



PART TWO:

HISTORY

History of Waikumete Cemetery

History of Waikumete Cemetery and its Development

Maori History

The two iwi who have an historical association with the area within which Waikumete Cemetery is sited are Te Kawerau A Maki and Ngati Whatua. Neither Te Kawerau A Maki nor Ngati Whatua identify Waikumete Cemetery as a key heritage area to the iwi.

Prior to the purchase of the land for cemetery purposes, there is little information on land use. The only feature depicted on early plans is the route of an old dray road running from the Glen Eden station up to the ridge (near the current water reservoir). A branch also swung towards an early settlement in Henderson Valley (J. Diamond, pers. Comm.). Diamond also suggests that this may have followed the route of an earlier Maori track through the area, as the ridgelines were the logical route through an otherwise swampy terrain. No archaeological sites have been recorded in the area. Recorded Maori settlement sites in West Auckland tend to be located in coastal areas. The lack of archival and archaeological information indicates that the area was little used, other than for transit by Maori or early European settlers prior to the establishment of the Cemetery in 1886.

Selection and Development of Cemetery Site

Land was first reserved for a cemetery at Waikomiti in 1876 as a result of the need to find an alternative site for the Symonds Street Cemetery. The rapid growth of Auckland City

and the enclosure of the Symonds Street Cemetery by housing meant that there was no opportunity to extend the Cemetery in its present location.

Between 1872 and 1881 the issue of finding a new cemetery was regularly debated in both the Auckland City Council and public arenas. A number of prerequisites were set for the new location. These included the need to guard against repetition of the problems encountered with Symonds Street and to place the new cemetery at a considerable distance⁸ from the city so that it would have room to expand unimpeded by urban growth. It also needed to ensure that great care be taken to avoid any heavy burden of expense of burying the dead as a result of locating the cemetery too far from the city, where it may be largely inaccessible⁹. Roads and vehicular access outside Auckland City were often reduced to muddy mires in winter, with vehicles being the sole domain of the wealthy. With this in mind, the city fathers deemed that the new cemetery must be located close to a rail line so that the train could take both mourners and caskets to the cemetery.

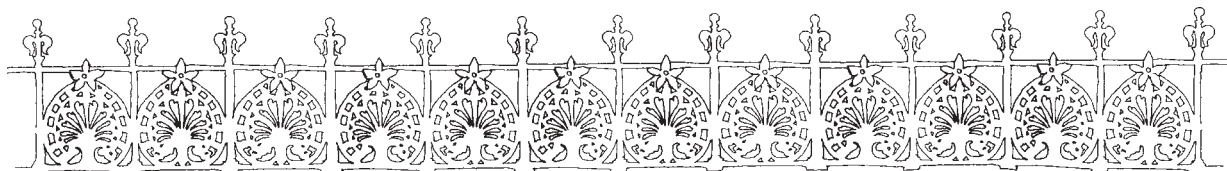
And so with all these factors in mind, the search for a new site began in earnest. In November 1876, 80 acres of land in Ellerslie was inspected. It was resolved that a public meeting would be called to discuss the matter further. This meeting resolved that a committee be formed to obtain all necessary information for the inhabitants of Auckland to decide upon the important question of a new location for a public cemetery. On receiving this information the Mayor of Auckland would then convene a public meeting and take whatever action was deemed necessary¹⁰.

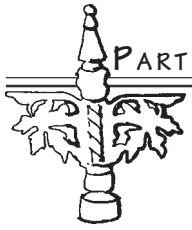
In October 1876 under the former Auckland Waste Lands Act 1874, the Crown reserved Allotment 248, Parish of

⁸ Daily Southern Cross (DSC), 18 November 1876.

⁹ DSC, 3 January 1872.

¹⁰ DSC, 3 January 1872.





Waikomiti (approximately 100 acres) as a site for a public cemetery. When the Auckland City Council Subcommittee finally inspected the site in 1878, it received a favourable report on its situation and suitability. Located about 9½ miles from the city, the site was recorded as having clay soils and an undulating surface. Its only limitation was that the railway had yet to be completed, but plans were in place to run the line right past the site and erect a local station. The area around the proposed cemetery was in its initial stages of development, as recorded in the Brett's Auckland Almanac:

"The Waikomiti district commences at the Whau Bridge, seven miles from Auckland, and extends for a distance of five miles along the line of the Great North Road. The Whau creek, which fronts the district, is navigable for vessels drawing eight feet of water, and affords excellent means of communication with Auckland for the industries and farms on its banks. A conveyance leaves the Whau Bridge at 8am each morning for town; fare 1 shilling.

The brick making industry has been established on the creek and 120,000 bricks per week can be produced. There are thirty occupied houses in the district, widely scattered, and a population (according to census) of 94 males and 53 female. Of the total area of 7,000 acres of land, about 1,500 acres are held as in actual occupation, and of this, 50 acres are under crop with oats and potatoes, 150 acres laid down with English grasses. Reserves of about 1,000 acres are held by the Government, and the balance of the land in the district is unoccupied and in private hands. There are about 2,000 acres of bush in which men are engaged sawing timber, splitting firewood, making posts and rails, etc.

The land is of average quality. Macadamised road

*runs through a portion of it, and no long time will elapse before the whole of the main line will be in the same condition. A large portion of the land is level, and being so near the city will, no doubt, ultimately be occupied by farmers on areas of from 20 to 200 acres. Abundance of timber for fuel and fencing can be obtained from the ranges close by. A respected resident summarises the present drawbacks to the district as a want of plenty of cash and increased population."*¹¹

In 1881, an additional 188 acres was gazetted as cemetery reserve¹² at Waikomiti, making a total area of 288 acres available for the Cemetery. In 1883, the Auckland City Council applied to the Government to have the proposed Waikomiti Cemetery vested in the Council¹³ and was subsequently appointed trustees of approximately 188 acres along the railway line¹⁴. Initial development was formally commenced in 1884 when the Auckland City Council requested the Waitemata County Council to lay out suitable roads to improve access to the Cemetery.

The railway was an important means of transporting bodies to this western resting place¹⁵. The completion of the railway line from Newmarket to Waikomiti in 1880¹⁶ provided easy access to the Cemetery. The Glen Eden Railway Station played a significant role in the early history of the Cemetery, allowing mourners and their dead to travel from town with relative ease¹⁷.

Initially the railway line ran through the southern part of the Cemetery. Mourners would travel in ordinary carriages on the same train and a whole day would be spent travelling to and from Waikomiti and burying a loved one. Often the Sexton would arrive with a wheelbarrow and the coffin would then be reverently pushed up the steep incline whereupon the burial would take place¹⁸.

¹¹ Brett's Auckland Almanac 1975-1880, p.93.

¹² NZ Gazette, 1881, p.115; 405. This area was increased by later additions to about 309 acres.

¹³ Auckland City Council (ACC) Minutes, 29 August 1883.

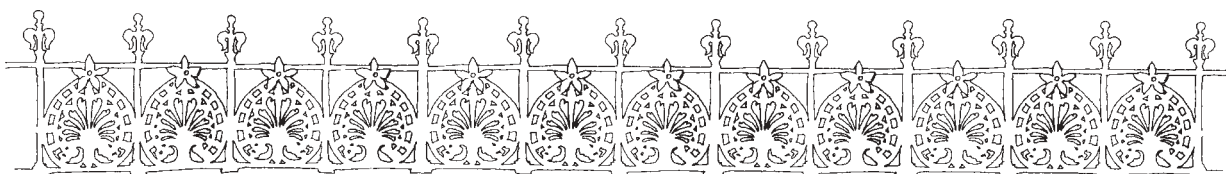
¹⁴ ACC Town Clerk's Report 1883, p.4.

¹⁵ Harrison Grierson Consultants Ltd, 1998.

¹⁶ NZ Herald, 30 March 1880.

¹⁷ Clough and Associates Ltd, 1999.

¹⁸ Harrison Grierson Consultants Ltd, 1998.



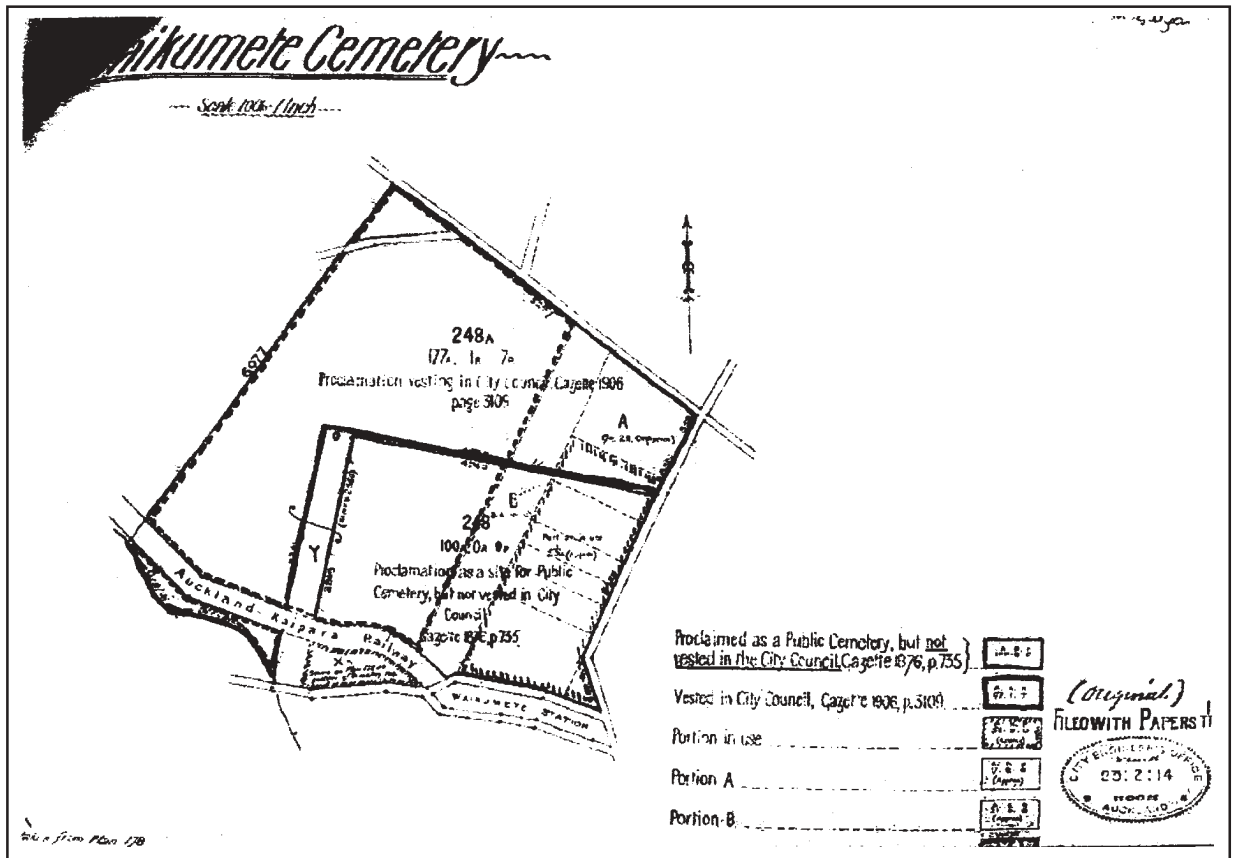


Management by Auckland City Council

The establishment of the Cemetery was further formalised in February 1886 when Auckland City Council published cemetery bylaws in the New Zealand Herald¹⁹. Waikomiti Cemetery was officially opened on 3 March 1886²⁰ and replaced Symonds Street as Auckland's main public cemetery. Initially an area of 53 acres bounded by the railway and Waikumete station to the south and Glenview Road to the east was opened up for burials. The first official burial recorded was on 19 March 1886 when Florence Lena Bell²¹, aged 14 months, was interred. By the end of the first year of its operation, Waikomiti, as it was then known, had recorded 299 burials²².

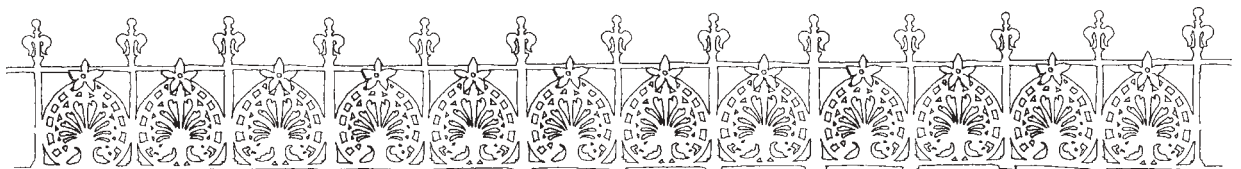
In 1906 and 1915 the Cemetery reserve was vested by the Crown in the Auckland City Council in trust as a public cemetery pursuant to the former Public Reserves Act 1881 and the Public Reserves and Domains Act 1908. The Council applied for titles to be issued containing the Cemetery. The first three were issued in 1917, each of them marked up to show that the Council held the land "in trust for the purposes of a public cemetery"²³. At this stage the Cemetery comprised 303 acres.

