

ENGINEERING HERITAGE AUSTRALIA

ENGINEERING HERITAGE & CONSERVATION GUIDELINES



ENGINEERS
AUSTRALIA

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These Guidelines are produced by Engineering Heritage Australia (EHA) on behalf of Engineers Australia, the trading name of the Institution of Engineers Australia.
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Users of the Guidelines are invited to make suggestions for additional material to:

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Cover

The capacity upgrade of the Hinton Bridge over the Paterson River in the NSW Hunter Valley won the 2007 Colin Crisp Award for the NSW Roads and Traffic Authority. The original timber Allan trusses were strengthened for modern traffic loadings by replacing the timber cross girders with steel hollow sections, strengthening the bottom chords of the trusses with hidden steel plates and fitting a stress-laminated timber deck. Steel crash rails were designed to have an appearance similar to the replaced timber ordinance fencing.

The inserts, clockwise from top left: strengthened bottom chord and steel cross girders do not significantly affect the bridge's appearance; the steel crash rail looks similar to the original fencing, including the angled top rail; a new timber pier trestle rests on a piled concrete footing; the stress-laminated timber deck resting on the new RHS steel cross-girders.

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Introduction

Engineering and Heritage

For the first Charter of the Institution of Civil Engineers in 1828, Thomas Tredgold defined the profession of a civil engineer as “the art of directing the great sources of power in Nature for the use and convenience of man”.¹

Well before the formation of the Institution of Civil Engineers and derivative bodies in the nineteenth century, and before any thought was given to a formal technical education for engineers, many examples of works conforming to that definition of civil engineering had been built over many centuries: these ranged from Roman aqueducts and Mesopotamian irrigation works to the early canals of the eighteenth century. In Australia, Aboriginal fish trapping structures should be included. It is useful to keep the above definition in mind as it distinguishes works of engineering from those purely intended to provide shelter, although in many cases the two are inextricably mixed.

The nineteenth century saw the profession of civil engineering diverge into the many branches we now have. Engineers in each branch of the profession continue to follow their profession as laid down almost two centuries ago. Unfortunately, rapid evolution of scientific and technical knowledge, and its application by engineers, sometimes seems to make the work of practitioners of previous generations seem trivial and of no account, particularly by those in our society who only look to a future limited by the narrow economic and planning boundaries set by political cycles. However, “those who cannot remember the past are condemned to repeat it”² or, as an engineers’ corollary, “there’s no point in reinventing the wheel”. The recognition, conservation and appreciation of our engineering heritage is an important part of the community’s knowledge of who we are.

The economic and practical life of much of the country’s infrastructure is much greater than discounted cash flow tables can account for. At a time when “sustainability” is becoming an important catch-cry, the evaluation and continuing use or adaptation of older infrastructure will be a requirement in engineering practice, and engineers will increasingly need to be aware of and use the tools of conservation practice.

The need for conservation guidelines

These guidelines have been prepared by Engineering Heritage Australia to assist professional engineers and others to discharge their responsibilities towards our engineering heritage. The guidelines complement the Environmental Principles of Engineers Australia.

This second edition of the Guidelines, first published in 1992, has been made necessary by the revision of the Burra Charter of Australia by ICOMOS in November 1999 and development of heritage practice in Australia.

The Guidelines are intended to help the engineer and heritage practitioner to understand the concept of significance of an engineered work or its elements, and also the methods available for retaining that significance during any alterations, development or demolition.

Because the objective of professional engineering is to improve the physical quality of life of the community, the work of the engineer results in a very diverse range of machinery and equipment, structures, systems and processes ranging from small items to those that span the continent.

Most engineering works ultimately become outdated and require upgrading, replacement or disposal. For example, a community might need a bridge to cross a river and the community pays for its upkeep. When the community no longer requires the bridge, it will deteriorate without maintenance to the point of collapse. The bridge may also become too small or its maintenance too expensive compared to a new bridge.

Recent trends have recognised the benefits to be derived from recycling engineering works to allow them to continue to perform their original function or, in some cases, a new function (“adaptive reuse”). Cases are increasingly arising where engineering works are becoming so valued by the community that there is a reluctance to see them disappear, even though the replacements and modifications provide a better service. The challenge, particularly in the case of large fixed structures or machines, is to find a solution which satisfies the engineer’s professional responsibility to provide an improved service while guarding against the charge of being a materialist without any sensitivity or regard for cultural values.

1. M Chrimes, 1997, *Civil Engineering 1839-1889 – A photographic Survey*, Budding Books, Stroud
2. George Santayana, 1905, *The Life of Reason*, Vol 1, Ch 12, Charles Scribner’s Sons, New York

Conservation Principles

The Beginnings and The Burra Charter

The formally structured conservation movement in Australia can be traced back to the formation of National Trusts in the various states following World War II. This was done at a time when anything “old” did not appear to have value to most in the community and a large amount of our built infrastructure was under threat. As stated in the preamble to the Burra Charter,³ “Places of cultural significance enrich people’s lives, often providing a deep and inspirational sense of connection to community and landscape, to the past, and to lived experiences”. At first a few enthusiasts, followed eventually by governments, began to formulate ways of expressing this in practical ways by defining and expanding the concept of conservation as it applies to the built environment, the result of human activities.

The genesis and history of the Burra Charter can be read in the Charter itself.

The Burra Charter is generally accepted by heritage authorities and professional conservation practitioners in Australia as the methodological basis of identifying and managing heritage places and objects. Engineers Australia has adopted the Burra Charter as a basis for the conservation of engineering works.

All engineering conservation should try to conform to the requirements of the Burra Charter.

Other charters

The Burra Charter is primarily concerned with “place” and those buildings and artefacts which can be identified with a particular place. The concept of place also forms the basis of most heritage legislation as it provides a ready means of legally defining the site, building or precinct by means of boundary definitions and property title.

The concept of place has to be stretched to cover the needs of many engineering heritage works, especially those, such as working railway locomotives or ships, which can readily move. The Burra Charter is also not very helpful in determining what changes are acceptable to an item to allow it to continue to function and be appreciated without unnecessary risk to the item. Such interventions as modern bearings in locomotives allow a longer and safer continuing life of operation.

Three other charters have been produced by international bodies in recent years which cover industrial heritage, and operating railways and ships:

- The Nizhny Tagil Charter for the Industrial Heritage, passed by the assembled delegates at the triennial National Assembly of The International Committee for the Conservation of the Industrial Heritage (TICCIH) in Moscow, 17 July 2003
- The Riga Charter, adopted by the Annual General Meeting of Fedecrail (Federation of European Museum and Tourist Railways) in 2005 at Graves-sur-Anse near Lyon (France)
- The Barcelona Charter (European Charter for The Conservation and Restoration of Traditional Ships in Operation), adopted by 4th European Maritime Heritage Congress meeting in Barcelona in 2001

Copies of these charters are appended and engineers engaged in the conservation of moveable engineering works are encouraged to use them as applicable, with due regard for their limitations outside the areas of practice for which they were formulated and possible conflicts with accepted Australian practice.

Definitions

In Australian practice, terms which can sometimes be thought of as equivalents have precise definitions and understanding them is essential in order to understand the process and procedures.

The following definitions (shown in italics) are taken from the Burra Charter. Additional explanation has been added where thought necessary for application to engineered works; the Burra Charter should be referred to for fuller definitions in some cases.

“Cultural significance” means aesthetic, historic, scientific, social or spiritual value for past, present or future generations. In the various state government Acts and regulations these attributes of significance have been expanded to distinguish, for example, between historical events and historical persons.

“Conservation” means all the processes of looking after a place (work) so as to retain its cultural significance. Conservation encompasses all the processes such as recording, maintenance, preservation, restoration and reconstruction which together are managed to achieve the desirable outcome.

The *“Conservation Management Plan”* is the process required to achieve long term conservation aims.

It is useful at this stage to quote some definitions from the Burra Charter which may have different or narrower meanings than are in common use.

“Maintenance” means the continuous protective care of the fabric, contents and setting of a place [or item or works] and is to be distinguished from repair. Repair involves restoration or reconstruction and it should be treated accordingly; however, this is not to say it should not be done as part of the conservation process.

“Preservation” means maintaining the fabric of a place [or works] in its existing state and retarding deterioration. This would apply to many industrial heritage works that no longer function.

“Restoration” means returning the existing fabric of a place [or item or work] to a known earlier state by removing accretions or by re-assembling existing components **without the introduction of new material** [our emphasis].

“Reconstruction” means returning a place [item or works] to a known earlier state and is distinguished from restoration by the introduction of new material into the fabric. This is not to be confused with either recreation or conjectural reconstruction which recreate an item based on some past information either documented or memory. Many moving transport items such as steam engines, planes and cars are reconstructed in such a manner.

“Adaptation” means modifying a place (or works) to suit the existing use or a proposed use. Adaptive reuse is extremely important in engineering heritage since it enables a functioning future for a work or place. A functioning work can provide income for maintenance and upkeep, without which the works would deteriorate. Works such as bridges, and industrial structures such as large cranes and towers, have very few adaptive re-use possibilities, thus limiting their future if they are no longer functioning as they were intended. Buildings usually have the most potential for adaptive re-use.

Understanding of the above definitions may be helped by an example of a deteriorated timber bridge deck.

- *Preservation* would mean keeping the decking in its state of deterioration for future reference but reducing the rate of further decay. It involves no action except regular maintenance. Preservation does, however, limit the bridge’s potential for reuse and therefore limits its ability to be managed in the future because the public bears the cost of maintaining a bridge of no real functioning value.

In strict Burra Charter terms, restoration of the deck would involve finding and replacing the original timbers. This is clearly impossible for a timber bridge deck where there has been a continual process of replacement of deteriorated timber throughout the bridge’s life. Reconstruction is the only possible conservation process under most similar circumstances. (However, for mechanical works, it is sometimes possible to find and replace original components which have been removed and stored.)

- *Reconstruction* would allow the use of new timbers or old timbers from another bridge. In the current climate this could include the use of engineered laminated timber decking, especially where the decking is not a significant element or part of the bridge.
- *Adaptation* may involve changing the use of the bridge from road to pedestrian and cycles only, while still maintaining the significant features.

These conservation processes are seldom applied in isolation. Conservation usually involves several methods in combination. The individual conservation processes should be taken in context and applied where they are best suited. None of the conservation methods should be considered lower in heritage terms than any other as the purpose of “heritage” is to provide future generations with knowledge of the past. Consider a steam locomotive that is not reconstructed and operable. It tells future generations very little about the nature of the form and function of the machine and how it was used: it is only slightly better than scrap metal. Unfortunately, many engineered works and items fall into this category and other steps are necessary in the conservation process such as adequate recording of the work in use.

Two other definitions which do not come from the Burra Charter are useful:

“Renovation” means modifying an item with new materials without necessarily considering the cultural significance.

“Recycling” is similar to renovation but means the expedient reuse of selected material based on economy rather than cultural significance.

Conservation and Society

“Conservation” of engineering works and objects has a different emphasis to the “conservation” of the natural environment.

Conservation in this context is the process of looking after the cultural values of a work or place for present and future generations. In many instances, it is not a fossilising process which renders the work unusable. Adequately managed conservation can best provide for continuing economic and productive use.

Retaining works from the past can give people a sense of security, identity and continuity, despite recognition that new technology may be desirable. Nevertheless, conservation and development need not be mutually exclusive; in fact they should be part of a single planning process. Moreover, conflict between advocates for

retaining the old, and those intent on disposal and replacement, need not necessarily be wholly bad, provided that the information required for decision-making has been made available to all parties concerned, and that a method of making those decisions has been agreed.

People value objects or works for a variety of reasons irrespective of their age or condition. Some may be rare surviving links with past society or events and may serve as reminders of these, even if they hold no outstanding aesthetic, architectural, engineering or scientific merit. Others may be important or representative examples of a certain design type or an important designer, builder or manufacturer. Some may simply have a pleasing appearance whilst others might reveal important information for archaeologists, historians, engineers, architects or sociologists.

