

Rock art conservation survey, Tongariro/Taupo Conservancy

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Abstract

Existing formal information about rock art recorded within Tongariro/Taupo Conservancy was found to be inadequate for management, advocacy, and protection purposes. A research project was established by the Department of Conservation to assess the origin, condition, threats, and conservation and protection needs of a number of recorded rock art sites. General research results are presented.

1. Background

There are about 90 recorded (i.e. for which a record form has been completed and entered in the NZ Archaeological Association Site Recording Scheme) rock art sites in the North Island, New Zealand. These are sites in which artwork has been identified by the site recorder as an important element of the site. Just under half of the recorded rock art sites fall within Tongariro/Taupo Conservancy (see Figure 1). While some of these, such as Rua Hoata (Trotter & McCulloch 1971; Trotter 1978), are well publicised, most are little known. The Conservancy is, therefore, a significant but largely overlooked area of North Island rock art.

Descriptive material included in NZ Archaeological Association (NZAA) site record forms can be used to briefly characterise the rock art recorded within Tongariro/Taupo Conservancy. Just over half of the recorded sites contain areas of red colour, generally in the form of dots or circles, dashes or strokes, splashes, or spirals. Slightly less than half contain rock carvings or incisions. Only two of the recorded sites appear to contain both carved rock surfaces and areas of colour. These are Rua Hoata (N94/3) and N94/38. (Site numbers are from the NZAA Site Recording Scheme.)

The Department of Conservation (DOC) manages a small number of the rock art sites recorded within Tongariro/Taupo Conservancy. Existing formal information about the artwork recorded within the conservancy was found to be inadequate for management, advocacy, and protection purposes. A research project was established by the Science & Research Unit, DOC, with a view to rectifying this situation. Nick Tupara, rock art consultant, was retained to provide specialist input and advice.

2. Research objectives

The main objectives of the research were to:

1. Reassess and describe selected rock art sites.
2. Determine whether the features recorded as art are of natural or cultural origin.
3. Where the features are of cultural origin:
 - Record their condition.
 - Identify any threats to their continued survival.
 - Identify conservation and protection needs.

3. Methodology

A thorough, systematic inspection of site record forms completed for rock art sites in Tongariro/Taupo Conservancy was undertaken with the aim of identifying a sample set of sites for field investigation. Criteria used included:

1. The feasibility of relocating the site using the information provided on the site record form.
2. The apparent origin of the features recorded as art.
3. The apparent state of preservation of the features.
4. The form the features took.
5. The possible presence of archaeological deposits.

Site record forms that contained location information deemed inadequate to the task of readily relocating the site effectively removed the site from consideration. Nevertheless, the objective was for the sample set to display a range of attributes. Sites where a cultural origin for the artwork seemed likely were chosen and also some where the origin of the artwork was less certain. Sites with an apparently good state of preservation were chosen along with sites with an apparently poorer state of preservation.

The resulting sample set consisted of 15 sites either along the northern shores of Lake Taupo or within the immediate hinterland (Figure 2) and included sites on land managed by DOC, on land managed by Taupo District Council, and on land in private ownership (see Table 1 for details). Permission was

obtained from Taupo District Council and from individual owners to visit sites on relevant blocks of land.

At the time the sample set was chosen, site record forms for all rock art sites recorded in Tongariro/Taupo Conservancy dated to the late 1970s or early 1980s. The sites had not been subsequently revisited for the purposes of updating site record or condition information.

4. Results

The field inspections were undertaken between 10 and 13 May 1995 by Ann Williams (Science & Research, DOC), Nick Tupara, and Perry Fletcher (NZAA file keeper). New information on the features and their context was recorded. Three new sites with potential artwork were recorded during fieldwork. Two of these are on land managed by the Department, while one is on privately owned land.

Research results are presented in this section under three headings. These headings relate to research objectives 2 and 3 and are:

1. Natural versus cultural origin for the recorded artwork.
2. General condition of, and threats, to the recorded artwork.
3. General conservation and protection issues relating to the recorded artwork.

The discussion synthesises material relevant to the sites visited and individual sites are generally not discussed. The paper draws heavily upon notes made during the field inspections and upon other advice given by Nick Tupara.

