

What do we mean, *conserve*?

Jasper Swann writes that Australians have something of a love affair with stone buildings. The degree of passion may vary from one city to the next, but the admiration of the qualities afforded to our urban environments through our stone heritage is universal.

In Melbourne and Adelaide, there is a sense of these buildings being our elder statesmen, the omnipresent backdrop affording a comforting familiarity. In Hobart, a rich and tangible colonial history is breathed into the streets through the ubiquitous stone façades. In Brisbane and Perth, the highly distinct local sandstones and limestones serve as key contributors to those cities' identities. And in Sydney, steeped in a sandstone heritage which throbs at the heart of the city's very identity, the love affair is perhaps at its greatest. But wherever the location and whatever the intensity of feeling, it is fair to say that Australians have a very great awareness of the stone buildings that provide an architectural backdrop in all of our towns and cities, all be they now very much merged alongside the new. In the eyes of the general public, (in Sydney, in particular), those who designed and built these buildings seem to have been afforded an almost mythological status. Understanding why this peculiar adoration exists is central to understanding what it is about these buildings that needs to be conserved. There exists a strong attachment to these buildings, and a strong desire to conserve them. But *why* is that attachment so strong? And what does it mean to conserve them? Answering these questions will go some way towards achieving the successful conservation outcomes desired. Answering a more practical question: *how* to conserve them? is equally important. Somewhere in the marriage of these two significant considerations lies the successful conservation outcome that those responsible for overseeing stonework conservation projects seek to achieve.

Stone has been a primary building material across the globe for thousands of years, and perhaps just two generations ago there would not have been an architect alive who did not have a thorough understanding of the material and the processes involved in working with it. But it has been a good 50 or 60 years since this was the case, and during this time few architects have had the need or the opportunity to learn about it.

Today, the conservation of historic stonework is a burgeoning field in Australia, as in many other parts of the world. But as a consequence of the significant hiatus between the 1950s and the present day, whilst masonry skills still remain at a high level and the number of masons in Australia is on the rise, today's conservation architects find themselves having to supervise significant stone conservation projects without actually knowing as much about the material and the discipline as they would doubtless desire. In truth, many are having to play a rather uncomfortable game of catch up. Quite rightly their clients have an expectation of expertise in the field, as do the contractors working under their direction, and therein lies the potential for discomfort. It is not a criticism, but merely a statement of fact, to say that this expertise remains lacking amongst the majority of our conservation architects today. This experience is by no means unique to Australia. In the UK, the stonemasons' sense of acute frustration at the lack of knowledge in the field in those responsible for supervising stone conservation works has been openly expressed. In Australia, such frustration has simmered gently beneath the surface – in a smaller market, open expression of negative sentiment brings greater potential for harmful consequences for those contractors who might wish to voice their frustrations, and this has kept a lid on open debate. But today there is some evidence of movement towards a more co-operative approach, with a number of architects demonstrating a willingness to consult with those who have a thorough understanding of masonry conservation. However, many contemporary schedules of work still contain the words, 'stonemason to advise', (not always advisable when the mason may have a vested interest in doing more work rather than less), and others call for the stonemason to carry out repairs 'as required', (yet not specified). So this is a welcome development and one that must be encouraged. A good case might yet be put, though, for enshrining this collaborative approach in the Australia ICOMOS Burra Charter, which sooner

Below: *Silverton, NSW*
(Photo: Jasper Swann, 2007)

Top left: *Hobart's Commissariat Store, (1808).* (Photo: Jasper Swann, 2008)

Top right: *The Mint, Sydney – the southern wing of the former 'Rum' Hospital, (1811-16).* (Photo: Jasper Swann, 2010).





or later will doubtless undergo its fourth revision. The equivalent Canadian Code of Ethics specifically states that 'the conservation professional shall recognise his or her limitations and the special skills and knowledge of others.' And further, in its 'Guidance for Practice': 'When a conservation professional is asked to provide a service beyond the limits of his/her competence, the assistance of a qualified professional shall be sought, or the work shall be referred or subcontracted to a qualified professional'.

