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THE CHANGING LANDSCAPE OF OWAIRAKA, AUCKLAND

Jeremy Spencer
Canberra

This paper brings together the changing landscape of Owairaka, using traditional Maori accounts, and European records from 1820 to the present. It utilizes maps, watercolour drawings, photographs and New Zealand Gazette Notices. The Select Lists of Tables are to be found at the end of the paper. The New Zealand Railways (N.Z.R.) Plan 1053 (Table 1.9) provides the basis for a suggested reconstruction of the original contours pre-1867 (Fig. 1). This portrays the mountain before the ballast quarry destroyed the summit of Owairaka (Fig. 2).

Topography

The volcanic cone of Owairaka is located 2.9 km east of the Whau portage on the Auckland Isthmus. The summit was reduced to 135 m (Trigonometric Station, Mt Albert No. 3) from an original height of 148 m. This reflects mining activity over 61 years (1867-ca. 1928) from N.Z.R. scoria ballast pit operations (Figs. 1-3).

The Domain of Owairaka occupies the top flanks of the volcanic cone (6.421 ha), and is classified as a Crown Recreation Reserve (N.Z. Gazette, 14 Feb 1980). The Quarry Reserve removed 60% (3.837 ha) of the total domain area. Thus less than half of the original land surface remains containing a mixture of Maori terraces and European features (Fig. 3).

Survey methods

The planetable survey, plotted at a metric scale of 1:200, was mapped from 43 separate station points around the mountain's flanks. Survey field sheets were assembled and reduced to 1:600 scale for inking up. From this master, the field plan was reduced for publication. The terrace areas were computed from an average of four readings using a Tamara Planix 7 Digital Planimeter. The Domain's total area in association with the former Quarry Reserve was computed in hectares using the Trapezoidal Rule from Deposited Plan (D.P.) 12481 (Table 1.10).

Maori tradition

A Maori tradition closely associates the cone of Owairaka with a volcanic reef on the Waitemata. Part of Owairaka's lava flow reached the sea off Point Chevalier. The reef off the

point was known as Te Ara Whaka Pekapeka a Ruarangi 'the perplexing pathway of Ruarangi' (Kelly, ms). A basaltic lava cave called Te Ara Tomo o Ruarangi 'the entrance pathway of Ruarangi' on the southern slopes of Owairaka (Fig. 1) is linked with the dramatic escape underground to Point Chevalier of the besieged Ngati Wai people. In aerial photographs of the 1940s the cavern entrance is clearly visible and it was plotted onto the Titirangi N.Z.M.S. 2A Sheet of March 1944 (Table 1.22). Today the cave is beneath a suburban house at 81 Mt Royal Avenue, Mt Albert, Auckland.

Nineteenth century European visitors

Te Ara Tomo o Ruarangi is possibly the cave noted by Samuel Marsden in 1820 while travelling with the Ngati Whatua chief, Kawau, overland from the Waitemata to the Kaipara Harbour (Elder, 1932:316).

In January 1859, Charles Heaphy (1860:247) accompanied Ferdinand von Hochstetter (Fleming, 1959) on a visit to Owairaka to make geological observations. Both men described the main crater as opening towards the north-west and estimated it to be 80-100 feet (24-30 m) deep. Forty years later, the crater was levelled for a sports ground (Fleming, 1959:192).

A volcanic mound south of the football field bordered by a stone retaining wall and changing sheds contains several terraces and pits on its flanks (Fig. 3). This mound marked by the 390 ft contour on the 1901 survey (Fig. 2) is possibly the mound that excited Hochstetter's attention in 1859. "A remarkable lava hill lying right in front of the opening of the crater (which) shows very characteristically the place whence the lava flowed" (Fleming, 1959:193).

Hochstetter also noted loose scoria on the slopes of the cone. This was used from the 1840s by European settlers for constructing dry stone walls in the Mt Albert district (Table 1.5). These walls still constitute a portion of the domain boundary and form fences in the surrounding suburban gardens (Fig. 3). Loose scoria blocks were still present until the 1920s on the southern slopes of the mountain (Table 2.9).

