

Threats to archaeological features within the redoubt and village area, Opepe Bush Scenic and Historic Reserve, Taupo

SCIENCE & RESEARCH INTERNAL REPORT NO.168

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Published by
Department of Conservation
P.O. Box 10-420
Wellington, New Zealand

Science & Research Internal Reports are written by DOC staff on matters which are on-going within the Department. They include reports on conferences, workshops, and study tours, and also work in progress. *Internal Reports* are not normally subject to peer review.

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ISSN 0114-2798

ISBN 0-478-21816-8

Cataloguing in Publication

Williams, A. M. (Ann Mary), 1962-

Threats to archaeological features within the redoubt and village area,
Opepe Bush Scenic and Historic Reserve, Taupo / Ann Williams.

Wellington, N.Z. : Dept. of Conservation, 1999.

1 v. ; 30 cm. (Science & Research internal report, 0114-2798 ; no.
168.)

Includes bibliographical references.

ISBN 0478218168

1. Historic sites—New Zealand—Taupo District—Conservation and
restoration. 2. Historic sites—New Zealand—Taupo District—
Environmental aspects. 3. Opepe Bush Scenic and Historic Reserve
(N.Z.)—Management. I. Title. II. Series: Science and Research internal
report ; no. 168.

333.784099339 20

zbn99-025296

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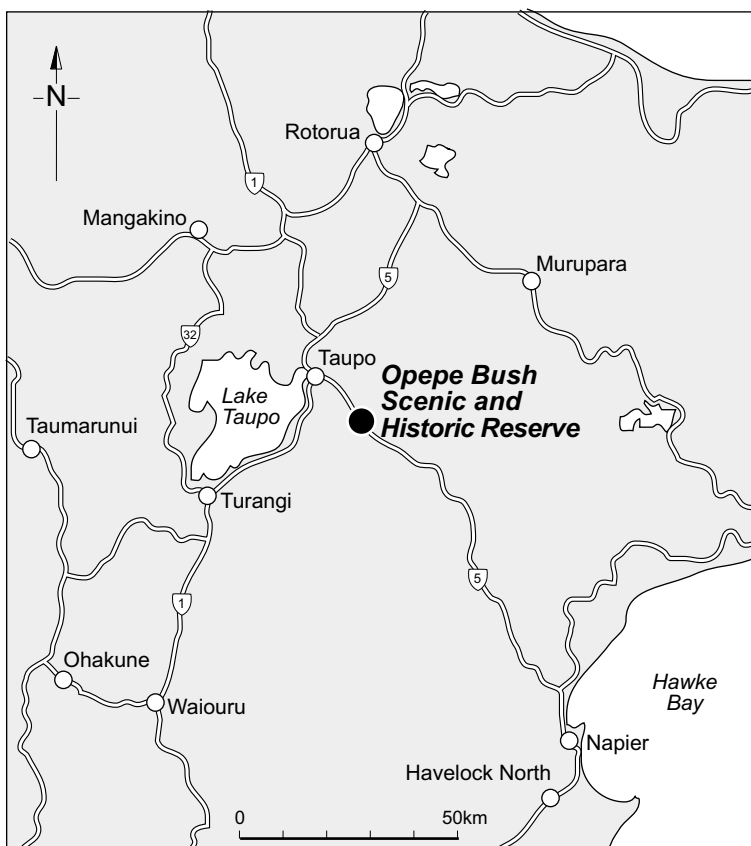
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Abstract

Opepe Bush Scenic and Historic Reserve is managed by the Department of Conservation (DOC) and is of national importance in relation to historic events that occurred there. Threats to historic features within the Opepe village and redoubt area are discussed. These threats include vegetation cover and regeneration, fossicking, definition of reserve boundaries, and visitor impact. Experience outside New Zealand suggests that signs may be effective in reducing visitor impact on historic resources. Given the isolation of the reserve, this is likely to be one of DOC's main ways to protect the historic features from adverse visitor impact.

1. Background

Opepe Bush Scenic and Historic Reserve (referred to in this paper as 'the reserve') lies about 16 km south-east of Taupo on the Napier-Taupo Highway (Figure 1). The reserve is managed by the Tongariro/Taupo Conservancy of the Department of Conservation (DOC). Events important in New Zealand's history occurred at Opepe. The reserve contains a number of historic places relevant to both Maori and European occupation.