No matter what the reasons are for valuing such works, there is a social pressure to keep all or part of them in order to allow continued enjoyment of their values. Society also considers it important that future generations have an opportunity to inherit and appreciate those same values - the heritage values ("heritage" literally being property which is or can be inherited). These social attitudes are evident in the increasing interest in heritage conservation projects, and in existing environmental planning and development controls. Remember, works which have been destroyed can never be replaced as replicas are a poor substitute for the original.

Just as a work may have a well established image in the mind of the community, so also may its use. When it is necessary to find a new use, it must not trivialize the significance of the work.

Conservation directly involves owners and users, and the professionals from whom they seek advice, as well as the workers who carry out the conservation process. Other people may also have professional, political or emotional involvement in this process.

In assessing community needs it is important to consider the extent of the "community" involved in a project. Change in a familiar area is regretted, but change in an area only occasionally visited, but much liked and much remembered, is probably even more regretted. Consequently "community" must be expanded to include our wider surroundings - national, political or cultural.

Many engineering works are rare, and represent the only surviving remnants of an earlier way of life. They are the physical evidence of history. Their conservation serves the wider community, and can be revenue producing, both directly and indirectly. In exceptional cases this wider community can even be international.

Effective conservation demands a balance between the retention of tested and valuable traditions and the development of new techniques to meet changing circumstances such as market forces and community expectations.

The Conservation Process

The conservation process has been structured by the formulation of procedures which produce a Conservation Plan; if the continuing management of the place or work is to be considered, a Management Plan is also produced; most commonly now the processes are combined to produce a Conservation Management Plan, usually referred to as a CMP.

Now in its sixth edition, James Semple Kerr's *The Conservation Plan*,³ which had its first edition in 1982, is the accepted guideline of good practice in producing the conservation planning part of the process. Management requirements are then added, often dictated by legislative requirements.

The production of a CMP is usually broken down into steps, which can be illustrated by those set out in the NSW guidelines for the preparation of a conservation document:⁴

- Understand the heritage item through investigation of its historical and geographical context, its history, fabric, research potential, and importance to the community; prepare a statement of significance — the plan will analyse documentary and physical evidence to determine the nature, extent and degree of significance of the heritage item.
- Develop a conservation policy, arising out of the statement of heritage significance, to guide current and future owners of the item on the development potential of the item and its ongoing maintenance — constraints and opportunities are to be examined.
- Consider current proposals for re-use or development, and how they can best be achieved in accordance with the conservation policy — where proposals may have an adverse impact on the heritage significance of the item, the need for such work must be justified; where development proposals have not been finalised, several likely options are to be discussed.
- Recommend how the heritage item can best be managed bearing in mind those responsible and interested in its ongoing conservation. It is to include proposals to review the Conservation Management Plan and the item's maintenance.

3. James Semple Kerr, 2004, *The Conservation Plan*, National Trust of Australia (NSW), Sydney

4. *Conservation Management Documents [including Model Brief]*, NSW Heritage Office and Department of Urban Affairs & Planning, 1996, revised 2002

At times, total loss or demolition may be unavoidable, so conservation will take a totally different approach by means of records such as film, drawings, video and sound recordings.

Other States and the Commonwealth may have slightly different procedures, but the general intention and methodology are similar.

The Concept of Significance

The conservation of any heritage item relates to and revolves around the preservation of the “significance” of the item (sometimes referred to as the “Cultural Significance”).

This concept is of great importance as it is the basis of all conservation.

Rarely are all the elements of any heritage item of heritage value in themselves. Importantly, conservation is a practical solution, and the allocation of funds must be directed to those elements that give the item such significance that it justifies classification as heritage. Other elements can then be altered or adapted to make the heritage item function in changed conditions.

The heritage qualities of an item are known as the “significance” of the item.

The Burra Charter defines “significance”:

Cultural significance means aesthetic, historic, scientific, social or spiritual value for past, present or future generations.

Cultural significance is embodied in the place itself, its fabric, setting, use, associations, meanings, records, related places and related objects.

Places may have a range of values for different individuals or groups.

Conservation involves the determination of significance, and the protection of this significance during change, adaptation, maintenance or even demolition.

Conservation Policy

A well researched and formulated policy can make all the difference between whether a place or work survives as a viable entity into the future or whether the conservation process is a waste of money and resources.

A key element in any Conservation Policy is the answer to the question: “How is the place or work going to continue as a viable asset into the future?” In answering this question, cold hard facts sometimes seem to lead to compromises in preservation which “purists” find hard to accept; on the other hand, the effort often results in adaptive reuse solutions which had not even been contemplated at the start of the process.

Conservation Practice

Identifying Engineering Heritage

Our engineering heritage includes all engineering works or items of “heritage significance”, as opposed to only works of “engineering heritage” significance. The distinction is important as engineering has a social purpose, and even works that are not remarkable in engineering terms may have provided great social benefits. On the other hand, a work may be highly significant in engineering terms yet have had little social impact.

It is even also possible that an “engineering failure” may for a time have made a significant social contribution, or may have generated research, innovation or invention that has been of great subsequent benefit. Assessing past works as poor or as a failure, solely because the world has developed and technology moved on, is a serious flaw in any significance assessment. This can be difficult, knowing what we know now compared to our forebears.

Assessment of significance includes determining the reasons for significance, and leads to the development of a methodology of maintaining that significance. In this assessment the relationship to the engineering profession will evolve.

Assessing Significance

Every heritage item has a past, a present and a future. It is important to research and understand an item’s past in order to assess its significance to us today and in turn pass on those significant aspects to future generations.

It is also important that this process be transparent and accountable, so that planning decisions can be based upon verifiable research and informed analysis.

To develop an understanding of a heritage place or object we need to undertake historical research, investigate its fabric, and make comparisons. Once these processes have been undertaken, a statement of significance can be developed: after that conservation policies can be developed to manage the item.

It is necessary that the investigation is undertaken in the right order or sequence. When caring for a heritage place, its significance must first be understood before methods for managing the item and its significance are decided upon.

Assessment Criteria

Heritage significance is not a quality that is easily evaluated. Conservation practice has developed a list of criteria for assessment that is reasonably uniform throughout Australia.

Assessment is carried out under seven main criteria:

- Historic Phase
- Historic Individuals or Association
- Creative or Technical Achievement
- Research Potential – Teaching and Understanding
- Social or Cultural
- Rarity
- Representativeness

Refer to the NSW Heritage Branch publication *Assessing heritage significance* for guidance on using these criteria. Some other states have similar guides. All criteria should be addressed if possible, but the depth will depend on the characteristic of the item. Note that the criteria may have slightly different descriptions in the different states with, for example, the word “aesthetic” replacing “creative” in some.

Note that age alone does not assure significance, nor need very significant items be old. A returned space probe may be significant at the completion of its brief mission. Nevertheless, in most cases heritage status implies high value over some lengthy time span, remembering that in the computer age “lengthy” may be less than a decade.

The assessment criteria should be addressed to parts as well as the whole of the work and be answered from the point of view of all technical disciplines; consultation with relevant specialists should be required.

Levels of Significance

As well as assessing the significance of the item, the level of significance must be determined to provide guidance on the extent of future modification that can be permitted.

There are two ways that the level of significance can be defined.

1. There are statutory levels that provide regulatory protection.

Such levels are generally only used for classification of the whole item, and usually require endorsement by the appropriate authority which might be local, state, national, or international.

2. In assessing the significance of any work it will usually become apparent that certain elements are more significant than others.

Classification of this level of significance will help determine the degree of interference that can be tolerated on these individual elements. The usually adopted levels are:

Exceptional

High

Moderate

Low

The Statement of Significance

The Statement is the most important part of any assessment and forms the basis of all proposed conservation activity.

It should summarise the essential information derived from the assessment of heritage significance. It should clearly answer the basic question, "Why is the object significant?" It must also define the degree and level of that significance.

A series of sub-statements that address each of the seven assessment criteria should follow from the concise statement addressing each relevant criterion in greater detail.

It must not be a repetition of the assessment criteria, or merely a recital of the history of the work.

It is important that all the individual elements of the work that contribute to its significance be identified, in order that the Statement can be of use in later conservation activity.

Managing Engineering Heritage

Managing Significance

Many engineering works or objects are rare and represent the only surviving remnants of an earlier way of life. They are the physical evidence of history. Their retention is necessary for the education of present and future generations. For example, very few gas works or remnants of the coal gas industry survive today although they represent what was once the prime source of energy in the community.

Cost and impracticalities will normally prevent the preservation of these items in their original condition and format. Some alteration to the fabric will usually be necessary to allow function for modern usage. Such change is acceptable provided that the significance of the work is maintained.

The Statement of Significance will have defined the elements that make the work significant. Conservation will build on this definition to provide a practical solution to future operation that, at the same time, maintains these significant elements.

The Conservation Management Plan

One of the most important tools in caring for a heritage work is a Conservation Management Plan (CMP). This essential document provides a guide to future care and use, including any new development. It aims to provide an understanding of the significance of a heritage item, and sets out management policies to conserve that significance while still providing for the continuing evolution and use of the item.

A CMP must always be prepared for any work or item that is assessed as having State or National Significance. It is also recommended for use on items of lesser significance that are proposed to be kept because of community interest, but adapted to justify their economic retention. Retention of a heritage item without a plan to manage its future, and especially manage the funding for its future, is simply extending the time to its demolition. Such lack of action can even lead to all knowledge of the place being lost because adequate recording is not carried out.

A CMP consists of three main parts: investigation, assessment and management. Investigation and assessment will have been completed if the conservation process has been followed. The Conservation Management Plan, as its name implies provides the framework for management – alteration, adaptation, and prevention from deterioration or, in a worst case, conservation by media only in the case of demolition.

A CMP is intended to provide guidance to those who will work on or conserve the value of the heritage item in the future. The preparation of a CMP requires a certain discipline to ensure that all facets of future involvement are delineated and controlled, and that no elements of significance can be accidentally destroyed. It must develop a policy for the future.

The Plan should:

- Identify constraints and requirements arising from the need to retain significance
- Assess the physical and structural condition
- List any requirements imposed by external factors
- Establish the resources and funding available and user requirements;
- Develop a policy by which the conservation may best be achieved.

It should include recommendations for:

- Physical conservation action and care necessary for the retention of significance
- Uses that are both feasible and compatible with the above
- Maintenance
- Public access and interpretation (where appropriate)
- Security, and the control measures to reduce risk of loss or damage
- Controls on future development and change
- The mechanism for the adoption of the policy and for subsequent review
- Archiving of historical documents related to the item
- Sources of funding into the future
- Retention of significance and memory if the item is totally destroyed or lost

Whilst many practitioners use different formats for a CMP, there has been a move towards standardisation to both ensure adequacy of the basic contents, and enable easy reference by users. Use of a standard format will also aid in approvals from consent authorities.

Heritage authorities in most States have comprehensive publications to assist with the CMP process. The NSW Heritage Branch publications *Conservation Management Documents* and the *Conservation Management Plan (CMP) Checklist* will be found particularly helpful.

Statement of Heritage Impact

A Statement of Heritage Impact (SOHI) is prepared at the time (and every time) that any work is proposed on an item of heritage significance. It analyses and justifies the impact of any proposal to alter a heritage item, through adaptation, change, maintenance or demolition. It is prepared with reference to the Conservation Management Plan, and relates any proposed work to the policies that have been developed in that document, and the significance that has been defined in that document.

Where the proposed alteration departs from stated policies, or the impact is detrimental to the heritage significance of the item, a Statement of Heritage Impact must clearly argue why such work is required for the item's long-term viability. Ideally, the impact would be such that the significance of the heritage item is not compromised, but rather enhanced by, for example, its stabilization or repair and, where appropriate, restoration, reconstruction, adaptive re-use or sympathetic new development.

