

Archaeological assessment of effects

Proposed development: Titanium Park

Hamilton Airport

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1 Summary

Robert Dol of the Greenstone Group on behalf of Hamilton Airport commissioned W. Gumbley Ltd to undertake an archaeological and historical assessment for an area of proposed development adjacent the operational Hamilton Airport; called Titanium Park.

A review of historic aerial photographs, historic maps and plans, and a summary of the archaeological data/knowledge including a review of the New Zealand Archaeological Associations (NZAA) database (Archsite) was undertaken. The purpose of this assessment is to determine the effects of the proposed development on archaeological and historical values.

Within the area of proposed works there is no recorded or identified archaeology. The surrounding landscape is flat lowlands punctuated with two hills, a larger and smaller. It was these that were subject to archaeological testing. No evidence for archaeology were identified during testing.

As part of the process tangata whenua should be consulted early in the process to ascertain their traditional history of the area and their cultural values for the area.

2 Introduction

Hamilton Airport are proposing to develop a business and industry hub adjacent Hamilton Airport. They commissioned W. Gumbley Ltd to undertake an archaeological and historical assessment for the proposed works to identify the presence/absence of archaeology within the area of works. The following report is compiled by Matthew Gainsford (Figures 1–2). The proposed works are located within Lot 1 DP 306726, Lot 5 DP 307815, Lot 1 DPS 60613, Lot 1 DPS 89282, Lot 1 DPS 35045.



Figure 1. General location for Titanium Park (Source: LINZ).

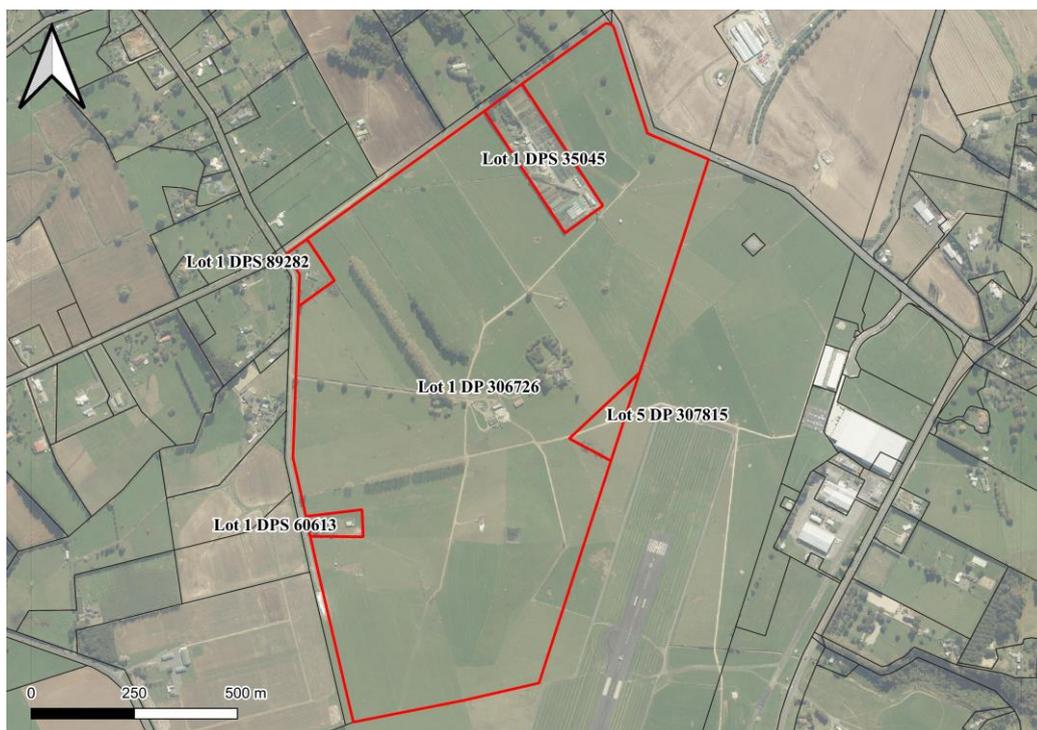


Figure 2. Affected land parcels (Source: LINZ).

3 Statutory requirements

The management of archaeological historical and cultural sites and landscapes are controlled by the Resource Management Act (RMA) and its associated District Plans and Regional Policy Statements. Archaeological sites are also explicitly protected through the archaeological provisions of the Heritage New Zealand/Pouhere Taonga Act (NZHPT). This Act prevents archaeological sites from being destroyed or modified without an authority from Heritage NZ.