Maori archaeological features

Within the present domain boundaries 50 terraces have survived, comprising 4700 m². This is 18% of the unquarried summit area. The most significant cluster of terraces with

pits is situated on the hill spur of the present trig station and its adjoining hillside flanks (Fig. 3). Three pits were once present where Trig Station No.3 is now located. These pits are clearly visible in the aerial photograph of August 1958 (Table 2.19).

North of the football field (Fig. 3) were once terraces which consisted of three levels below the original summit. These terraces (within the former Quarry Reserve) have now been completely quarried away. Evidence for terraces came from the 1901 topographic survey cross sections A¹ and A³ (Fig. 2). By 1956 only a reduced vestige of the lower terrace still remained (Table 2.20). This terrace was finally destroyed by the grading of the quarry edge in 1961 (Table 2.23).

Elsewhere in the Domain individual terraces survive on the outer slopes. The watercolour sketch of ca. 1842 by J.G. Mitford (Plate 1) and the ballast pit photograph of ca. 1900 (Plate 2) both depict large continuous terraces on Owairaka's northern slopes. By the 1920s the quarry had destroyed all evidence of these. Only one 20 m² terrace has survived on the former quarry rim near the entrance to the archery club (fig. 3).

European archaeological features

The funnel shaped boundary of the 1860 survey was expressly designed for the extraction of scoria (Table 1.6). The ballast pit was first opened in 1867. It supplied scoria ash to both local council bodies and private citizens. With the extension of the Auckland to Kaipara railway in the 1880s, a 'Self-Acting Incline Tramway' was constructed on the northern slopes of the mountain. The tramway ran from a terminus south of Mt Albert Road for 100 m to the entrance of the scoria pit, rising on a gradient of 1:25 and 1:3 (Table 1.11). From here it extended as several tracks into the quarry face (Fig. 2). A branch line transported scoria from Owairaka to join the Auckland-Kaipara railway, west of the present Mt Albert Railway Station. On the northern hillside within the domain boundaries the course of the former tramway tracks can be seen as two parallel mounds (Fig. 3). Today the sides of the ballast pit have been graded and planted with trees while the grassed pit floor is used by the Mountain Green Archery club.

The domain entrance on Summit Drive is flanked by two dis-used Mount Albert Borough Council service reservoirs, dug into the hillside. The buildings, constructed in the 1920s, have been placed on excavated mounds of rubble. The southern reservoir, partially covers a former European roadway which is aligned