In an attempt to get abreast of the subject, many conservation architects, materials analysts and other heritage professionals have concentrated solely on understanding the material itself, endlessly dissecting its physical properties: its geological origins, its petrography; its compressive strength; its modulus of rupture; its porosity; its resistance to salt attack, and many other significant criteria besides. All of these things are unquestionably important, but they form just a part of the picture, and most are readily determined by parties whose expertise lies in materials testing or geology, rather than in conservation. The important thing to realise is that the material, after all, is nothing other than a starting point. It is what is done *with* it and what is done *to* it that ultimately defines the success or otherwise of any given stone conservation project. Masons and conservators experienced in stone conservation have many skills beyond simply working stone. So to dwell on the physical characteristics of stone is to miss the point. It is the conjunction of the knowledge of the material – and its decay mechanisms – with these practical skills that ultimately defines the real possibilities and limitations in stone conservation. Discussion of practical skills is beyond the scope of this article, but it is ultimately the philosophy of conservation that must guide the practical response, and the inherent responsibility in this process lies in conserving the qualities and attributes of the stone buildings that Australian society holds significant. These qualities may not be limited to the architectural alone. The patina of age, for example – the wrinkles and grey hairs, if you like, of our elder statesmen – may be equally significant. Conserving what is important, in other words, may not always equate to restoring a building to its original condition, and this must be carefully borne in mind when defining the conservation of stonework.

Why Are Our Historic Stone Buildings Important?

Many miles from any of the nation's capital cities, surrounded by vast expanses of dry and barren desert, the visitor to Silverton in far western New South Wales will stumble upon a collection of stone buildings that perhaps provide the answer to this question.

Founded in 1883, Silverton, 25 kms north of Broken Hill, sprung up almost overnight in response to the favourable granting of mining leases in the region. Rich in silver, the otherwise barren environment played host to a sudden influx of people intent on seeking their fortune. In the space of two years, the population had reached 3000, with an initial collection of tents and huts turning into a flourishing

town. Yet within a little over two decades, the town was no more. Today, in the bar of the Silverton Hotel, a framed 1894 map of Silverton provides us with an insight into a thriving community. The town has a comprehensive grid-network of streets (comprising mostly timber homes), and a collection of modest but nonetheless elegant public buildings. And yet, when you empty your glass and stroll out through the front door of the pub, what meets your eyes is a barren, stony, desert landscape, dotted only with a handful of buildings that seem to bear no relation to one another, let alone to the map that you had just been looking at.

So what happened? Where did the town go? The answer, of course, lies with the fortunes of the miners. As the silver ran out, so too did the residents of the town. And with most of the buildings being of timber, the residents simply wheeled their homes with them, drawn upon bullock-carts in great clouds of dust behind them. They put them down again in Broken Hill, where the next significant granting of mining leases occurred. What remained was the handful of stone buildings that were, of course, by no means portable: the Municipal Chambers; two churches (Methodists and Catholics had a strong and differential presence); the Public School; the Silverton Hotel; and a small number of stone cottages, one occupied by the Surveyor, the others perhaps by the more successful pioneers. Silverton came and went within the space of a few short years, but its history tells us much about the lives of many Australians in the 1880s; bold entrepreneurs (a meeting in the Silverton Hotel in 1885 gave birth to the Broken Hill Pty Ltd Company, later better known as BHP); itinerant workers; the extraction of wealth from a seemingly barren land; the subsequent development of more elaborate forms of municipal and domestic architecture. This history is important to the nation. And yet, were it not for the handful of stone buildings that remain, there would be virtually nothing at Silverton to show that it had ever even existed. It is the stone buildings, in other words, that provide this tangible link to our forebears. It is an extreme example, perhaps, but in Silverton, as in Sydney and Melbourne, Adelaide and Brisbane, Hobart and Perth – and a wealth of regional towns in between – it is the stone buildings that have remained, long after most of the other earliest buildings have perished.

Early buildings such as Sydney's 'Rum Hospital' (1811) still stand, (in part), today. Hobart's Commissariat Store, (1808), graces Macquarie Street, two hundred years on from the days when convict labour wrought its stones. In Adelaide, many early buildings were constructed from the local limestones and bluestones, as well as local sandstones, and many later utilised imported Sydney sandstones. In Melbourne, where the sandstone industries never really became well-established, much sandstone being imported instead from Tasmania, a variety of local sandstones nonetheless were utilised and grand buildings such as Parliament House (1856) and the Treasury Building (1862), provide Melbournians with tangible links to their



Left: Melbourne's Parliament House, (1856). (Photo: Jasper Swann, 2009). **Right:** South Australian Museum, (1856). (Photo: Jasper Swann, 2009)

past. For a hundred years or more from colonisation, stone remained a dominant building material in Australia, though increasingly less for humble dwellings and more so for grander public buildings. Even in Darwin, hardly a city held in regard for its old stone buildings, the few that were built towards the end of the 19th-century and in the early part of the 20th-century – or parts of them, at least – were all that remained in the wake of Cyclone Tracy's destruction of the town on Christmas Eve in 1974, and they remain of high significance to the local community today.

