

ARCHAEOLOGICAL SURVEY TUAMOTU ISLAND, GISBORNE

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OCTOBER 2005



Department of Conservation
Te Papa Atawhai

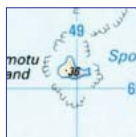
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Published by
Department of Conservation
Napier Conservancy
PO Box 644
Napier, New Zealand
ISBN 978-0-478-14392-8 online PDF
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INTRODUCTION

Ngati Oneone, Tairawhiti Polytechnic, Gisborne District Council, Eastland Infrastructure and the Department of Conservation have formed a trust with the intention to reforest Tuamotu Island and provide a safe place for threatened plant species. The long-term aim is to reforest the island using ngaio as a cover plant with under-planting of other species such as karaka and other coastal natives.

This archaeological survey was commissioned by the Gisborne Conservancy of the Department of Conservation in order to determine the nature and extent of archaeological resources on Tuamotu Island and to provide an assessment of effects on archaeological resources by the proposed planting programme.

An archaeological site, as defined by the Historic Places Act 1993, 2(a)(i) and 2(b) is, “any place in New Zealand that was associated with human activity that occurred before 1900: and is or may be able through investigation by archaeological methods to provide evidence relating to the history of New Zealand”. Archaeological sites may not be destroyed, damaged or modified except pursuant to an authority granted under section 14 of the Historic Places Act.

An assessment of the cultural significance of an area can only be competently made by the affected tangata whenua. It should be noted that an assessment of cultural significance might not necessarily correlate with an assessment of archaeological significance.

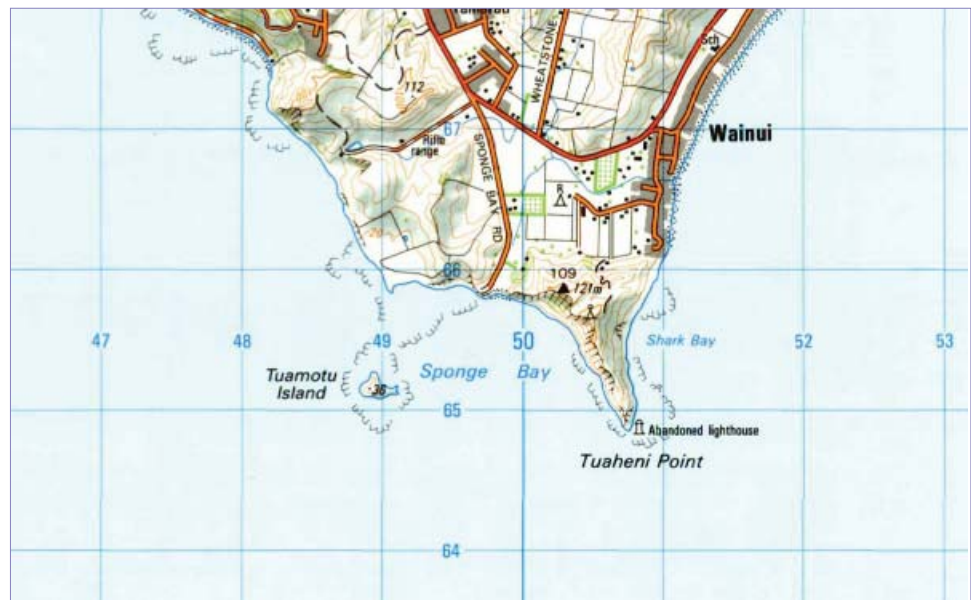


Figure 1. Topographic map showing the location of Tuamotu Island (NZMS 260 Sheet Y18).

METHODOLOGY

Prior to the survey the records of the New Zealand Archaeological Association (N.Z.A.A.) were consulted in order to determine if archaeological sites have been recorded on Tuamotu Island. Records for archaeological sites located on and in the general vicinity of the Island were examined.

One previously recorded archaeological site is located on the Island (Y18/17). The site was first recorded with the New Zealand Archaeological Association Site Recording Scheme in 1971 and is described as a pa.

Early survey plans were examined for information relating to human activity in the area. Available survey plans including plans produced for the Native Land Court did not provide information indicating the location of traditional prehistoric archaeological sites on the Island. Several plans provided information relating to historic quarry activity on the Island.

Aerial photos were examined for evidence of archaeological or historic features. The earliest available aerial photos were flown by New Zealand Aerial Mapping in 1942. Stereo pairs from this series were examined under a stereoscope in order to determine if earthwork features could be identified. Recent aerial photos of the Island taken in 2003 were also examined at New Zealand Aerial Mapping.