In June 1869, a small contingent of Bay of Plenty Volunteer Cavalry, camped at Opepe, was attacked by Maori parties associated with Te Kooti Arikirangi. Many of the cavalry who lost their lives are buried in the Opepe cemetery which lies within the reserve. The Opepe Armed Constabulary Redoubt was built nearby soon after this engagement and formed one of seven armed constabulary posts built between Napier and Taupo. At least two of these posts lie within the Tongariro/Taupo Conservancy on land administered by DOC. The remains of Opepe village are located close to the redoubt on either side of the old road connecting Taupo and Hawkes Bay (see Figure 2 and 3).

Figure 1. Location of Opepe Bush Scenic and Historic Reserve, Tongariro/Taupo Conservancy.



Figure 2. Opepe village and redoubt, c. 1870. (Photographer: Russell James Duncan 1855-1946.) Historic features visible in the photograph include the redoubt stockade, the old Opepe Road, and huts and other structures built on the terraces to the left of and above the road. Courtesy of Alexander Turnbull Library, National Library of New Zealand, Te Puna Matauranga o Aotearoa. F18077_{1/2}.

There has long been public interest in Opepe. Recently, this interest has taken the form of suggestions for development of the reserve, including reconstructions of built structures and erection of sign-boards. However, with the exception of the Tongariro/Taupo Conservancy Summer Programme, little on-going visitor interpretation of historic resources, particularly in the village and redoubt area, has been undertaken to date. Conservancy managers recognise that a reserve management strategy is essential to the appropriate management of the reserve. To this end, preliminary bibliographic research was undertaken by DOC's Science and Research Division in 1993. In 1994, a joint Conservancy/Science and Research Division project was established. Objectives included the identification of threats to the historic resources in the reserve and the mapping of those resources. The area of the reserve containing the Opepe redoubt and village has received most attention to date. This report, therefore, addresses threats relating to this area: these include vegetation cover and regeneration, erosion, fossicking, definition of reserve boundaries, and visitor impact. A reserve management plan would be an appropriate vehicle for a fuller discussion of threats and of methods for enhanced protection of the archaeological features within the reserve.



Figure 3. Opepe village and redoubt, c. 1880. (Photographer: possibly Burton Brothers 1868-1898.) Historic features visible in the photograph include the redoubt stockade, the old Opepe Road, and the hotel (with a line of washing in front). Comparison of this photograph with the 1871 photograph shows that considerable modification of the bank to the left of the road has taken place in the intervening decade and that more substantial structures have been built in this area. *Courtesy of Alexander Turnbull Library, National Library of New Zealand, Te Puna Matauranga o Aotearoa. F2673_{1/4}*

1.2 RISK MITIGATION

According to ICOMOS New Zealand (1995) ‘all places of cultural heritage value should be assessed as to their potential risk from any natural process or event. Where a significant risk is determined, appropriate action to minimise the risk should be undertaken.’ The concept of identifying risks to historic features within Opepe Bush Scenic and Historic Reserve and the taking of appropriate action to minimise such risks is, therefore, consistent with ICOMOS (International Council on Monuments and Sites) principles. Stabilisation is defined as arresting the processes of decay. Although ICOMOS New Zealand (1995) appears to emphasise risks arising out of natural processes, this report deals with both natural and cultural processes. Natural processes include vegetation cover and regeneration and erosion. Cultural processes include fossicking, definition of reserve boundaries, and visitor impact.

2. Threats to the historic resources in the village and redoubt area of the reserve

2.1 VEGETATION COVER AND REGENERATION AND EROSION

2.1.1 Impact

Discussions between Science and Research Division and Conservancy staff included the issue of vegetation regenerating on the historic features in the reserve cleared during the survey and mapping programme. Conservancy staff identified the potential problems associated with keeping large amounts of the reserve in a state which requires a high level of maintenance, raising issues of public access and interpretation.

Other than during exceptionally heavy rainfall, the risk of increased natural erosion of the cleared areas seems minimal. Due to their pumiceous nature, however, soils of the Taupo district are susceptible to gullyng.

There are several large trees, particularly pine trees, in the redoubt and village area and some are nearing the end of their lives. Wind throw of dead trees has the potential to cause considerable damage to archaeological features.

