

ENGINEERING HERITAGE AUSTRALIA

ENGINEERING HERITAGE PRACTICE NOTES



ENGINEERS
AUSTRALIA

PRACTICE NOTE No. 5

ASSESSMENT AND CONSERVATION OF AN INDUSTRIAL HERITAGE ITEM

Purpose

The purpose of this practice note is to provide engineers and others with essential background information on the assessment and conservation of an industrial heritage item.

Preamble

Industrial Heritage deals with the remains of industrial culture inherited from past generations which are of technological, social or scientific value.

The assessment of them involves determination of their significance and of the benefit of conserving them for future generations.

The scope is vast and the item should be assessed for significance within its functional context.

Industrial functions include industrial structures, transport, mining, water, stormwater, energy generation, sewerage, industrial processes, communications and infrastructure.

The items within these functions include structures, dams, reservoirs, plant and equipment, tools, pipelines and the machinery associated with the function.

Some items are fixed and some are movable with need to determine the value of association of the item with its place.

Many items are of public interest and, particularly with machinery, there is an element of affection.

The continuing use of an item requires assessment of safety, of presentation and their impact on the conservation of the item.

Reference should be made to Practice Notes 1, 2, 3 and 4.

The Assessment Procedure

The procedure gathers information and analyses it for use in the conservation procedure.

- Carry out the process as Practice Note 2 to determine the significance of the item and its individual components. Obtaining a technical understanding is best carried out by an expert with knowledge of the item.
- Evaluate its place within the industrial function together with its place within the timeline of the technological development of the item. Technology continually alters and evolves as knowledge is gained and design, construction, usage and operating experience reflect this and industrial items obtain significance from them.

The Conservation Procedure

The procedure applies the assessment to obtain the available options enabling a best choice decision to be made. The process is iterative and dependent upon the end use.

A requirement, for example, for continuing use, will likely require adaptation, will rule out other conservation techniques and will immediately lead to evaluation of the acceptability of loss of significance.

The principles and techniques are those of the Australian Burra Charter set out in Practice Note 1.

Conservation of the item must differentiate between a fixed or movable item and between an item which will be used and one which will be for display only.

The significance and demonstration value of the item may be enhanced by continued use while the conservation of fragile fabric or particular components may dictate static display

Conservation of the item involves a number of ordered steps as follows:-

- Determine the significance of the item as a whole.
- Determine which components are highly significant, which components have some significance and which components have no significance.
- For both fixed and movable items, determine if there are individual components which require removal, restoration, reconstruction or adaptation and assess whether the impact of the alterations diminishes the significance of the item.
Operating requirements may require modifications, the addition of safety devices or alteration of the structure or fabric.
Preference must be given to changes with little visible impact or which are reversible.
- For both fixed and movable items, assess public safety issues. Consider structural and fabric implications and their impact on conservation options and on end use.
- For a movable item intended to be used, examine the defects in design and construction and whether improvements should be made.
- Evaluate whether an alteration is acceptable.
- Determine acceptable end uses for the item based on the above.
- Assess the practicality of carrying out the conservation works decided upon. This includes considering the impact of introducing new materials.
- Carry out the conservation works to the above.