So in each of these cities, the stone architecture stands testament to the endeavours of our forebears. And this is surely the reason that, consciously or not, Australians a) feel such a strong attachment to stone buildings, and b) are filled with such a passionate desire to conserve them. It is this recognition of the nation's history and desperation not to let it slip away that fuels the love affair previously described.

It is important, however, to recognise that it is not merely the existence of these early buildings as pieces of architecture that provides these essential ancestral links. It is equally the character and charm of the buildings; the weathered cornices; the pitted hood moulds; the fretted ashlar; the softened lines of voussour mouldings – all of which speak resonantly of one thing; the age of the building. This physical expression of age contributes greatly to the sense of history that these buildings exude, and there is considerable international consensus amongst conservationists that this quality should be preserved where possible. Any visitor to the cities of Europe and the Americas will probably have been quite overcome with the rich sense of history steeped upon them through this characteristic of the historic architecture, and there is no reason why Australians should not admire the same quality at home. That is not to say that the nation's stone buildings can be allowed to deteriorate at will. There is, at times, a need for intervention to ensure that the buildings remain for future generations. But a balance needs to be struck between preservation and restoration, and this is precisely what the conservation of stonework is all about.

The Patina of Age

Much is spoken in conservation circles about the patina of age, and its preservation is certainly an important aspect of stonework conservation. But what exactly are we talking about? Is it simply surface dirt and discolouration? Is it the blotchy patchwork of lichens and algae that are a feature of almost every parish church? Is it the colour changes that occur over time from within the stone? Or is it the cracking of beds and the chipping of arisses; or the loss, even, of architectural detail? Is it, in fact, a combination of all of these things?

Bernard Fielden, in his acclaimed volume *Conservation of Historic Buildings*, describes it thus: "Time and circumstance can give a building many irregularities. Stones may be cracked, edges worn or chipped and spalled and eroded. All these irregularities should be

conserved as part of the patina of a historic building... For the true presentation of historic buildings it is essential that patina, in all its forms, is respected."

Long before Fielden, John Ruskin, in the overtly lyrical but nonetheless resonant terms of his 'Lamp of Memory', expressed his view that 'the greatest glory of a building is not in its stones.... Its glory is in its Age, and in that deep sense of voicefulness, of stern watching, of mysterious sympathy ... which we feel in walls that have long been washed by the passing waves of humanity.' Ruskin was, in almost Godly tones, espousing the virtues of the patina of age.

It is important, also, to recognise the still current value of the words of intent that Ruskin put in the mouths of his forebears as a precursor to this statement, in which he postulated that the builders might have said amongst themselves:

'... when we build, let us think that we build for ever. Let it be such work as our descendants will thank us for, and let us think, as we lay stone on stone that a time is to come when those stones will be held sacred because our hands have touched them, and that men will say as they look upon them, "See! This our fathers did for us."'

Whether or not our own forebears thought along those lines as they laid the first stones of the Sydney Town Hall or the Melbourne GPO is open to conjecture. But if we choose to respect and revere the work of those men, which as a society we unquestionably do, then it is in these terms that we must see the fruits of their labours, for the connection that the stones provide to those who lived in our cities before us, is surely the greatest contribution of these buildings to our present day society.

It would appear that this is the position that the general public subscribes to, albeit at times subconsciously. This has been demonstrated in a variety of ways. Often without any knowledge of the actual historical significance of a building, for example, communities engaged in heritage studies will nominate buildings that *look* old as being significant to them. The most readily identifiable aspect of these buildings – their age in other words – is what is attractive. The patina, therefore, is in itself a significant aspect of a historic building, and one held to be valuable. There is no reason to doubt that future generations will value it any the less.