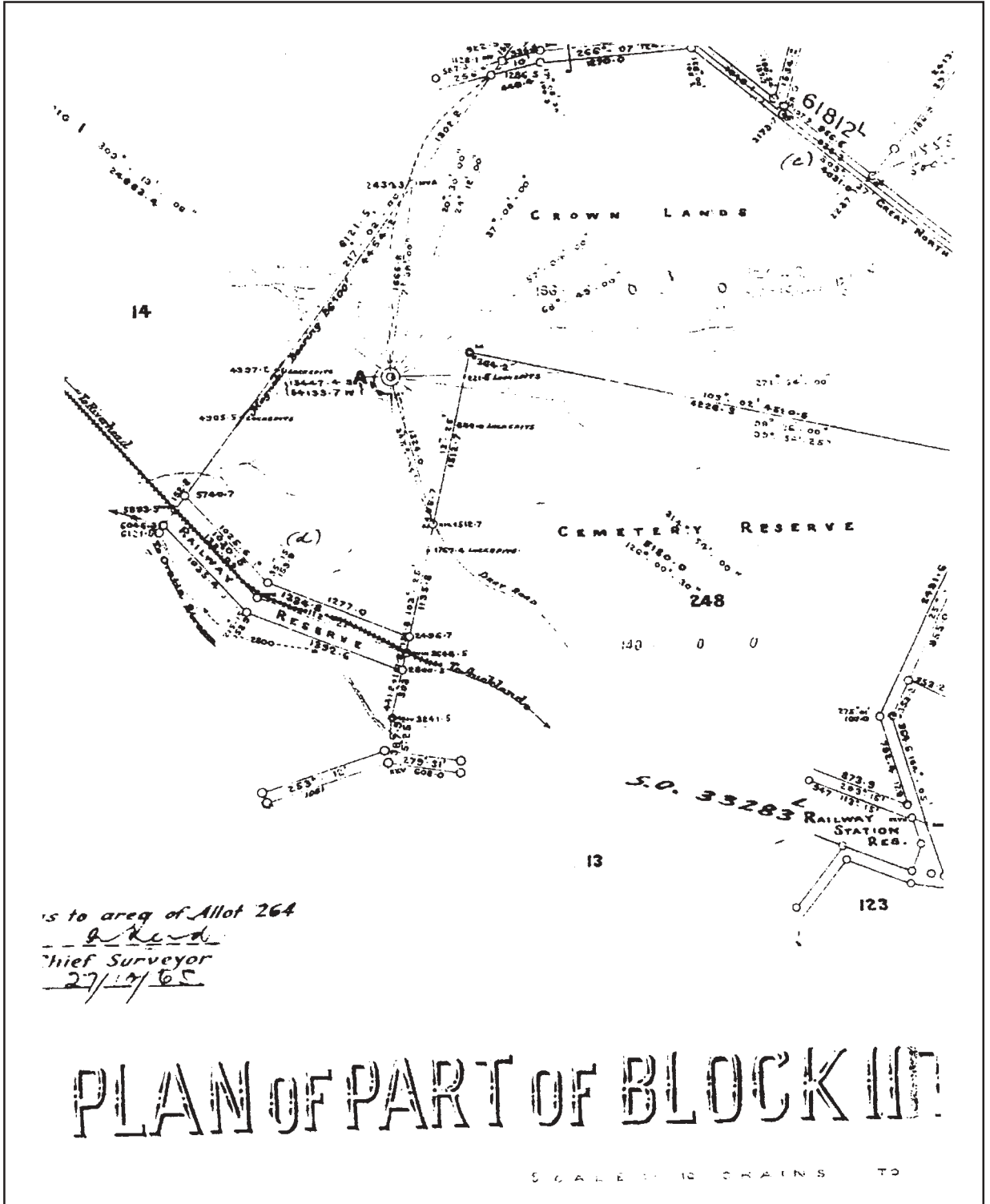
Small areas of land were taken out of the Cemetery between 1953 and 1979, with the consent of the Department of Lands, for purposes such as road widening, the building of



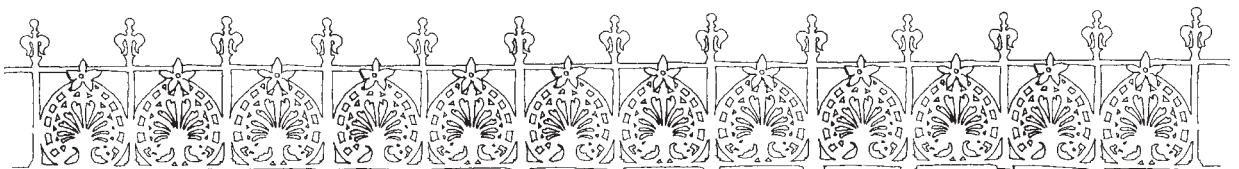
Site plan, Auckland City Engineer's Office, 23 February 1914, showing areas incorporated as part of Waikumete Cemetery, Auckland City Council Archives.

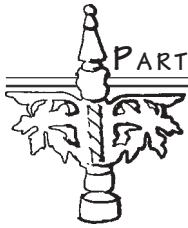
¹⁹ NZ Herald, 22 February 1886.
²⁰ Auckland Weekly News, 27 February 1886.
²¹ WCC Archive, Accn. 2401A/95 No.1.
²² ACC Minutes, 3 February 1887.
²³ Land Information NZ Title Refs: Vol. 264, Folio 220; V265, F118; and V271, F213.





Plan showing DP2283 Land Information NZ Cemetery boundaries and Sunhill Development





a reservoir and fire station, and the creation of small recreation reserves such as Singer Park and Awaroa Park. In 1979 the Cemetery was purported to be classified under the Reserves Act 1977 as a local purpose (site for a cemetery) reserve²⁴.

Management by Waitakere City Council

Auckland City retained vested control as trustees of the Cemetery until 1989, when it was first transferred to the former Waitemata City Council on 31 March 1989²⁵. The final transfer occurred after completion of the countrywide local body reorganisation in 1989²⁶, when the Cemetery was transferred to the Waitakere City Council.

In 1995 the Council transferred that part of the Cemetery forming the now completed Sunhill Park subdivision to Waitakere Properties Limited (a Local Authority Trading Enterprise), which surveyed and sold 53 residential sections on the open market. Income from this sale was deposited into the Waikumete Cemetery Memorial Fund to be used for the maintenance and upgrading of the remainder of the area that comprised the Cemetery.

Waikumete Cemetery now covers an area of 107.7 hectares (approximately 266 acres). It is the largest cemetery

and park of its type in Auckland, being three and a half times the size of the next largest, the Snapper Rock Cemetery on the North Shore.

Sextons and Cemetery Managers²⁷

The Sexton and Assistant Sextons were appointed by the Council. There were seven sextons of Waikumete Cemetery from the opening of the Cemetery in 1886 until the last official sexton, Tom Brown, retired in 1986. The Sexton's duties were varied, including supervision of planting, digging graves, and in the early days of the Cemetery one of the duties was to receive the bodies at the station and transport them by cart or wheelbarrow to the mortuary Chapel for a funeral service or to the grave site. The Sexton and Assistant Sexton also cleared land for future burial grounds and organised tree planting, fencing and the forming of the paths and roads.

The first Cemetery Manager was appointed in 1985. It is the Cemetery Manager who co-ordinates and manages the Cemetery operations, including the development of new burial areas, the management of maintenance contracts, and the management of the Cemetery business. Cemetery staff undertake the burials and operation of the Cemetery, while maintenance and major physical works are undertaken by contractors.

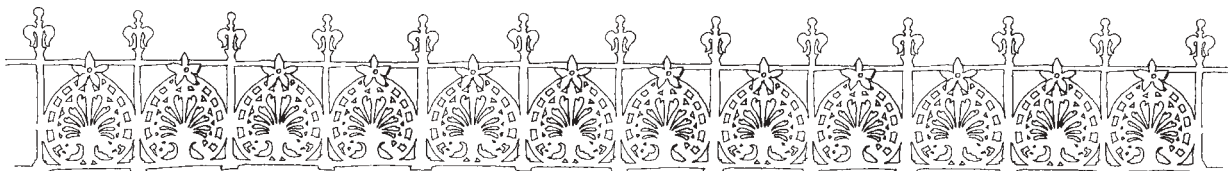
Sextons	Key Works Undertaken During Tenure
W.E. Walker (1886 - 1901)	Establishment of the Cemetery.
Herman Erickson (1901 - 1921)	Daffodil Drive formed, other roads repaired, large areas of footpaths reformed, tarred and sanded. Flowering bulbs planted in main gully, shrubs planted in nursery rows. Levelling, planting and sowing of the area near Station Road. Addition of a toilet. Relocation of Beach Road cottage to Waikumete Cemetery. Establishment of the Returned Services Area.
W.A. Kirkpatrick (1921 - 1934)	Supervised planting of 75,000 pinus radiata seedlings. Completed fencing of Cemetery and planting of an avenue of gums planted around the Cemetery. First crematorium constructed.
Thomas Sissons (1934 - 1939)	Craig plantings undertaken.
H. A. Lawson (1939 - 1947)	First mausoleum installed by Corban family.

²⁴ NZ Gazette, 18 October 1979, p.3024.

²⁵ Transfer between the Auckland and the former Waitemata City Council was formalised by way of a gazette notice issued pursuant to sections 20 and 50 of the Public Works Act 1981, by the former Department of Lands.

²⁶ Transfer of control between the Auckland and the former Waitemata City Council was formalised by way of a gazette notice issued pursuant to sections 20 and 50 of the Public Works Act 1951, by the former Department of Lands.

²⁷ Much of the information contained in this section was provided by Mary Gilligan.





Sextons	Key Works Undertaken During Tenure
Alf McBurney (1947 - 1968)	New crematorium completed. Lawn burials begin. Berm burials begin. Gallipoli "Lone Pine" planted. Obelisk erected in commemoration of WWI. Millable pine removed from area.
Tom Brown (1970 - 1986)	Assistant Sexton's house relocated to make way for Fire Station. Mortuary Chapel restored.
Cemetery Managers	Key Works Undertaken During Tenure
Bill Graham (1985 - 1995)	Wildflower Sanctuary established. Garden of Remembrance opened.
Clifton Thompson (1995 - 1998)	Creation of the columbarium beside the Crematorium. Development of the Crematorium ash lawn. Development of stillborn area in Freesia Road. Further development of the eastern and western berm and lawn areas. Development of the Urupa. Installation of a new toilet off Waitakere View Road. Development of the Avenues of Remembrance off Acmena Avenue. Upgrading of Orchid Rise.
Graham Resnick (1998 - present)	Additional mausoleums developed in Magnolia Way and Narcissus Drive. Stormwater treatment pond constructed adjacent to the Gaden Stream. Upgrading of the WWI cenotaph and memorial area (in conjunction with Glen Eden RSA). Commencement of deferred maintenance programme in older area, including weed control and road upgrading. Development of new berms in West Berm, West Lawn, North Lawn and Muslim areas. Landscaping of new Hebrew area (in conjunction with Hebrew Burial Society).

Table Three: Key Council Staff involved in Waikumete Cemetery

History of Buildings within the Cemetery

There are a number of buildings associated with the development of the Cemetery. These include houses for the Sextons and buildings associated directly with Cemetery operations such as the Chapels and Crematorium. The history of these buildings requires additional research; particularly if they are to be included in any on-site interpretation programmes.

Waikumete Cemetery Mortuary Chapel (Faith in the Oaks) 1886

This building was one of a group of buildings, including the

two Sexton's houses, that were advertised for tender in 1886²⁸. Mr E. Morris' successful bid was for £586. The building was completed in May 1886 after it was taken over by the architect, Mr H.G. Wade on behalf of the Auckland City Council²⁹. The building is in the shape of a Greek Cross and is built of double cavity brick with a slate roof.

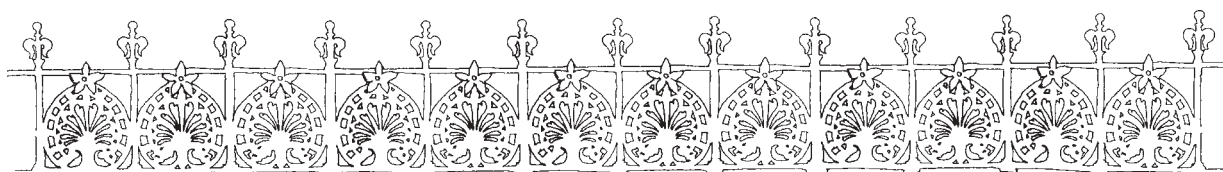
The building was used exclusively as a Mortuary Chapel until November 1886 when the residents of Waikomiti petitioned the Auckland City Council with a request to use the building for Church services for various religious denominations. This request was granted provided the services be suspended when the Chapel was required for funerals³⁰. The Chapel continued to be used for church services up to 1926³¹.

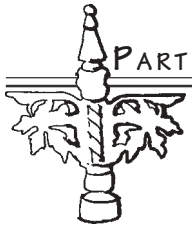
²⁸ ACC Minutes, 21 January 1886.

²⁹ Weekly News, 29 May 1886, p.17.

³⁰ ACC Minutes, 28 May 1886.

³¹ Osborn, G., St Andrews Church, Glen Eden: A History.





PART TWO: HISTORY

Its final use was to house 1,800 urns of ashes when the old crematorium was demolished in 1969.

The condition of the building deteriorated rapidly from 1969 to 1976. In 1977 a group of concerned local residents established a restoration programme for the Chapel, forming the Waikumete Restoration Trust in June 1978. The Trust was formed with support from the Auckland and Waitemata City Councils and the Borough Councils of Henderson, New Lynn and Glen Eden. Glen Eden Borough Council in particular played a significant role in the Chapel's restoration. The Trust comprises a voluntary group of church, Council and community representatives. Their stated function is to restore, maintain and manage the Chapel. In 1980 the Trust was given a management lease for a term of 30 years. The Trust completed its restoration of the chapel in 1986. The Chapel was renamed "The Chapel of the Faith in the Oaks" after the grove of large oak trees around its perimeter.

The Sextons' Houses

Tenders for the construction of two houses for the Sexton and the Assistant Sexton were called for in January 1886³². The successful tenderer was Mr J. Heron with £189 for the

smaller two-bedroom dwelling and £297 for the larger three-bedroom one, which also had an office for the Sexton. Construction of the buildings was completed in May 1886³³.

Sexton's House 1886

Built in 1886 by E. Heron for £297. Originally this house had 3 bedrooms, a parlour, a living room and a scullery, with a large room on the east corner, intended for the Cemetery office, that had an entrance off the front veranda. The building is clad with rusticated weather boards. The building is situated in the Cemetery on the corner of what is now known as Old Chapel Way and Waikumete Road, immediately opposite the original site of the old Glen Eden railway station. The postal address is 1 Waikumete Road.

It is clear that the office originally built at the front of the house eventually became the master bedroom, transforming the dwelling from 3 bedrooms to 4 bedrooms.

In November 1919 the City Engineer's Office furnished the Town Clerk with an estimate of £62.10 to build a 12 foot x 8 foot room in the north eastern corner of the house. This room then became the Cemetery office³⁴.