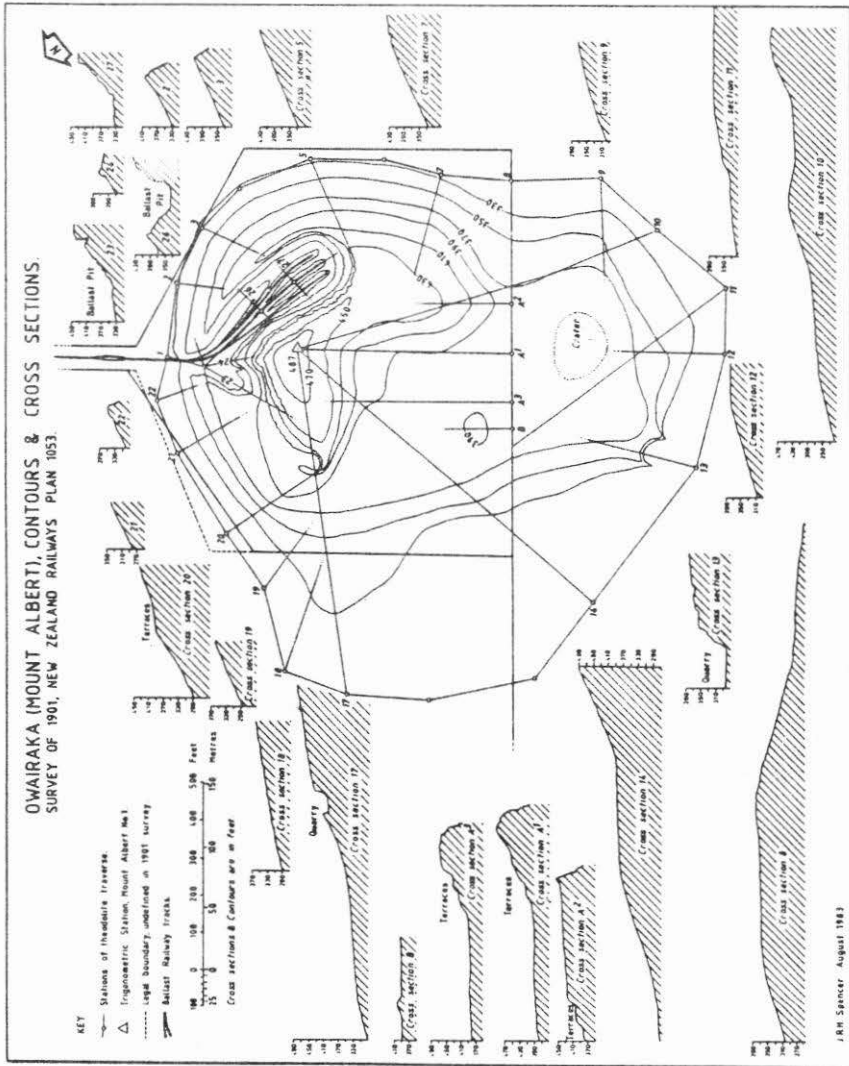


FIGURE 2. Owairaka. Contours and cross-sections, 1901.
New Zealand Railways plan 1053.

with the western boundary (Fig. 3). From this reservoir a 9 inch pipe (buried beneath Maori terraces) links up with the Auckland Regional Authority reservoir situated in a subsidiary crater south of Owairaka Domain (Figs. 1 and 3). A large pit 1.5 m deep containing rubble situated between the disused southern reservoir and Domain Drive is possibly of European origin. This is in the vicinity of World War II home guard trenches and latrines (pers. comm. H. Turner, 1973).

Conclusion

The railway plans and the graphic records, which consisted of watercolour sketches and photographs, demonstrate that the major concentration of Maori terraces on Owairaka were situated close to the summit above the 400 ft contour.

The planetable survey of 1981 affirmed this. It established that terraces on the lower mountain flanks were scattered and not uniform in distribution. The destruction of 3.837 ha of Owairaka's summit by quarry activities thus destroyed a major portion of terraces extant on the mountain.

TABLE 1. A select list of maps and plans relating to Owairaka (Mt Albert), Auckland.

1. 'Map of the Harbour of Waitemata New Zealand, and of the adjacent Country...From actual measurements with the Chain, and from a Trigonometrical Survey'. Scale 1:110 100. Felton Mathew, Surveyor General, 1841. Coloured lithographic map. 'Ordered by the House of Commons to be printed, 12th Aug. 1842', James & Luke J. Hansard, London.
2. 'New Zealand, North Island, Country around Auckland, from HMS Acheron, 1848'. Scale 1:14 200. John Lort Stokes RN. Manuscript map on paper, 96 x 74 cm, folded 96 x 37 cm. Chart Archives, L9295/Xz, Hydrographic Department, Ministry of Defence, Taunton, Somerset. Hydrographic Office stamp: '28 Nov (18)53'. Black ink lettering with coastlines in grey-blue wash. Yellow ink lines for land subdivisions. Watercolour hachures and formlines for the isthmus volcanoes. This manuscript map formed the topographic basis for engraved Admiralty chart 'Auckland Harbour', No. 1970, first published in 1849.
3. 'Geological Sketch-map of the Auckland District. By C. Heaphy, 1857. (Corrected to Feby 1859)'. Scale 1:154 000. Engraving, 19.1 x 14.5 cm. In 'On the Volcanic Country of Auck-

land, New Zealand', Plate 12. Quarterly Journal of the Geological Society, 16 (London, August 1860).