Determining Conservation Policy

The trick in determining appropriate conservation policy, then, is to identify which aspects of a building's condition actually threaten its continued existence, and which are simply evidence of its old age. Which defects can realistically be rectified to retain significance



Left: A weathered capital on a Sydney church. The 'patina of age', or disfigurement? (Photo: Jasper Swann, 2004) **Right:** Remains of Christ Church, Darwin (1902), largely destroyed in Cyclone Tracy in 1974, now incorporated into Christ Church Cathedral, (1976). (Photo: Jasper Swann, 2008) **Below:** John Ruskin, 1894

and prolong longevity, and which are better left alone. For as well as respecting a building's patina of age, it is also important to realise that any historic building will have weaknesses within its fabric which it may be wisest to accept. Is a crack through a stone, for example, likely to develop further, to the point that a portion of stone may separate from the whole, or has the crack been there in a benign state for a hundred years? Does it present the potential for part of the stone to fall and injure, or is it in compression, and present no risk at all? Will pinning the crack increase the life of the stone, or will it simply introduce a point of weakness and accelerate future deterioration? Does the loss of a drip mould threaten the stones below it through increased moisture-facilitated erosion? If so, will a simple repair of the drip mould arrest the problem or does the stone have to be replaced? Or will a lead flashing suffice to allow the stone to function as it should without any intervention upon the stone itself? Can a stone be restored to a sound condition by the introduction of localised hairline indents where the damage exists, or does the stone have to be replaced in full? Can an outer layer of deteriorated stone simply be dressed off to allow the stone to weather better, or will this disfigure the building? Has the building been repointed in an unsympathetic material? If so, will the material's replacement be beneficial, or will its removal do more damage to the stonework in an instant than would occur naturally over thirty years? Is a stone salt-affected, and if so, will any available desalination techniques be effective in combating the problem? What might be gained in cleaning a building, and what might be lost? Does a loss of detail detract from the architectural integrity of the building, or does it add to its character? At what point does the patina of age cease to become something of value and become more akin to disfigurement?

These are the sorts of questions that need to be asked when determining what constitutes the appropriate conservation of a historic stone building. There is much to consider, and many ways to respond to the conservation dilemmas that historic buildings throw up.

A simplistic conservationist approach would be to replace stones in full with new to match the original each time deterioration is encountered. In some instances, notably with some frequency in Sydney, (and notably less frequently in our other capitals), such policy has in fact

occurred, and it has been framed as something of a purist approach – honouring the original architectural intent – in justifying its practice. In reality it very likely owes as much to this rather fragile philosophy as it does to the contemporarily embedded notion that a proper job requires the execution of extensive works. In the UK, this approach has been publicly described by one prominent author on the subject as 'a particularly dangerous kind of ignorance, invariably dressed up as wisdom'.¹ Not only does a great deal of original fabric stand to be lost in this approach, taking with it forever our Ruskinian link to our forebears, but it overlooks a raft of skills and practices that have been developed by talented craftsmen and conservators, (of which there exist more in Australia than the man in the street would presume), to conserve fabric, architectural integrity and character. It may even be a reflection of a peculiarly Australian cultural tendency to want to present everything in the built environment in a pristine and 'new'

condition – a somewhat invidious, if unwitting, social agenda to eradicate all trace of age. But whatever the motivation, it overlooks, or at best stretches to their limits, the central tenets of the Burra Charter, whose key clauses call for a cautious approach, and whose perhaps ultimate guiding principal is to 'do as much as necessary and as little as possible'. The same document demands the use of all available skills when choosing to conserve a significant building. Whilst the Burra Charter, like all guiding documents, is open to interpretation, the implicit message at the core of it is not hard to grasp, and care must be taken not to allow loose or disingenuous interpretation.

There may well be different approaches and different methods that can be employed to

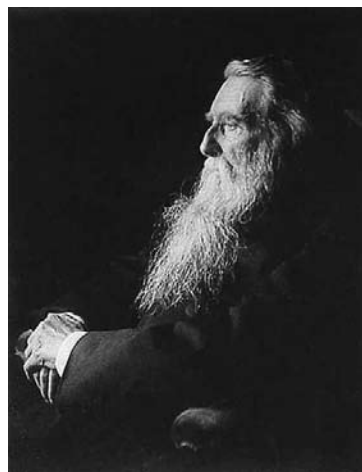
achieve the same outcome, but if the intent is to conserve a historic stone building or monument, then essentially the requirement is this:

Do everything possible, using all the available skills, to minimise the extent of intervention, yet at the same time preserve significance and maximise the potential for longevity.

This is not as tall an order as it may sound.

Regular Maintenance or One Major Campaign?

The question of how often stonework repairs should be carried out on a significant building is one that warrants careful consideration. In the majority of Australia's capital cities, regular maintenance and minimal intervention – carrying out stonework repairs every 20-30 years or so – seems to be the favoured approach. In Sydney in particular, the alternative approach of conducting a single major campaign appears to



¹ Earl, J. *Building Conservation Philosophy*, (3rd Ed.), Donhead, Shaftesbury, 2003, p.94

have won considerable favour in some quarters. So which equates more closely to the conservation doctrines that the nation espouses?