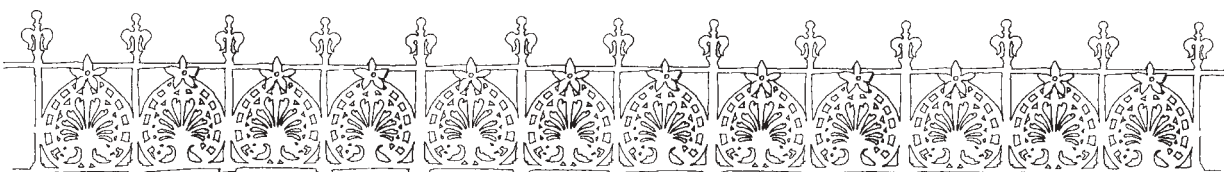


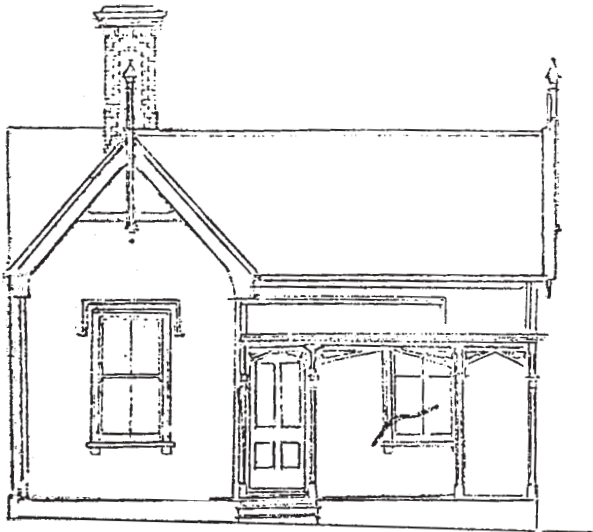
Sextons house

³² ACC Minutes, 21 January 1886.

³³ ACC Minutes, 20 May 1886.

³⁴ Letter from W.E. Bush, ACC City Engineer to Town Clerk, 19 November 1919.





Assistant Sextons house, Auckland City Archives

Sexton's House should be built facing into the Cemetery - the same way as the Sexton's dwelling. In this case it may well have stood closer to what is now Old Chapel Way than to what is now known as Glenview Road, as is commonly believed - a road that would have been an unimportant dirt track in 1886. This building was burnt down in early 1918³⁵.

The Foreman's House (Also known as the Beach Road Cottage and as the Glenview Road Cottage)

During the period from 1914 to 1918, many improvements were carried out in the Cemetery. On 27 September 1916, in accordance with a suggestion made by the Chairman of the Public Services Committee, the Superintendent of Parks recommended that a residence should be provided for the foreman in charge of the improvements. At that time the two existing houses at the Cemetery were occupied by Mr Erickson, the Sexton, and his assistant.

Assistant Sexton's House 1886-1918

Built in 1886 by E. Heron for £189. This house had 2 bedrooms, a parlour, a living room and a scullery. The building is commonly believed to have been situated north east of the Sexton's house on what is now known as Glenview Road. Careful examination of the front elevation of this building on the Auckland City Council drawing of this dwelling indicates that the draftsman may have intended that the Assistant

Rather than build a new residence (at an estimated cost of £400 - £500) it was decided to remove a cottage from 109 Beach Road, Auckland, where a major improvement scheme was also taking place and re-erect it within the Cemetery grounds at Glen Eden.

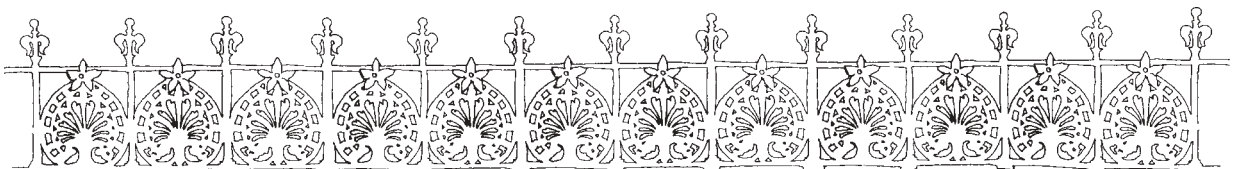
On 28 October a full set of specifications was drawn up for the cutting of the dwelling into suitable sections and it's re-

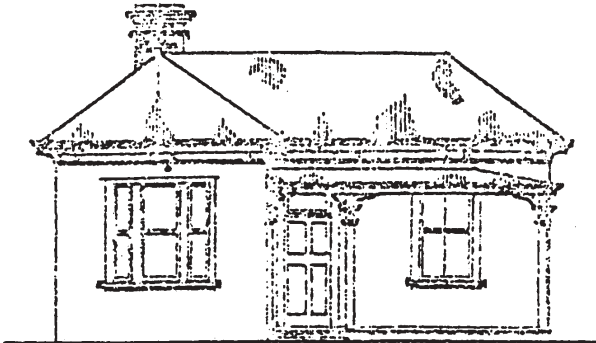
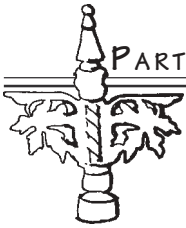


Foremans house

³⁵ ACC Minutes, 25 July 1918.

³⁶ Letter from W.E. Bush (City Engineer) to Town Clerk, 27 September 1916. See also WCC cemetery microfilm plans 4461/1 and 4598/1.





Foremans house Auckland City Archives

erection on the new site at a total cost of just under £230³⁶. As re-erected, the building had 3 bedrooms and a kitchen/living room with a lean-to wash house. The building is clad with rusticated weather boards.

On it's first Waikumete site (1917 - 1979) this dwelling was situated south east of the Sexton's House and south of the Assistant Sexton's House in the triangle formed by the junction of what is now known as Waikumete Road and Glenview Road. In 1979, in order to make way for the new fire station, this dwelling was moved northwards to approximately the site the Assistant Sexton's House had occupied up to 1918 when it was burnt down. This is the house that stands today at No. 6 Glenview Road between the Glen Eden Fire Station and the Chapel of Faith in the Oaks.

Crematoria and Chapels

Old Crematorium (1922 - 1969)

Calls for the construction of a crematorium in Auckland began in 1909 when the Auckland Cremation Society offered to pay Auckland City Council half the cost of establishing a public crematorium. Auckland City Council, however, chose to defer the proposal. It was again raised in 1916, when the Mayor stated that the Minister of Health has suggested that the Council should erect a crematorium at Waikumete. Once again the Council decided that no further action should be taken until the end of World War One³⁷.

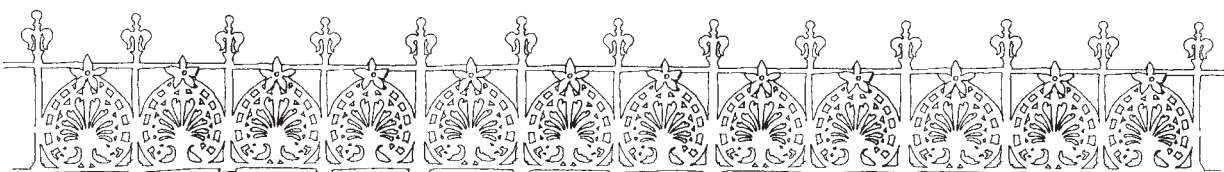
The Cremation Society reintroduced the issue in 1918, stating that if an offer was to be made to the Health Department to erect a public crematorium on a pound to pound subsidy basis, it may be granted by Parliament. The Auckland City Council responded by placing a £4,000 loan proposal before its ratepayers. In June 1919 a poll was taken on the proposal. The vote was 1,718 in favour and 1,071 against.

Although the proposal was carried with a majority of 647, nothing happened until May 1922 when the City Engineer, Mr W.E. Bush, sent a letter to the Town Clerk stating that he had received a letter from the Carbon-oxide Company Limited of London. The letter quoted the cost of iron work, steel work, cast iron work, machinery and fire clay blocks for a cremation



Aerial oblique of old crematorium

³⁷ Minutes of ACC Public Service Committee, 5 October 1915.





furnace of the latest type. The letter further stated that a set of working drawings would be sent out with the goods³⁸.

The proposed site for the building was near the soldiers' area on Glenview Road. This resulted in a 140 strong petition from Glen Eden residents concerned about the proximity of the crematorium to residential housing and the "nervous effects" cremations may have on "women home alone" and "school children travelling home from school". Despite this and protests from the Glen Eden Town Board³⁹ the construction work began in 1922. The builder was Mr Charles Walter Ravenhall.

The building was completed in December 1922 at a cost of £2,499 2s 10d. The builder then installed the furnace and the furnace floor, bringing the total cost to £3,486 1s 3d. Cremation charges were fixed at £4 4s 5d and the first cremation was undertaken on 15 August 1923 in the coke and wood fired furnace.

In 1934 a report to the Auckland City Council stated that the Crematorium was in urgent need of replacement. In 1935, rather than replacing the building, the Council chose to install an oil-fired furnace to replace the old one which was in a bad state of repair. The new furnace was first tested using 200lbs of heavy beef and bone in a typical wooden casket and was proved to be entirely satisfactory⁴⁰. An underground tank for the storage of 500 gallons of fuel oil was placed at the side of the building. These modifications reduced the time for cremation from 1½ hours from start-up to 40 minutes and allowed the plant to operate smoothly and silently with minimal smoke emissions⁴¹.

New Crematorium (1953)

The building of the new crematorium was subject to many delays. The initial plans with a cost estimate of £77,000 were submitted to Auckland City Council in November 1945. The Minister of Works, Mr Semple, deferred construction because of the shortage of building materials following the end of World War II⁴².



New crematorium built 1953

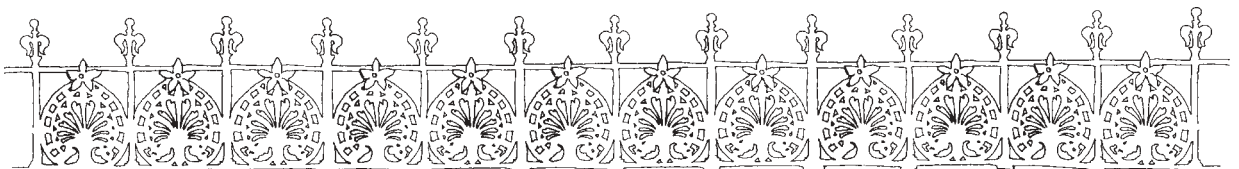
³⁸ ACC Minutes, May 1922.

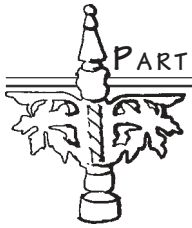
³⁹ Letter from Glen Eden Town Board to Auckland City Council Mayor and Councillors, 25 June 1922.

⁴⁰ Report to Town Clerk from City Engineer, 29 October 1935.

⁴¹ Report to Town Clerk from City Engineer, 29 October 1935.

⁴² NZ Herald, November 1945.





In 1947 a building permit was issued for part of the work. In 1948 cremations exceeded the number of burials and in response to continued calls to replace the old Crematorium, the construction of a new crematorium was approved in principle by the Building Control Subcommittee of the Cabinet.

Finally, in April 1949 the foundations were laid for the main chapel and furnace room at a cost of £44,000. The architects were Messrs. Massey, Beatson, Rex, Trott and Carter. Fletchers were responsible for the construction work. In July 1950 the Minister of Works, Mr Goosman, refused a permit to complete the rest of the complex. This included the smaller chapel, the remainder of the columbarium, records office, rest room, colonnade, circular wall, and rose garden (for scattering of ashes)⁴³.

A photo taken by the Auckland Star newspaper in 1952 revealed that the whole complex, other than the office and the second chapel, was almost complete. The second chapel was completed in September 1954 and a temporary office was located on the lawn opposite in June 1956. The new Crematorium was applauded as a striking piece of architecture and a promotional brochure of the time stated that dignity, reverence and comfort were the governing factors in its design⁴⁴.

With the opening of the new Crematorium in 1953 the old one ceased operation. The furnaces were dismantled in 1959 and the building itself was demolished in 1969. The remaining urns of ashes were removed and stored in the Chapel of Faith in the Oaks.

Jewish Prayer Houses

Old Jewish Prayer House (now located at Oratia Cemetery)

Also known as the Taharah House, the Jewish Prayer House was built in 1886 by T.H. Jones at the cost of £100. Plans for the Chapel were presented to the Auckland Jewish Synagogue Committee by Mr J.R. Keesing on 4 July 1886. Tenders were called for immediately and a circular was sent to all Synagogue members to raise the necessary funds. On 25 July 1886 the tender of T.H. Jones for £100 was accepted, "and work on the Chapel was to be proceeded with at once". Built entirely of kauri, the Prayer House was sited on the



Former Jewish Prayer House

northeast corner of the old Hebrew section. For the next 106 years the Jewish Community used it for burial services. The first burial was conducted on 15 June 1887 for Mr F.H. Lewisson. The Chapel and grounds were maintained by the "Chevra Kadisha", the Jewish benevolent society charged with caring for the bereaved and the dead.

The Chapel was removed from the Cemetery on 3 July 1992, one day prior to its intended demolition for salvageable materials. In its later years especially the Chapel had become a "frequent target of graffiti and vandal attacks" which were proving costly to repair.

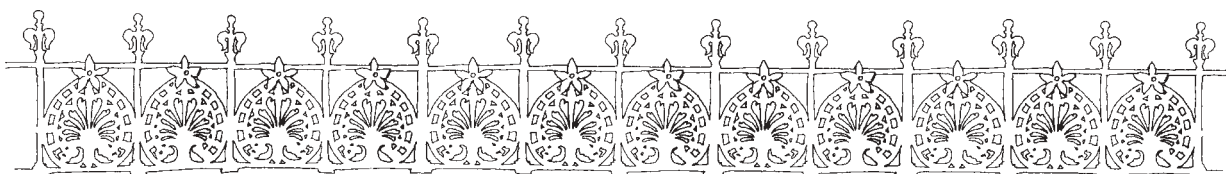
The Chapel was relocated to the Hoani Waititi Marae in Waitakere City for use as an implement shed, then purchased by the Oratia Cemetery Trust and moved four months later on 27 November 1992 to its final resting place in the Oratia Cemetery. The Chapel has now been restored under the direction of Mr David Harre⁴⁵.

The Chevra Kadisha and Benevolent Society has recently held discussions with Waitakere City Council regarding the redevelopment of the original prayerhouse site for burials. It is anticipated that there would be room for an additional 16 burials. This redevelopment is a result of a previous commitment from the Council that the Society could use the land for this purpose.

⁴³ NZ Herald, 14 June 1950.

⁴⁴ Bush, G., *Decently and in Order*, 1971, p.351.

⁴⁵ Taken from an unpublished history of the Chapel by Paul Schloytje.





New Jewish Prayer House built 1990

New Jewish Prayer House

Constructed in 1990 this modern octagonal building was built as a replacement for the Old Jewish Prayerhouse within the new area dedicated for Jewish burials.

Faith in the Oaks Toilet Block

Situated adjacent to Faith in the Oaks between the Chapel and the Sexton's House, this small building is thought to have been constructed in 1987 at the time of the Chapel's restoration. It is designed in a style sympathetic with the Chapel.