A Statement of Heritage Impact will normally be required to accompany any approval by statutory bodies. It should be succinct and should not repeat the detail in the Conservation Management Plan. Pertinent documents, such as physical condition reports, can be attached. Evidence must be included as to why alternative solutions are not viable.

Appendix 1: Conservation Charters

1.1 The Burra Charter

The Australia ICOMOS Charter for Places of Cultural Significance

1.2 The Riga Charter

Conservation guidelines for operational railway museums

1.3 The Barcelona Charter

European Charter for the Conservation and Restoration of Traditional Ships in Operation

1.4 The Nizhny Tagil Charter for Industrial Heritage

The International Committee for the Conservation of Industrial Heritage (TICCIH)

1.1. The Burra Charter

(The Australia ICOMOS Charter for Places of Cultural Significance, 2013)

Preamble

Considering the International Charter for the Conservation and Restoration of Monuments and Sites (Venice 1964), and the Resolutions of the 5th General Assembly of the International Council on Monuments and Sites (ICOMOS) (Moscow 1978), the Burra Charter was adopted by Australia ICOMOS (the Australian National Committee of ICOMOS) on 19 August 1979 at Burra, South Australia. Revisions were adopted on 23 February 1981, 23 April 1988, 26 November 1999 and 31 October 2013.

The Burra Charter provides guidance for the conservation and management of places of cultural significance (cultural heritage places), and is based on the knowledge and experience of Australia ICOMOS members.

Conservation is an integral part of the management of places of cultural significance and is an ongoing responsibility.

Who is the Charter for?

The Charter sets a standard of practice for those who provide advice, make decisions about, or undertake works to places of cultural significance, including owners, managers and custodians.

Using the Charter

The Charter should be read as a whole. Many articles are interdependent.

The Charter consists of:

- Definitions Article 1
- Conservation Principles Articles 2 - 13
- Conservation Processes Articles 14 - 25
- Conservation Practices Articles 26 - 34
- The Burra Charter Process flow chart

The key concepts are included in the Conservation Principles section and these are further developed in the Conservation Processes and Conservation Practice sections. The flow chart explains the Burra Charter Process (Article 6) and is an integral part of the Charter. Explanatory Notes also form part of the Charter.

The Charter is self-contained, but aspects of its use and application are further explained, in a series of Australia ICOMOS Practice Notes, in *The Illustrated Burra Charter*, and in other guiding documents available from the Australia ICOMOS web site: australia.icomos.org.

What places does the Charter apply to?

The Charter can be applied to all types of places of cultural significance including natural, Indigenous and historic places with cultural values.

The standards of other organisations may also be relevant. These include the *Australian Natural Heritage Charter*, *Ask First: a guide to respecting Indigenous heritage places and values* and *Significance 2.0: a guide to assessing the significance of collections*.

National and international charters and other doctrine may be relevant. See australia.icomos.org.

Why conserve?

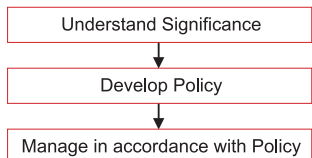
Places of cultural significance enrich people's lives, often providing a deep and inspirational sense of connection to community and landscape, to the past and to lived experiences. They are historical records that are important expressions of Australian identity and experience. Places of cultural significance reflect the diversity of our communities, telling us about who we are and the past that has formed us and the Australian landscape. They are irreplaceable and precious.

These places of cultural significance must be conserved for present and future generations in accordance with the principle of inter-generational equity.

The Burra Charter advocates a cautious approach to change: do as much as necessary to care for the place and to make it useable, but otherwise change it as little as possible so that its cultural significance is retained.

Note: Words in *italics* are defined in Article 1.

Articles	Explanatory Notes
<p>Article 1. Definitions</p> <p>For the purposes of this Charter:</p>	
<p>1.1 <i>Place</i> means a geographically defined area. It may include elements, objects, spaces and views. Place may have tangible and intangible dimensions.</p>	<p>Place has a broad scope and includes natural and cultural features. Place can be large or small: for example, a memorial, a tree, an individual building or group of buildings, the location of an historical event, an urban area or town, a cultural landscape, a garden, an industrial plant, a shipwreck, a site with in situ remains, a stone arrangement, a road or travel route, a community meeting place, a site with spiritual or religious connections.</p>
<p>1.2 <i>Cultural significance</i> means aesthetic, historic, scientific, social or spiritual value for past, present or future generations. Cultural significance is embodied in the place itself, its <i>fabric, setting, use, associations, meanings, records, related places</i> and <i>related objects</i>. Places may have a range of values for different individuals or groups.</p>	<p>The term cultural significance is synonymous with cultural heritage significance and cultural heritage value.</p> <p>Cultural significance may change over time and with use. Understanding of cultural significance may change as a result of new information.</p>
<p>1.3 <i>Fabric</i> means all the physical material of the <i>place</i> including elements, fixtures, contents and objects.</p>	<p>Fabric includes building interiors and sub-surface remains, as well as excavated material.</p> <p>Natural elements of a place may also constitute fabric. For example the rocks that signify a Dreaming place.</p> <p>Fabric may define spaces and views and these may be part of the significance of the place.</p>
<p>1.4 <i>Conservation</i> means all the processes of looking after a place so as to retain its <i>cultural significance</i>.</p>	<p>See also Article 14.</p>
<p>1.5 <i>Maintenance</i> means the continuous protective care of a <i>place</i>, and its setting. Maintenance is to be distinguished from repair which involves <i>restoration</i> or <i>reconstruction</i>.</p>	<p>Examples of protective care include:</p> <ul style="list-style-type: none"> • maintenance — regular inspection and cleaning of a place, eg, mowing and pruning in a garden; • repair involving restoration — returning dislodged or relocated fabric to its original location, eg, loose roof gutters on a building or displaced rocks in a stone bora ring; • repair involving reconstruction — replacing decayed fabric with new fabric
<p>1.6 <i>Preservation</i> means maintaining a <i>place</i> in its existing state and retarding deterioration.</p>	<p>It is recognised that all places and their elements change over time at varying rates.</p>
<p>1.7 <i>Restoration</i> means returning a <i>place</i> to a known earlier state by removing accretions or by reassembling existing elements without the introduction of new material.</p>	
<p>1.8 <i>Reconstruction</i> means returning a <i>place</i> to a known earlier state and is distinguished from <i>restoration</i> by the introduction of new material.</p>	<p>New material may include recycled material salvaged from other places. This should not be to the detriment of any place of cultural significance.</p>
<p>1.9 <i>Adaptation</i> means changing a <i>place</i> to suit the existing <i>use</i> or a proposed use.</p>	
<p>1.10 <i>Use</i> means the functions of a <i>place</i>, including the activities and traditional and customary practices that may occur at the place or are dependent on the place..</p>	<p>Use includes for example cultural practices commonly associated with Indigenous peoples such as ceremonies, hunting and fishing, and fulfillment of traditional obligations. Exercising a right of access may be a use.</p>
<p>1.11 <i>Compatible use</i> means a <i>use</i> which respects the <i>cultural significance</i> of a <i>place</i>. Such a use involves no, or minimal, impact on cultural significance.</p>	
<p>1.12 <i>Setting</i> means the immediate and extended environment of a <i>place</i> that is part of or contributes to its cultural significance and distinctive character.</p>	<p>Setting may include: structures, spaces, land, water and sky; the visual setting including views to and from the place, and along a cultural route; and other sensory aspects of the setting such as smells and sounds. Setting may also include historical and contemporary relationships, such as use and activities, social and spiritual practices, and relationships with other places, both tangible and intangible.</p>
<p>1.13 <i>Related place</i> means a place that contributes to the <i>cultural significance</i> of another place.</p>	

Articles	Explanatory Notes
1.14 <i>Related object</i> means an object that contributes to the <i>cultural significance</i> of a <i>place</i> but is not at the place.	Objects at a place are encompassed by the definition of place, and may or may not contribute to its cultural significance.
1.15 <i>Associations</i> mean the connections that exist between people and a <i>place</i> .	Associations may include social or spiritual values and cultural responsibilities for a place.
1.16 <i>Meanings</i> denote what a <i>place</i> signifies, indicates, evokes or expresses.	Meanings generally relate to intangible aspects such as symbolic qualities and memories.
1.17 <i>Interpretation</i> means all the ways of presenting the <i>cultural significance</i> of a <i>place</i> .	Interpretation may be a combination of the treatment of the fabric (eg. maintenance, restoration, reconstruction); the use of and activities at the place; and the use of introduced explanatory material.
Conservation Principles	
Article 2. Conservation and management	
2.1 <i>Places of cultural significance</i> should be conserved.	
2.2 The aim of <i>conservation</i> is to retain the <i>cultural significance</i> of a <i>place</i> .	
2.3 <i>Conservation</i> is an integral part of good management of <i>places of cultural significance</i> .	
2.4 <i>Places of cultural significance</i> should be safeguarded and not put at risk or left in a vulnerable state.	
Article 3. Cautious approach	
3.1 <i>Conservation</i> is based on a respect for the existing <i>fabric, use, associations</i> and <i>meanings</i> . It requires a cautious approach of changing as much as necessary but as little as possible.	The traces of additions, alterations and earlier treatments to the fabric of a place are evidence of its history and uses which may be part of its significance. Conservation action should assist and not impede their understanding.
3.2 Changes to a <i>place</i> should not distort the physical or other evidence it provides, nor be based on conjecture.	
Article 4. Knowledge, skills and techniques	
4.1 <i>Conservation</i> should make use of all the knowledge, skills and disciplines which can contribute to the study and care of the <i>place</i> .	
4.2 Traditional techniques and materials are preferred for the <i>conservation</i> of significant <i>fabric</i> . In some circumstances modern techniques and materials which offer substantial conservation benefits may be appropriate.	The use of modern materials and techniques must be supported by firm scientific evidence or by a body of experience.
Article 5. Values	
5.1 <i>Conservation</i> of a <i>place</i> should identify and take into consideration all aspects of cultural and natural significance without unwarranted emphasis on any one value at the expense of others.	Conservation of places with natural significance is explained in the Australian Natural Heritage Charter. This Charter defines natural significance to mean the importance of ecosystems, biological diversity and geodiversity for their existence value, or for present or future generations in terms of their scientific, social, aesthetic and life-support value.
5.2 Relative degrees of <i>cultural significance</i> may lead to different <i>conservation</i> actions at a place.	A cautious approach is needed, as understanding of cultural significance may change. This article should not be used to justify actions which do not retain cultural significance.
Article 6. Burra Charter Process	
6.1 The <i>cultural significance</i> of a <i>place</i> and other issues affecting its future are best understood by a sequence of collecting and analysing information before making decisions. Understanding cultural significance comes first, then development of policy and finally management of the place in accordance with the policy. This is the Burra Charter Process.	<p>The Burra Charter process, or sequence of investigations, decisions and actions, is illustrated below and in more detail in the accompanying flowchart which forms part of the Charter [page x].</p>  <pre> graph TD A[Understand Significance] --> B[Develop Policy] B --> C[Manage in accordance with Policy] </pre>