4.1 NATURAL VERSUS CULTURAL ORIGIN

The majority of the site record forms in the sample set identified for field inspection describe the artwork as occurrences of red colour which takes various forms including dots or circles, dashes or strokes, splashes, and spirals. However, areas of red colour in the form of lines or splashes may occur naturally on rock surfaces, perhaps revealed by water wash or vegetation rub. Given the significance of the Tongariro/Taupo Conservancy for recorded rock art and the sometimes inconclusive remarks about the status of the artwork contained in site record forms, a major focus of the field work was to determine whether the red colour was of natural or cultural origin.

No invasive procedures were used to determine this. Instead, a visual inspection was made. A number of criteria were used to assist in the determination of origin, including:

1. Depth of penetration of colour into the rock.
2. Identification of definable edges to the colour.
3. Change in density or thickness of colour over the rock surface.
4. Effect of environmental elements on colour.
5. Proximity to archaeological deposits or an affinity with other areas of colour.

A brief discussion of each criterion may be helpful. Areas of natural colour may penetrate well below the surface of the rock, while an area of colour that appears only on the surface or penetrates a small way back into the rock may be indicative of a cultural origin. Areas of natural colour may have indeterminate edges and may simply fade out across the rock surface. Areas of culturally applied colour may have more definable edges. Natural areas of colour are more likely to be evenly spread across the ridges and valleys in the rock, while culturally applied colour may have an uneven distribution. Weathering may remove culturally applied colour from the rock ridges but not from rock valleys. The use of drier pigment compounds may mean that the colour touches and adheres to rock ridges only. Removal of colour due to lichen growth may be more indicative of a cultural application, given that natural colour is more likely to penetrate deeper into the rock and to occur beneath the fragments of rock dislodged by the death of the lichen. Presence of, and affinity with, other areas of culturally applied colour or archaeological deposits may suggest a cultural origin for an area of colour.

As exceptions to the criteria may occur, they were used in a careful and judicious manner. Taken collectively, these criteria are more likely to give a reliable origin for the coloration than the use of one criterion in isolation. As the information acquired increased, potential artwork was compared with other examples to test thoughts about origin. This occasionally led to a reinterpretation of feature origin at particular sites.

Of the 15 previously recorded artwork sites visited, the features recorded as artwork at two of the sites were reassessed as being of natural origin (see Table 1). Furthermore, the features at two of the newly recorded sites were assessed as being of natural origin. Of the 13 remaining previously recorded sites, four were deemed to have both natural and cultural features, with the cultural characteristics dominating in three of them. For the purposes of management and protection, these sites should be treated as cultural. The remainder were assessed as being cultural in origin, as was the third newly recorded site.

4.2 GENERAL CONDITION AND THREATS

The artwork at most of the sites visited was found to be in reasonably good condition. A notable exception to this is N94/38. Fieldworkers noted a number of potential threats to the long-term stability and durability of the artwork at the sites visited. These threats included:

1. The presence of lichen on rock surfaces containing artwork.
2. The wash of water across the rock surfaces containing rock art.
3. The presence of vegetation close to areas of artwork.
4. The reduction of colour intensity which may occur as a result of exposure to sun and wind.
5. The accessibility of the artwork to the public.

Microflora such as lichen was commonly noted at the sites visited. Left alone, the growth and death of lichen can have adverse affects upon areas of artwork. The lichen can visually obscure areas of artwork, perhaps encouraging incorrect conclusions about the nature and form of it, and can contribute to the destabilisation of the rock surface resulting in rock fall and flaking and to the loss of applied colour. Artwork at around one-third of the sites visited faced adverse affects from water wash, which can contribute to the shift and removal of applied colour. At one site (U18/11), water wash is occurring behind a panel of rock upon which artwork appears. It is undermining the structural stability of the panel and, therefore, the long-term survival of the artwork. Furthermore, water wash may produce patterns of colour similar to those occurring in areas of culturally applied colour. For a small number of sites, the closeness of vegetation to areas of artwork poses a number of threats. In one case in particular (T18/26), vegetation may be rubbing against the applied colour, causing it to fragment and exfoliate. At several sites, the destruction of vegetation by fire would have major adverse affects on the artwork. Furthermore, trees and larger shrubs can cause cracks or fissures in the parent rock, undermining stability and creating water channels (see Pearson & Sullivan 1999). Artwork to which the public has ready access faces the threat of disturbance and defacement. A number of the sites visited as part of the survey are accessible by boat from the lake, while others are in public reserves and alongside public walkways and are easily accessed.