Service Buildings

Old Toilets

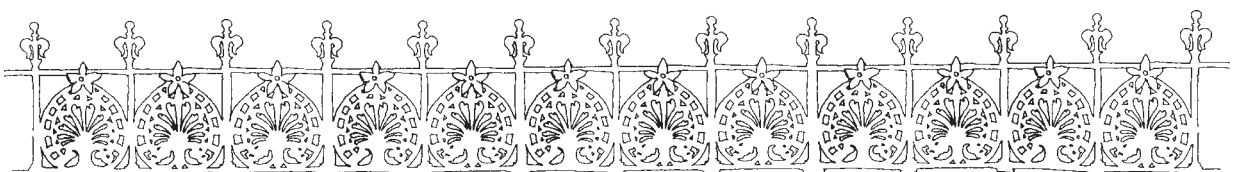
These brick toilets, located on Acmena Ave and Kowhai Road, are thought to have been built around 1939. They have been subjected to ongoing vandalism and have been closed to use on a regular basis. The block in Kowhai Road is scheduled for demolition due to the high level of vandalism, poor surveillance and lack of usage.

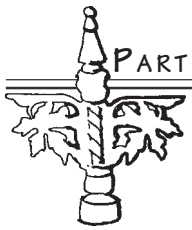


Faith in the Oaks toilet



Old Toilets





Works Shed

New Toilets

Located on Waitakere View Road, these Exeloo style toilets were erected in 1999 to serve the modern western berms and lawns and Urupa. Unfortunately the style and location of these toilets integrates poorly with the Cemetery

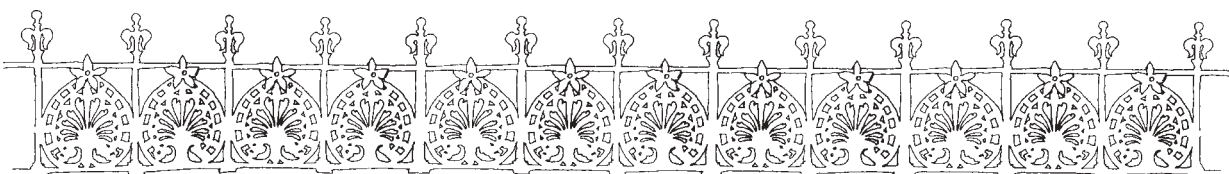
and they are located in a visually prominent location.

Works Shed

Built in 1961, the works shed and associated yard and depot is located in Amber Crescent.



Mausoleum





Corban Mausoleum

Mausoleums

There are a total of 37 mausoleums in Waikumete Cemetery along Orchid Rise, Narcissus Drive and Magnolia Way. The first Mausoleum was built in 1941 by the Corban family for the interment of Assid Abraham Corban.

Contribution of the Buildings to the Cemetery

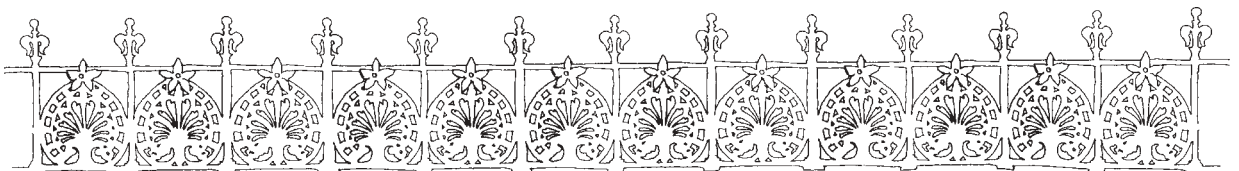
The presence of the historic buildings around Old Chapel Way and the Crematorium adds appreciably to the significance of Waikumete Cemetery as a historical site. Together the buildings form a group significance interpreting early cemetery function and social development. The buildings highlight the clear relationship between management of the site as a functioning cemetery while also contributing visually in terms of bulk and scale within the landscape. In particular the buildings contribute to the landscape character of the Cemetery in terms of built structure, complementing and enhancing the soft landscape and hard landscape features of graves with their interspersed vegetation.

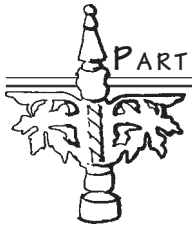
Landscape History Summary

From its inception in 1886, Waikumete Cemetery has undergone a number of physical and vegetative changes. Many of these changes have been human-induced and relate to the adaptation of the topography and vegetation of the site, while others are a response to natural processes, in particular fire, which have affected the site over the years.

The following summary of the landscape history of Waikumete has been derived predominantly from the extensive range of maps and plans of the site that date from the late 1800's to the present. Additional 'infill' information has been gleaned from historical records and archive information held by Waitakere City Council and previous reports, summaries carried out by a range of interest groups associated with the Cemetery. The information is referenced in the summary text associated with each era covered by the plans.

Information on the landscape changes at Waikumete is 'sketchy' and relies on the sporadic notation of planting and landscape works pulled together from a variety of sources,





including Waitakere City Council archives, the Department of Conservation, National Archives, interviews of present and past staff, and the Historic Places Trust. The summary draws on the historical information on Waikumete and is supplemented, where appropriate, with an analysis of vegetative and landscape treatments that may relate to broader cemetery design influences over the years.

For ease of interpretation, the majority of the information has been reflected in the appendicised plans that notate the significant landscape modifications and approaches within certain time periods and gives an overall picture (from the documented information) of the landscape of the Cemetery.

1886-1904 (Refer to Figure 1A, Appendix 15)

Waikumete Cemetery had a smaller original developed area (53 acres) that related strongly to the railway line. At this time the railway line was the predominant access for people to the Cemetery. During this period the Cemetery was located some distance from the 'built up' or residential part of the city. This original area of Cemetery was treated in a formal manner. Layout of the grave sites and associated roads and pathways took the form of a grid pattern that was literally 'laid over' the existing topography. At this stage there is no evidence of any attempt to modify the topography, and the grid-like pattern contrasts strongly with the natural gullies and landform of the site.

This attempt to implement a grid-like pattern is typical of cemetery design of the Victorian era, where the desired character was the attainment of a sense of order within the 'harsh' environment and in some sense to create a style reminiscent of a garden. Evidence of this approach is documented in comments made in local papers regarding the Cemetery, which refer to the Cemetery "...being made more attractive than at present."⁴⁶

The main focus for the Cemetery at this time was the entrance located near the railway line and the associated buildings clustered in that vicinity. These buildings include the Sextons' houses and Chapel of Faith in the Oaks. The nearby

Glen Eden Railway Station was also an important building at the time, providing access to the Cemetery.

There is documentation on plans from this period of a number of shelter belt plantings and fencing to control stock. This was the first period of major planting within the Cemetery and the planting consisted of predominantly exotic shelter species with some evidence of the first plantings of wildflowers at gravesides. At this time the Cemetery site was surrounded by gumland vegetation.

There are a number of wildflower species within Waikumete Cemetery, many originating from grave plantings that have become naturalised within the Cemetery. Most of these species are from Southern Africa and this is considered the largest collection of these plants in the world outside of their natural environment.

Significant examples of particular wildflower species are found in the following areas:

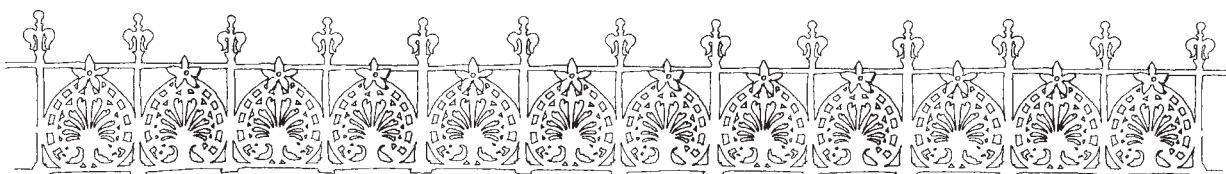
- Both sides of Daffodil Drive have extensive displays of Romulea.
- Both sides of Acmena Drive, from Watsonia Way to Waitakere View Road, have good displays of wildflowers amongst the graves.
- The old toilet area has a display of Ixia.

Appendix 6 - Wildflowers in Waikumete - outlines the range of exotic naturalised plants within the Cemetery with general locations. The list differentiates between those plants that are 'garden escapees' and those which are 'meadow plants'. However, many of the species would have originated as deliberate plantings on and in the graves.

1904-1918 (Refer to Figure 1B, Appendix 15)

By 1904 the Cemetery had fallen into a state of disrepair and there was extensive discussion on the unsatisfactory state of the gravesites. Planting in particular had grown out of control due to lack of maintenance. Following complaints the

⁴⁶ New Zealand Herald, 22 July 1904. Improvements needed for Waikumete Cemetery "at present disgrace to the city" (Mayor). Cemetery should be made "more attractive" than at present.





Wildflowers

Council instigated a 'clean-up' which involved general maintenance, bulb and shrub planting⁴⁷. Native specimen trees (unfortunately un-named) were planted during this period along with some exotics, including oaks and gums.

Further fencing and upgrading continued throughout the period, with the major change occurring in 1917 with the establishment of the Returned Soldiers Area. The layout of this new area reflected a major change in the style of cemetery layout and planting. The grid pattern was replaced with winding paths and a less formal planting layout. The entrance feature on the corner of Great North and Glenview Road (during this period called 'Cemetery Road') was developed at this time also, and provided the first dominant and specifically designed entrance to the Cemetery.

"The work in connection with the laying out of that portion dedicated to Returned Soldiers called for special care and attention on the part of your Committee, and much time and attention was devoted by the Committee to this special work.

The plans of the city engineer were followed in laying out this area whereby provision was made for a wide imposing entrance, and which from the natural configuration of the ground destined it to become the main entrance to the Cemetery.

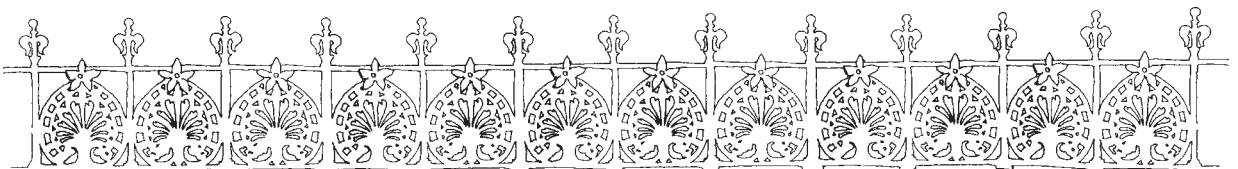
It is the intention of your Committee to erect gates at this entrance, supported by concrete pillars of such design to fit in with the general scheme of further improvements.

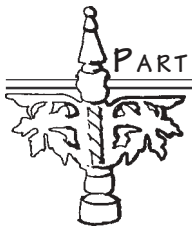
Through the grounds is formed a Drive of graceful curves, giving easy access to the sections allotted to the several Denominations and continuing down into the main drive of the Cemetery.

The whole of this area comprising 17 acres, was twice ploughed, harrowed and well cleaned, and sown with grass seed, and is now coming into vigorous growth, giving a pleasing effect with its park like appearance. SGD J Trevethick, Chairman."⁴⁸

⁴⁷ 1909/1910 TCR, p.14. "Waikumete: in this cemetery the task of keeping the cemetery in decent order and of executing improvements has been carried out to as great an extent as the funding available permitted and the cemetery staff were able to cope with. The road lending across the gully has been reformed; all other roads kept in repair, and a large area of footpaths reformed, tarred and sanded. The hedges have been trimmed; flowering bulbs have been planted in the main gully; shrubs planted in nursery rows and the open drain through the main gully cleaned out, while the buildings and fences have been kept in order. The cemetery, unfortunately presents a very bleak aspect, which must continue until the planting operations have advanced sufficiently to improve this condition of affairs."

⁴⁸ Report to Finance Committee, June 1918, ACC.

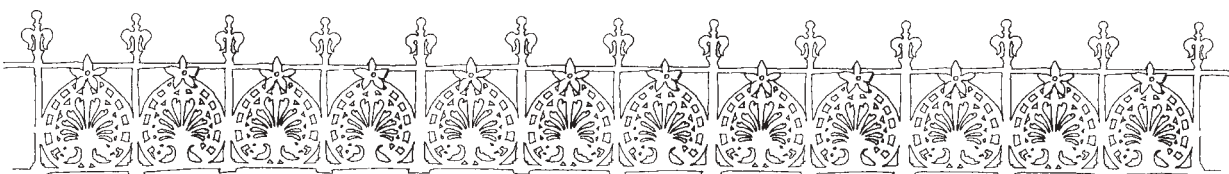




Returned Soldiers Area



Returned Soldiers Area





Eucalypts

carried out at this time also. Pines and mixed natives were planted in 1920⁵⁰. In 1921, 250 eucalypts were planted which were said to have made a "complete avenue of gums all round the cemetery"⁵¹. The eucalypts noted were *Eucalyptus amygdalina*, but the species supplied were in fact *Eucalyptus pulchella*. Remnants of these trees still exist along the Glenview Road boundary, as identified in the Arboricultural assessment of the eucalypts, (refer Appendix 7 - Eucalypt Species Recorded in Waikumete Cemetery).



Natives in gullies

1918-1925 (Refer to Figure 1C, Appendix 15)

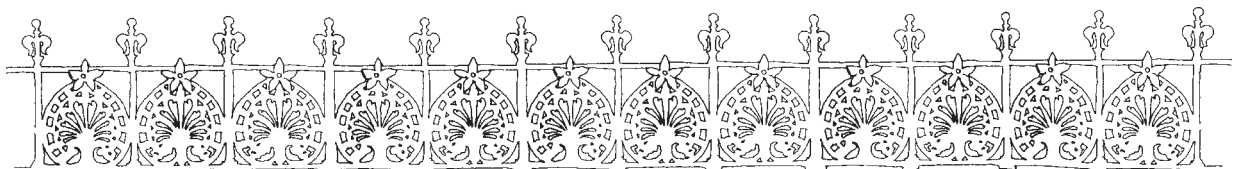
This was the second era of major planting within the Cemetery⁴⁹, the planting predominantly being carried out on the large area of land adjacent to the Cemetery itself. Pine with some native specimens dominated this planting.

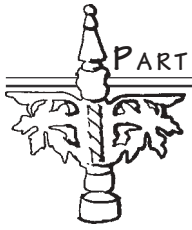
Plans showed that the original shelter planting along Great North Road was well established by this stage and consisted of a 30m wide plantation. Further planting in gullies was

⁴⁹ 7 March 1925, New Zealand Herald, p.10. "The mayor is very pleased with tree-planting at Waikumete. 90% of trees planted over the 130 acres are well established. Although the expenditure had been considerable during the last 6 or 7 yrs it was now ended and no further special appropriations would be necessary. The trees were well forward and could now be left to look after themselves."

