significance, stories and meanings, before we make decisions. Only then can we identify and understand what opportunities are available to us for telling these stories in new and exciting ways. Ways which inspire and inform the new work. Clearly new elements or structure must enable and support a sustainable new use, but they should also enrich the meaning and interpretation of the place, as well as invigorate and rejuvenate it.

To use new structure in this way encourages all those involved with its future use to value and enjoy its significance. It has the potential to strengthen our connection with the past in a way that enriches the future, providing an environment which can tell its stories honestly, with dignity and integrity. Even ordinary and not so significant structures can be approached in this way. They too can become inspiring places to live and work in, while still proudly wearing and telling their own stories of change and evolution.

Endnotes

2 White Bay Power Station Conservation Management Plan, 2004, by a team led by Design 5 – Architects, Volume 1 page 32. [Since the “Telling Tales” conference, this CMP has been endorsed by the NSW Heritage Council and has won a National Trust Heritage Award. It is available on the Sydney Harbour Foreshore Authority website.]