4.3 GENERAL CONSERVATION AND PROTECTION ISSUES

Given the threats to the long-term stability and durability of the artwork, management programmes, including an assessment of cultural significance, should be developed for all of the sites with artwork visited as part of the survey programme. A range of conservation techniques and treatments may be applied to some of the problems faced by the artwork. Clearance of vegetation from within close proximity to artwork may reduce the threat of damage from the vegetation but may also increase the artwork's vulnerability to other weathering forces and lead to undesirable attention from visitors. Similarly, while interpretation facilities may enhance visitor understanding of the artwork, they may also encourage greater numbers of visitors to the sites with potentially adverse results for the long-term survival of the artwork. Management of the artwork "must ensure that the treatment is not more destructive of the cultural resource and its assessed significance than the threat that is being treated" (Pearson & Sullivan 1999: 257).

Management programmes should be supported by sound information and adequate planning. A summary of a planning process for the management of heritage places is illustrated in Figure 3 (Pearson & Sullivan 1999) and is commended in the context of addressing conservation and protection issues and needs at rock art sites in Tongariro/Taupo Conservancy. The process is iterative, and any part of the planning process, including significance assessments, should be reviewed and revised as additional information becomes available. Information generated as part of the May 1995 field inspections contributes to a number of stages identified in the planning process.

A knowledge of the surrounding physical and cultural landscape provides comparative information which will assist heritage managers to make informed decisions about management requirements at individual historic places: "if the number of other similar sites in the region and the regional prehistory are known, it is possible to see where [a] particular place fits in and to determine its comparative value" (Pearson & Sullivan 1999: 195). There is a present dearth of published, freely available syntheses that provide such a context for Tongariro/Taupo Conservancy rock art sites.

5. Discussion

Information collected during the May 1995 fieldwork has considerably extended our knowledge and understanding of the artwork in the Tongariro/Taupo Conservancy. The conservancy is a very significant area of North Island rock art and one that deserves continuing attention.

Results from the research indicate that a number of sites recorded as rock art in other parts of the conservancy may have been incorrectly recorded. Features recorded as cultural applications of colour may in fact be of natural origin. Field checking of all recorded artwork sites by experienced rock art fieldworkers, along with systematic survey for unrecorded artwork, would help consolidate the knowledge gained as part of the research. Other issues requiring investigation are:

- Does the artwork differ across the conservancy?
- Are there differences between artwork found close to the lake edge and that found further inland?
- Is the distribution of recorded artwork a product of site recording emphasis or does it reflect a real distribution across the conservancy (for instance, no artwork is recorded along the eastern and southern shores of Lake Taupo)?
- Can a representative sample of rock art sites for inclusion on publicly managed land be identified?

Further work needs to be done in order to develop management programmes for the artwork at sites visited as part of the survey.

6. Acknowledgements

Grateful thanks to all landowners and managers for access to their land and for their interest in the work; to Perry Fletcher for giving so generously of his time to assist with the relocation of the sites in the field; and to Tongariro/ Taupo Conservancy staff for their help with logistics and with the management of the project.

7. References

- Pearson, M. and S. Sullivan. 1999. *Looking after Heritage Places. The Basics of Heritage Planning for Managers, Landowners, and Administrators*. Melbourne University Press, Melbourne.
- Trotter, M. and B. McCulloch 1971. *Prehistoric Rock Art of New Zealand*. A.H. & A.W. Reed, Wellington.
- Trotter, M. 1978. Rua Hoata - report of an inspection. Unpublished report to New Zealand Historic PlacesTrust.