Consider the following:

Building owner 'A' owns a late 19th century sandstone building that once served as a bank but now operates as a private hotel. The sandstone has been cleaned in the eighties, and a number of mortar repairs installed at that time have begun to fail. Other than that, there has been little intervention and no replacement of stone, and the building generally shows all the usual signs of old age. Cornices are weathered, drip moulds are partially missing, some are severely cracked and present a danger of falling into the street below. Ashlar is generally in sound condition, though some have developed horizontal lines of weakness. One or two sills have horizontal delaminations, and many joints, particularly perpend, are open and have long been allowing the ingress of water. 'A' has both little interest and little money to spend in 'restoring' the façade, but recognises his obligation to limit the risk of falling masonry and has an interest in keeping the water out of his building.

Building owner 'B' owns a state heritage-listed building that exhibits the same characteristics, but owner 'B' has an almost limitless supply of money, and a profile that requires it to be seen to be caring for the building.

'A' erects a light steel scaffold and dresses off all the loose stone that has a genuine potential to fall in the foreseeable future. He replaces one cornice stone that far and away exceeds all the others in terms of the extent of deterioration it has suffered. He replaces failing repairs with a mixture of mortar repairs and hairline stone indents. He desalinates the cornice, installs a lead flashing over it to a) keep the water out, and b) arrest the rate of its deterioration. He repoints the open and cracked joints only, gives the whole façade a light clean with water, and strips the scaffold. He hasn't done a lot of work, and it hasn't cost him that much. Importantly for him, he knows that he won't have to go back to the façade for another twenty years or so, and any further deterioration will probably be someone else's problem by then, anyway.

'B' erects a heavy duty steel scaffold, and wraps it in banners declaring his intent to conserve this important building. He cleans the façade with a contemporary micro-abrasive technique, bringing the stone back to an 'as new' appearance. Anticipating that the failure of some of the cornices will equate to failure of all of them in the medium term, he replaces all of the cornice stones with new to match the original, each beautifully carved and a faithful replica of its forebear. He replaces a significant quantity of ashlar with new, replaces the damaged sills with new ones, repoints all the joints to the façade, gives the building a final wash down, and removes the scaffold. The works have cost a large amount of money, but he will likely not have to revisit the façade for another 50 or perhaps even 100 years. (At least not to replace stone. The building will almost certainly require repointing before then).

These are two very different yet very real potential circumstances, and they trigger the consideration of two things:

- i) What is meant by stonework conservation in the first place, and
- ii) With what sort of regularity should we aim to attend to the care and maintenance of historic stonework?

The answer to the first question may be found in the context of everything considered thus far. Applying our accepted conservation principles, an examination of 'B's approach will in all likelihood

precipitate a conclusion that the central ethics of conservation as described in guiding documents such as the Burra Charter, have largely been left behind in preference for a desire to return the building to its original state and in response to a desire to maximise cost benefit ratios. It may well be argued that this approach stems from a different cultural perspective, and it will almost certainly be argued that somewhere along the line a case exists for economies-of-scale considerations. But Australia has adopted conservation models and conservationist approaches that would more probably label this level of intervention 'refurbishment'.

Looking at the approach of 'A', a rather sorry sense of his attitude being one based on least-cost economics and a general indifference to the appropriate care of a historic building may very well be felt. But looking at it more closely, the likely conclusion is that 'A' has unwittingly served the building – and conservationists – quite well. He has carried out minimal repairs and necessary maintenance only. The very worst stones have been replaced, the rate of future deterioration has been slowed, the risk of foreseeable falling masonry has been removed, water is no longer getting into the building, and the patina of age remains. To say that he has done as much as necessary and as little as possible would probably be as apt a description as any. This may be a hypothetical illustration, but in Adelaide, prominent conservation architects concur that a steady decline in the skills- and knowledge-base between the 1960s and 1990s actually served that city's stone buildings well – from a conservation perspective – by limiting the extent of intervention.

This, then, goes some way toward answering the second question: *With what sort of regularity should we aim to attend to the care and maintenance of historic stonework?* Ruskin was particularly vociferous in encouraging regular maintenance and minimal intervention, and William Morris's concurrence – 'stave off decay by daily care'

- formed the backbone of the Society for the Protection of Ancient Buildings, (SPAB), manifesto of 1877.