2.1.2 Management intervention

At least as an interim measure, the ongoing work at the reserve would benefit from maintaining a sufficiently low level of vegetation on cleared features so that the features may be seen. Vegetation cover will be relevant to Conservancy decisions about public access to and interpretation of historic features within the reserve. A vegetation cover that enhances visibility and public interpretation may not be suitable in areas deemed fragile and sensitive, where a cover that conceals and discourages access may be appropriate. Knowledge of vegetation already present in the reserve may be usefully employed in this regard. It is suggested that a joint management-scientific inspection be undertaken to provide advice on vegetation cover, situation, and presentation. This could be done as part of the development of a management plan for the reserve.

Should gullyng or any other erosion occur on any of the cleared areas, mitigatory actions might include placement of matting or netting over the eroded areas followed by the planting of appropriate vegetation (see Berry & Brown 1994). Monitoring of historic features during vegetation maintenance work for indications of erosion and deterioration will help give early warning of when remedial, restoration, or stabilisation work is required.

Inspection of trees for 'soundness' could be done during the 1999-2000 financial year and consideration given to the removal of unsound trees and particularly large trees. Trees relevant to the history of the site may need to be

replaced by new trees of the same species. Wild seedling pines should be removed to prevent disturbance caused by their growth and demise.

Long-term stabilisation and preservation of the historic features will be a paramount goal of management planning. Attention should be paid to choosing a vegetation cover which will ensure that this goal is achieved.

2.2 FOSSICKING

2.2.1 Impact

The Opepe Reserve has a history of fossicking (see, for example, Lands and Survey 1984). The redoubt and village are a main target, with people presumably looking for bottles, crockery, buttons, and other colonial memorabilia. Original pit-sawn telegraph poles have been removed from the reserve (Mitchell 1983).

In his 1983 paper, Mitchell discusses fossicking at Opepe and at Rununga, the latter also on land administered by Tongariro/Taupo Conservancy. He records that the Opepe hotel site had been badly fossicked. During a September 1983 visit to the reserve, Mitchell discovered that fossickers had exposed a pit in the centre of the stockade which contained items used by the Armed Constabulary. He conducted a salvage excavation on the pit, which he suggested served as an early magazine. The pit contained matchboxes and Enfield bullets dating to the early 1870s and a large number of tools, including 99 spade and shovel heads, 21 axe heads, saws, and wedges. Pieces of boots, glassware, and crockery were also present. The evidence of fossicking and the amount of material Mitchell recovered indicates a high potential for finding more artefacts in the redoubt and village area and, therefore, a high risk of more fossicking.

The threat posed by fossicking to the preservation of the historic features within the reserve is still present. Fresh fossick holes were noted during a visit to the reserve in September 1993 by DOC staff. Material scattered about on the surface as a result of fossicking activities included bottles, jars, iron ware, and pieces of boots, subsequently reported on by Ritchie (1993). Furthermore, at least four wooden posts, installed as survey markers during the December 1994 field season, have also been taken. In the light of ongoing damage, consideration needs to be given to appropriate ways of reducing the threat of fossicking.

2.2.2 Management intervention

The threat of fossicking is increased by the relative isolation of the reserve from official presence. It is further increased by the somewhat uncared-for appearance of some of its historic features (Ritchie 1993). In general, the historic features within and around the village and redoubt are not identified by any publicly apparent form of management attention, such as signs or notices, or fences or barriers. At least in the short term, DOC is unlikely to be able to control fossicking through such direct measures as regular monitoring and patrolling of the reserve. Although less effective than direct approaches in reducing the incidence of fossicking, indirect measures may be DOC's most viable option (Nickens 1993). Indirect measures include encouraging greater

numbers of visitors to the reserve, improving access, erecting interpretative and warning signs, producing pamphlets and other promotional material, and providing guided tours. An obvious and attractive by-product of such indirect measures is the potential to increase public awareness about historic features in the reserve.

Opinion seems to be divided on the effectiveness of warning and/or interpretative signs in reducing unauthorised digging of historical features. Some field studies indicate the success of warning or protective signs in particular in reducing fossicking, yet other investigations are less clear about the impact of signs (Nickens 1993). Based on a review of literature, however, Nickens (1993) suggests that signs are generally effective in reducing adverse visitor impact on historic sites.