3.1 *The Heritage New Zealand Pouhere Taonga Act (HNZPTA) 2014*

The purpose of the HNZPTA is to promote the identification, protection, preservation, and conservation of the historical and cultural heritage of New Zealand (HNZPTA section 3). Emphasis is placed on avoiding effects on heritage.

The HNZPTA provides blanket protection to all archaeological sites meeting the definition in the Act, whether they are recorded or not. Protection and management of sites is managed by the archaeological authority process, administered by HNZPT. It is illegal to destroy, or modify archaeological sites without an authority to do so from HNZPT.

The HNZPTA 2014 (s6) defines an archaeological site as:

- (a) Any place in New Zealand including any building or structure (or part of a building or structure) that:
 - (i) was associated with human activity that occurred before 1900 or is the site of the wreck of any vessel where that wreck occurred before 1900; and
 - (ii) provides, or may provide through investigation by archaeological methods, evidence relating to the history of New Zealand; and
- (b) Includes a site for which a declaration is made under Section 43(1) of the Act¹.

Any person who intends carrying out work that may modify or destroy an archaeological site, or to investigate an archaeological site using invasive archaeological techniques, must first obtain an authority from HNZPT. The process applies to sites on land of all tenure including private, public and designated land. The HNZPTA contains penalties for unauthorised site damage.

The archaeological authority process applies to all archaeological sites that fit the HNZPTA definition regardless of whether the site is recorded in the NZAA Site Recording Scheme or registered with HNZPT; or if the site only becomes known about as a result of ground disturbance; and/or the activity is permitted under a district or regional plan, or a resource or building consent has been granted, or the ground is subject to a designation.

The HNZPTA replaced the *Historic Places Act 1993* (HPA) in May 2014.

HNZPT also maintain the New Zealand Heritage List/Rārangī Kōrero (The List). The List can include archaeological sites. The purpose of The List is to inform members of the public about such places, and to assist with their protection under the RMA.

It is possible that archaeological sites, as defined in the HNZPTA, may be discovered by this project. Any archaeological sites identified during the ground works at this site will be protected under the HNZPTA.

¹ Such declarations usually pertain to important post-1900 remains with archaeological values.

4 Methodology

4.1 Desktop study

For the assessment, a desktop study was undertaken to determine the historical and archaeological landscape, background and previous land uses for the proposed development area. A combination of historic survey plans and aerials were examined to determine former and current land use, owners and references to vegetation or other notations about the area. Heritage Lists and Archsite were viewed to determine if any recorded sites exist within the area of works. From this, archaeological reports were identified and used to generate an archaeological landscape and background for the proposed area of works.

4.2 Site visit

A site visit was undertaken with the client to identify the areas to be developed and to further identify which areas would be tested.

4.3 Test trenching

Test trenching using a 3-tonne excavator was undertaken to determine the presence/absence of archaeology on the hills. Test trenches were excavated on flat seemingly undisturbed areas to determine soil composition, stratigraphy and any archaeological deposits. Trenches were excavated through the upper topsoil layer into the underlying B-horizon (subsoil).

5 Physical environment and setting

The area affected by the proposed development is mainly low lying flat land that surrounds two hillocks. These hillocks are dominant features within the landscape. Soils within the development are a mixture of Horotiu silt loam, Te Kowhai silt loam and Horotiu sandy loam on the lower lying areas and Hamilton clay loam on the hills (Figure 3).