4. 'The Isthmus of Auckland, with its extinct Volcanoes, by Dr Ferdinand von Hochstetter, 1859. The Drawing & geographical Foundation compiled principally from the Surveys of Stokes & Drury by A. Petermann'. Scale 1:120 000. Engraved map base, hand coloured, 24.1 x 19.2 cm. In 'Geological and Topographical Atlas of New Zealand', published by Delattre, Lower Queen Street, Auckland, 1864.
5. '(Mt. Albert District)'. Survey Office Plan 927. S. Elliot Surveyor, 1859. Manuscript plan in grey wash. Department of Lands and Survey, Auckland. A wash sketch of Owairaka is contained within this plan which sets out the first surveyed road plan of the Mt. Albert District.
6. '(Owairaka)'. Scale 1:1584. Frederick J. Utting, Surveyor, August 1860. Department of Lands and Survey, Auckland. Pen and wash hachures and form lines delineate Owairaka's shape. Surveyed boundaries of the future Owairaka Domain are indicated in links.
7. 'Map of Eden County Shewing Original Sections and Subdivisions Thereof', 1890. Printed Map. Copy held by the Auckland Public Library.
8. 'Mt. Albert, Plan of Ballast Pit'. Scale 1:1584. Plan 9762, New Zealand Railways, Auckland, Engineers Office, 1901. Blueprint drawing on paper, ca. 40 x 37 cm, with the addition of watercolour, marking out the proposed additions to the Quarry Reserve. 'Land wanted for Rly purposes in the near future coloured green. Land not likely to be wanted for Rly purposes coloured brown!'. Initialed 'N.W.F. 7.1.01'. N.Z.R. Engineering Office stamp: 'Traced 5377, Date 2.11.01'. On surface of plan 'Attach to 1053 Drawer A'.
9. '(New Zealand Railways Contour Survey of Owairaka)' Scale 1:1584. Plan 1053. New Zealand Railways, Auckland, Engineers Office, 1901. Plan, 69.5 x 93.8 cm, ink and pencil on cartridge paper. Two columns of cross sections (rubbed out) exist down the sides of the main drawing. On face of plan are two statements: 'Note The green line represents the boundary of the portion of Pit referred to in Chief Engr's memo 3335/2 of Feb 8th 1901 - see file 1046/11'. Bottom RH corner 'See also Plan 9762'.
10. '(Legal Survey of Owairaka Domain and Railway Ballast Pit)'. Scale 1:3000. Deposited Plan 12481. Department of Lands and Survey, Auckland. 'Approved, C.R. Pollen for Assistant Surveyor General 5/12/1902'. 'Agreed to for Railway Purposes, C. Holm Biss, District Engineer, 22 May 1903'.