The International Charter for Archaeological Heritage Management (ICOMOS 1990) recognises that the presentation of archaeological features to the public is an important way of promoting their protection (see also ICOMOS New Zealand 1995). In addition, the Charter notes that the state of knowledge is continually changing and that information presented to the public needs to be updated accordingly. ICOMOS New Zealand (1995) recognises that 'any interpretation should not compromise the values, appearance, structure or materials of a place, or intrude upon the experience of the place'.

On-site signs, both warning and interpretative, are particularly important if regenerating vegetation on historic features cleared for mapping purposes is to be kept to low levels for any length of time. The very act of clearing features for mapping may render them more susceptible to fossicking and other forms of malicious damage.

Before installing signs, there should be appropriate determination of the target audience, of the primary message that the signs are to convey, and of the format through which the message will be communicated. Nickens (1993) contains material that may be of assistance in designing signs. In addition, the effectiveness of a sign programme could be monitored as part of routine maintenance work at the reserve.

Researchers in Australia have observed 'that any protective procedure, including sign posting, will work best when it is but one part of a comprehensive and integrated protection context. For example, the effectiveness of properly designed warning and interpretative signs will be enhanced when combined with other approaches such as visitor centres, self-guided tours, maps and brochures, well-designed paths or boardwalks, and barriers, if necessary' (cited in Nickens 1993: 31, 33). Given this and the remoteness of Opepe Reserve from field centre or Conservancy offices, consideration might be given to combining signs with a pamphlet along similar lines to that produced by Williams & McFadgen (1994).

2.3 VISITOR USE

2.3.1 Impact

The archaeological features within the village and redoubt area are vulnerable to damage caused by visitor trampling and to the formation of tracks created by pedestrian movement across the site. Such trampling or tracking would have an adverse affect upon the site.

2.3.2 Management intervention

A protective layer on top of fragile features, such as parts of the redoubt, may protect these features in the longer term from trampling and erosion. Specialist scientific advice should be sought before any such action is taken.

Alternatively, protection might be achieved by installing a viewing tower so that visitors can clearly see the layout of the redoubt without having to walk over the earthen banks. In the late 1970s, viewing towers were erected at both the lower and the upper redoubts at Te Porere in response to the deterioration caused by visitors walking along the top of the earthen breastworks (Jones & Simpson 1995). At the lower redoubt, a sign was also installed which requested people to keep off the walls. No such sign is present at the upper redoubt. Today, there is little indication of pedestrian traffic on the walls of the lower redoubt. There is, however, indication that this activity is still occurring at the upper redoubt and is contributing to the destabilisation of the walls. The combination of viewing towers and signs has been recognised by Jones & Simpson (1995) as successfully reducing adverse visitor impact on the lower redoubt; their case study substantiates the call for suitable signs at the upper redoubt and provides valuable lessons which may be applied to Opepe.

Protection might also be achieved by providing boardwalks around features to direct pedestrian movement or by fencing off features. The construction and erection of any intrusive structures such as viewing towers, boardwalks, or fences should be preceded by an investigation into the impact of such structures on the historic landscape.

Whatever action is taken at Opepe, visitor impact should be monitored and preventative or mitigatory action taken if visitor usage is seen as having an adverse affect on archaeological features.

2.4 DEFINITION OF RESERVE BOUNDARIES

2.4.1 Impact

Mapping of the archaeological features in the village and redoubt area was tied into the New Zealand cadastral mapping system. This made it possible to show the location of archaeological features in relation to land boundaries. It was found that a considerable number of archaeological features fall within the reserve boundaries of the old Napier-Taupo Road (Figure 4). Furthermore, it was found that the old Napier-Taupo Road had not been closed following the road's realignment to the present State Highway 5. Archaeological features within the road reserve boundaries, therefore, are not legally part of the Opepe