PHYSICAL LANDSCAPE

Tuamotu Island is a small Island of approximately eight acres on the western side of Sponge Bay, Gisborne. It comprises a single principal ridge rising to 36 metres above sea level and two secondary spurs extending to the north and west.

The original morphology of the Island has been significantly modified by late 19th and early 20th Century quarrying. The quarrying has formed a steep quarry face on the northwestern side of the Island and a low scarp on the north side of the Island.

The Island was once connected to the mainland by a rocky shelf that was the location of a smaller Island known variously as Papawhariki¹ or Puakawai. This smaller Island was quarried completely away probably by the late 1800s. The rocky shelf still provides pedestrian access to the Island at low tide.

¹ ML 505



Figure 2. Tuamotu Island viewed from the Sponge Bay lookout. Photo courtesy of Ken Phillips.



Figure 3. View of quarry face on the northern side of the Island. Photo courtesy of Ken Phillips



Figure 4. Quarry face on the western side of the Island. Photo courtesy of Jamie Quirk.



Figure 5. Aerial photo taken in 1943 showing the western quarry face on Tuamotu Island and the rock shelf connecting the Island to the mainland. (New Zealand Aerial Mapping, Negative No. 440/15 flown 22 October 1942)

BACKGROUND

PRE EUROPEAN HISTORY

Tuamotu Island was the location of a defended pa, a number of surface features of which are still clearly visible including occupation terraces, shell middens and a defensive ditch and scarp.

Shaw writes that the pa was “possibly occupied since 1690 referencing information from Rongo Halbert, from a whakapapa with each generation of 25 years and that it was the pa of Tuapaua, a chief and ancestor of the Te Kani family, Ngati Ira tribe, East Coast”.²

Shaw provides the name Ruruhangenge³ for the summit pa. However, with regard to the name of the pa on Tuamotu, Salmond cites land court evidence by Ihaka Ngarangione⁴ referring to the pa called ‘Ruruhangehange, or another called Rarohau, both of which were said to have been strongholds on the Island’⁵ at the time of Cook’s arrival at Turanganui.

Oliver in his summary of the Gisborne Harbour Board and Public Works Land Takings states that Tuamotu Island was the site of an old Maori burial ground.

The first description of the pa comes from Cook’s Voyage around the Gisborne coast in 1769. Joseph Banks describes it as:

“On a small peninsula at the NE head we could plainly see a regular paling⁶, pretty high, inclosing the top of a hill, for what purpose many conjectures were made: most are of the opinion or say at least that it must or shall be either [a] park of Deer or a field of oxen and sheep.”⁷

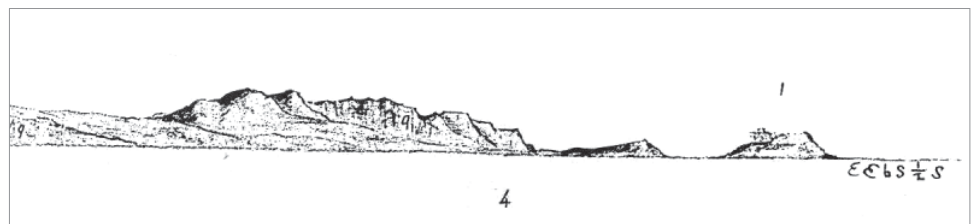


Figure 6. Sketch of mainland and Tuamotu Island by Herman Diedrich Sporing 1769.

WHALING AT PAPA WHARIKI

The next mention of Tuamotu Island in the archives relates to J.W. Harris’s whaling activities at Papawhariki. In a letter from Harris to E. Deas Thompson dated 10 November 1840, Harris writes “On the eighth day of July 1840 I was presented by the Native Chiefs of the place with a piece of land on the north side of Poverty Bay commencing from a rock called by the Natives Te Opoko ou ma ra tai, a little distance from the heads, to the extremity of the point laid down in the charts as te Tuamotu. I must also add I have had several houses erected on the above land and a whaling station there as far back as Nov 1838”.⁸

² NZAA Site Record form N98/25

³ Salmond 1991:135 refers to the pa as Ruruhangehange.

⁴ Gisborne Minute Book 1:235-36

⁵ Salmond 1991:135

⁶ The ‘paling’ was the palisades of the pa

⁷ Banks, Vol 1. P.400

⁸ Letter from Harris to E. Deas Thompson 10 November 1840. in R. Guscott 1943



Figure 7. Part of Cook's chart of the East Coast accurately recording Tettuamotu (Te Tuamotu).
(From Salmond 1991:136)

was gazetted. On 13 September 1886 the Native Land Court awarded land near Tuamotu Island to Hirini Te Kani and Edward Harris to convey to the Gisborne Harbour Board for quarrying.