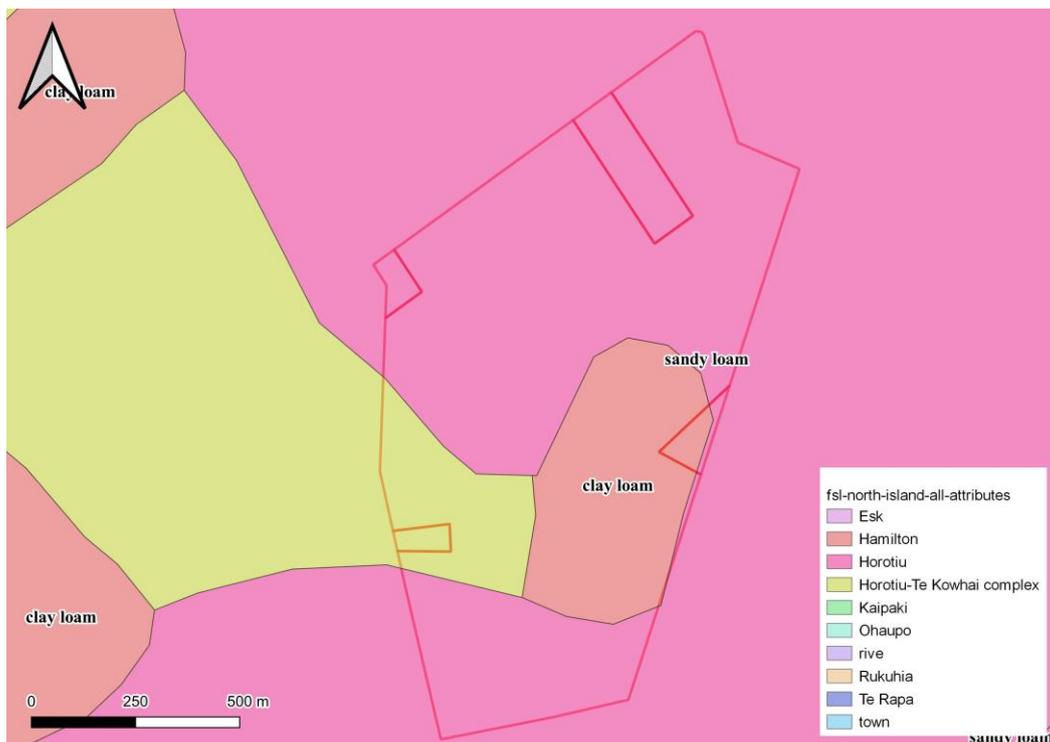


Figure 3. Soil map of the development area.

6 Proposed works

Based on communications with Robert Dol from the Greenstone Group and Dion Merson from Hamilton Airport the proposed works will modify the entire proposed area of works. The larger of the two hills will be entirely removed the smaller hill will be landscaped/modified, flat areas will also be developed according to the plans below (Figures 4-5).



Figure 4. Overview of Titanium Park (Source: Harrison Grierson).

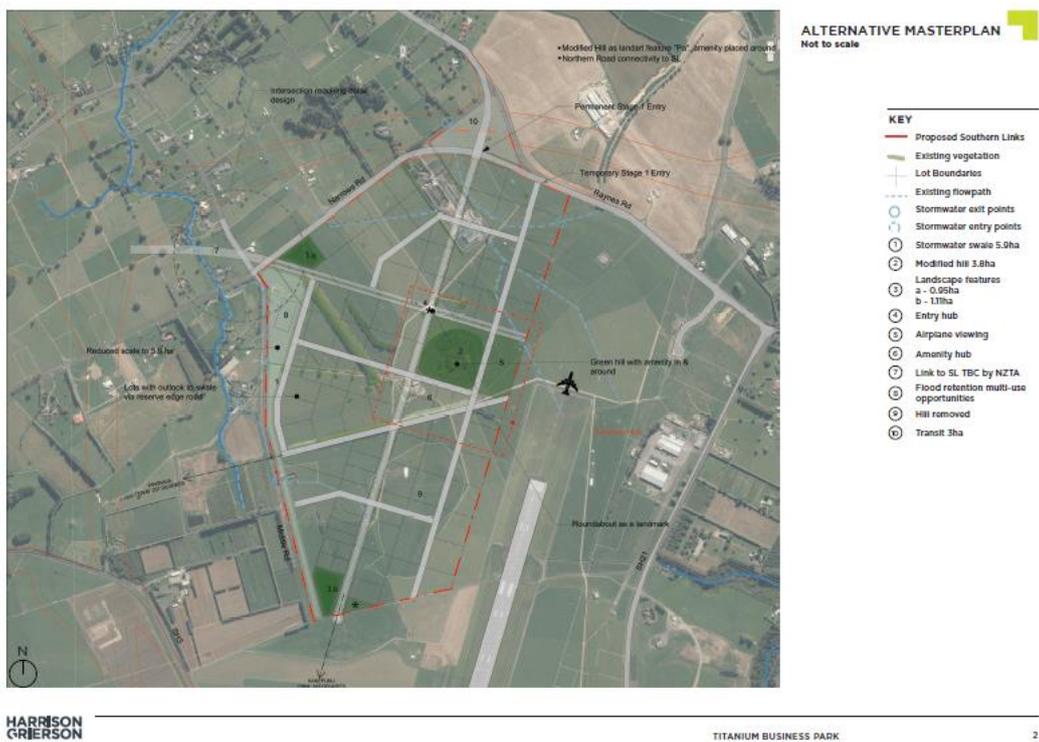


Figure 5. Titanium Park key (Source: Harrison Grierson).