⁵⁰ 12 June 1920. Memo from W. Kirkpatrick, Foreman to the City Engineer, ACC. "Advised that 1,000 *Pinus* trees arrived. Require 100 natives mixed. Lot of Rimu, Kahikatea, Miro, Matai, Totara, Puriri, Kauri, Karaka, Pohutukawa and NZ Cedar; if they can get it all from Nihotupu."

⁵¹ 30 May 1921. From W. Kirkpatrick to the Town Clerk, ACC. Reporting that "the fencing of the Cemetery Reserve is now completed. The *Eucalyptus Amygdalina* (250) have been planted making a complete avenue of gums all round the cemetery."





Acmena Ave

1925-1940 (Refer to Figure 1D, Appendix 15)

A major impact on the Cemetery in this era was a fire that destroyed most of the 200 acre pine plantation established during the early 1900's⁵². Native and exotic plantings were destroyed in the fire. At this time maintenance was again an issue, with some cleared areas of land reverting to gorse⁵³.

A mass planting of natives in the gullies was carried out in response to complaints about the lack of amenity within the Cemetery⁵⁴. Planting along fence lines is documented, including gums - exact locations for these plantings are not given.

1940-1960 (Refer to Figure 1E, Appendix 15)

The major change during this period was the development of the land to the west of the original Cemetery. New roads followed a more sinuous pattern and land was modified with extensive cut and fill to create areas appropriate for the gravesites (in contrast to the original overlay of the grid). Planting of specimen trees was carried out, including the Acmena specimens, cypress, kowhai and pines⁵⁵.

The new Crematorium, built in 1951, was developed with an extensive exotic garden surrounding the building. The lawn cemetery style was established⁵⁶. This innovation, which was

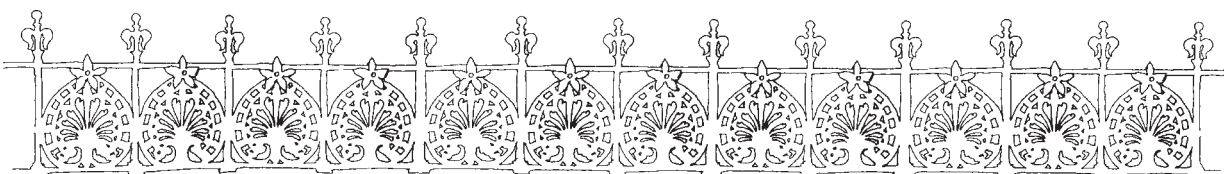
⁵² NZ Herald, 27 March 1929. "Fire swept through nearly half of the City Council's 200 acres of pine plantation at Waikumete yesterday, scorching or destroying about 40,000 young trees."

⁵³ 1 August 1934. Report to Town Clerk on criticism of the cemetery maintenance and appearance. "The improvements carried out to the newer portion of the cemetery include the forming of avenues and walks which provide for grass margins. Present policy of beautification is on the right track."

⁵⁴ 18 June 1934, NZ Herald, p.13. "Far from being God's acre it seemed to this correspondent that the curse of God lay on it." "...tract of desolate swampy ground..."

⁵⁵ 20 August 1961. Gallipoli 'Lone Pine' seedling planted (and bronze plaque erected) by the Western Suburbs RSA 'in remembrance of the fallen'.

⁵⁶ 8 March 1943, ACC MB 43, p.236. Comprehensive scheme for Waikumete Cemetery future development. Work to be done immediately includes: widening of road, development of Roman Catholic area, 4,500 cubic metres of earth moving. Comments that the burial system known as the lawn plan has much to commend it.





Urupa

typical of cemetery design of the time, created a different character to the spaces within Waikumete Cemetery.

1960-1980 (Refer to Figure 1F, Appendix 15)

A period of continued clearing and burning of vegetation along with further earthworks and sinuous roadways. Another fire destroyed parts of the scrub and forest within the site⁵⁷. Neglect of some areas within the Cemetery was again reported.

1980 - present (Refer to Figure 1E, Appendix 14)

Continued minor additions to the Cemetery occurred with sporadic planting. The Garden of Remembrance and the establishment of the Urupa were the main developments during this period. A landscape development plan for the Cemetery was developed for Waitakere City Council by Barnett Shafer and Corfe Landscape Architects. Only certain elements of this plan were implemented - predominantly those features associated with the Crematorium and Chapel such as the Garden Of Remembrance⁵⁸.

Summary

The research regarding the landscape history of Waikumete Cemetery suggests that the development of the

Cemetery has been carried out with well-defined and generally traditional design intentions, but that many of these efforts either were not fully carried out or were diluted through lack of maintenance subsequent to their implementation. An example of this is the intent for the Cemetery to reflect an ordered and 'garden-like' character at its inception, however, due to both the topography of the site and the lack of maintenance through the years, this intent was never truly realised and the site was often viewed as a neglected swampland.

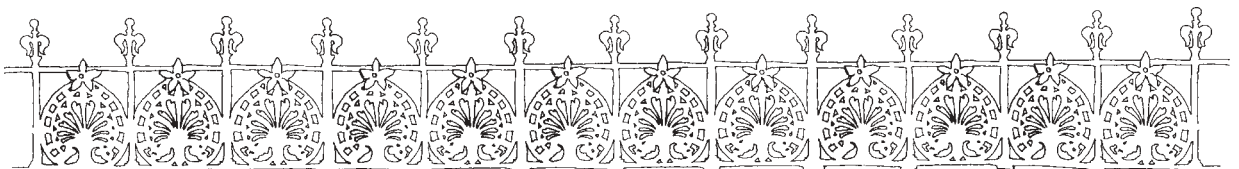
No clear indication is given of an overall landscape master plan for the development of the Cemetery in any of its eras of development, with work tending to be carried out in a sporadic way in response to either natural disasters (fire), the need for new grave areas, and/or complaints about the state of disrepair.

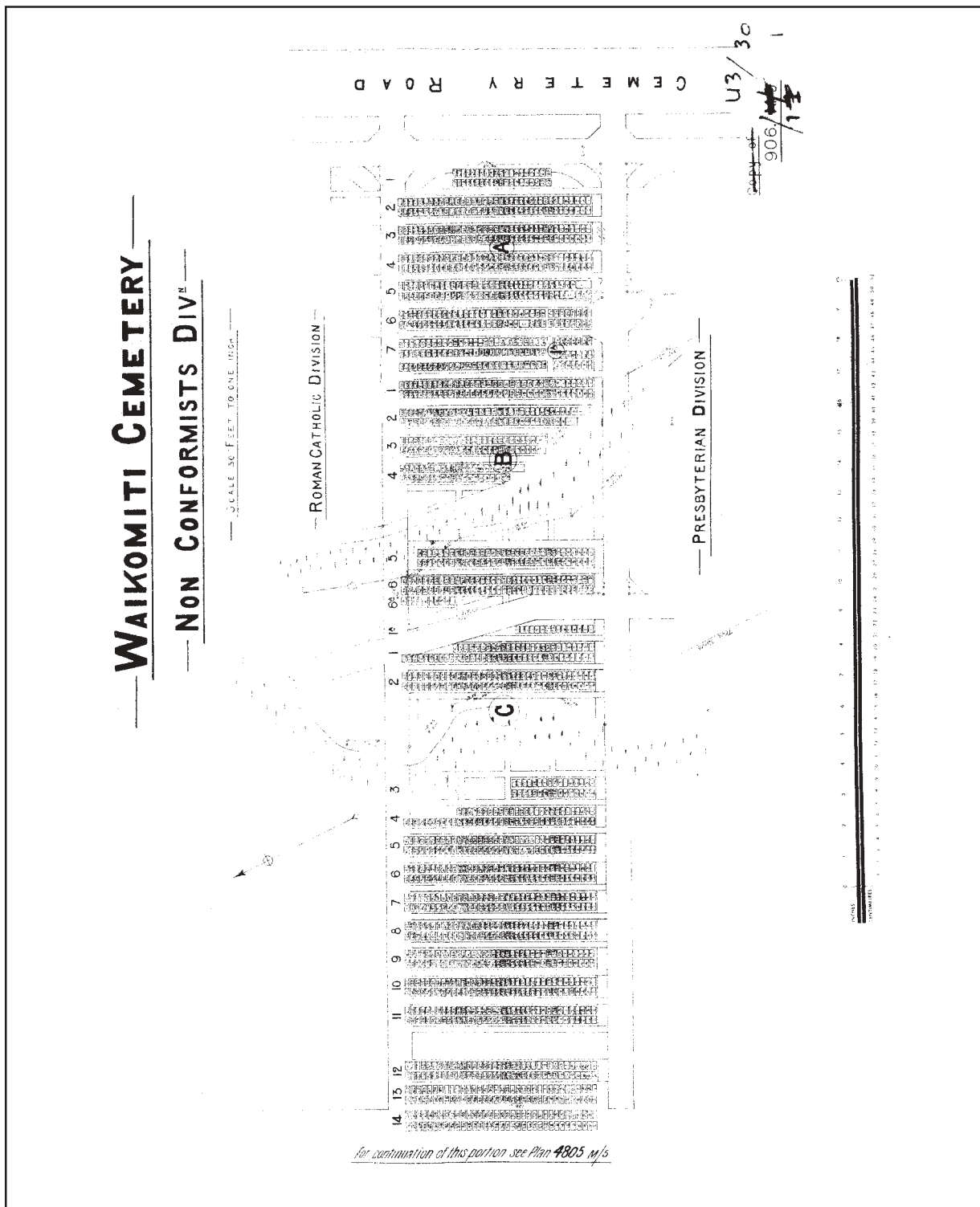
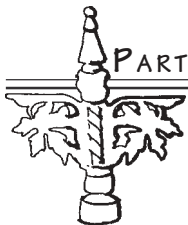
Remnants of older plantings (i.e. Cypress and oaks, etc.) indicate that there was an intention to recreate a traditional Victorian Cemetery approach to planting, in particular with the use of 'symbolic' trees.

The legacy of neglect is partly what gives the current Cemetery its distinctive character, with the sense of decay and random naturalisation of specimen trees and wildflowers.

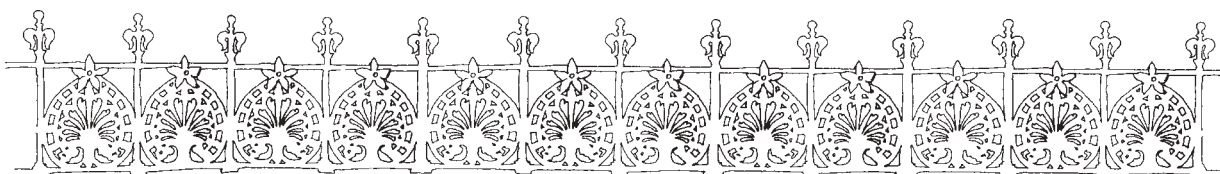
⁵⁷ November 1969, ASB, p.279. 20 acres of scrub and forest at the cemetery destroyed by fire.

⁵⁸ NZ Herald, 20 July 1994, S.1, p.6. New Garden of Remembrance opened.





Early grave layout in presbyterian area WCC Archives





Evidence of the intent for order within the Cemetery, particularly in the original Cemetery area, is reflected in the remnant avenue, the layout of plots, and the large specimen tree and hedge plantings in this area.

From its establishment the planted gullies within the Cemetery were retained. The retention of these gullies has quite dramatically influenced the style of the Cemetery, as they have continued to impart an informal and highly vegetated naturalistic character.

Monuments and Graves⁵⁹

Waikumete Cemetery is laid out on sloping undulating land bisected by several gullies. Early portions of the Cemetery were formally planned in rows back to back and grouped by denominations.

The Cemetery was, and is still, serviced by a large range of Auckland's monumental masons. Many still retain the names of their predecessors. The process of monumental masonry has changed little since early times. The one key change has been the move of cemetery management towards lawn or berm type layouts, which involve a simple marker, either laid flush to the ground surface or mounted on a concrete plinth or berm. This type of planning emphasises uniform layout and standardised grave design for the ease of maintenance.

Masons still operate largely as they always have, as importers of monumental stone who carry out the final finishing work which involves the cutting, polishing, letter cutting and erection of the monument. Today most of the headstones are constructed of granite, but traditionally grave sites were marked by a range of materials from timber to stone such as sandstone, marble, and - the most expensive - granite. The most commonly used material during the late nineteenth and early twentieth centuries was marble, (commonly Carrara) which was sometimes shaped or decorated with relief carving. The lettering was formed by carving each character, filling it with a lead plug and finally polishing the surface.

The more elaborate Victorian and Edwardian graves often incorporated figurative marble work which, along with much of the relief carving, was produced overseas - most commonly Carrara, Italy - and imported by each monumental mason. Both the Italian Marble Company and the Italian Sculpture Marble Company were providing Auckland Masons with their figurative marble work at the same time⁶⁰.

By the turn of the twentieth century, carved granite monuments were also being imported from Aberdeen, Scotland. Firms like W.M. Crighton provided Auckland masons McNab and Mason with elaborate catalogues with a large range of monuments. The common type were "Red and Grey Scotch Granite"⁶¹.

There is very little information about the process of stone masonry at Waikumete. This includes the level to which the local stone masons would have added carved decoration to blank headstones or monuments. Some of the decorative relief carving on gravestones can be attributed to local stone masons, but further research is required to confirm the extent and significance of this work. From around the 1880's to just after the turn of the century was the peak of elaborate memorial design in New Zealand. During this period people's attitude towards death combined with the skill of designers and artisans to produce some fine examples of memorial architecture within the early areas of the Cemetery⁶².

After the First World War memorial design in general reverted to more simple styles, as the mechanisation of stone cutting processes and cemetery maintenance developed. Gradually the most maintenance efficient form - the lawn cemetery - has been accepted across New Zealand.

Grave Design and Symbolism

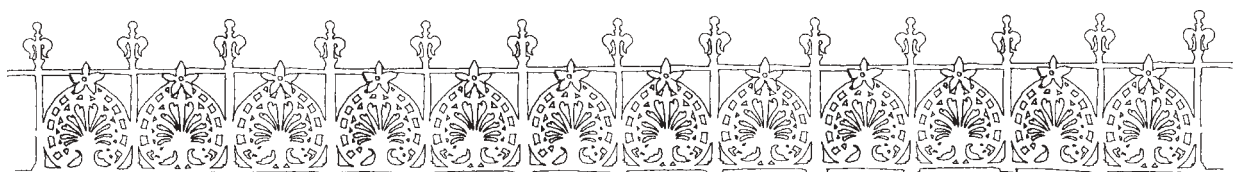
Victorian and Edwardian designs dominate the graves in the older part of the Cemetery. Victorian and Edwardian monument and grave design seldom made direct reference to death. Instead it made polite euphemistic associations with the character of the deceased and the feelings of the family

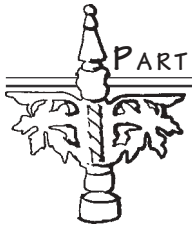
⁵⁹ Much of the information in this section is from Clough and Associates, 1999.