Articles	Explanatory Notes
6.2 The policy for managing a <i>place</i> must be based on an understanding of its <i>cultural significance</i> .	
6.3 Policy development should also include consideration of other factors affecting the future of a <i>place</i> such as the owner's needs, resources, external constraints and its physical condition.	
6.4 In developing an effective policy, different ways to retain <i>cultural significance</i> and address other factors may need to be explored.	Options considered may include a range of uses and changes (eg, adaptation) to a place.
6.5 Changes in circumstances, or new information or perspectives, may require reiteration of part or all of the Burra Charter Process.	
Article 7. Use	
7.1 Where the <i>use</i> of a <i>place</i> is of <i>cultural significance</i> it should be retained.	
7.2 A <i>place</i> should have a <i>compatible use</i> .	The policy should identify a use or combination of uses or constraints on uses that retain the cultural significance of the place. New use of a place should involve minimal change to significant fabric and use; should respect associations and meanings; and where appropriate should provide for continuation of activities and practices which contribute to the cultural significance of the place.
Article 8. Setting	
<p><i>Conservation</i> requires the retention of an appropriate <i>setting</i>. This includes retention of the visual and sensory setting, as well as the retention of spiritual and other cultural relationships that contribute to the <i>cultural significance</i> of the <i>place</i>. New construction, demolition, intrusions or other changes which would adversely affect the setting or relationships are not appropriate.</p>	Setting is explained in Article 1.12.
Article 9. Location	
9.1 The physical location of a <i>place</i> is part of its <i>cultural significance</i> . A building, work or other element of a place should remain in its historical location. Relocation is generally unacceptable unless this is the sole practical means of ensuring its survival.	
9.2 Some buildings, works or other elements of <i>places</i> were designed to be readily removable or already have a history of relocation. Provided such buildings, works or other elements do not have significant links with their present location, removal may be appropriate.	
9.3 If any building, work or other component is moved, it should be moved to an appropriate location and given an appropriate <i>use</i> . Such action should not be to the detriment of any <i>place</i> of <i>cultural significance</i> .	
Article 10. Contents	
<p>Contents, fixtures and objects which contribute to the <i>cultural significance</i> of a <i>place</i> should be retained at that place. Their removal is unacceptable unless it is: the sole means of ensuring their security and <i>preservation</i>; on a temporary basis for treatment or exhibition; for cultural reasons; for health and safety; or to protect the place. Such contents, fixtures and objects should be returned where circumstances permit and it is culturally appropriate.</p>	<p>For example, the repatriation (returning) of an object or element to a place may be important to Indigenous cultures, and may be essential to the retention of its cultural significance.</p> <p>Article 28 covers the circumstances where significant fabric might be disturbed, for example, during archaeological excavation.</p> <p>Article 33 deals with significant fabric that has been removed from a place.</p>
Article 11. Related places and objects	
The contribution which <i>related places</i> and <i>related objects</i> make to the <i>cultural significance</i> of the <i>place</i> should be retained.	

Articles	Explanatory Notes
Article 12. Participation	
<p><i>Conservation, interpretation</i> and management of a <i>place</i> should provide for the participation of people for whom the place has significant <i>associations</i> and <i>meanings</i>, or who have social, spiritual or other cultural responsibilities for the place.</p>	
Article 13. Co-existence of cultural value	
<p>Co-existence of cultural values should be recognised, respected and encouraged. This is especially in cases where they conflict.</p>	<p>For some places, conflicting cultural values may affect policy development and management decisions. In Article 13, the term cultural values refers to those beliefs which are important to a cultural group, including but not limited to political, religious, spiritual and moral beliefs. This is broader than values associated with cultural significance.</p>
Conservation Processes	
Article 14. Conservation processes	
<p><i>Conservation</i> may, according to circumstance, include the processes of: retention or reintroduction of a <i>use</i>; retention of <i>associations</i> and <i>meanings</i>; <i>maintenance, preservation, restoration, reconstruction, adaptation</i> and <i>interpretation</i>; and will commonly include a combination of more than one of these. Conservation may also include retention of the contribution that <i>related places</i> and <i>related objects</i> make to the <i>cultural significance</i> of a <i>place</i>.</p>	<p>Conservation normally seeks to slow deterioration unless the significance of the place dictates otherwise. There may be circumstances where no action is required to achieve conservation.</p>
Article 15. Change	
<p>15.1 Change may be necessary to retain <i>cultural significance</i>, but is undesirable where it reduces cultural significance. The amount of change to a <i>place</i> should be guided by the <i>cultural significance</i> of the place and its appropriate <i>interpretation</i>.</p>	<p>When change is being considered, including for a temporary use, a range of options should be explored to seek the option which minimises the reduction of cultural significance.</p> <p>It may be appropriate to change a place where this reflects a change in cultural meanings or practices at the place, but the significance of the place should always be respected.</p>
<p>15.2 Changes which reduce <i>cultural significance</i> should be reversible, and be reversed when circumstances permit.</p>	<p>Reversible changes should be considered temporary. Non-reversible change should only be used as a last resort and should not prevent future conservation action.</p>
<p>15.3 Demolition of significant <i>fabric</i> of a <i>place</i> is generally not acceptable. However, in some cases minor demolition may be appropriate as part of <i>conservation</i>. Removed significant fabric should be reinstated when circumstances permit.</p>	
<p>15.4 The contributions of all aspects of <i>cultural significance</i> of a <i>place</i> should be respected. If a place includes <i>fabric, uses, associations</i> or <i>meanings</i> of different periods, or different aspects of cultural significance, emphasising or interpreting one period or aspect at the expense of another can only be justified when what is left out, removed or diminished is of slight cultural significance and that which is emphasised or interpreted is of much greater cultural significance.</p>	
Article 16. Maintenance	
<p><i>Maintenance</i> is fundamental to <i>conservation</i> and should be undertaken where <i>fabric</i> is of <i>cultural significance</i> and its maintenance is necessary to retain that <i>cultural significance</i>.</p>	<p>Maintaining a place may be important to the fulfilment of traditional laws and customs in some Indigenous communities and other cultural groups.</p>

Articles	Explanatory Notes
Article 17. Preservation	
<p><i>Preservation</i> is appropriate where the existing <i>fabric</i> or its condition constitutes evidence of <i>cultural significance</i>, or where insufficient evidence is available to allow other <i>conservation</i> processes to be carried out.</p>	<p>Preservation protects fabric without obscuring the evidence of its construction and use. The process should always be applied:</p> <ul style="list-style-type: none"> • where the evidence of the fabric is of such significance that it should not be altered; or • where insufficient investigation has been carried out to permit policy decisions to be taken in accord with Articles 26 to 28. <p>New work (eg, stabilisation) may be carried out in association with preservation when its purpose is the physical protection of the fabric and when it is consistent with Article 22.</p>
Article 18. Restoration and reconstruction	
<p><i>Restoration</i> and <i>reconstruction</i> should reveal culturally significant aspects of the <i>place</i>.</p>	
Article 19. Restoration	
<p><i>Restoration</i> is appropriate only if there is sufficient evidence of an earlier state of the <i>fabric</i>.</p>	
Article 20. Reconstruction	
<p>20.1 <i>Reconstruction</i> is appropriate only where a <i>place</i> is incomplete through damage or alteration, and only where there is sufficient evidence to reproduce an earlier state of the <i>fabric</i>. In some cases, reconstruction may also be appropriate as part of a <i>use</i> or practice that retains the <i>cultural significance</i> of the place.</p>	<p>Places with social or spiritual value may warrant reconstruction, even though very little may remain (eg, only building footings or tree stumps following fire, flood or storm). The requirement for sufficient evidence to reproduce an earlier state still applies.</p>
<p>20.2 <i>Reconstruction</i> should be identifiable on close inspection or through additional <i>interpretation</i>.</p>	
Article 21. Adaptation	
<p>21.1 <i>Adaptation</i> is acceptable only where the adaptation has minimal impact on the <i>cultural significance</i> of the place.</p>	<p>Adaptation may involve additions to the place, the introduction of new services, or a new use, or changes to safeguard the place. Adaptation of a place for a new use is often referred to as 'adaptive re-use' and should be consistent with Article 7.2.</p>
<p>21.2 <i>Adaptation</i> should involve minimal change to significant <i>fabric</i>, achieved only after considering alternatives.</p>	
Article 22. New work	
<p>22.1 New work such as additions to the <i>place</i> may be acceptable where it does not distort or obscure the <i>cultural significance</i> of the place, or detract from its <i>interpretation</i> and appreciation.</p>	<p>New work should respect the significance of a place through consideration of its siting, bulk, form, scale, character, colour, texture and material. Imitation should generally be avoided.</p>
<p>22.2 New work should be readily identifiable as such, but must respect and have minimal impact on the cultural significance of the place.</p>	
Article 23. Retaining or reintroducing use	
<p>Retaining, modifying or reintroducing a significant <i>use</i> may be appropriate and preferred forms of <i>conservation</i>.</p>	<p>These may require changes to significant fabric but they should be minimised. In some cases, continuing a significant use, activity or practice may involve substantial new work.</p>
Article 24. Retaining associations and meanings	
<p>24.1 Significant <i>associations</i> between people and a <i>place</i> should be respected, retained and not obscured. Opportunities for the <i>interpretation</i>, commemoration and celebration of these associations should be investigated and implemented.</p>	<p>For many places associations will be linked to aspects of use, including activities and practices. Some associations and meanings may not be apparent and will require research.</p>
<p>24.2 Significant <i>meanings</i>, including spiritual values, of a <i>place</i> should be respected. Opportunities for the continuation or revival of these meanings should be investigated and implemented.</p>	

Articles	Explanatory Notes
Article 25. Interpretation	
<p>The <i>cultural significance</i> of many places is not readily apparent, and should be explained by <i>interpretation</i>. Interpretation should enhance understanding and enjoyment, and be culturally appropriate.</p>	<p>In some circumstances any form of interpretation may be culturally inappropriate.</p>
Conservation Practice	
Article 26. Applying the Burra Charter process	
<p>26.1 Work on a <i>place</i> should be preceded by studies to understand the place which should include analysis of physical, documentary, oral and other evidence, drawing on appropriate knowledge, skills and disciplines.</p>	<p>The results of studies should be up to date, regularly reviewed and revised as necessary.</p>
<p>26.2 Written statements of <i>cultural significance</i> and policy for the <i>place</i> should be prepared, justified and accompanied by supporting evidence. The statements of significance and policy should be incorporated into a management plan for the place.</p>	<p>Policy should address all relevant issues; eg, use, interpretation, management and change.</p> <p>A management plan is a useful document for recording the Burra Charter Process; ie, the steps in planning for and managing a place of cultural significance (Article 6.1 and flow chart). Such plans are often called conservation management plans [CMP] and sometimes have other names.</p> <p>The management plan may deal with other matters related to the management of the place.</p>
<p>26.3 Groups and individuals with <i>associations</i> with the <i>place</i> as well as those involved in its management should be provided with opportunities to contribute to and participate in identifying and understanding the <i>cultural significance</i> of the place. Where appropriate they should also have opportunities to participate in its <i>conservation</i> and management.</p>	
<p>26.4 Statements of cultural significance and policy for the place should be periodically reviewed, and actions and their consequences monitored to ensure continuing appropriateness and effectiveness.</p>	<p>Monitor actions taken in case there are also unintended consequences.</p>
Article 27. Managing change	
<p>27.1 The impact of proposed changes , including incremental changes, on the <i>cultural significance</i> of a <i>place</i> should be analysed with reference to the statement of significance and the policy for managing the place. It may be necessary to modify proposed changes to better retain cultural significance.</p>	
<p>27.2 Existing <i>fabric, use, associations</i> and <i>meanings</i> should be adequately recorded before any changes are made to the <i>place</i>.</p>	
Article 28. Disturbance of fabric	
<p>28.1 Disturbance of significant <i>fabric</i> for study, or to obtain evidence, should be minimised. Study of a <i>place</i> by any disturbance of the fabric, including archaeological excavation, should only be undertaken to provide data essential for decisions on the <i>conservation</i> of the place, or to obtain important evidence about to be lost or made inaccessible.</p>	
<p>28.2 Investigation of a <i>place</i> which requires disturbance of the <i>fabric</i>, apart from that necessary to make decisions, may be appropriate provided that it is consistent with the policy for the place. Such investigation should be based on important research questions which have potential to substantially add to knowledge, which cannot be answered in other ways and which minimises disturbance of significant fabric.</p>	