7 Historic survey plans

There are very few historic survey plans that are relevant to the proposed development area. Two plans: a historic SO map and a modern depiction of historic research were identified. Raynes (1981) depiction of historic homesteads below shows that land surrounding the airport was owned by Andrew Bell (after some acquisitions). On a survey plan from 1885 land that Hamilton Airport currently owns is shown as partially in Bell's ownership (Lots 14 & 16–18). Other lots (Lots 12, 13 & 19) that occupy the remaining proposed works area are shown as owned by Joseph ? (12), H's Mosot?? (13) and ?? (19) before being bought by Bell (SO 1885) (Figures 5 & 6).

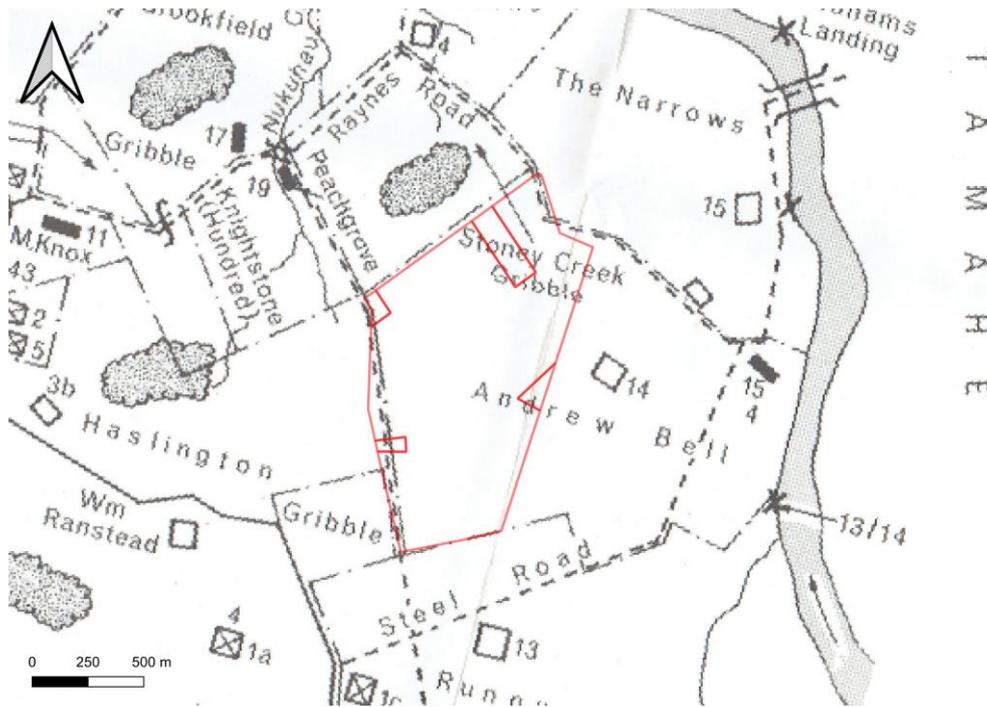


Figure 6. Excerpt from Raynes map showing historic homesteads of south west Hamilton (Raynes 1981).