Table 1 : Reassessed status of previously recorded sites

Natural origin	Cultural origin	Natural and cultural origin
T18/65 D	T18/25 D	T18/42 D
T18/68 P	T18/26 P	T18/64 D
	T18/50 P	T18/81 D
	T18/52 P	T18/67 P
	T18/69 P	
	T18/102 P	
	IJ18/11 T	
	U18/12 T	
	N94/38 T	

Site numbers given are from the NZAA Site Recording Scheme. Letters and numbers to the left of the back-slash denote the mapsheet upon which the site is recorded, while numbers to the right of the back-slash denote the individual site number. D = site managed by DOC. T = site managed by Taupo District Council. P = site on privately owned land.

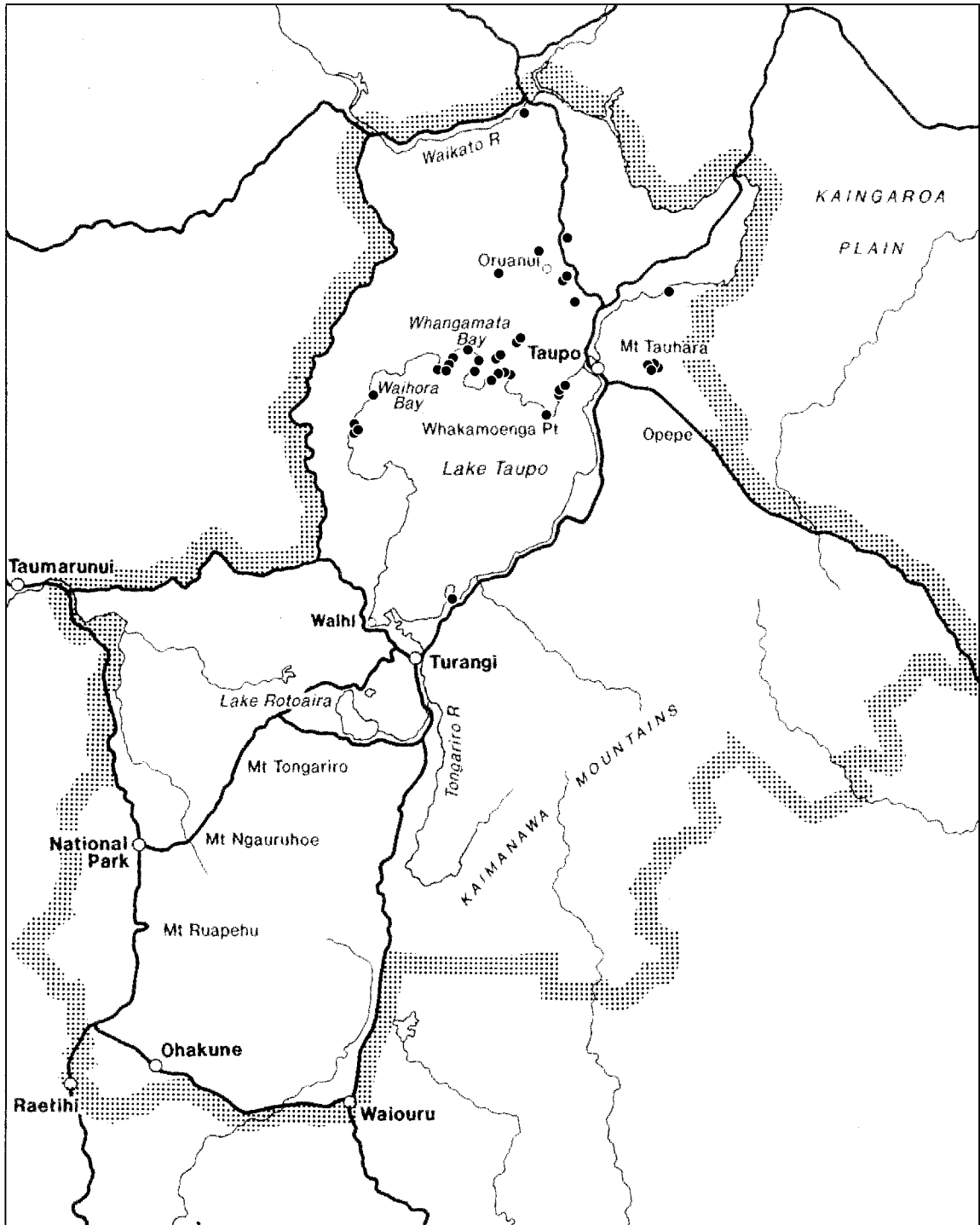


Figure 1. Recorded rock art sites in Tongariro/Taupo Conservancy.