11. 'Mt. Albert Self-acting Incline Tramway'. Plan 1257. New Zealand Railways, Auckland, Engineers Office, 1905. Plan and section of Tramway, 1:600. The sheet also contains elevation drawings of wagons and breakwheels. Signed: 'E.C. (E. Casey)/ 15.3.05'. N.Z.R. Engineering Office stamp: 'Tracing 6299', Date 24.03.05'.
12. 'Mt. Albert Cross Sections of Ballast Pit'. Scale 1:792. Plan 5240. New Zealand Railways, Auckland, Engineers Office, ca 1910. Plan, 59 x 79 cm, ink on linen.
13. 'Mt. Albert Ballast Pit Cross Sections'. Scale 1:7920. Plan 2252. New Zealand Railways, Auckland, Engineers Office, 1910. Plan, 56.5 x 76 cm, ink on linen 'Copy of Drwg 17808'. Signed: 'H.W.B. (H.W. Beasley)/ 12.4.10'.
14. 'Proposed Crusher Foundations, Mt. Albert Ballast Pit'. Plan 2897. New Zealand Railways, Auckland, Engineers Office, 1913. Plan, 59.3 x 84 cm, ink on linen. Elevation and plan for stand and foundations. Scales 1:075, 1:48.
15. 'Mt. Albert Ballast Pit Yard, Feby 1913'. Scale 1:792. Plan 2898. New Zealand Railways, Auckland, Engineers Office, 1913. Plan, 42.5 x 63.5 cm. Black ink for boundaries, blue ink for railway lines, pale red wash for railway land, yellow for roads (except Sadgrove Terrace which is uncoloured). Shows in detail the Railway branch line below Owairaka mountain bordering Mt. Albert Road, and as far west as Belmont Avenue. Signed: 'H.W.B./ 17.12.13'.
16. 'Borough of Mt. Albert, Proposed Motor Drive, Mt. Albert Domain'. Horizontal scale 1:480. Vertical scale 1:120. Plan 121R (610), Sheet 3. Mt. Albert Borough Council, 1929. Plan, 56 x 74.5 cm, ink on linen. Lodged with Mt. Albert City Council.
17. '(Mt. Albert Proposed Roadway - Cut and Fill Profiles)'. Plan 121R (614), Sheet 1. Dated 13 August 1929. Mt Albert City Council.
18. 'Borough of Mt. Albert. Proposed Motor Drive - Mount Albert Domain'. Scale 1:792. Plan 121R (609). (a) Sheet 1, Mt. Albert Borough Council, 22 August 1929. Plan, 66 x 60 cm, ink on linen. Survey of proposed road route round Owairaka Mountain flanks. (b) Sheet 2, Plan 121R (615). Mt. Albert Borough Council, 22 August 1929. Plan, 56 x 75.5 cm, ink on linen. 'Cut and fill Profiles of Proposed Motor Drive'.
19. 'Borough of Mt. Albert, Proposed Playing Area, Mt. Albert Domain'. Scale 1:792. Plan 151R (616). Mt. Albert Borough Council, 1929. Plan, 74.3 x 55.8 cm, ink on linen. Signed 'S.E.S. August 1929'. A plan for the future development of the ballast pit into playing fields. Plan held by Mt. Albert City Council.

20. (Mount Albert Domain, Proposed Landscape Development'. Scale 1:396. Fred Tschopp, Landscape Architect, 15 October 1929. Plan, 64.5 x 96.6 cm, ink on linen. Maps the proposed placement of shrubs and trees over the raw faces of the former scoria pit. Plan held by the Mt. Albert City Council.
21. 'Tamaki-makau-rau'. (Outline map of the Auckland Isthmus, with Maori Place names, compiled by Leslie Kelly ca. 1933). The source for names came from George Graham ms (120), Auckland Museum. Map in ink and watercolour, held by Auckland Museum.
22. 'Titirangi Sheet N.Z.M.S. 2A, N42/8 topographical series. Scale 1:25 000. Department of Lands and Survey, Wellington. Published March 1944, being based on 1940 aerial photography. 'Rock piles 5 ft high' are noted covering ca. 30 ha of ground, in the vicinity of Stoddard Rd, within the confines of the former Owairaka Swamp.
23. 'Auckland City Council - City Engineer's Department, Mt. Albert Service Reservoir, Site Plan'. Scale 1:240. Sheet 1 of 17 sheets, 1945. Plan from aperture card negative, held by the Planning Division, Auckland Regional Authority. Original plan destroyed.
24. 'Borough of Mt. Albert - Proposed Development of Mt. Albert'. Scale 1:792. G.D. Lawn, Borough Engineer, Mt. Albert Borough Council, ca. 1970. Plan 620, 58 x 74 cm.
25. 'Owairaka Domain Drive and Parking Areas'. Contract No. 74/1. P.C. McCormick, Borough Engineer, Mount Albert Borough Council, February 1974. Plans, 39.5 x 54.6 cm, ink on canson paper. Various scales. (a) Parking area modifications near the summit of Owairaka Domain. Detail A. Sheet 1 of 4 sheets. Scales 1:12, 1:120. (b) Modifications of carpark and picnic area south of the Playing Field. Detail B. Sheet 2. (c) Parking area and curbing beside Owairaka Domain Public Toilets. Detail C. Sheet 3. Scales 1:24, 1:60, 1:120. (d) Location Plan. Sheet 4. Scale 1:600.
26. 'Auckland Regional Planning Scheme'. Volume 2, Policy Maps, November 1979. Map 4, Sheet 6: 'Owairaka Park - The Visual Protection of Auckland's Volcanic Cones'. Scale 1:8 000.