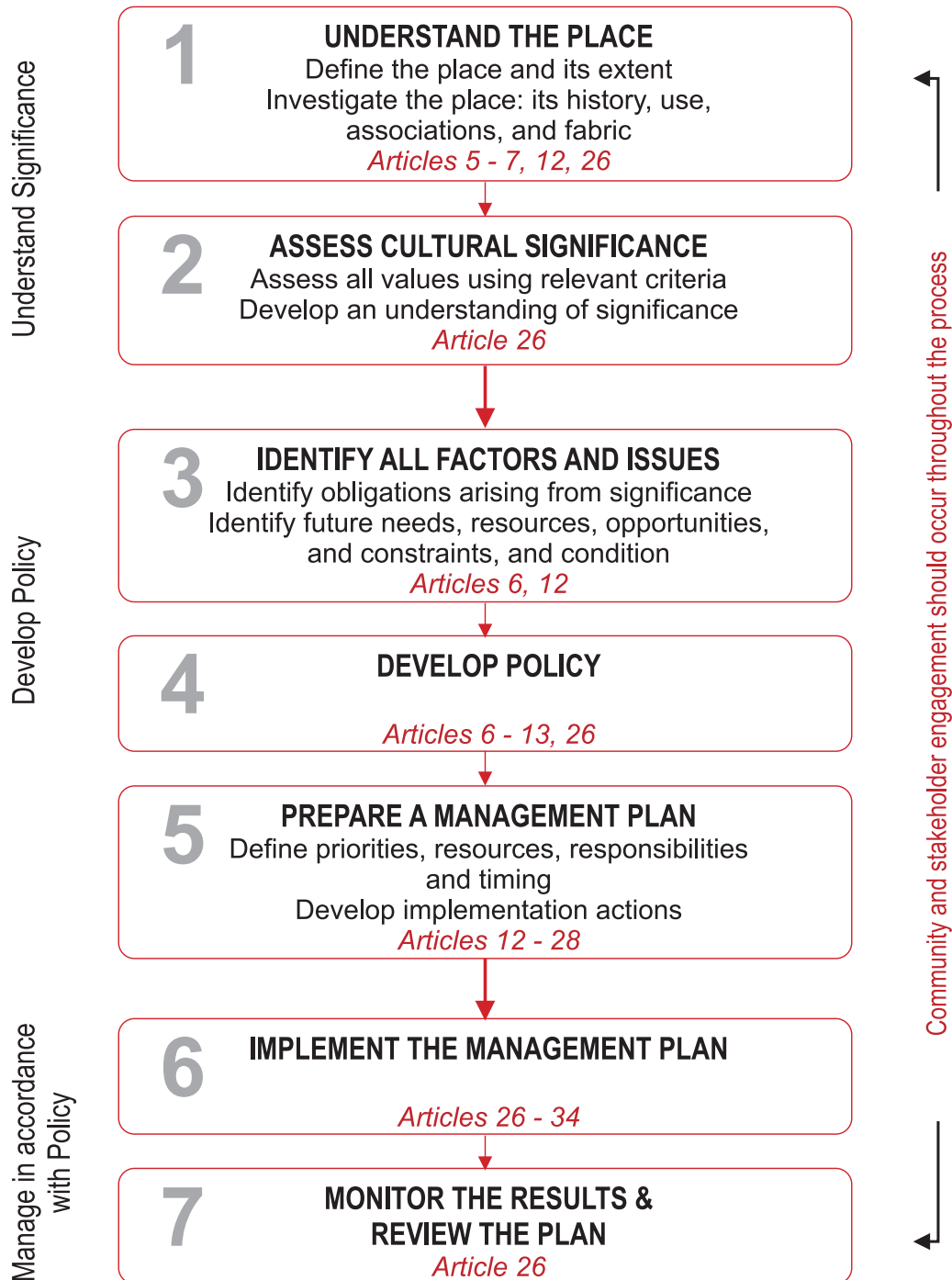
Articles	Explanatory Notes
Article 29. Responsibility for decisions	
The organisations and individuals responsible for management decisions should be named and specific responsibility taken for each such decision.	
Article 30. Direction, supervision, implementation	
Competent direction and supervision should be maintained at all stages, and any changes should be implemented by people with appropriate knowledge and skills.	
Article 31. Keeping a log	
New evidence may come to light while implementing policy or a plan for a <i>place</i> . Other factors may arise and require new decisions. A log of new evidence and additional decisions should be kept.	New decisions should respect and have minimal impact on the cultural significance of the place.
Article 32. Records	
32.1 The records associated with the <i>conservation</i> of a <i>place</i> should be placed in a permanent archive and made publicly available, subject to requirements of security and privacy, and where this is culturally appropriate.	
32.2 Records about the history of a <i>place</i> should be protected and made publicly available, subject to requirements of security and privacy, and where this is culturally appropriate.	
Article 33. Removed fabric	
Significant <i>fabric</i> which has been removed from a <i>place</i> including contents, fixtures and objects, should be catalogued, and protected in accordance with its <i>cultural significance</i> . Where possible and culturally appropriate, removed significant fabric including contents, fixtures and objects, should be kept at the place.	
Article 34. Resources	
Adequate resources should be provided for conservation.	The best conservation often involves the least work and can be inexpensive.

The Burra Charter Process

Steps in planning for and managing a place of cultural significance

The Burra Charter should be read as a whole.

Key articles relevant to each step are shown in the boxes. Article 6 summarises the Burra Charter Process.



1.2. THE RIGA CHARTER

*Adopted by the Annual General Meeting of Fedecrail on Saturday 16 April 2005
at Graves-sur-Anse near Lyon (France)*

Introduction

This Charter has been created to guide decisions that will result in heritage railways being able to be enjoyed by future generations.

Heritage railways have been very successful in recruiting, restoring, preserving and operating heritage equipment.

It is hoped that this charter will help everyone involved to see opportunities for making wise decisions.

It has been created to accompany the several other charters relating to heritage conservation.

Purpose

The Riga Charter is a statement of principles which guide the conservation, restoration, maintenance and repair and use of historic railway equipment, which is being operated. It is hoped that this will help our members make wise decisions.

Definitions

Heritage Railways referred to in this Charter, may also include historic or preserved railways, museum railways and tramways, working railway and tram museums and tourist railways, and may extend to heritage trains operating on the national network and other railways.

Railway Equipment referred to in this Charter may include buildings or infrastructure which form part of the railway ensemble.

Preservation is the process of keeping an object safe from harm and decomposition, by maintaining it properly so that its condition, quality and memory is retained

Conservation is the process of stabilising the condition of an object without compromising the historical or material evidence in any way

Restoration is the process of repairing or replacing missing parts in an attempt to regain an earlier state of the object. The restoration may increase the strength of the object before work started, and may generally go further than conservation. It should neither be invisible or glaringly obvious.

Repair is the process of adjustment or replacement of the components. The specified standard of mechanical condition is achieved irrespective of the historic integrity of parts that may be altered or discarded

Article 1

Scientific and technical skills, together with the facilities needed to preserve and operate historic railway equipment, within a culture of safety, should be used to safeguard railway heritage.

Article 2

The aim of preserving and restoring historic railway items and associated working practices is to safeguard them, whether they are significant technological artefacts, evidence for transport history or a means of perpetuating traditional skills.

Article 3

Maintenance of all aspects of their equipment, and operation on a regular basis is essential for the survival of heritage railways. Operating historic and valuable railway equipment with traditional operating procedures, and presenting it to the public, is an important means of interpreting that material.

Article 4

Identifying socially useful purposes for historic railway items will help facilitate their preservation, but such use should involve the minimum change necessary, and such changes should be fully reversible.

Article 5

A heritage railway should reflect not only the importance of its own role as a transport system, but also when appropriate, its own historic origins and its impact on the community.

Article 6

The process of restoration is a highly specialised operation. Its aim is to preserve and reveal the aesthetic, functional and historic value of traditional railway equipment. It should be based on respect and an understanding wherever possible of the original designs and specifications.

Article 7

The original or historically correct materials and techniques should be used in the conservation of historic railway items, unless they can no longer be adopted for reasons of safety, legislation or availability. In such cases appropriate contemporary substitutes for such materials or techniques should be used.

Article 8

The restoration of a piece of historic railway equipment does not require that it must be restored to its original as built state. Some equipment acquires its historic importance later on in its working life. Restoration to any period should be executed only after thorough consideration of historic records, and available documentation covering the chosen period, after which a restoration plan should be written and adopted. Material that is replaced with new should be readily identified as such with a simple permanent marking system.

Article 9

Added mandatory safety equipment should if possible blend harmoniously with the conserved or restored item but the fact that it is an addition or alteration to the original make-up of the item should be clearly indicated.

Article 10

Any other necessary later modifications to the item that are introduced for whatever reason should be as sympathetic as possible to the make-up and appearance of the original item. Ideally any such modification should be reversible and any significant original parts removed should be retained for possible future re-use.

Article 11

Every stage in the conservation or restoration work on an historic railway item should be systematically planned and recorded. The resultant record of these processes retained for a minimum of the life of the item.

Article 12

All bodies involved in the repair, restoration, maintenance, conservation and operation of heritage railways and railway equipment, must make proper arrangements for the conservation of their records and archives.

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- Livius J Kooy, Fedecrail and CCW Secretary, for providing the developmental history of the Riga Charter and a copy of the final draft as passed at the 2005 Fedecrail AGM

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Websites: www.icomos.org
 www.fedecrail.org

Author of article: Arthur Brook

Version 12-5-2005

The Riga Charter – A Significant New Initiative

Conservation guidelines for operational railway museums

A tourist railway that operates old equipment is not a museum unless, among other things, it manages its collection of railway rolling stock and infrastructure according to internationally recognised standards for the conservation of heritage objects and places. This article briefly describes the origin of heritage management concepts adopted by the Daylesford Spa Country Railway, and introduces the Riga Charter, a new initiative that provides heritage conservation guidelines designed specifically for operational railway and tramway museums.

Conservation Charters & Other Documents.

In order to provide a rational basis for the conservation of significant heritage objects and places, a number of related Charters and associated documents have been developed both overseas and in Australia. Historically, the Athens Charter (1931) and the Venice Charter (1964) paved the way for a number of charters of international significance that define the basic principles and procedures to be observed when conserving important objects and places. The Athens and Venice Charters were concerned with cultural and heritage items as preserved by traditional museums as static exhibits and by those who care for listed buildings, and did not consider conservation issues associated with operating heritage items.

In 1965 ICOMOS (International Council on Monuments and Sites) was established, and in 1966 an Australian Committee, called Australia ICOMOS, was formed to carry out national programs and provide an input to the international body.

In 1977 Australia ICOMOS started a review of the applicability of the Venice Charter in Australia. In 1979 the Australia ICOMOS Guidelines for the Conservation of Places of Cultural Significance was adopted at the historic mining town of Burra in South Australia. The document was given the short title of the Burra Charter.

The Institute of Engineers Australia adopted the Burra Charter as the basis for the understanding of conservation principles, processes and practice. However, minor extensions to definitions and explanations were required to the Burra Charter to help engineering conservation projects, particularly where moveable engineering heritage was involved. In 1992 the Institute published extensions to the Burra Charter in *Engineering Heritage & Conservation Guidelines*.

When the Daylesford Spa Country Railway registered in MAP (Museum Accreditation Program) in September 2001, the formal documentation of the railways own Conservation Policies for rolling stock and infrastructure was based on the principles, processes and practice contained in the Burra Charter (1999 revision) and the Engineering Heritage & Conservation Guidelines.

Background to the Riga Charter

The initiative for the Riga Charter was taken by the European Federation of Museum and Tourist Railways (Fedecrail) president David Morgan who presented his views at the AGM in Riga (Latvia) in 2002. He said that the heritage railways would benefit if they could improve their profile in the same way as had been achieved by the museum world with their Athens and Venice Charters. A recent addition to these Charters was the Barcelona Charter (2001), a European charter for the conservation and restoration of traditional ships in operation, prepared by the owners because they felt that the preservation of a working item demanded a special approach.

In the 2003 meeting at Llandudno (North Wales, UK), the AGM of Fedecrail agreed that a working party be set up named the Cultural Charter Working group or CCW. Its members were railway museum experts from the UK, Spain and Germany, and heritage railway and culture policy experts from the Netherlands and Italy.