In December 1886 a 5.8km tram line was opened to commence transporting rock from Tuamotu Island to the block yard on the east bank of the Turanganui River.



Figure 9. Photo showing Tuamotu Island (left) and Puakawai Island (right) at the commencement of quarry operations in the late 1880s. Quarry plant can be seen to the right of Puakawai Island (enlarged in Figure 10). Photo courtesy of Gisborne Museum

Robert Knox and Co began quarrying Tuamotu but delays in supply cost him the contract which was later given to Mr P McLouglin. McLouglin also struggled to meet the demands of the Harbour Board. The problem seemed to be that the harder stone which the board required had to be separated from the softer stone and overburden of which there were large quantities.

‘The plan of the quarry [Figure 12] at Tuamotu Point shows the railway line leaving the shore and traveling over an embankment to Papawhariki Island and from there over a second embankment to Tuamotu Island. A letter to the new contractor from the engineer warning not to leave any rolling stock or equipment on either of the two embankments would appear to indicate that they were covered with water at high tide’.¹⁴

On reaching Tuamotu Island the railway branched to the western quarry face and the low eastern slopes. It is not clear if the projected rail along the length of the southern shore was ever constructed.

Papawhariki Island was entirely removed during the early quarry operations as well as an enormous amount of stone from Tuamotu Island itself. It is conservatively estimated that some 67,895 cubic metres of rock was transported from Tuamotu to the Port of Gisborne via the railway over a period of nine years.¹⁵

¹⁴ Wood 1996:12

¹⁵ Wood 1996:12



Figure 10. Quarry plant on the landward side of Puakawai Island.

The Harbour Board ran out of money in the late 1880s and the quarry operation at Tuamotu was closed. The plant there was uplifted by the contractor and the locomotive and rolling stock withdrawn. The rails on the two embankments were taken up and placed on the foreshore. The Sponge Bay railway sat and rusted for several years until the Roads Board and Cook County Council demanded that the lines be removed from Wainui and Crawford Roads. This was carried out in 1895.

Figure 11. Enlargement of an aerial photo flown in October 1942 showing the jetty still standing at that time. (Part neg. 440/15 NZAM)

In 1905 the harbour breakwater was extended by 60 metres. The bulk of the stone for this extension came from Tuamotu Island where the Board built a small jetty to allow the lighters to come in and tie up. The Breakwater extension was completed in 1914. Further wharf developments involving the separation of the river from the wharf to eliminate silting problems resulted in further quarrying on Tuamotu in the early 1920s.