TABLE 2. Photographs of Owairaka.

1. Mt Albert Borough, looking south-west from above Western Springs Lake. Date 1860's/1870's. Owairaka on the skyline. Auckland Public Library (A.P.L.) negative 1022.
2. Auckland - panoramic views, looking south-west, from Partingtons Mill, upper Symonds Street. Owairaka left background. Date ca. 1883. (Forms panorama with prints 3180-3189). A.P.L. negative 3182.

3. View south-west from Partingtons Mill, Karangahape Road foreground. The quarrying of Owairaka's northern face clearly visible. Date 1885-6. APL negative 1004.
4. View south-west from Mt Eden with Owairaka, background right of centre. Date 1880's. Burton Brothers photograph. APL negative 808.
5. Owairaka, northern slopes from the vicinity of Alberton Ave showing the 'Self Acting Inclined Tramway' ascending the hillside into the scoria ballast pit. Date early 1900's. APL negative 428.
6. Telephoto view south-west from Partingtons Mill. Owairaka and quarry in left background, terracing clearly visible. Date October 1900. APL negative W192.
7. From One Tree Hill view west over Epsom; Owairaka in mid-picture. Date 23 July 1905. APL negative W1226.
8. View south-west from Mt Eden to Owairaka. Date 12 August 1912. APL negative W1481.
9. Owairaka summit view SSW across outer slopes. Illustrates the raised lip of crater (filled in for Auckland City Council Reservoir 1945), with scoria bombs littered about. Manukau Heads mid-picture. Date 3 August 1920. APL negative 4420.
10. Owairaka's eastern slopes, viewed north-east. Mt. Albert Road in the immediate foreground. Date 3 September 1920. APL negative 11685.
11. View north-west from Owairaka towards the Waitemata Harbour. Summit Drive mid-picture. Date 3 September 1920. APL negative 4688.
12. View SSE from Owairaka, with the Three Kings in background. Date 21 November 1923. APL negative 4487.
13. View south-west from St Lukes Road, with Owairaka centre, and Mt Albert Grammar School right. Date 2 January 1930. APL negative 2868. Owairaka summit much flattened, with new fence encircling mountain in the vicinity of the present day road.
14. Mt Albert un-numbered glass negatives, taken 11 January 1931. Reference file No. 15, for typed list. Box 157. Views from summit of Owairaka across the recently disused scoria ballast pit. APL.
15. Aerial oblique of Owairaka, view north-east, 28 June 1949. Whites Aviation photograph, No 20756. Shows Trig No.2 on rim of former ballast quarry, the presence of three pits in spur terrace (now covered by Trig No.3) and Auckland City Council Reservoir (in former crater) under construction. Road leads

from playing field to join the Domain Drive at foot of spur.

16. Aerial oblique of Owairaka, view south-east, 24 March 1950. Whites Aviation photograph, No. 24196. Shows extent of quarry on the south-western slopes, where present La Veta Avenue is situated. City Council Reservoir by Williamson Construction Co., with concrete roofing in place clearly visible.

17. Vertical aerial photography of Mt. Albert Borough, flown 1955. Scale 1:15840. Run 1919/26-27. N.Z. Aerial Mapping, Hastings. Negatives 22.4 x 16.7 cm plate size. Shows eucalypts on the outer slopes below the Domain Drive.

18. Aerial oblique of Owairaka, view north-west, 25 August 1958. Whites Aviation photograph, No 48101. Shows Auckland City Council Reservoir as a grassed over crater but still retaining its polygon shape.