After the presentation of an improved text finalised shortly before the next AGM at Leiden (the Netherlands) in 2004, the members of Fedecrail were invited during their AGM to take the text to their home countries and discuss it with their own members. This led to reactions from the Netherlands, the UK and from Sweden including the Swedish (national) Railway Museum at Gävle. The main improvements made were the addition of tramways and tram museums (definitions), repair (def.), and operating (including safety) procedures (art. 3). Despite discussions, the tourist railways were not deleted from the text as some Fedecrail members are national umbrella organisations of museum and tourist railways and, in France, museum railways are not recognised as useful institutions unless they attract tourists (and therefore are named tourist railways in most of the cases).

The final version of the Riga Charter was accepted by the Annual General Meeting of Fedecrail on Saturday 16th April 2005 at Graves-sur-Anse near Lyon (France). It is essential reading for anyone interested in the preservation of railway heritage. Comments and suggestions about the Riga Charter are welcome and should be addressed to the Editor of *The Turntable* [www.dscr.com.au/turntable.php].

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1. The ICOMOS 'Venice Charter for the Conservation and Restoration of Monuments and Sites', 1964.
 2. For convenience, 'sites' will be taken to mean landscapes, complexes, buildings, structures and machines unless these terms are used in a more specific way.

1.3. The Barcelona Charter

European Charter for the Conservation and Restoration of Traditional Ships in Operation

[Preamble]

The VENICE CHARTER was created in 1964 as a statement of principles for the conservation and restoration of monuments and sites. It opens with the preamble:

“Imbued with a message from the past, the historic monuments of generations of people remain to the present day as living witnesses of their age-old traditions. People are becoming more and more conscious of the unity of human values and regard ancient monuments as a common heritage. The common responsibility to safeguard them for future generations is recognized. It is our duty to hand them on in the full richness of their authenticity.

It is essential that the principles guiding the preservation and restoration of ancient buildings should be agreed and be laid down on an international basis, with each country being responsible for applying the plan within the framework of its own culture and traditions.

By defining these basic principles for the first time, the ATHENS CHARTER of 1931 contributed towards the development of an extensive international movement which has assumed concrete form in national documents, in the work of ICOM and UNESCO and in the establishment by the latter of the International Centre for the Study of the Preservation and the Restoration of Cultural Property.”

Both Charters focus on monuments and sites ashore. Maritime heritage is not covered despite its close affinity. Therefore the 4th EMH Congress, meeting in Barcelona in 2001, resolved to adapt the VENICE CHARTER for maritime heritage in Europe, to be known as the “BARCELONA CHARTER”.

Definitions

ARTICLE 1. The concept of maritime heritage afloat embraces the single traditional ship in which is found the evidence of a particular civilisation or significant development as well as traditional sailing, seamanship and maritime workmanship. This applies both to larger ships and to more modest craft of the past, which have acquired cultural significance with the passing of time.

ARTICLE 2. The preservation, restoration and operation of traditional ships must have recourse to all the sciences, techniques and facilities, that can contribute to the study and safeguarding of the maritime heritage afloat.

Aim

ARTICLE 3. The intention in preserving and restoring traditional ships in operation is to safeguard them whether as works of art, as historical evidence or for perpetuating traditional skills.

Preservation

ARTICLE 4. It is essential for the continued survival of traditional ships in operation that they be maintained on a permanent basis.

ARTICLE 5. Making use of traditional ships for some socially useful purpose always facilitates their preservation. Such use is therefore desirable but it must not significantly change the exterior layout of the ship. Modifications demanded by a change of function should be kept within these limits.

ARTICLE 6. A traditional ship is inseparable from the history to which it bears witness and from the waters it sailed. Therefore its homeport and area of operation ideally should be in the regions of its former usage.

Restoration

ARTICLE 7. The process of restoration is a highly specialised operation. Its aim is to preserve and reveal the aesthetic, functional, and historic value of traditional ships and is based on respect for original material and authentic documents. The restoration in any case must be preceded and accompanied by a historical study of the ship.

ARTICLE 8. The restoration of traditional ships will best be accomplished by means of traditional materials and techniques. Where traditional materials or techniques prove inadequate, the consolidation of traditional ships in operation can be achieved by the use of modern materials for conservation, the efficacy of which has been shown by scientific data and proved by experience.

ARTICLE 9. The restoration of a traditional ship does not require that the ship shall be restored to the original building year. Some ships have a great historical value in a later period of their former time of working. Restoration to any period should be executed only after thorough consideration of the quality of the historical and technical documentation available for the chosen period.

ARTICLE 10. Obligatory navigation- and safety equipment must integrate harmoniously with the whole, but at the same time must be distinguishable from the original so that restoration does not falsify the artistic or historic evidence.

ARTICLE 11. Additions cannot be allowed except in so far as they do not detract from the interesting parts of the ship, its traditional setting and the balance of its composition.

ARTICLE 12. In all works of restoration there should always be precise documentation in the form of analytical and critical reports, illustrated with drawings and/or photographs and other appropriate media. Every stage of the work of dismantling, treatment, reassembly and addition of new parts, as well as technical and structural features identified during the course of the work, should be included.

The BARCELONA CHARTER as adopted by the EMH Working Group
28th of September 2002 in Enkhuizen

Arne Gotved
(Chairman EMH Cultural Council)

Anders Berg
(President EMH)

Signed March 30th 2003
on board Fregatten Jylland, Ebeltøft DK

1.4. The Nizhny Tagil Charter for the Industrial Heritage

The International Committee for the Conservation of the Industrial Heritage (TICCIH)

TICCIH is the world organisation representing industrial heritage and is special adviser to ICOMOS on industrial heritage. The text of this charter was passed by the assembled delegates at the triennial National Assembly of TICCIH held in Moscow on 17 July 2003.

Preamble

The earliest periods of human history are defined by the archaeological evidence for fundamental changes in the ways in which people made objects, and the importance of conserving and studying the evidence of these changes is universally accepted.

From the Middle Ages, innovations in Europe in the use of energy and in trade and commerce led to a change towards the end of the 18th century just as profound as that between the Neolithic and Bronze Ages, with developments in the social, technical and economic circumstances of manufacturing sufficiently rapid and profound to be called a revolution. The Industrial Revolution was the beginning of a historical phenomenon that has affected an ever-greater part of the human population, as well as all the other forms of life on our planet, and that continues to the present day.

The material evidence of these profound changes is of universal human value, and the importance of the study and conservation of this evidence must be recognised.

The delegates assembled for the 2003 TICCIH Congress in Russia wish therefore to assert that the buildings and structures built for industrial activities, the processes and tools used within them and the towns and landscapes in which they are located, along with all their other tangible and intangible manifestations, are of fundamental importance. They should be studied, their history should be taught, their meaning and significance should be probed and made clear for everyone, and the most significant and characteristic examples should be identified, protected and maintained, in accordance with the spirit of the Venice Charter¹, for the use and benefit of today and of the future.

1. Definition of industrial heritage

Industrial heritage consists of the remains of industrial culture which are of historical, technological, social, architectural or scientific value. These remains consist of buildings and machinery, workshops, mills and factories, mines and sites for processing and refining, warehouses and stores, places where energy is generated, transmitted and used, transport and all its infrastructure, as well as places used for social activities related to industry such as housing, religious worship or education.

Industrial archaeology is an interdisciplinary method of studying all the evidence, material and immaterial, of documents, artefacts, stratigraphy and structures, human settlements and natural and urban landscapes², created for or by industrial processes. It makes use of those methods of investigation that are most suitable to increase understanding of the industrial past and present.

The historical period of principal interest extends forward from the beginning of the Industrial Revolution in the second half of the eighteenth century up to and including the present day, while also examining its earlier pre-industrial and proto-industrial roots. In addition it draws on the study of work and working techniques encompassed by the history of technology.

2. Values of industrial heritage

1. The industrial heritage is the evidence of activities which had and continue to have profound historical consequences. The motives for protecting the industrial heritage are based on the universal value of this evidence, rather than on the singularity of unique sites.
2. The industrial heritage is of social value as part of the record of the lives of ordinary men and women, and as such it provides an important sense of identity. It is of technological and scientific value in the history of manufacturing, engineering, construction, and it may have considerable aesthetic value for the quality of its architecture, design or planning.
3. These values are intrinsic to the site itself, its fabric, components, machinery and setting, in the industrial landscape, in written documentation, and also in the intangible records of industry contained in human memories and customs.
4. Rarity, in terms of the survival of particular processes, site typologies or landscapes, adds particular value and should be carefully assessed. Early or pioneering examples are of especial value.

3. The importance of identification, recording and research

1. Every territory should identify, record and protect the industrial remains that it wants to preserve for future generations.
2. Surveys of areas and of different industrial typologies should identify the extent of the industrial heritage. Using this information, inventories should be created of all the sites that have been identified. They should be devised to be easily searchable and should be freely accessible to the public. Computerisation and on-line access are valuable objectives.
3. Recording is a fundamental part of the study of industrial heritage. A full record of the physical features and condition of a site should be made and placed in a public archive before any interventions are made. Much information can be gained if recording is carried out before a process or site has ceased operation. Records should include descriptions, drawings, photographs and video film of moving objects, with references to supporting documentation. Peoples' memories are a unique and irreplaceable resource which should also be recorded when they are available.
4. Archaeological investigation of historic industrial sites is a fundamental technique for their study. It should be carried out to the same high standards as that of sites from other historical or cultural periods.
5. Programmes of historical research are needed to support policies for the protection of the industrial heritage. Because of the interdependency of many industrial activities, international studies can help identify sites and types of sites of world importance.
6. The criteria for assessing industrial buildings should be defined and published so as to achieve general public acceptance of rational and consistent standards. On the basis of appropriate research, these criteria should be used to identify the most important surviving landscapes, settlements, sites, typologies, buildings, structures, machines and processes.
7. Those sites and structures that are identified as important should be protected by legal measures that are sufficiently strong to ensure the conservation of their significance. The World Heritage List of UNESCO should give due recognition to the tremendous impact that industrialisation has had on human culture.
8. The value of significant sites should be defined and guidelines for future interventions established. Any legal, administrative and financial measures that are necessary to maintain their value should be put in place.
9. Sites that are at risk should be identified so that appropriate measures can be taken to reduce that risk and facilitate suitable schemes for repairing or re-using them.
10. International co-operation is a particularly appropriate approach to the conservation of the industrial heritage through co-ordinated initiatives and sharing resources. Compatible criteria should be developed to compile international inventories and databases.

4. Legal protection

1. The industrial heritage should be seen as an integral part of the cultural heritage in general. Nevertheless, its legal protection should take into account the special nature of the industrial heritage. It should be capable of protecting plant and machinery, below-ground elements, standing structures, complexes and ensembles of buildings, and industrial landscapes. Areas of industrial waste should be considered for their potential archaeological as well as ecological value.
2. Programmes for the conservation of the industrial heritage should be integrated into policies for economic development and into regional and national planning.
3. The most important sites should be fully protected and no interventions allowed that compromise their historical integrity or the authenticity of their fabric. Sympathetic adaptation and re-use may be an appropriate and a cost-effective way of ensuring the survival of industrial buildings, and should be encouraged by appropriate legal controls, technical advice, tax incentives and grants.
4. Industrial communities which are threatened by rapid structural change should be supported by central and local government authorities. Potential threats to the industrial heritage from such changes should be anticipated and plans prepared to avoid the need for emergency actions.
5. Procedures should be established for responding quickly to the closure of important industrial sites to prevent the removal or destruction of significant elements. The competent authorities should have statutory powers to intervene when necessary to protect important threatened sites.
6. Government should have specialist advisory bodies that can give independent advice on questions relating to the protection and conservation of industrial heritage, and their opinions should be sought on all important cases.
7. Every effort should be made to ensure the consultation and participation of local communities in the protection and conservation of their local industrial heritage.
8. Associations and societies of volunteers have an important role in identifying sites, promoting public participation in industrial conservation and disseminating information and research, and as such are indispensable actors in the theatre of industrial heritage.