⁶⁰ Symonds Street Cemetery Conservation Plan, p.39.

⁶¹ McNab and Mason Papers, Auckland Public Library, Special Collections, ref 807/381, 1, 2, and 3.

⁶² Symonds Street Cemetery Conservation Plan, p.39.





towards them⁶³. This was expressed through the type of grave marker, its decorative design, inscriptions, and association with other grave sites.

The older parts of the Cemetery are characterised by the definition of each plot by an edging wall (sometimes used to keep stock out when areas were being grazed), a raised base or fence and often include a headstone or memorial as a marker. The area within the boundary of the plot was often decorated with shells, white stones or sometimes tiled, which generally became a surface for placing commemorative items such as porcelain flowers or wreaths.

The armed services areas and the modern lawn and berm cemetery areas have reduced the opportunity to mark the entire grave by limiting the area for the placement of grave headstones and prescribing standardised designs.

The importance of cemetery architecture lies not in the headstones alone, but in the relationship of headstones to their surrounding rails and kerbings, and to the cemetery landscape as a whole. The symbolism of a particular grave may also be expressed in the kerbing and railing of the grave, with those elements forming a complete design.

All elements of an individual grave's architecture are part of the design whole and should be considered as forming a complete unit along with the headstone. The loss of such design elements would certainly remove an essential part of the grave's complete design.

The geographical or topographical position of particular graves may have been planned so that it can be seen as part of a particular vista, or so that it could be seen from a particular viewpoint or for the view from it. It was not unusual in nineteenth century cemetery landscaping to place smaller headstones nearer a drive with larger ones still visible behind in an effort to create picturesque composition. In addition, some graves such as family groups often relate to their neighbours.

The predominant form of the cemetery was a rectangular grid pattern of rows and plots with the numbering of the plots

alternatively across the row like street numbering - even numbers one side and odd on the other. This replication of residential housing patterns reinforces the common theme cemeteries have always followed as cities of the dead which paralleled those of the living.

Memorial Design Origins

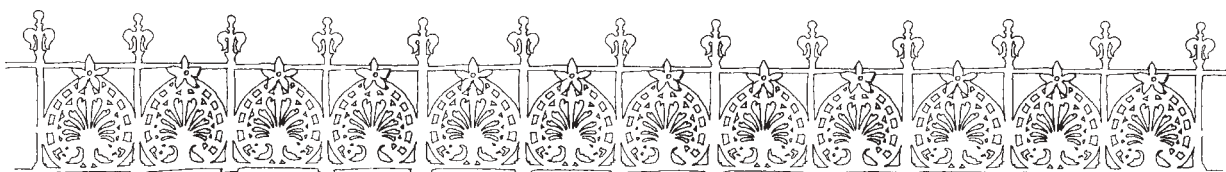
Memorial design stems from two primary sources - the menhir (single standing stone) or cairn (heaped pile of smaller stones), and the idea of the tomb as a house. Both the menhir/cairn and the tomb-as-house ideas date from early history and it is not possible to date one earlier than the other. Both ideas are frequently combined in tomb design. In general, the menhir/cairn pointedly and dominantly marks a burial for remembrance, whereas the enclosed tomb reminds us in modern times that death is close to life and that it could be likened to sleeping in a bedroom waiting to be awakened. In the past, many cultures have believed that death is simply another life and so they could take into that "after-life" the possessions and necessities that they had used in the life they had just left. So the tomb was fitted out just like the home with their belongings and perhaps even their servants to be used again in whatever future awaited them. From the menhir/cairn are descended such design patterns as the Roman stela, the concept of burial under altars, and the use of pillars, crosses, statues and modern headstones as grave markers. From the tomb-as-house comes the concept of the coffin, the crypt, the vault and the mausoleum, and the use of horizontal ledgers or lids perhaps decorated with carving or effigies culminating in the large and ornate canopied tomb.

Grave Types Represented in the Cemetery

Altars and Ledgers (Headstone)

Altar tombs consist of flat, inscribed slabs of stone supported on raised brick or cement walls or sometimes on a solid raised block of brick or stone. As this was predominantly a nineteenth century design, many of these altars have become notoriously unstable due to ground subsidence or weathering of bricks or mortar. As a result, many have been demolished and the slabs laid directly on top of the grave

⁶³ Sagazio (1992) p 132.





itself. Such slabs are called ledgers and if they have moulded or caved edges, this can be an indicator of former raised placement.



Altars and Ledgers

Chest Tombs

Similar to altars and ledgers, chest tombs are also raised, but have stone panelled walls or concrete rendered brick walls. The corners usually act as the main supports for the top slab and are slotted for the side panels to be slid into place. These panels allowed for extensive and durable inscriptions. Chest tombs were also prone to collapse, but not so readily as altars as they tended to have stronger corner post supports.

Bedheads and Armchairs

This design was a later development of chest tomb that combined the altar and chest type to form a composite type. It defines the outline of the grave plot with an edging wall incorporating a low tilted headstone often buttressed with armrest forms. These types of graves date back from the late 1920's and are constructed of brick with a rendered plaster finish.



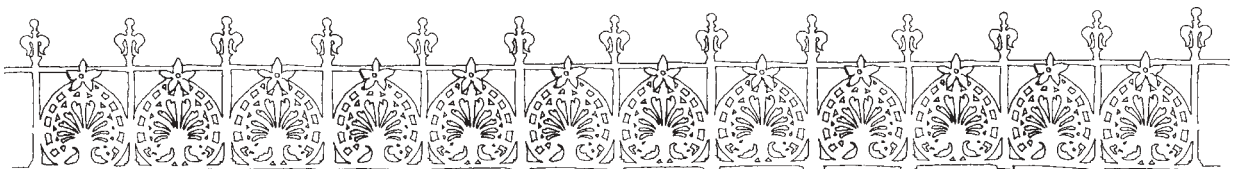
Bedheads and Armchairs

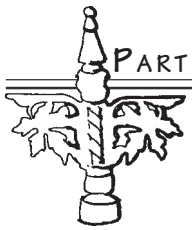


Chest Tombs

Crosses

Crosses were out of favour in England for three hundred years following the Reformation as they were regarded as idolatrous. They came back into fashion in England and New Zealand around the 1850's and became extremely popular as





PART TWO: HISTORY

the incorporation of Italian marble into designs increased later in the century. The cross tends to be mounted on a pedestal base or a headstone. Types of crosses found in Waikumete include:



Calvary Cross

Calvary: Single cross-bar shorter than the upright. Pedestal has three steps representing the Trinity or Faith, Hope and Charity.

Celtic: Single cross bar, often tall and ornately carved with a circle or solid wheel at the junction of the bar and upright.



Celtic Cross



Maltese Cross

Maltese : Equally sized bar and upright. Ends widen in a triangular pattern similar to a medal decoration.

Eastern Orthodox: Double bar that is horizontal above and slanted below.

The groups of Mausoleums found in Waikumete along Narcissus Drive and Magnolia Way are predominantly constructed of concrete by the local Yugoslavian and Lebanese communities and are a unique example of this type in New Zealand. The family name is often prominently located above the entranceway or to one side at the front of the building. Many have small gardens outside or features constructed around the entrance to allow the placement of fresh flowers.

The first Mausoleum was built in 1941 by the Corban family for the interment of Assid Abraham Corban. There are now 37 Mausoleums in the Cemetery, the most recent one being completed in 2001. They range in size, with the largest able to hold 40 caskets.



Mausoleums

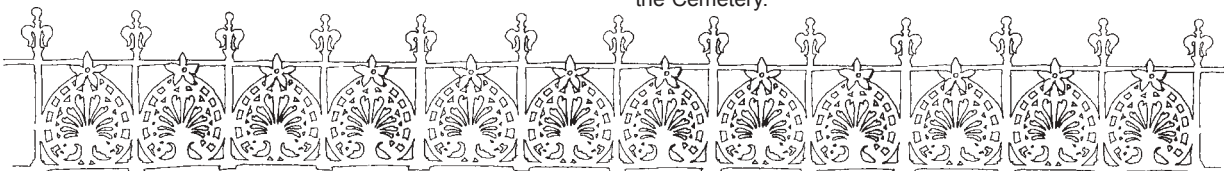
The Public Mausoleum, built in 1992 by Stately Mausoleums, was opened on 30 September 1992 and has proved a very popular facility. There are 24 crypts/niches, which are now either full or pre-purchased.

Mausoleums

Mausoleums are fairly infrequent in New Zealand. Whole avenues of mausoleums, as seen in cemeteries in Europe and America, are not found in this country. This may be due to the small percentage of European and Middle Eastern ethnic groups that use this form of burial who are resident in New Zealand. The high cost of construction may also be a factor.

Vaults

Vaults are sometimes referred to as "poor man's crypts" as they can often be little more than a brick lined grave. Some, however, can be quite large and entered by steps underneath a slab that is usually distinguished by ringbolts or handles in the surface. Often a hinged gate would be inserted into the railings for added ease of access. There are a few vaults at Waikumete, but this is not a commonly used type of grave in the Cemetery.





The first above-ground burial at Waikumete was the Buchanan Monument. The Buchanan family came from Glasgow in Scotland where they were stone masons. Three sons came to New Zealand in 1861. Edward Buchanan established Buchanan Monumental Specialists in Auckland in 1862. The Buchanan Memorial spire was erected either in the late 1800's or early 1900's. Made of pink marble, it is about 20 feet high. It was prepared in Scotland and shipped to New Zealand by the Buchanan family. There is a memorial to Edward and his wife Elizabeth, a brother George and his wife Agnes and their three children, and a brother John⁶⁴.

Memorial Types Represented in the Cemetery

There are two types of memorials in the Cemetery - those that are a feature of individual graves and those that commemorate major events that resulted in multiple deaths, such as world wars and the Erebus tragedy.

Individual Grave Memorials

This type of memorial is associated with the older parts of

the Cemetery. Modern day memorials are much smaller in keeping with the lawn cemetery layout and reflect the increasing trend towards cremations rather than burials.

Individual grave memorials are composed of a variety of symbols that can relate to a person's occupation, their style of living, character, religion, or to the way that they died. They can also reflect what the person buried thought of themselves and what others thought of them.

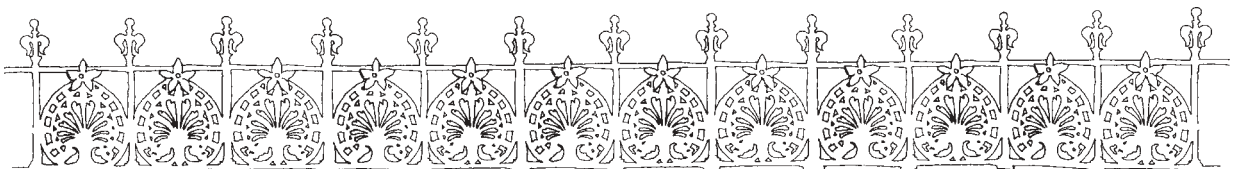
There are a number of common symbols that appear on memorials in Waikumete. They represent common themes and values of the many religious denominations and cultural groups buried within the Cemetery. A summary of these symbols is contained in Appendix Two.

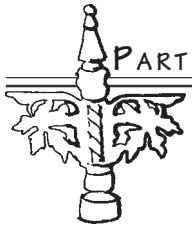
Waikumete also contains a number of memorials that are represented by other means. The most common of these is tree planting. One of the most significant is a grove of some 500 native trees planted in the 1930's by Charles Craig. This planting is located in the gully between Watsonia Way and Crocus Road. In addition, the Cemetery management has recently established Avenues of Remembrance or Ecoburials, where a native tree is used as the marker for a grave



Marble grave marker with lead inlay lettering

⁶⁴ Information provided by Mrs E. Daphne Porter.





Commemorative Memorials

These tend to be a more modern feature of the Cemetery and commemorate wars, epidemics (such as influenza) and disasters. One of the most significant is the Erebus Memorial, erected to commemorate the unidentified remains of passengers on an Air New Zealand DC10 flight that crashed in Antarctica on 28 November 1979.

Archaeological Features

Archaeological sites are defined under the Historic Places Act 1993 as "any place in New Zealand that ... 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 is or may be able, through investigation by archaeological methods, to provide evidence relating to the history of New Zealand."

Archaeological evidence may also relate to later periods, although these remains are not legally protected unless specifically declared to be an archaeological site by the Historic Places Trust, as provided for under the Act.

⁶⁵Clough and Associates carried out an archaeological assessment of the Cemetery area in 1999 as part of the preparatory work for the Conservation Plan. The research and survey undertaken for the assessment focussed on the establishment and operation of the Cemetery and on physical remains that preceded cemetery use. Archival references were found to activities such as gum digging and contracts relating to de-stumping and ploughing of unused parts of the Cemetery, but no direct references could be found to the initial extraction of kauri or other native timbers from the area or to earlier Maori use of the land⁶⁶.

Prior to the purchase of the land for cemetery use, the only feature depicted on early plans is the route of an old dray road running from Glen Eden station up to the ridge and along what is now Sunhill Road and Awaroa Roads. At the top of the ridge (near the current water reservoir) a branch also swung towards an early settlement in the Henderson Valley. This may

have followed the route of an earlier Maori track through the area, as the ridgelines were the logical route through an otherwise swampy terrain. No archaeological sites have been recorded in the area. Recorded pre-European settlement sites in West Auckland tend to be concentrated in coastal areas.

The lack of archival and archaeological information indicates that the area may not have been used much by either Maori or European settlers other than for transit prior to the establishment of the Cemetery in 1886. This was confirmed by a physical survey, which found no archaeological remains relating to pre-1886 activities. It is possible, however, that the extensive modification of the landscape to create the Cemetery may have obliterated any evidence of the area's early history.