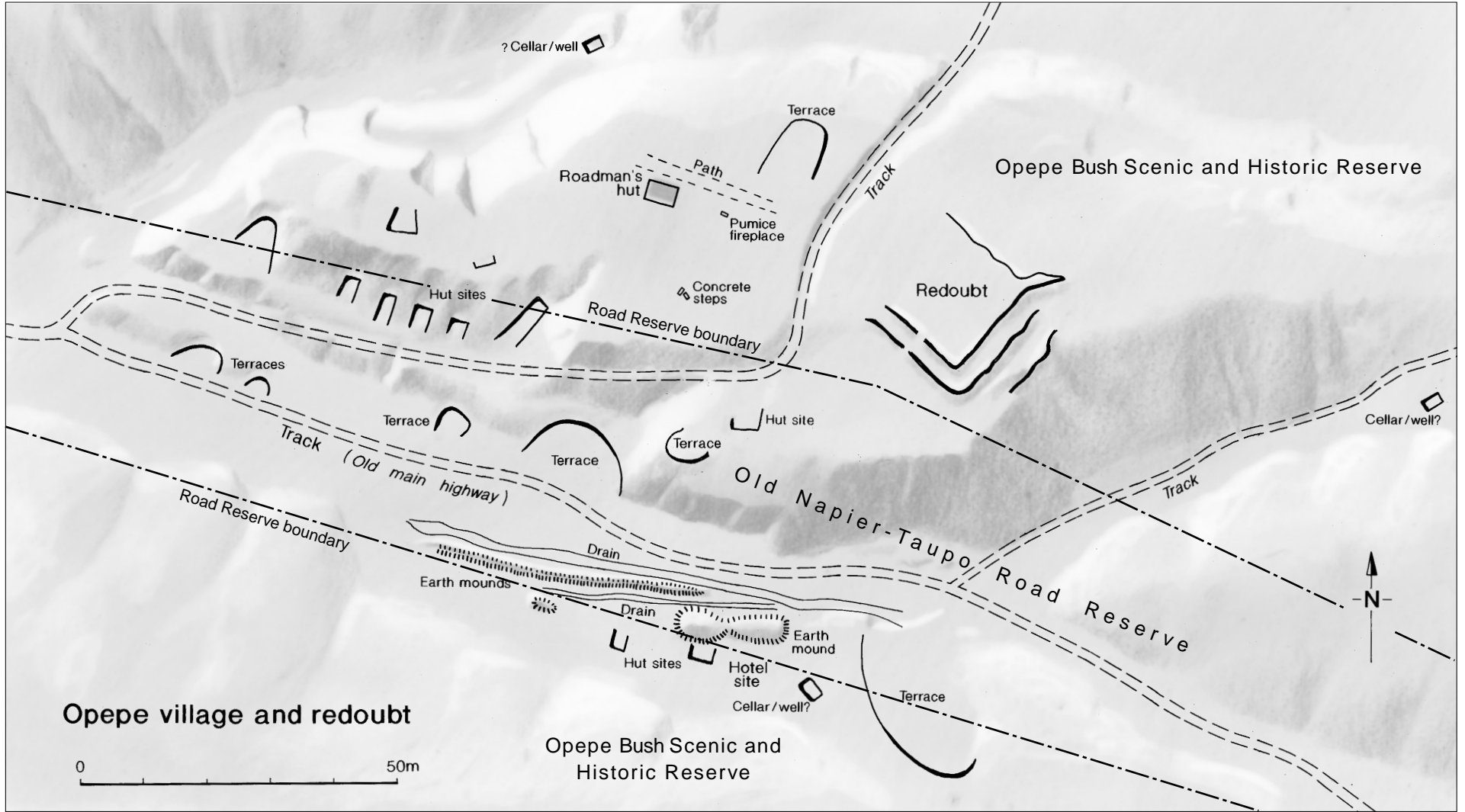


Figure 4. Selected archaeological features in relation to the Old Napier/Taupo Road Reserve.

Bush Scenic and Historic Reserve (pers. comm. Bruce McFadgen, Science & Research Unit, DOC).

In or about 1993, earthmoving machinery caused damage to vegetation alongside State Highway 5. It is not known whether this vegetation was located on Opepe Reserve or on State Highway 5.

2.4.2 Management interventions

Consideration should be given to having the old Napier-Taupo Road closed and the land vested in DOC as part of the Opepe Bush Scenic and Historic Reserve. Consideration should also be given to clearly defining the boundary between State Highway 5 and the reserve. Furthermore, consideration should be given to restricting vehicular access to the reserve via the old Napier-Taupo Road by the erection of an appropriate barrier at the point at which this road intersects with State Highway 5.