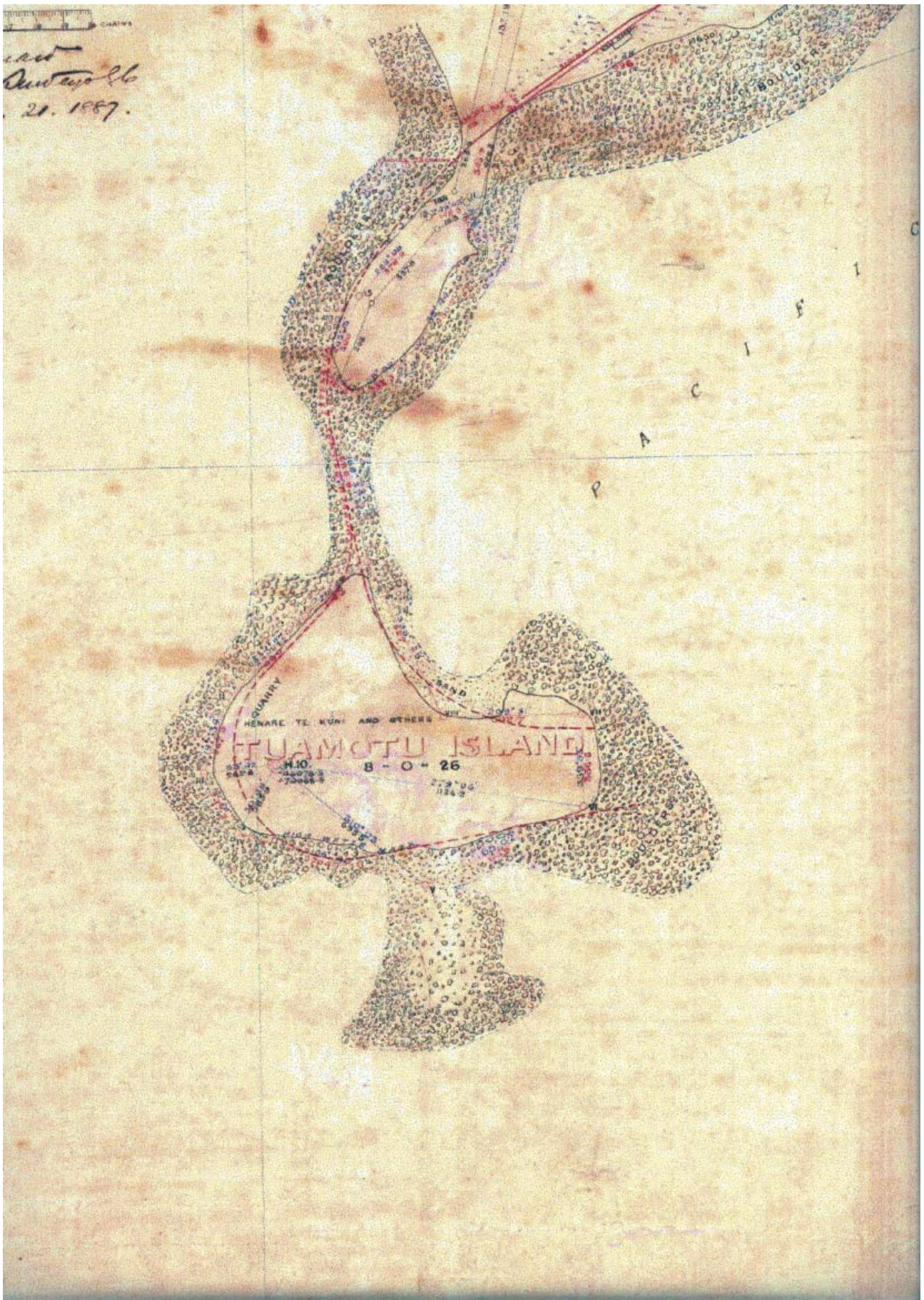


Figure 12. Part SO 305 produced in 1887 showing 'Plan of Railway Under Construction' (dotted red lines)



Figure 13. Remains of jetty used c. 1905-1914 and 1920s. Quarry face possibly dating to the 1880s. Photo courtesy of Jamie Quirk



Figure 14. Railway iron in intertidal zone near the jetty remains. These irons may relate to rock transporting to the jetty during 20th Century quarrying rather than remnants of the 1880s tram line which was uplifted in 1890. Photo courtesy of Ken Phillips



Figure 15. Remains of a roughly hewn concrete bench on the west side of the Island.
Photo courtesy of Ken Phillips

HARRIS'S CANON

It is possibly during the last quarrying episode that the discovery of an old cannon occurred on the Island that is said to have once been owned by J.W.Harris. Lambert writes that the cannon was once used by Harris to advantage in assisting his Maori friends in an intertribal war.¹⁶

¹⁶ Lambert 1925:353

THE ARCHAEOLOGY OF TUAMOTU ISLAND

PREVIOUS ARCHAEOLOGICAL RESEARCH

Visible archaeological remains of Ruruhangenge Pa remain reasonably well defined. Shaw recorded the Island as an archaeological site in 1971 and describes the remains as simply a 'small island pa with midden visible on a low area to the east'.

Kevin Jones visited the pa in 1993 providing additional description and a sketch plan of the pa. Jones writes 'the platform is triangular in plan, about 35 m long and 15 m at its widest. There are transverse scarps or ditches to the north-east and west, the former much eroded away to the northwest and very short. There may be pits on the platform but are difficult to see for the cover. To the west and north east are lower external platforms.'¹⁷

Ken Phillips completed an archaeological survey of the Island in July 2005. The survey involved an inspection of the summit pa, north and eastern spurs and the coast line. Dense vegetation cover prevented accurate archaeological assessment in many areas.

The lower eastern slopes are relatively level and these were inspected by way of pedestrian transects however again dense ground cover, up to one metre high in places, prevented accurate archaeological survey.

RURUHANGENGE PA, NEW ZEALAND ARCHAEOLOGICAL SITE RECORD Y18/17 PA

The Defended Summit

Visible earthwork features associated with the pa are largely confined to the summit of the Island, however it is highly probable that subsurface archaeological features associated with pre European Maori occupation extend over all areas of level to moderately sloping ground on the Island.

The defended summit is relatively small in area and likely served as a citadel type defensive position during times of threat, however, extensive shell midden eroding from the southern terrace suggests it was permanently occupied. Probable crop storage pits and house floors are evidenced on the summit by shallow rectangular depressions while a shallow metre wide trench extends north south across the eastern end of the upper terrace possibly indicating the location of a defensive line or as Jones suggests a slump fissure.