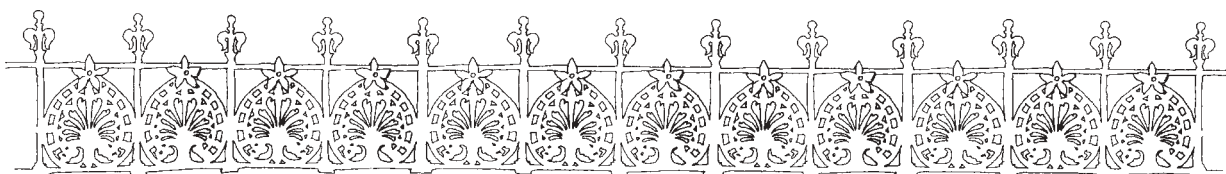
Clearance of the stumps from the old plantation area behind the Crematorium in 1999 was monitored as this was reputed to have been the location of an old gum diggers camp. However, no archaeological remains were uncovered.

The historic part of the Cemetery with its chapel, graves, tombs, pathways and roads is an area of considerable archaeological significance. The tomb inscriptions have considerable information relating to social history, genealogy and demography. Analysis of the materials used and design of the gravestones and monuments also provides information on the source of available raw materials and on local crafts and industries (stone masonry, iron foundries, lime and cement industries, brick making and ceramics). Old pathways and roads also provide evidence of the original layout of the Cemetery as well as the types of materials used in their construction.

Occasional finds of salt glazed garden edging were located out of context in the old part of the Cemetery, around some of the graves and in the fill beneath Daffodil Drive. These are of local manufacture - one edging tile had remnants of a Carder Brothers, Ponsonby stamp. It would appear that many of these earlier decorative features have been removed, probably for ease of maintenance, but the remnants provide valuable information on the design and manufacture of these former features and it is important that they are both recorded and stored in an appropriate manner.

⁶⁵ Much of the information in this section is from Clough and Associates, 1999.

⁶⁶ Clough and Associates, 1999.





The older part of the Cemetery is also the location of the remains of the old Crematorium, dating back to 1922/23. The remains of the building can still be observed under the pohutukawa trees between the Soldiers' and Hebrew Plots. The site of the original Jewish Prayerhouse, built in 1886, is also contained within this part of the Cemetery.

The remains of a rubbish trench located to the north of Anglican M and N below the paupers' graves in the gully between Ixia Street and Eucalyptus Avenue was also investigated. Over 30m long, about 700 millimetres wide and of unknown depth, the trench contains a considerable amount of rubbish such as broken glass, ceramics, metal and bottles. Discussions held with Martin Banks (current Cemetery Foreman) revealed that the material in the trench was derived largely from broken funerary ornaments that had been cleared from grave monuments. A few bottle fragments near the surface indicated that some of the material derives from the 20th century. However it is possible that the lower levels of the trench contain 19th century material, since general rubbish deposits, particularly in gullies, are likely to have been used and added to over an extended period of time. Dense vegetation indicated that the trench was as least 40 years old.

The survey concluded that the archaeological values of

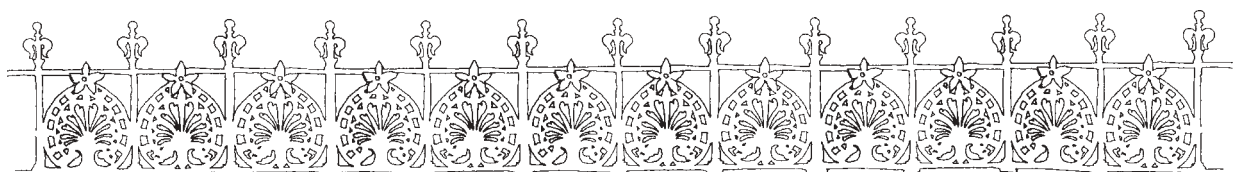
the Cemetery have been considerably compromised as a result of the extensive spread of self-seeded plants such as pohutukawa and acacia and invasive species such as heather and watsonia. This is of most concern in large areas such as Roman Catholic A through C, Non Conformist, Presbyterian and Wesleyan A through D and Anglican G & H. These species have overgrown and caused often irreversible damage to graves. The pohutukawa, although a New Zealand native, does not naturally occur in this area and the planted specimens around the Cemetery are of unknown provenance. Urgent action is required to minimise further damage.

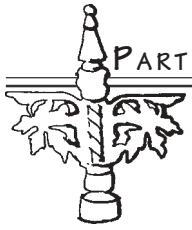
Historic roads and paths were generally recorded as being in a poor state of repair, largely as a result of poor construction techniques consisting of laying shelly tarmac straight onto clay soils with very little preparation. Poor maintenance and in particular a lack of ongoing maintenance of drains have compounded the rate of deterioration.

Overall, with the exception of the tombs themselves, the fabric (e.g. roads and paths) has been extensively modified since 1886 with the result that it is unlikely that much of the original fabric has been retained. The original layout is considered to be of archaeological significance and as such should not be altered. Furthermore, removal of fabric and/or archaeological features should be avoided wherever possible. The following table summarises the archaeological values:

Feature	Values
Older areas (including the Chapel, graves and tombs)	Considerable archaeological significance. Tomb inscriptions have considerable information relating to social history, genealogy and demography, material used on gravestones and monuments provide information on raw materials and on local crafts and industries of the time.
Old roads and pathways	Considerable archaeological significance. Provide evidence of original layout of Cemetery as well as materials used in their construction.
Occasional finds of ceramic decorative edging	Generally in the older part of the Cemetery and tend to be of local manufacture. Removed from headstones possibly for ease of maintenance. Provide information on design and manufacture of these former features.
Old Crematorium	Located adjacent to Glenview Road opposite Saron Ave (North side of Hebrew A). The foundation layers can still be observed. Could be further exposed and interpreted for public interest.
Site of the Jewish Prayerhouse	Located adjacent to Glenview Road opposite Saron Avenue (Hebrew A). No building remains, site only.

Table Four: Summary of Archaeological Features of Waikumete Cemetery





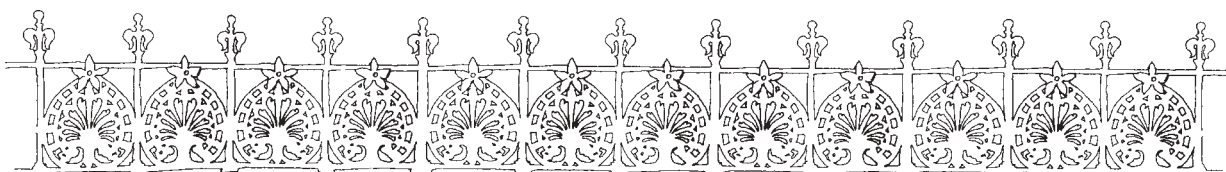
Representative Selection of Notable Graves⁶⁷

Waikumete Cemetery contains the graves of many people who played a significant role in the community, either locally or

nationally. They include figures in the early development of Auckland's commercial sector such as brickmakers, winemakers, war heroes, politicians and criminals.

Notable Person	Personal Details
John Archibald d.1948	Well known local brickmaker.
George and Helen Boyd d.1886	George Boyd: Founder of Newton Potteries, Ponsonby. Helen Boyd: Tombstone reads, "in the true spirit of charity she provided for the orphans and essayed by ornamenting the public parks with sculptures."
Don Buck d.1917 (Francisco Rodrigues Figueira)	Ran a notorious gum-digging camp in Henderson, applying his own brand of law and order.
Assid Abraham Corban 1864-1941	Local winemaker (Henderson). Planted his first four acres of grapes in 1902.
Albert Crum d.1951	Well known local brickmaker. Established a brickyard in New Lynn in 1905.
Charles Oliver Bond Davis d.1887	Government official, Maori interpreter, author of <i>The Renowned Chief Kawiti</i> (1855) and <i>Life and Times of Patuone</i> (1876).
Sir Ernest Hyam Davis 1872-1962	Mayor of Newmarket (1909-1911) and Auckland City (1935-1941). Known for gifts to the community.
Lady Marion Davis	Born Marion Mitchell, a well known soprano, later wife of Sir Ernest Davis.
Sir George Fowlds 1860-1934	MP for Auckland City (1899-1902) and Grey Lynn (until 1911). Received the CBE for his efforts in World War I and was knighted in 1928.
Reginald Stanley Judson d.1972	1st Battalion Auckland Regiment. Received a VC at Baupaume 1918. Also received DCM and MM, the only other major awards for gallantry open to non-commissioned officers.
Robert Alexander Laidlaw 1885-1971	Businessman, philanthropist - founded Laidlaw Leeds, which evolved into the Farmers Trading Co. Ltd. Awarded OBE in 1955.
Bruce McLaren d.1979	Famous New Zealand motor racing driver.
Captain William John Newby d.1934	Veteran of Garibaldi campaign, arrived in New Zealand in 1864 and joined the Waikato Regiment.
Sergeant William Shepherd	Awarded New Zealand Cross for part in New Zealand Wars.
William S. Swanson d.1903	Local politician and businessman involved with timber industry. Swanson township named after him.
Karl Joseph Wolfskehl d.1948	German/Jewish poet of international significance.

⁶⁷ Compiled from research undertaken by Friends of Waikumete.





Notable Person	Personal Details
Criminals	
John Caffrey and William Penn d.1887	Both men given the death sentence for murder - only one was responsible for the actual murder. Both men are rumoured to have been buried standing up.
Unusual	
Peter William Scott 1919-1939	His epitaph reads "If everyone who drives a car or truck would heed the danger signs placed by the Highway Engineers, who also marked the lines to park cars and trucks from off the road, to give the traffic space this poor boy would not now be resting in this place."
Peter Double 1919-1939	Accidentally killed with Peter Scott.
Patrick Henry Shine d.1939	Exhumed illegally by two Australians who burnt the body as part of an attempted insurance fraud.

Table Four: Summary of Archaeological Features of Waikumete Cemetery

Use of Waikumete Cemetery for Burials and Cremations

Waikumete Cemetery was originally established to serve the general burial needs of Auckland City. This included most of the major religious denominations and a wide range of cultural groups (refer Map 2, Appendix 15). The older parts of the Cemetery reflect this variety where areas have been laid out according to these groupings. As a result, the Cemetery is recognised as a significant source of social and genealogical information on the early history of Auckland.

Other cemeteries operating at the time were either very small, some distance from the city and, therefore, not easily accessible or they catered exclusively for specific denominations, such as Purewa.

Burials began in the eastern end of the Cemetery, as it was the closest area to the then main entrance at Waikumete Road adjacent to the railway station, the railway being the main mode of transport for visitors, mourners and caskets. Prior to 1923, when the first Crematorium was opened, the Cemetery catered exclusively for burials.

The heavy death toll incurred by World War One saw the development of the soldiers' area. The first area to be

developed was the area on the corner of Great North and Glenview Roads.

In 1918-1919 following the end of the First World War, there was a catastrophic outbreak of Spanish pneumonic influenza that caused a large number of burials in a short period of time. In the autumn of 1918 the disease spread quickly from country to country, resulting in a heavy death toll. An estimated twenty million people died worldwide, a greater number than were killed in the war itself⁶⁸. In New Zealand this epidemic was recorded as the worst natural disaster to date. The railway line to Waikumete station played an important role in transporting the dead, particularly when the number of deaths reached its peak in the third and fourth weeks of November 1918. Auckland recorded the nation's highest death toll of 1,680⁶⁹. From 1-26 November there were 469 interments at Waikumete⁷⁰.

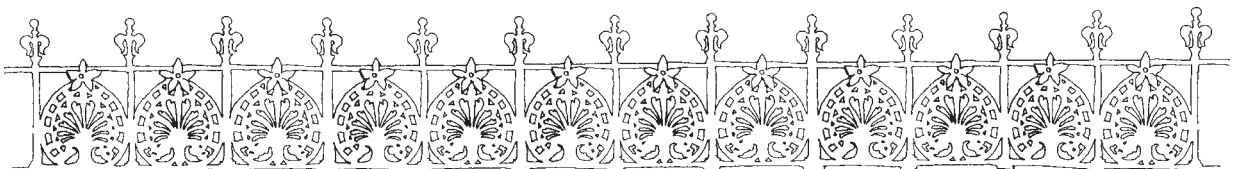
In 1994 a report on Cemetery Requirements for Waitakere City Council⁷¹ found that burials account for about 27% and cremations for about 73% at Waikumete. This ratio, which had trended towards cremations over the previous thirty years, was still changing and expected to stabilise at around 20% : 70%. It is expected that this trend will continue, particularly with the limited land that is available around Auckland for cemetery purposes.

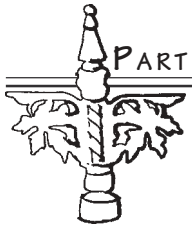
⁶⁸ National Trust of Australia, 1995.

⁶⁹ Dave Pearson Architects Ltd, 1998, p.11-12.

⁷⁰ ACC City Engineer's Report to Mayor, 27 November 1918.

⁷¹ M.B. Elliot, October 1994.





Interviews conducted for the above report with managers of cemeteries operating crematoriums in the Auckland area, found that less than half of the ashes from cremations are interred or scattered in the cemeteries in which the cremations are taking place. Relatives of the deceased are free to scatter, inter, or store ashes according to the wishes of the deceased or the preferences of those surviving. Within cemeteries now, more options are available for disposal of ashes than for earth burials. The options include ash plots, arboreta (interment of ashes (contained) at the foot of memorial trees), niche walls, and lawns for ash scattering⁷².

Today Waikumete is one of approximately seven public cemeteries currently in operation in Auckland. It serves mainly the burial and cremation needs of Waitakere City and the central and western parts of Auckland City. It has strong associations with a wide cross-section of religious denominations and ethnic groups, and has areas reserved for a number of these denominations and groups. Some groups do not accept cremation and opt for earth burials exclusively.

Waikumete has a significant area devoted to the commemoration of soldiers lost in various wars, including the two major world wars, and the Vietnam and Korean conflicts. The first soldiers' area was developed on the corner of Great North and Glenview Roads at the end of the first World War. The areas are laid out in the lawn style, with small flat stones and standard crosses surrounded by grass. Some areas contain plaques of marble or metal in the lawn style with the number, rank, serial number and name of the serviceperson buried there. Memorials have been erected for each of the aforementioned conflicts and the areas are maintained to a high standard.

A small Urupa, or Maori burial ground, was established at Waikumete in 1996. To date the Urupa has mainly been used for Maori who have become disassociated with their whanau, who are urban born and/or cannot afford to return their deceased to their place of birth. It is important that this area is maintained to a high standard and that certain protocols are observed. These include the fencing and delineation of the Urupa, as well as careful landscaping to ensure that only

certain species of native trees and plants are planted in the area.