3. Recommendations

3.1 VEGETATION MANAGEMENT

- Maintain vegetation on cleared features at a sufficient level for the features to be seen so that options for public interpretation are retained.
- Carry out mitigatory actions should erosion or slumping occur on any of the cleared areas. Such actions might include placement of matting or netting over the eroded areas, followed by the planting of appropriate vegetation (see Berry & Brown 1994).
- As part of the decision making process on the long-term use of the reserve, undertake a joint management/scientific inspection to provide advice on vegetation cover, situation, and presentation of historic features. Herwi Scheltus, Landscape Architect with Tongariro/Taupo Conservancy, and Kevin Jones, Science & Research Unit, could be invited to participate.
- Remove unsound trees. Trees relevant to the history of the site may need to be replaced by new trees of the same species. Where practical, remove wild seedling pines immediately once noted.

3.2 SIGNS

Short-term objectives

- Improve signs along the highway on either side of Opepe to encourage visitors to the reserve.
- Improve road signs at the main track entrance. The existing signs should be upgraded to incorporate mention of specific relevant features which can be seen; particularly those cleared as part of the survey and mapping programme, such as the redoubt, the village, and the hotel site.

- Precede the erection of any signs by an investigation into the impact of such signs on the historic features and landscape.

Medium-term objectives

- Erect roadside signs that provide an overall ‘guide’ to Opepe Reserve, explaining the historical significance of the reserve and supplying a little detail on the main features (such as the redoubt, the village, the old Opepe Road, the activities of pit sawers, and such like). International research suggests that larger, more detailed interpretative signs may be appropriate at points of entry to reserves (see Nickens 1993).
- Install signs on or near the historic features cleared for mapping during the survey and mapping programme in order to facilitate:
 - Public understanding of the detrimental effects such activities as fossicking and pedestrian traffic across the earthen banks of the redoubt and over terraces can have on the long-term preservation of the features. In addition, material explaining the legal implications of interfering with historic features could be included on such signs.
 - Ongoing public interpretation of DOC’s work on historic resources within the reserve. Signs should be located close to, but not obscuring views of, relevant features. Experience outside New Zealand suggests that on-site interpretative signs are most effective when the signs are small, contain short, unambiguous, easily understood messages, and include diagrams, photographs, or pictures (see Nickens 1993). Such signs are consistent with ICOMOS New Zealand (1995) principles.
- Precede the erection of any signs by an investigation into the impact of such signs on the historic features and landscape.

Longer-term objectives

- Upgrade signs located on or near historic features over time to include additional text and pictorial information.
- Consistent with experience outside New Zealand, combine signs with a pamphlet along similar lines to that produced by Williams & McFadgen (1994). Such a pamphlet could be made available through Conservancy and Field Centre Offices as well as through Information Centres and accommodation lobbies.
- Continue to use the Tongariro/Taupo Conservancy Summer Programme guided tours to enhance the public profile of the reserve.

3.3 VIEWING TOWERS AND BOARDWALKS

- Precede the construction and erection of any intrusive structures such as viewing towers or boardwalks by an investigation into the impact of such structures on the historic features and landscape.

3.4 FENCING

- Subject to the Reserves Act, it may be desirable to temporarily fence off particular areas, such as the redoubt, in order to direct or channel pedestrian traffic away from such areas. The fencing should permit clear views of the features within.
- Any fencing should be preceded by an investigation into the impact of such fencing on the historic features and landscape.

3.5 LEGAL BOUNDARIES

- Give consideration to having the old Napier/Taupo Road closed and the land vested in DOC as part of the Opepe Bush Scenic and Historic Reserve.
- Give consideration to restricting vehicular access to the reserve via the old Napier-Taupo Road by the erection of an appropriate barrier at the point at which this road intersects with State Highway 5. The line of the road from its intersection with State Highway 5 to the village should be inspected for archaeological sites during the preparation of the management/concept plan.

Prior to any implementation of the above recommendations, further work on a number of issues will need to be completed. Such issues include the form and wording of signs, investigation into the impact of boardwalks, viewing towers, or other intrusive structures on the historic landscape, and, subject to the results of such investigation, obtaining and considering costings for the construction and erection of such structures.

4. Acknowledgements

Grateful thanks are extended to Aidan Challis, Paul Dingwall, Laura Gibson, Kevin Jones, Harry Keys, Bruce McFadgen, Terry Slec, and Tony Walton for their feedback on drafts of this paper, to staff of the Taupo Field Centre and the Turangi Conservancy Office for their assistance particularly in the field, to Chris Edkins for drawing Figure 1, to Bruce McFadgen for producing Figure 4, and to the Alexander Turnbull Library, National Library, Wellington, for permission to reprint the historic photos.

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