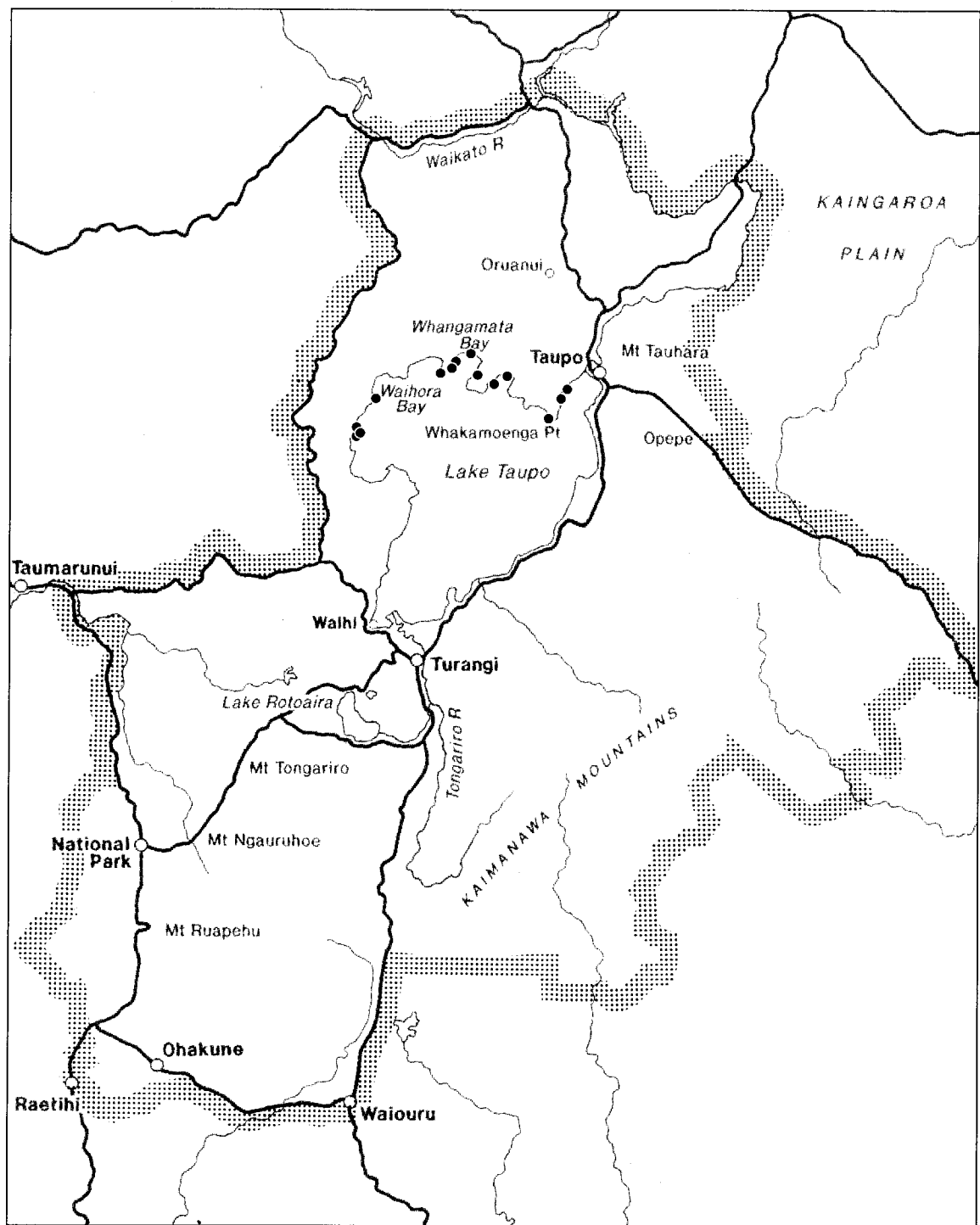


Figure 2. Previously recorded rock art sites visited.