In the last four decades, many significant authors on the subject have extolled the virtues of seeking to achieve a 20-30 year repair cycle for stonework of historic significance. After all, 20-30 years is quite a long time, and provides ample opportunity for financial planning for future repair works. Repairing stones to ensure their survival for the next 20-30 years, (and replacing stones only where they are beyond repair), the longevity of the building is preserved, whilst simultaneously preserving the patina of age for future generations. The argument presented in some circles against this approach in favour of the more interventionist undertaking of a single major campaign is one that frequently stems from weighing what can often be significant access costs against the likelihood of being able to return to a building within 50 years. This has given rise to the 'economies of scale' philosophy referred to above that has sometimes led to wholesale replacement of cornices, parapets, string courses and the like, on the basis that if certain stones of a given type have failed then others of the same type are also likely to fail - though they may show only small levels of decay – and should therefore be replaced whilst accessible. This economies-of-scale argument is based upon predictive rather than actual fabric analysis, and this places it squarely outside the guidelines of currently accepted conservation practice in Australia. It might well, therefore, be argued that this approach does not constitute good conservation practice. As far as the perceived commercial benefits are concerned, the very significant expense of replacing large quantities of profiled stones far outweighs the costs of carrying out less interventionist conservation repairs several times over. There is no doubt that some clients have spent millions of dollars 'restoring' their buildings when they could have had them conserved for thousands.



William Morris, 1877

Rates of Decay

The perception of likely rates of decay of stone is a strongly contributing factor in determining the extent and the timing of repairs. No study focused specifically upon the rates of decay of Australian sandstones has ever been carried out, but a study commissioned by Historic Scotland in the 1990s, results of which were presented in 2000, demonstrated that decay rates of Scottish sandstones ranged from 0.5 – 10.5 % per century. If a stone that had weathered beyond 30% behind its original face were hypothetically considered to

have reached a point where it was of a structural concern, then in the worst case for those sandstones, it would be more than 300 years before a stone of 300mm depth reached this point, and in the best case, more than 6000 years. There are, of course, other mechanisms of decay that are not simply to do with progressive uniform erosion, particularly in Australia’s argillaceous sandstones, and there is also a need to prevent over-deterioration of a given stone if its poor condition threatens the condition of adjacent stones. There are also instances where decay rates can be significantly quicker where a specific factor is causing exponential deterioration. Nonetheless, the figures provide some perspective on rates of decay, and a consequent perspective on whether or not a stone needs to be replaced with new at any given time. And though it may be a slightly extreme analogy by way of providing a further perspective on this, consider the case of one of the most iconic historic masonry structures in the world:

Brunelleschi’s Dome, sitting magnificently atop Florence Cathedral, was completed in 1436. When significant cracks developed in the dome shortly thereafter, a committee was set up in 1491 to investigate the cracking and consider mechanisms by which it could be arrested. Not much happened in the next 148 years, (to the dome, that is), but in 1639, a further report was commissioned to discuss remedial measures for the cracking. In the late 17th century it was decided that significant structural repairs were necessary, but at the end of a protracted period of discussion, criticism and counter-criticism,




Florence Cathedral, (Etching, Giuseppe Zocchi, 1754)

these were abandoned. Further reports and proposals were commissioned in 1748, 1757, 1812, 1857, 1887, 1892, 1937, 1941, 1953, 1977, 1983, and in 1985, when a report professed to have determined once and for all the cause of the cracking. The significant point is that in all this time – during which Columbus discovered America and NASA named a Space Shuttle after him – nothing other than minimal and incremental works to the structure were carried out. A weakness in the dome has been present for more than 500 years, but the structure is still with us in all its

splendour. The point? There is not always a need to rush in with an interventionist approach when points of weakness and failings in a historic building are encountered. A minimalist approach – caution, care and regular maintenance – will almost universally preserve the significance of a historic building for future generations far better than any other.

Properly interpreted, the Burra Charter’s ‘do as much as necessary and as little as possible’ ought to be the only guiding principle required. More specifically, though – and by way of summation – if we wish to conserve those attributes of our historic stone buildings that are important to our society, the following simple guidelines can assist us:

- i) Respect the patina of age, and seek to preserve it where possible;
- ii) Respond to actual fabric condition, and not engage in predictive analyses;
- iii) Use all available conservation skills, recognising that future generations may improve upon them;
- iv) Recognise that rates of decay for most decay mechanisms are mostly quite slow;
- v) Accept that a historic building will have a number of weaknesses that it may be better to retain than attempt to eradicate; and
- vi) Always intend to return to a building for further works within 20-30 years. 

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