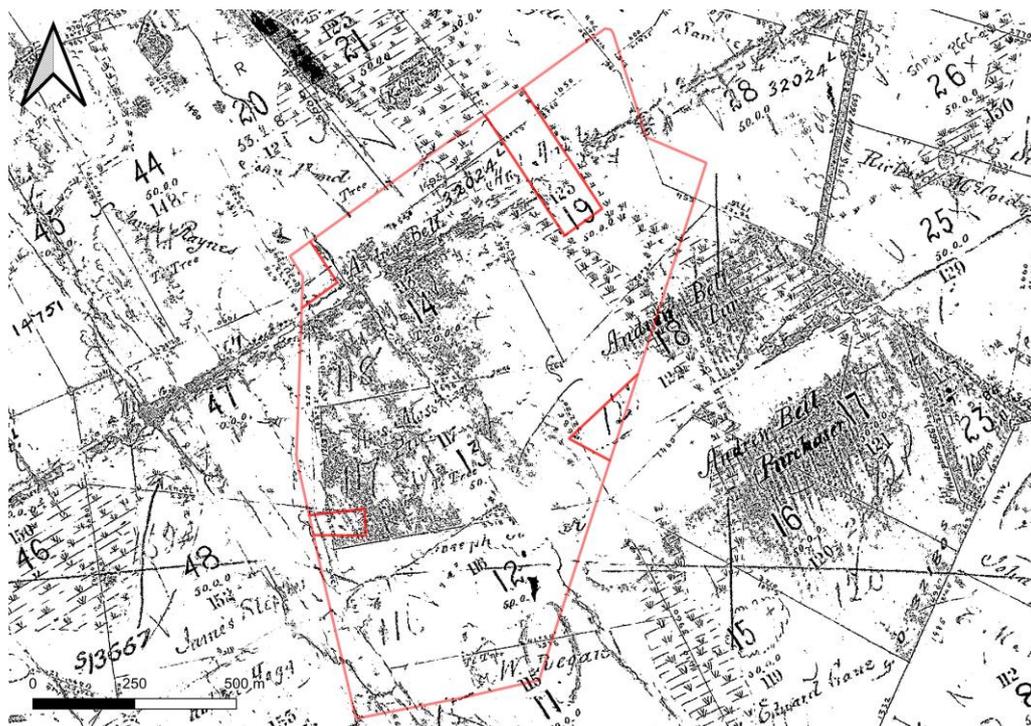


Figure 7. Survey plan from 1885 depicting land parcels and ownership (HN_SO_1385_C_1_1) (Source: Quickmap).

The area within lots 12 and 13 is labelled Ti Tree whilst lots 18 and 19 have a significant amount of swamp land; this land has subsequently been cleared and drained and now is either part of the airport or used for pastoral grazing and maize production.

8 Historic aerial photographs

Aerial photographs below were sourced from Retrolens and depict the landscape surrounding Archaeological background. It is apparent in the 1940s aerials (below) that the land is likely in use for pastoral grazing. The smaller hillock is built upon but the rest of the area is free from structures. The larger hill seems to be in a natural state and does not appear to be flat although it is difficult to see in the imagery (Figure 7).



Figure 8. Excerpt from aerial photographs from 1943 series (SN1943_833-48 & 50) (Source: Retrolens).

As shown in the 1967 aerial imagery (below) nothing much has changed within the proposed area since the 1940s. The major change is that the airport has been established south east of the area but the runway does not extend up parallel it yet. The land use appears to be consistent with earlier imagery.

Modern aerial imagery is relatively consistent with the historic imagery. There has however been some modification to the larger hill but this is difficult to determine when this was undertaken. It is likely that it has occurred within the last two decades.



Figure 9. Excerpt from aerial an aerial photograph from the 1967 series (SN1889_5057-12) (Source: Retrolens).