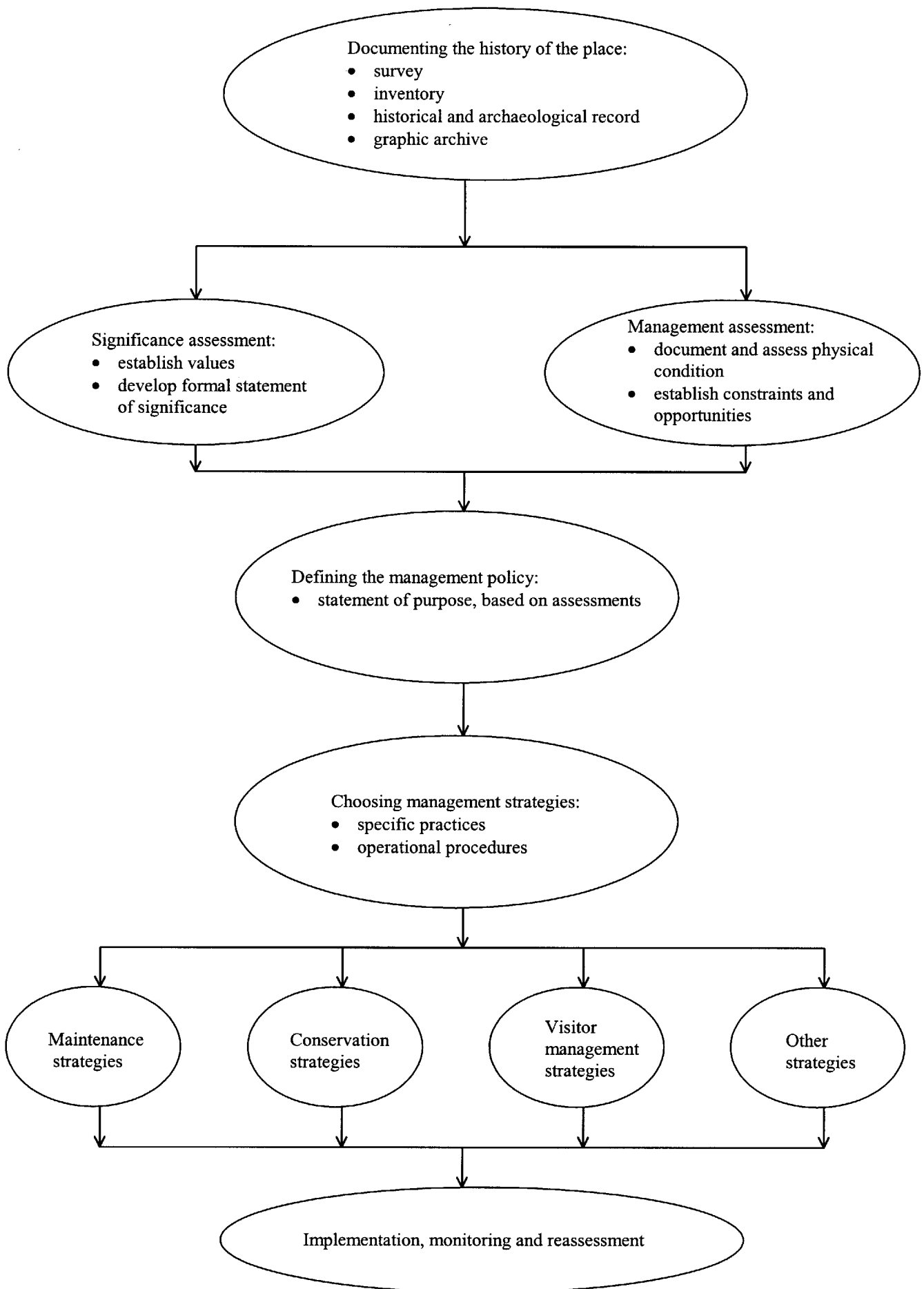


Figure 3. Historic heritage conservation planning process (after Pearson & Sullivan 1990).