Muted terracing extends from the eastern defensive ditch down to the level eastern end of the Island.

¹⁷ Jones 1993 - NZAA Site
Record Form Y18/17

Occupation on the Lower Eastern Slopes

The principal undefended occupation area is likely to have been on the level to gently sloping ground on the low eastern side of the Island. Currently obscured by metre high ground cover it was difficult to define surface archaeological features in this area, however, archaeological features and artifacts are exposed in the coastal erosion scarp surrounding this part of the Island. Stratigraphy of the southern scarp includes clean sand overlying earlier topsoil development probably indicating erosion and wind blown sand deposition following the commencement of quarry activity.

One possible house floor was recorded on the southern side of this area while shell midden, possible pit features and artifacts including chert cores and flakes were noted in the coastal erosion scarp. The chert cores comprised water rolled cobbles of locally sourced grey chert some of which had flakes removed from the water rolled cortex.

Chert is Gisborne's notable high quality stone material and is found in early period sites (1300-1500 AD). It was recently found in an archaic site on the west bank of the Turanganui River in the form of flake material fashioned into quality drill points.

It is possible that the occurrence of chert artifacts is indicative of relatively early settlement on the lower eastern slopes of Tuamotu Island.



Figure 16. Flaked chert core found on the eastern side of the Island eroding from a coastal midden exposure (Figure 18).



Figure 17. View of the lower eastern slopes with Norfolk Pines where significant pre European Maori occupation occurred.



Figure 18. Exposed cultural layer in quarry face on lower eastern slopes of Tuamotu Island



Figure 19. Pre quarry topsoil layer 'a' buried beneath wind blown sand exposed in south eastern coastal erosion scarp.

HISTORIC ACTIVITY - WHALING QUARRYING

Visible Archaeology relating to the post contact period is restricted to remains of the post 1900 quarrying activity on the northern and western sides of the Island. Visible remains include the remnants of the western jetty (Figure 13), concrete bench (Figure 15) on the northern bay and various machinery components lying on the lower eastern slopes and in the intertidal zone. The function of the concrete bench is unclear but may relate to the tram running from the lower eastern slopes to the jetty on the western side of the Island.

The 1830s whaling activities of Harris are thought to have been confined to the mainland at Papawhariki. However, the discovery of Harris' canon on the Island in the early 20th century may suggest his activities extended onto the Island in some form or another.

IDENTIFICATION AND ASSESSMENT OF EFFECTS

The archaeological survey of Tuamotu Island identified visible archaeological features associated with defended and undefended occupation on the Island by Pre and early contact Maori. Visible features included defensive earthwork on the eastern side of the summit, extensive midden deposits on the southern face immediately below the summit; undefended terracing extending down the eastern slopes and cultural layers exposed in quarry and coastal erosion scarps surrounding the flat distal end of the eastern spur. The extent of Y18/17 is considered to cover all level to moderately steep land on Tuamotu Island including the eastern spur, the southern slopes and the summit.

The proposed planting programme will initially involve limited ground disturbance from spaded planting holes. The growth of trees over time will result in further ground disturbance from root growth and possible wind throws.

All archaeological sites whether recorded or not are afforded legal protection by the Historic Places Act (1993), and may not be modified, damaged or destroyed without prior authority having been obtained under the provisions of Section 11 and Section 12 of the Act.

Archaeological survey and mitigation deals solely with the identification and recovery of the physical evidence of past human habitation. Archaeological methods cannot usually identify the spiritual or cultural values associated with that occupation.



Figure 20. Aerial photo showing areas of archaeological sensitivity.

RECOMMENDATIONS

In order to avoid or mitigate damage to archaeological site Y18/17 and possible unrecorded archaeological sites the following recommendations are provided as points of discussion between the Tuamotu Island Restoration Trust and the New Zealand Historic Places Trust.

- That the New Zealand Historic Places Trust are consulted in order to determine if an NZHPT authority to modify or damage an archaeological site is required to carry out the proposed planting programme.
- That a charitable archaeologist is invited to monitor and record subsurface stratigraphy during the planting programme in order to determine if subsurface archaeological features are encountered.
- That if significant subsurface archaeology is encountered during the planting programme a strategy for the recovery or protection of that information is established.
- Archaeological survey cannot always detect sites of traditional value to Maori, such as wahi tapu. Tangata whenua should be consulted regarding the possible existence of such sites and informed of the recommendations of this report.

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