5. Maintenance and conservation

1. Conservation of the industrial heritage depends on preserving functional integrity, and interventions to an industrial site should therefore aim to maintain this as far as possible. The value and authenticity of an industrial site may be greatly reduced if machinery or components are removed, or if subsidiary elements which form part of a whole site are destroyed.
2. The conservation of industrial sites requires a thorough knowledge of the purpose or purposes to which they were put, and of the various industrial processes which may have taken place there. These may have changed over time, but all former uses should be examined and assessed.
3. Preservation in situ should always be given priority consideration. Dismantling and relocating a building or structure are only acceptable when the destruction of the site is required by overwhelming economic or social needs.
4. The adaptation of an industrial site to a new use to ensure its conservation is usually acceptable except in the case of sites of especial historical significance. New uses should respect the significant material and maintain original patterns of circulation and activity, and should be compatible as much as possible with the original or principal use. An area that interprets the former use is recommended.
5. Continuing to adapt and use industrial buildings avoids wasting energy and contributes to sustainable development. Industrial heritage can have an important role in the economic regeneration of decayed or declining areas. The continuity that re-use implies may provide psychological stability for communities facing the sudden end a long-standing sources of employment.
6. Interventions should be reversible and have a minimal impact. Any unavoidable changes should be documented and significant elements that are removed should be recorded and stored safely. Many industrial processes confer a patina that is integral to the integrity and interest of the site.
7. Reconstruction, or returning to a previous known state, should be considered an exceptional intervention and one which is only appropriate if it benefits the integrity of the whole site, or in the case of the destruction of a major site by violence.
8. The human skills involved in many old or obsolete industrial processes are a critically important resource whose loss may be irreplaceable. They need to be carefully recorded and transmitted to younger generations.
9. Preservation of documentary records, company archives, building plans, as well as sample specimens of industrial products should be encouraged.

6. Education and training

1. Specialist professional training in the methodological, theoretical and historical aspects of industrial heritage should be taught at technical and university levels.
2. Specific educational material about the industrial past and its heritage should be produced by and for students at primary and secondary level.

7. Presentation and interpretation

1. Public interest and affection for the industrial heritage and appreciation of its values are the surest ways to conserve it. Public authorities should actively explain the meaning and value of industrial sites through publications, exhibitions, television, the Internet and other media, by providing sustainable access to important sites and by promoting tourism in industrial areas.
2. Specialist industrial and technical museums and conserved industrial sites are both important means of protecting and interpreting the industrial heritage.
3. Regional and international routes of industrial heritage can highlight the continual transfer of industrial technology and the large-scale movement of people that can be caused by it.

Eusebi Casanelles
President TICCIH

Eugene Logunov
TICCIH XII International Congress

Nizhny Tagil, 2003

Appendix 2: Australian Heritage Legislation

Commonwealth Heritage Legislation

In September 2003, the Federal Parliament passed new heritage legislation that identifies, conserves and protects places of national heritage significance; provides for the identification and management of Commonwealth heritage places; and establishes an independent expert body to advise the Minister on the listing and protection of heritage places.

The legislation comprises three Acts:

Environment and Heritage Legislation Amendment Act (No 1) 2003

Australian Heritage Council Act 2003

Australian Heritage Council (Consequential and Transitional Provisions) Act 2003

and their associated Regulations:

Environment Protection and Biodiversity Conservation

Amendment Regulations 2003 (No 1) 2003

(Note that this Act is the central piece of legislation to which all others are linked)

Australian Heritage Council Regulations 2003

The *Environment and Heritage Legislation Amendment Act (No 1) 2003* makes amendments to the *Environment Protection and Biodiversity Conservation Act 1999* and establishes a new heritage regime for the Commonwealth.

This Act sets out the steps for entering places on the National Heritage List and the Commonwealth Heritage List, the management of National and Commonwealth heritage places, the requirements for impacts of proposals involving National Heritage places, and the requirements for Commonwealth agencies in relation to Commonwealth Heritage Places.

The Act also prescribes criteria for listing National Heritage places and Commonwealth Heritage places and management principles for National Heritage places and Commonwealth Heritage places.

The *Australian Heritage Council Act 2003* establishes the Australian Heritage Council, sets out the structure of the Council, and states the Council's functions in relation to maintaining the Register of the National Estate.

Under these legislative changes, the Australian Heritage Council replaces the Australian Heritage Commission as the Government's independent expert advisory body on heritage matters.

The *Australian Heritage Council (Transitional and Consequential Provisions) Act 2003* provides for the smooth transition between the old heritage regime and the new.

The three Acts usher in a new era of protection and management for Australian heritage places. In particular:

1. National Heritage will be protected using the Commonwealth's constitutional powers and managed cooperatively with State and Territory governments, and private owners where appropriate.
2. Commonwealth Heritage will be protected and managed in a systematic way, involving careful identification and management of heritage places under Commonwealth control.
3. It is proposed that an independent body of heritage experts, the Australian Heritage Council, will undertake the assessment of places nominated for the National Heritage List and the Commonwealth Heritage List, and will advise the Minister for the Environment and Heritage on conserving and protecting listed places. There will be a public nomination process that will allow individuals, the community, and governments to nominate places to the National Heritage List and the Commonwealth Heritage List.

The new heritage regime was developed in cooperation with the Australian Heritage Commission, after six years of public consultation and discussion.

Department of the Environment
GPO Box 787
Canberra ACT 2601
General enquiries 1800 803 772
www.environment.gov.au

State & Territory Heritage Legislation

Australian Capital Territory – ACT Heritage Act 2004

The main objects of this Act are to establish a system for the recognition, registration and conservation of natural and cultural heritage places and objects, including Aboriginal places and objects; to establish the heritage council; to provide for heritage agreements to encourage the conservation of heritage places and objects; to establish enforcement and offence provisions to provide greater protection for heritage places and objects; and to provide a system integrated with land planning and development to consider development applications having regard to the heritage significance of places and heritage guidelines.

New South Wales – *Heritage Act 1977*

This Act makes provisions to conserve the environmental heritage of the State. It provides for the identification and registration of items of State heritage significance, provides for the interim protection of items of State heritage significance, constitutes the Heritage Council of New South Wales and confers on it functions relating to the State's heritage.

Northern Territory – *Heritage Act 2011*

This Act is provides for the conservation of the Territory's cultural and natural heritage by declaring places and objects of heritage significance to be heritage places and objects; declaring classes of places and objects of heritage significance to be protected classes of heritage places and objects; establishing the Heritage Council; providing for heritage agreements to encourage the conservation, use and management of heritage places and objects; regulating work on heritage places and objects; and establishing enforcement and offence provisions.

Queensland – *Queensland Heritage Act 1992*

The object of this Act is to provide for the conservation of Queensland's cultural heritage for the benefit of the community and future generations. This is to be primarily achieved by establishing the Queensland Heritage Council; keeping the Queensland heritage register and local heritage registers; regulating, in conjunction with other legislation, development affecting the cultural heritage significance of Queensland heritage places; providing for heritage agreements to encourage appropriate management of Queensland heritage places; and providing for appropriate enforcement powers to help protect Queensland's cultural heritage.

South Australia – *Heritage Places Act 1993*

The objects of the Act are to recognise the importance of South Australia's heritage places and related objects in understanding the course of the State's history, including its natural history; to provide for the identification and documentation of places and related objects of State heritage significance; to provide for and promote the conservation of places and related objects of State heritage significance; to promote an understanding and appreciation of the State's heritage; and to encourage the sustainable use and adaptation of heritage places in a manner consistent with high standards of conservation practice, the retention of their heritage significance, and relevant development policies.

Tasmania – *Historic Cultural Heritage Act 1995*

The purpose of the Act is to promote the identification, assessment, protection and conservation of places having historic cultural heritage significance and to establish the Tasmanian Heritage Council. The Act also includes requirements to establish and maintain the Tasmanian Heritage Register; a system of approvals for work on places on the Register; Heritage Agreements and assistance to property owners; the protection of shipwrecks; and for control mechanisms and penalties for breaches of the Act

Victoria – *Heritage Act 1995*

The main purposes of this Act are to provide for the protection and conservation of places and objects of cultural heritage significance and the registration of such places and objects; establish a Heritage Council; and to establish a Victorian Heritage Register.

Western Australia – *Heritage of Western Australia Act 1990*

The objects of this Act, with due regard to the rights of property ownership, are to identify, conserve and where appropriate enhance those places within Western Australia which are of significance to the cultural heritage; in relation to any area, to facilitate development that is in harmony with the cultural heritage values of that area; and to promote public awareness as to the cultural heritage, generally.

Appendix 3: Movable Heritage

Heritage laws: overview

Appendix 4: Heritage Records

Introduction

It is difficult to understate the value of records to the determination of the engineering heritage significance of a work or item, and to any heritage conservation process undertaken in respect of that item. The processes for assessing engineering heritage significance and for conservation of same are well documented in the Burra, Riga, Barcelona and Nizhny Tagil Charters but, in almost every definition and step along the way, records and recording play a pivotal role.

Record Format

The dual role of records and recording – in researching the significance of the work and documenting the conservation process – is well exemplified by Article 32 of the Burra Charter (see Appendix 1) but, whatever the role, the record itself can be of many forms:

- Original records and documents in traditional form (hard copy)
- Electronic documents, records and objects
- Databases
- Maps and plans
- Photographic materials - images and film
- Recordings
- Research papers and documents
- Memoirs
- Rare books and journals
- Manuscripts
- Memorabilia & Souvenirs
- Promotional and informational literature
- Press clippings, articles and publications

Record Sources

The organisations listed in Appendix 5 are good starting points for historical records of potential engineering heritage works/items. One should add to the Professional Organizations, not only Engineering Heritage Australia, but also Engineers Australia itself for its Conference and Technical Paper publications, and overseas bodies such as the UK Institution of Civil Engineers which can be the source of valuable technical papers prior to 1919 (when IEAust was formed).

Early relevant press clippings may be sourced from newspapers accessible through the National Library of Australia's Digitised Newspapers service, TROVE trove.nla.gov.au.

Hierarchy of records

Records may be categorized as primary, secondary or tertiary. Primary sources, such as contemporaneous diaries, often contain personal opinions, errors or other irregularities which are discovered by comparison of primary sources during the writing of secondary sources, particularly learned papers. Some tertiary sources may be shallow and lack in-depth research.

It is thus necessary to consult and compare all available categories of relevant records about a particular work or item, applying reason and logic to arrive at the facts about it.

Dealing with records

Particular organisations will have their own specific requirements regarding accessing and handling of historical records; these must, for the sake of future researchers, be strictly adhered to. Fragile record materials may necessitate restricted access to the original items; however, where possible, true copies may be made available for research purposes.

Where new records are being created, for example in the documenting of a conservation process, wherever possible photographs and documents should be made using accepted conservation materials and practice and materials and stored in a controlled, clean and secure environment so as to ensure the longevity of the materials. New records should also be created in digital format to facilitate copying in the future.

Where historical records themselves are found to be in need of repair or other conservation process, the services of a conservation archivist should be sought.

Appendix 5: Heritage Sources & Organisations

This appendix contains a list of sources and organisations for use by professionals involved in Engineering Heritage work. Specific contact details have not been provided because these are liable to change over quite short time frames: instead we recommend that you search for these or similar organisations in your region. The list might jog your memory when an apparent dead end looms.

The list includes:

- National Trusts
- Government Departments
- Australia ICOMOS
- Professional organisations
- Australian historic societies
- Other special interest heritage organisations
- Australian museums with significant engineering heritage collections and knowledge

1. National Trusts

The National Trust in each state and territory maintains registers of heritage objects or places and lobbies for their conservation. Listing on a National Trust Register carries no legal enforcement power to prevent an owner destroying or damaging a heritage object. However, National Trust listing is often influences Local Government Authorities or Heritage Councils in taking statutory protective action if an object is threatened.