19. Aerial oblique of Owairaka, view north, 25 August 1958. Whites Aviation photograph, No 48101. Clear view of central spur with its Maori terraces and pits. Three pits on the edge of the former quarry were destroyed when the trig was resited in October 1961 as Mt Albert No.3, on a concrete base, with a new beacon being erected. Eucalypts still cover southern slopes of the Domain.

20. Aerial oblique of Owairaka, view east, 29 August 1958. Whites Aviation photograph, No 48100. Shows Trig No.2 on rim of former ballast quarry, immediately above a long terrace curving around above the eastern end of the playing field. All evidence that this terrace once existed was removed in grading activities in 1961, to smooth the cliffs of the former ballast quarry.

21. Aerial oblique of Owairaka, view north, December 1960. Whites Aviation photograph, No 54470. Clearance of trees from the Domain's southern slopes, makes terraces visible. View across Mt. Albert suburb to Point Chevalier and the North Shore.

22. Vertical aerial photograph of Mt. Albert Borough, 2 November 1961. Scale 16 632. Run 3236/12-13 N.Z. Aerial Mapping, Hastings. Plate size of negative 18 x 18 cm. Owairaka Domain cleared of vegetation except near service reservoir.

23. Aerial oblique of Owairaka, viewing south-west, 12 December 1961. Whites Aviation photograph, No 56348. Depicts the freshly graded slopes of quarry, centre picture.

24. Aerial oblique of Owairaka, view east. 18 December 1961. Whites Aviation photograph, No 56540. Trig station moved to become Trig No.3 on Domain's southern spur. Former cliff of quarry in process of being extensively 'smoothed'. Complete destruction of terrace remnants flanking the north-eastern slopes of playing field.

25. Aerial oblique of Owairaka, view east, 9 April 1962. Whites Aviation photograph, No 57148. The regraded contours of the ballast quarry are now grassed. The quarry on the southern slopes is still active.

26. Aerial oblique of Owairaka, view east, 16 August 1966. Whites Aviation photograph, No 66318. Quarry on southern slopes smooth graded. Construction of La Veta Avenue taking place.

TABLE 3. Nineteenth century paintings of Mount Albert.

1. John Guise Mitford (1822-1854). 'Mt Albert nearby Auckland an extinct volcano' (ca. 1842). Watercolour manuscript C89/13, 15.6 x 24.7 cm. Alexander Turnbull Library, Wellington.
2. K. Staples Alexander. 'Mount Albert, an extinct Volcano near Auckland, and the Kauri Pine Forests in the west coast in the distance Feb 12 1846'. Watercolour. A.P.L. photograph collection, Auckland, copy negative 37. (This watercolour is a direct copy from Mitford).
3. Artist unknown. '(View of Owairaka)'. Oil on board. Alberton historic residence (N.Z. Historic Places Trust), 100 Mt Albert Rd.
4. John Kinder (1819-1903). '(Karangahape Road looking south west from upper Queen Street)'. Watercolour. A.P.L. Copy negative A4788. A distant view of Owairaka on the skyline.

References

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| Elder, J.R. | 1932 | <u>The Letters and Journals of Samuel Marsden, 1765-1838.</u> Coulls Somerville Wilkie Ltd and A.H. Reed, Dunedin. |
| Fleming, C.A. | 1959 | (Ed. and transl.), Ferdinand von Hochstetter, <u>Geology of New Zealand.</u> Government Printer, Wellington. |
| Heaphy, C. | 1860 | On the volcanic country of Auckland, New Zealand. <u>The Quarterly Journal of the Geological Society</u> , 16:242-252. |
| Kelly, L.G. | ms. | Manuscript 450. Auckland Institute and Museum Library, Auckland. |
| Turner, H. Sir | | Pers. comm. Resident at 40 Summit Drive, Mount Albert. |



OWAIRAKA Plate 1. Mitford watercolour (ca. 1842). Alexander Turnbull Library.



OWAIRAKA Plate 2. Railway ballast pit (ca. 1900). Auckland Public Library.