Productivity Commission Inquiry into the Conservation of Historic Heritage Places

Submission by David Young OAM, Heritage Consultant, Canberra

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Standards of Practice

Introduction

This submission is about standards of practice as they apply to the physical conservation of heritage buildings, structures and sites. Rather than the initial identification and assessment of heritage value, or the broader management of heritage places, this submission is about the works phase, the physical doing of it, undertaken by specifiers (architects, builders, engineers and others), by artisans and tradespeople (bricklayers, carpenters, masons, plasterers, etc) and sometimes by conservators.

With a background in geology, I am a heritage consultant specialising in building materials conservation and have been involved in the diagnosis and repair of historic buildings, cemeteries and other heritage places for over twenty years. My work includes current projects in Adelaide, Darwin, Brisbane, Sydney and Canberra. I also teach: running professional development summer schools in building conservation and heritage management for the University of Canberra, and contributing to international courses on wood conservation in Norway. I am a member of ICOMOS's International Scientific Committee on Stone and chair the New South Wales Heritage Council's Technical Advisory Group (TAG).

Argument

Australia is at the forefront in the development of broad heritage management practice: our Burra Charter and associated guides are acknowledged around the world. We have made substantial advances in understanding what is heritage and how its value or significance should be assessed. The fundamental principle of separating assessment of heritage significance from subsequent management decisions has provided a basis for a workable system of heritage administration. However, technical conservation practice in this country falls a long way short of the standards we should be aspiring to. Our knowledge of, and expertise in, the physical conservation of buildings, structures and sites is thinly spread and lags well behind that of many other countries.

The scant attention that has been given to technical issues by heritage agencies in the last two decades is understandable: we have been busy coming to grips with values and significance and their assessment, and with the broader management of heritage places in order to retain them. But now we risk negating the advances we have made, through well-intentioned but uninformed physical conservation works. While we have been busy developing standards for many other aspects of conservation practice we have failed to include the technical ones.

The concern extends across all aspects of the physical conservation of buildings, structures and sites, and applies to all levels of the industry from specifiers to supervisors (architects, engineers, project managers), contractors and doers (builders, artisans, tradespeople), and includes those administering work on heritage places (planners and others in government agencies).

Justification

There are numerous examples of poor conservation practice, the range includes:

- poor understanding of properties of traditional materials;
- excessive replacement of elements during works;
- repointing masonry joints with inappropriate mortars and application techniques;
- poor understanding and treatment of rising damp;
- mixing of different metals leading to corrosion;
- inappropriate use of modern materials causing damage to original fabric.

In order to provide specific evidence, three cases studies drawn from the author's practice have been included in a confidential appendix to this submission. The case studies principally demonstrate the lack of understanding of technical building conservation issues and the poor analysis of building condition by professional specifiers of repairs and remediation works. They also demonstrate poor understanding and poor quality workmanship by tradespeople. They further raise an issue with regard to the clients: each of the organisations responsible for these buildings employs staff in building and property management roles — roles that would be considerably enhanced were they aware of heritage issues and had some understanding of building conservation practice.

Discussion and Recommendations

This section explores a range of ways of improving heritage conservation practice in Australia drawing on examples from overseas where appropriate.

Technical Advisory Material

State heritage agencies publish a range of technical literature on conservation issues which varies in depth from very thin to more substantial. Even the more substantial documents would benefit from a higher level of technical input. Agencies have an agreement to share content and so some cost savings have been made that way, but it has generally been with the thinner documents. On an Australia-wide basis, the breadth and depth of technical advisory material is poor. Compare this with Scotland, where for a population of only 5.1 million, Historic Scotland publishes an excellent range of Technical Advice Notes, Guides to Practice, and Research Reports (http://www.historic-scotland.gov.uk/index/publications/technical_publications). As corrugated iron or lime mortar are the same whether in Perth, Melbourne, Hobart or Darwin, the production of technical advisory material should be undertaken on an Australia-wide basis so that economies of scale and funding sources can be maximised.

Recommendation 1

Australian governments and their heritage agencies should aspire to produce technical advisory material at least to a standard similar to that provided by Historic Scotland. The commissioning and production of such material should be undertaken on a co-operative and Australia-wide basis by all governments. Logically, it should be based in the federal Department of Environment and Heritage, but equally it could be based in a State agency provided appropriate funding arrangements were put in place.

Provision of high level Technical Advice

State heritage agencies provide technical advice, partly as an offset to the perceived burden of heritage listing. The advice is generally provided by architects working in development control functions. Only one agency (NSW) takes this further with a group of specialists (architects, builder, conservator, engineer, materials scientists) who form a Panel (sub-committee) of the NSW Heritage Council. The Technical Advisory Group (TAG, which I chair) provides advice to staff, to the NSW heritage advisers network and to owners and practitioners. They run seminars on specialist topics (e.g. masonry cleaning, corrugated iron, use of lime) and are presently upgrading technical literature which is available on the NSW heritage Office web site (http://www.heritage.nsw.gov.au/13_subnav_01.htm). TAG is supported by an executive officer on a half-day-a-week basis.