9 NZAA site recording database, Archsite

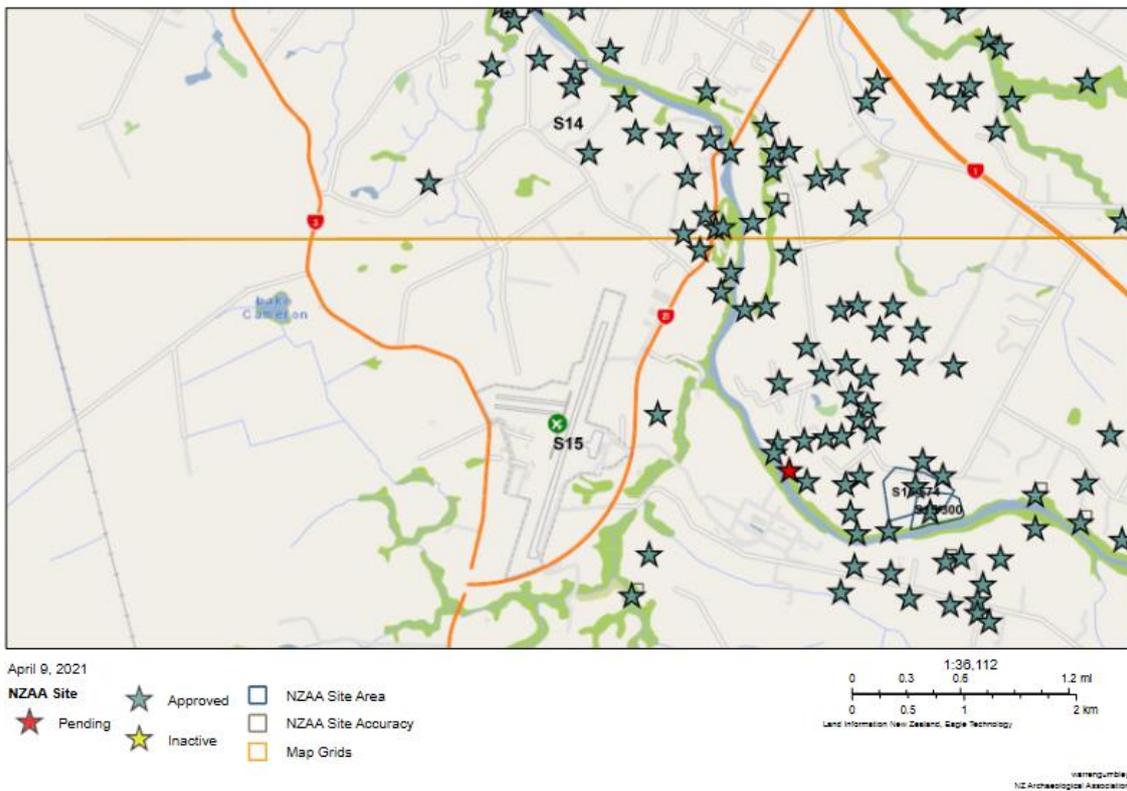


Figure 10. Excerpt from Archsite showing archaeological sites in proximity to area of works (Source: Archsite).

As seen in the above excerpt from Archsite there are no recorded archaeological sites within two kilometres of the proposed development area.

10 Results

To determine the likelihood of archaeology on the two hills test trenches were excavated with a 3-tonne excavator. These were excavated on the flattened top of the larger hill around the recently established effluent pond and on a small unbuilt flat area on the smaller hill. A total of seven trenches were excavated: six on the larger and one on the smaller.



Figure 11. Test trenches on the larger hill (Source: LINZ).



Figure 12. Test trench on the only open area on the smaller hill. This hill has been largely modified (Source: LINZ).

Test trenches revealed that the larger hill has been modified, probably within the last decade. Also, a recent effluent pond has been constructed that occupies approximately one quarter of the total flat area. Modification to the hill was evident through intensive ploughing and a variable subsoil layer. It appeared that the hill has been flattened filling in depressions and removing raised areas. Bulldozer tracks were also identified at a depth of circa 50 centimetres north of the effluent pond. It is likely that the creation of the pond contributed to the modification of the hilltop (Figure 13).



Figure 13. Modification of the soil through ploughing (left) and topsoil/subsoil redistribution. Probably a result of the effluent pond creation (right).

Aside from soil redistribution modern modification is evident through maize planting. Across the larger hill and surrounding landscape to the east and south maize has been planted for harvesting. Maize that was planted on the larger hill had been harvested prior to excavation (Figure 13).

No archaeological features, deposits or sites were identified on either hill. There was no charcoal in the topsoil or subsoil or evidence of forest clearance burning.

11 Archaeological and other values

Since there are no archaeological sites within the proposed development area there are no values.

12 Assessments of effects

There are no effects on archaeology since there are no identified sites within the proposed development area.

13 Conclusions and recommendations

Based on a site visit and archaeological test trenching of the two hills it is determined that there is no evidence for archaeology on either. The remaining land surrounding the two hills is low lying and has historically been covered in ti tree scrub and swamp; it is now used for pastoral grazing and maize production. Due to the nature of the landscape, it is highly unlikely that archaeology exists within the remaining low lying surrounding landscape.

According to Dion from Hamilton Airport the surrounding landscape has also undergone significant modification. This was also apparent on the larger hill. Soil depth varied in several areas due to topsoil and subsoil distribution and the creation of the effluent pond (Dion Mersh pers. comm. 9 March 2021).

Since there is no evidence for any archaeology W. Gumbley Ltd does not recommend that the client apply for an archaeological authority.

14 References

Databases

Waikato Regional Council. WRAPS 2012–2016.

Quickmap. 2021.

Websites

Retrolens. 2021. Historical image resource. <retrolens.nz>.

ArchSite. 2021. New Zealand archaeological associations site recording database. <<http://www.archsite.org.nz/>>.