The National Trust has an active publications program, issuing technical and popular documents of particular interest to professionals working in the conservation field [such as *Industrial Archaeology* published by the National Trust (NSW)].

The Trust also provides opinions on specific development/building applications on request from the relevant statutory authorities, through the operation of voluntary professional committees or technical advisers. These committees and advisors are also available to assist with advice on specific projects.

2. Government Departments

The Australian government agency with responsibility for heritage is the Department of the Environment. Contact details for the various agencies which are part of the department are listed on the web site.

Searching on “heritage legislation” or similar terms will locate the appropriate State and Territory Government departments.

Heritage units are also located in many local government councils.

3. Australia ICOMOS

International Council on Monuments and Sites

The Australia ICOMOS Secretariat can be contacted via their website australia.icomos.org. Contacts for some members of the Australia ICOMOS Executive Committee can be found in the Executive Committee section of the website.

4. Professional Organisations

Engineering Heritage Australia (EHA)

www.engineersaustralia.org.au/engineering-heritage-australia

EHA operates via a national board and committees in each division of Engineers Australia. The National Office Administrator can provide contact details for the divisions, or search for Engineers Australia. There are divisions based in all capitals plus Newcastle.

5. Australian Historical Societies

Royal Australian Historical Society (RAHS)

Royal Historical Society of Victoria

Canberra and District Historical Society

Royal Historical Society of Queensland

Royal Western Australian Historical Society

Tasmanian Historical Research Association

Historical Society of the Northern Territory

History Council of South Australia

Australian Society for Historical Archaeology

Websites for the Societies also include links to affiliated societies in each state.

6. Other Special Interest Heritage Organisations

International Stationary Steam Engine Society (ISSES)

The primary aims of ISSES are to foster, encourage and co-ordinate an interest in the appreciation of the history, recording and preservation of stationary engines throughout the world.

Melbourne Steam Traction Engine Club

The MSTEC site is known as the National Steam Centre and contains a very large collection of stationary engines and wheeled steam machines.

Australian Railway Historical Society (ARHS)

ARHS has Divisions in NSW, Victoria, Queensland, ACT, WA, Tasmania, and SA

Australasian Maritime Historical Society

Naval Historical Society of Australia

Australian National Committee on Large Dams (ANCOLD)

ANCOLD is not a historical society as such but it maintains a register of large dams in Australia which is available on the web site. The secretariat moves every three years and the website should be used to confirm the current address.

Aviation Historical Society of Australia

The society maintains autonomous branches in Victoria, NSW and Queensland.

The Civil Aviation Historical Society (Victoria)

Civil Aviation Historical Society of Western Australia

Military Historical Society of Australia

Australian Society for History of Engineering and Technology (ASHET)

Road Transport Historical Society

The society operates the National Road Transport Hall of Fame in Alice Springs which is dedicated to the preservation and presentation of Australia's unique road transport heritage.

7. Australian Specialist Museums

Name & Location	Type Of Collection & Notes
Australian Capital Territory	
Australian War Memorial, Canberra	Military museum
National Museum of Australia, Canberra	Multi-disciplinary collection
Australian Railway Historical Society (ACT Division), Queanbeyan	Railway museum
New South Wales	
Powerhouse Museum, Sydney	Multi-disciplinary collection
National Maritime Museum, Darling Harbour, Sydney	Maritime museum
Australian Heritage Fleet, Sydney	Maritime museum
Valley Heights Locomotive Depot Heritage Museum, Blue Mountains	Heritage railway
Cooma Monaro Railway, Cooma	Heritage railway
Dorrigo Steam Railway & Museum, Dorrigo	Heritage railway and museum
Goulburn Crookwell Heritage Railway, Goulburn	Heritage railway
Gleneagh Mountain Railway, Coffs Harbour/Grafton	Heritage railway
State Mine Heritage Park & Railway, Lithgow	Mining/steel/railway museum
Zig Zag Railway, Lithgow	Heritage railway
Newcastle Regional Museum	Mining and industrial machinery including BHP exhibits and working 1885 Craven Crane
Newcastle Maritime Museum	Collection of maritime and port-related artefacts, boats and models
Fort Scratchley Historical Society, Newcastle	Military museum in conserved historical fort
Australia's Museum of Flight/Australian Naval Aviation Museum, Nowra	Military aviation
Museum of Fire, Penrith	Fire services museum
Richmond Main Colliery and Richmond Vale Railway	Large collection of coal-mining related materials with working steam railway once a month
Turon Technology Museum, Sofala	Steam and internal combustion engines
Sydney Tramway Museum, Sutherland	Tramway museum
Temora Aviation Museum, Temora	Aviation heritage
NSW Rail Transport Museum Thirlmere	Railway museum
Fighter World, Williamtown (near Newcastle)	Aviation heritage
Yass Railway Museum, Yass	Railway museum
Northern Territory	
East Point Military Museum, Darwin	Military museum
QANTAS Hangar, Parap, Darwin (NT Museum & Art Galleries)	Small engines and motor vehicles
Australian Aviation Heritage Centre, Darwin	Aviation museum
Road Transport Hall of Fame, Alice Springs	Road transport industry
Pine Creek Miners Park, Pine Creek	Gold mining industry including substantial stationary steam collection

Queensland

Queensland Museum, Brisbane	Multidisciplinary collection
Telstra Museum, Brisbane	Communications industry
Queensland Energy Museum, Brisbane	Electricity and Gas industry
The Boiler House, Queensland Steam & Vintage Machinery Society, Petrie, Brisbane	Steam and internal combustion engines
Queensland Maritime Museum, Brisbane South Bank	Maritime museum
Blackall Woolscour, Blackall	Only steam-driven wool scour in Australia
Birdsville Working Museum, Birdsville	Farming and agricultural equipment
Cairns Regional Museum	Relics from the period of railroad expansion (Kuranda)
John Flynn Place, Cloncurry	Aviation museum
Gympie Historical Society & Gold Mining Museum	Gold mining industry
Mary Valley Heritage Railway, Gympie	Heritage railway
Camera and Photography Museum, Herberton	Collection of cameras and spy equipment
Infracombe Museum, Infracombe	Agricultural, mining and transport industry equipment
The Workshops Rail Museum, Ipswich	Railway museum
Kingaroy Bicentennial Heritage Museum	Agricultural industry
QANTAS Founders Outback Museum, Longreach	Aviation/airline heritage
Australian Stockman's Hall of Fame, Longreach	Pastoral industry
Longreach Powerhouse Museum, Longreach	Heritage-listed power station
Museum of Australian Army Flying, Oakey	Military aviation
Roma Oil and Gas Museum	Oil and gas industry
Thargomindah Artesian Hydro Power Plant	Hydro power plant display
Cobb and Co Museum, Toowoomba	Collection of horse-drawn carriages
Zucolli Collection, Toowoomba	Aviation museum
RAAF Townsville Museum, Townsville	Military aviation
Wondai Heritage Museum	Agricultural industry

South Australia

South Australian Maritime Museum, Adelaide	Maritime museum
National Motor Museum, Birdwood	Motor vehicles
Enginehouse Museum, Burra	Copper mining industry including Cornish pumping engine houses
Cobdogla Irrigation Museum, Cobdogla, Riverland	Irrigation industry
SteamRanger Heritage Railway, Mount Barker	Heritage railway
National Railway Museum, Port Adelaide	Railway museum
South Australian Aviation Museum, Port Adelaide	Aviation museum
South Australian Maritime Museum, Port Adelaide	Maritime museum
Pichi Richi Railway Preservation Society, Port Augusta	Heritage railway

Western Australia

Whaleworld, Albany	Whaling industry
Wireless Hill, Ardross	Telecommunication museum
Aviation museum, Beverley	Military and civil aviation
RAAF Association Aviation Museum, Bull Creek, Perth	Military aviation
Collie Railway museum, Collie	Steam locomotive museum
Dardanup Heritage Park, Dardanup Fremantle	Industrial and agricultural machinery Army Museum, Tanks, artillery etc
WA Maritime Museum, Fremantle	Maritime museum
The Energy Museum, Fremantle	Utility industry
Mining Hall of Fame, Kalgoorlie	Mining engineering and geology
WA Museum, Kalgoorlie	Mining engineering and geology
Bunnings' Age of Steam Museum, Manjimup Regional Timber Park, Manjimup	Steam engines and timber industry
Midland Railway Interpretative Centre, Midland	Information about events, activities and people associated with original railway workshops
No 1 Pump Station, Mundaring Weir Golden Pipeline Museum & Interpretative Centre	Goldfields Water Supply history
Hotham Valley Tourist Railway, Pinjarra to Dwellingup	Heritage railway
Whiteman Park, Lord St, Whiteman	Transport museum, trains, trams, buses, tractors
Yarloop Workshops Complex, Yarloop	Railway workshops and stationary steam engine collection

Tasmania

Tasmanian Transportation Museum, Glenorchy, Hobart	Railway museum
Grubb Shaft Gold & Heritage Museum, Beaconsfield	Gold mining industry (built within the ruins of the Tasmania Gold Mine)
Devonport Maritime Museum, Devonport	Maritime museum
Don River Railway, Devonport	Heritage railway
City Park Radio Museum, Launceston	Radio museum
Queen Victoria Museum and Art Gallery, Inveresk, Launceston	Former railway workshops
Morrison's Huon Pine Sawmill, Strahan waterfront	Old saw mill
West Coast Pioneers' Memorial Museum, Zeehan	Mining industry including substantial stationary steam collection

Victoria

Scienceworks, Melbourne	Multi-disciplinary collection including the Spotswood Steam Pumping Station (a very large sewerage pumping station from early 20th century)
National Steam Centre, Melbourne	
Steam Traction Engine Club Inc, Scoresby, Melbourne	Steam engines
Railway Museum, North Williamstown, Melbourne	Railway museum
Polly Woodside Maritime Museum, Melbourne	Maritime museum
Melbourne Museum, Melbourne	Multi-disciplinary collection
RAAF Museum, Point Cook, Melbourne	Military aviation
Fire Services Museum of Victoria, East Melbourne	Fire services museum
Alexandra Timber Railway & Museum, Alexandra	Timber and railway industries
Sovereign Hill Historic Gold Mining Village, Ballarat	Gold mining including a significant steam engine collection
Ballarat Gold Museum, Ballarat	Gold industry
Ballarat Tramway Museum, Ballarat	Tramway museum
Puffing Billy Preservation Society, Belgrave	Heritage railway
Central Deborah Gold Mine, Bendigo	Gold mining industry
Bendigo Trust (Talking Trams), Bendigo	Heritage tramway
Central Highlands Tourist Railway, Daylesford	Heritage railway
National Wool Museum, Geelong	Wool industry
Geelong Naval & Maritime Museum, North Geelong	Maritime museum
Tramway Museum Society of Victoria, Keysborough	Tramway museum
Coal Creek Community Park and Museum, Korumburra	Mining theme park
South Gippsland Tourist Railway, Korumburra	Heritage railway
Victorian Goldfields Railway, Maldon	Heritage railway
Mornington Railway, Mooraduc	Heritage railway
Australian National Aviation Museum/ Moorabbin Air Museum, Moorabbin	Aviation museum
Walhalla Goldfields Railway, Walhalla	Heritage railway
Yarra Valley Tourist Railway, Healsville	Heritage railway
Vietnam Veterans Museum, Phillip Island	War museum
Portland Cable Trams, Portland	Heritage tramway
Bellarine Peninsula Railway, Queenscliff	Heritage railway
Seymour Heritage Railway Centre, Seymour	Railway museum
Swan Hill Pioneer Settlement, Swan Hill	Regional heritage theme park
The Stringybark Express, Wahgunyah	Heritage railway
State Coal Mine, Wonthaggi	Coal mining industry



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