Recommendation 2

As with the provision of technical publications, high level technical advice should be provided on an Australia-wide basis. It would a waste of resources to establish bodies similar to TAG in each State. Rather, there should be a full-time national executive officer with support staff to co-ordinate a national technical advisory service and to be responsible for the technical publications program. The advisory group would act as a technical overseer of the publications. Again, such a position should be located in the federal department but, with appropriate arrangements, might be located in a State agency.

Availability of Materials

There are increasing concerns with restrictions in (and sometimes total lack of) availability of materials used in traditional construction. The use of traditional materials is important for both appearance and performance characteristics. As a result of industrial advances and rationalisation, including the takeover of smaller companies, there are many different materials in limited supply. These include:

- bricks, which are now made in a different way than in the 19th and 20th centuries;
- profiles of sheet metal elements such as ridge cappings;
- timber of the quality used in the nineteenth century; and
- stone, as result of closure of old quarries as well as changes in building construction.

Two examples of how other countries deal with these issues are instructive. Historic Scotland recognised the need to maintain in operation old stone quarries as sources of material for heritage conservation work. They set out to build networks with the stone industry (the Scottish Stone Liaison Group) and the result has been a greater voice for the stone industry in modern construction, as well as guaranteeing the availability of stone for conservation (see the Research Report - A Future for Stone in Scotland, and the Reference Report - A pilot study into the potential for a Building Stones of Scotland publication, both available from Historic Scotland's Online Shop at the web page:
http://www.historic-scotland.gov.uk/range_detail.htm?RangeID=41&MainRangeID=1&PropID=0&startpoint=0

The world heritage listed town of Røros in Norway established the Material Bank of Røros in 1996 (http://www.materialbanken.no/). Rather than money, the material bank deals in high quality traditional construction materials, principally pine heartwood on account of its greater durability for exterior construction (most buildings in Norway are timber). The Material Bank was restructured as a commercial shareholder company in 1999 and now supplies products throughout Norway and exports to England, the Netherlands and Iceland. While pine

heartwood remains its principal product, it also deals in other materials from its local area including stone slates and birch bark. The business is growing at 25-30% annually.

Recommendation 3

By taking a pro-active networking approach Australian heritage agencies may be able to overcome some of the challenges of industry rationalisation without cost to the taxpayer. The Productivity Commission should encourage such enterprise. Historic stone quarries may need planning protection to ensure their ongoing availability as a resource.

Skills and Training of Practitioners — Trades

Others have written of the overall decline in training of tradespeople (Dr Phillip Toner, 2003, *Declining Apprenticeship Training Rates: Causes, Consequences and Solutions*. Dusseldorp Skills Forum, [http://www.dsf.org.au/], accessed 3.8.2005; and the Construction, Forestry, Mining and Energy Union (CFMEU) submission to this Inquiry). There is also a need to train tradespeople to an advanced level in the more specialised skills required for heritage conservation, and in response, the International Specialised Skills Institute (ISSI) is proposing a master artisan level of training. This initiative is supported, but in parallel, ***all*** building tradespeople should have some awareness of heritage conservation issues and some understanding of building conservation practice.

Recommendation 4

All building trade courses should have a compulsory component on heritage conservation practice, and on relevant traditional materials, construction and repair techniques.

Skills and Training of Practitioners — Specifiers (architects, engineers)

In a similar way to the trades, there is a need for specialised training in building conservation for some architects and engineers, and a parallel need for all architects and engineers to have an awareness of heritage conservation issues and some understanding of building conservation practice. At best, Australian architecture (undergraduate) degrees contain one (elective) subject dealing with heritage issues. Teaching in architecture is focussed on new design whereas many graduates will work on existing buildings whose materials and construction techniques they may be unfamiliar with. The English Heritage submission to this Inquiry makes the point that over half of all construction in the UK is work on existing buildings (conservation, repair, maintenance and improvement – CRMI). Comparable Australian figures may not be of the same magnitude (and need to be determined), but to not educate students for a significant part of their future work seems wrong.

Recommendation 5

There should be a survey of the building construction industry in Australia to determine the proportion of work undertaken on existing buildings, and on heritage conservation, in order to provide guidance on education and training of the professions and the trades.

Recommendation 6

There should be a review of heritage management and conservation courses at Australian universities to consider the range of their offerings, their effectiveness and their viability in the context of ensuring good ongoing heritage practice in Australia.

Recommendation 7

All architecture and engineering courses at Australian universities and in the TAFE sector should have a compulsory component on heritage conservation practice, and on traditional construction, maintenance and repair.

Skills and Training of Practitioners — Facilities Managers

Better informed building owners and managers would improve the management of heritage places and the retention of their heritage value. The emerging discipline of facilities management will be an important caretaker of many heritage places.

Recommendation 8

In developing courses such as post-graduate degrees in facilities management, universities should incorporate subjects which recognise the substantial difference between managing an asset with a relatively short life cycle and managing heritage properties where the underlying aim is their long term effective use. Such courses should also include components on conservation philosophy and conservation management practice, and on traditional materials and construction techniques and their proper care.

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