Natural History⁷³

Flora Values

Waikumete Cemetery was established on the remnants of kauri gumlands consisting of poorly drained clay soils with low fertility. Auckland's climatic influences often result in the area being very wet in winter and very dry in summer⁷⁴. This, in turn, influences the types of plant and animal species that have established naturally or have been successfully planted or released in the area. The naturally occurring plants and animals within the Cemetery have been supplemented over time by the introduction of many species of predominantly exotic plants and trees and some animals. These combine to give the area unique flora and fauna values within the Auckland Region.

A total of 539 species of native and exotic vascular plant species have been recorded from Waikumete Cemetery (175 native and 364 exotic - refer to Appendices 2-5). The list is dominated by the large number of exotics that are either naturalised, or in the case of the grave areas, were planted there either as commemorative plantings or as part of the overall landscaping of the Cemetery.

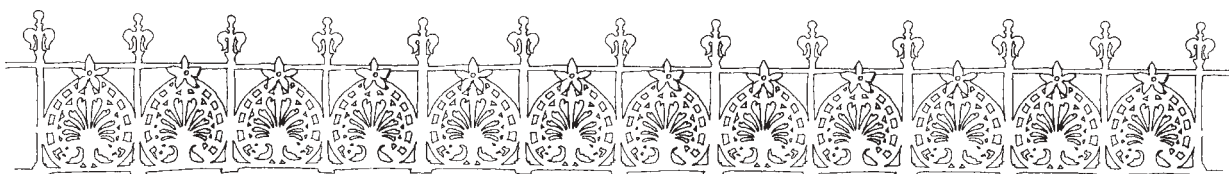
Waikumete Cemetery lies within the Tamaki Ecological District, one of eight ecological districts in the Auckland Ecological Region. The District encompasses much of the Tamaki (Auckland City) Isthmus and its surrounding hills and lowlands and is an area of highly modified landscapes. Its original vegetation has been reduced to scattered remnants, predominantly in gullies, where they have escaped the ravages of fire and land clearance. Most areas of native vegetation that do remain are, therefore, considered significant.

The high degree of modification of the Waikumete landscape also significantly influences the species diversity and composition of native and exotic plants and animals found

⁷² M.B. Elliot, October 1994.

⁷³ Much of the information in this section was obtained from Whaley et al, 1999, de Lange and Norton, 2001, de Lange and Crowcroft, 2001, and Waitakere City Council, 1998.

⁷⁴ Submission by Friends of Waikumete to Waikumete Conservation Plan, 1998.





Gaden Stream

within the Cemetery. Many native species in particular are highly susceptible to displacement by more aggressive and invasive exotic species. This is particularly the case with native flora in areas where there has been ongoing disturbance. Examples include fires in the gumland areas, and areas where successive clearing and/or deposition of grave spoil in gullies has hastened the establishment and spread of invasive weed species such as hakea and climbing asparagus. These same fires also, however, promote conditions for the many uncommon and threatened gumland plants found in Waikumete Cemetery. The open areas following fire are quickly colonised by these native orchids and grasses, however, without weed control the invasive exotic weeds quickly grow and smother the smaller natives.

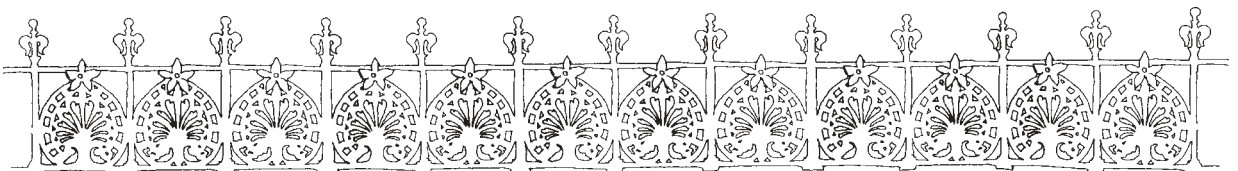
The Gaden Stream and several of its tributaries flow through the Cemetery. These tributaries flow into the Wairau Creek, which is part of the Whau River. Associated with the stream and its tributaries, which are predominantly soft-bottomed (muddy), are a number of wetlands. Together these watercourses and wetlands support aquatic insects, freshwater fish and native plant species. A number of the tributaries virtually dry up over summer, but there are a number of wetlands in Parade Gully which have weirs impeding their water flow, so they are always wet.

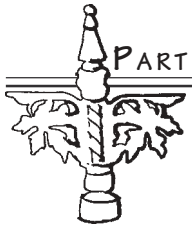
The practice of dumping grave spoil and other rubbish in the heads of the gullies has contributed significantly to the muddy and soft bottomed nature of many of the streams' pools and associated wetlands. It increases the stress on the stream when it rains and inhibits the colonisation of these streams by stoneflies, mayflies and some caddis flies, robbing them and many of the other more sensitive aquatic macro-invertebrates of anchoring points, food supplies, and clogging their gills. Sediment also destroys the algal films that are grazed by some aquatic macro-invertebrates. This, combined with poorly designed stormwater and overland flow runoff systems, has also affected overall water quality in the stream.

Native Flora

The Cemetery site in pre-human times would have originally supported kauri forest on ridges, kauri-podocarp/broad-leaved forests on upper slopes, and podocarp/broad-leaved forest on lower slopes and along stream terraces, with wetlands in damp gully bottoms.

These forests had probably largely gone by the early 1800's. Based on the observations of early missionary and botanist William Colenso and other explorers of the time, the land that Waikumete Cemetery now occupies was already covered in gumland scrub (a vegetation type dominated by manuka, kanuka and the cyperaceous genera *Baumea*,





Schoenus, *Tetraria* and *Lepidosperma*⁷⁵) during the 1840's⁷⁶. Whether this vegetation type was fire induced, or the natural consequence of the gradual podzolisation of the underlying soils has not been determined⁷⁷. By 1886 when the Cemetery was established, the vegetation remaining was mainly burnt gumland scrub dominated by manuka, "pitted with holes left by casual gum diggers"⁷⁸, with occasional kauri, podocarp and broad-leaved trees in the eastern gullies. Burning of the gumland areas has continued within the Cemetery, possibly initially as a management tool, and more recently as a result of arson.

Irrespective of the origin of the vegetation type, Waikumete has long been recognised as an important place to view gumland scrub, with its attendant unusual assemblage of small herbs, grasses, orchids and ferns⁷⁹. Although much of the Cemetery has been cleared of gumland vegetation, many small pockets of this vegetation type have either recolonised or persist amongst the graves. Associated with these gumland remnants are various indigenous orchids, grasses, herbs and ferns, many of them regionally scarce⁸⁰, while several are also listed as nationally threatened⁸¹.

Rimu, totara, tanekaha, kahikatea, oaks, gums and other trees were planted in the late 19th and 20th centuries. One of the most significant plantings of native trees was that associated with Charles Craig who planted 500 native trees in the 1930's. The cairn was for the wife of Samuel Craig. This planting is located in the gully between Watsonia Way and Crocus Road.

Eight of the native plants recorded within the Cemetery are threatened and a further two are uncommon⁸² (refer to Appendix 16 Rare plants list); the regionally vulnerable gum grass (*Dichelachne inaequiglumis*), the regionally declining native paspalum (*Paspalum orbiculare*), the regionally sparse native orchid (*Caladenia atradenia*), the regionally uncommon midge orchid (*Genoplesium pumilium*), the regionally declining native orchid (*Pterostylis tasmanica*), the regionally vulnerable blue sun orchid (*Thelymitra aemula*), the regionally declining sun orchid (*Thelymitra tholiformis*), the regionally uncommon spotted sun orchid (*Thelymitra aff. ixioides*), the regionally vulnerable native oxtongue (*Picris burbridgei*), and the regionally declining small-flowered bindweed (*Calystegia marginata*). In addition, the nationally rare pygmy clubmoss



Gumland scrub

⁷⁵ Rumball & Esler 1975.

⁷⁶ Dieffenbach 1843, Colenso 1844, Beaver 1981.

⁷⁷ de Lange and Crowcroft 2001.

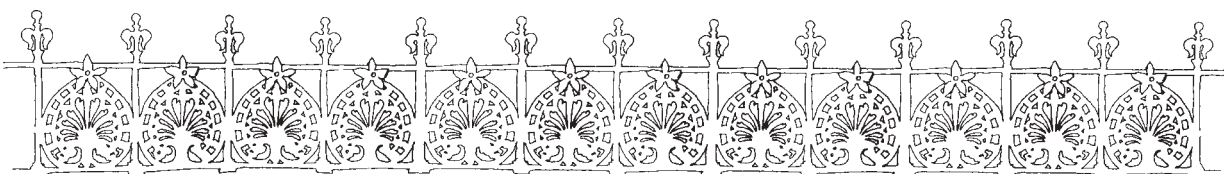
⁷⁸ Esler and Haines, 1996.

⁷⁹ Braggins 1974.

⁸⁰ de Lange et al 1999b.

⁸¹ de Lange et al 1999a.

⁸² de Lange et al 1999b.





(*Phylloglossum drumondii*) and the critical (probably extinct) dwarf green orchid (*Pterostylis puberula*) are now presumed extinct from the Cemetery⁸³.

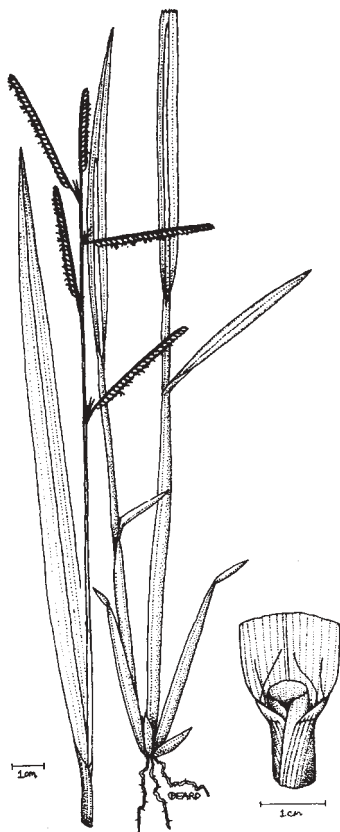
In addition to these regionally threatened and/or uncommon species which were found in the Cemetery during surveys undertaken, a further seventeen native orchids were recorded in the Cemetery, being *Caladenia alata* (the southern limit of the species), *Caladenia bartlettii*, *Caladenia chlorostyla*, Cheese-man's helmet orchid (*Corybas cheesemani*), spider orchid (*Corybus oblongus*), potato orchid/perei (*Gastrodia aff. sesamoides*), onion leaved orchid (*Microtis aff. parviflora*), onion leaved orchid (*Microtis unifolia*), grassland orchid (*Orthoceras novae-zelandiae*), kauri green hood (*Pterostylis agathicola*), trowel-leaved green hood (*Pterostylis trullifolia*), *Pterostylis aff. graminea*, pink sun orchid (*Thelymitra carnea*), sun orchid (*Thelymitra colensoi*),

sun orchid (*Thelymitra pulchella*), sun orchid (*Thelymitra aff. longifolia*), blue sun orchid (*Thelymitra aff. pauciflora*).

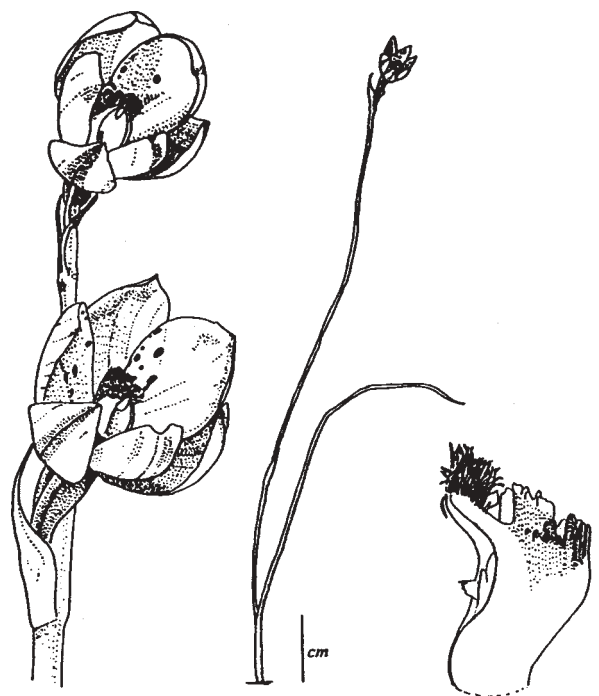
Four main predominantly native vegetation types have been identified within the Cemetery and adjacent to Singer Park, within which there are a number of variations, depending on the age of the vegetation, degree of exotic tree invasion, canopy composition, etc.

Manuka Gumland Scrub

The manuka shrublands on the poor clay soils within Waikumete Cemetery are a regionally significant botanical feature. Although once widespread around Auckland, this type of vegetation (gumlands) has now mainly been cleared for housing or has matured past this ecological stage. Apart from the North Shore, these are the closest and most extensive native shrublands to central Auckland⁸⁴.



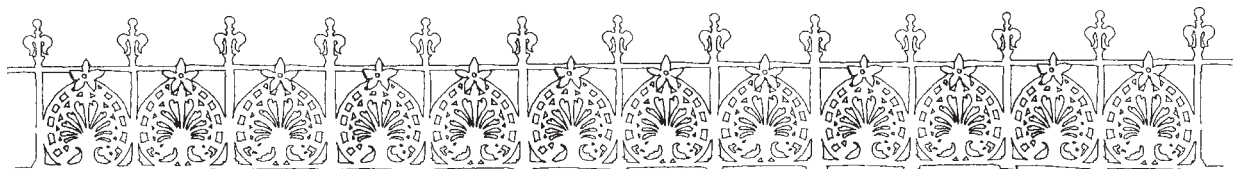
Regionally rare *Paspalum oriculare*

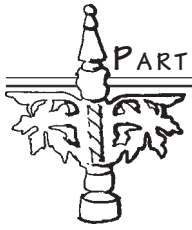


Regionally uncommon spotted sun orchid

⁸³ de Lange and Crowcroft 2001.

⁸⁴ Auckland Botanical Society submission to Waikumete Management Plan, 1998.





Gumland vegetation with manuka (*Leptospermum scoparium*) as the dominant native species is extensive in the western parts of the Cemetery, and to a much lesser extent in other areas throughout the Cemetery. Few pure manuka stands remain as a result of the spread of invasive species such as hakea, acacia, pine and eucalypt. These species are persistent in that they will remain and spread further unless managed. They pose differing levels of threat to the ecological values of the manuka scrub. The taller species such as pines and eucalypt threaten to shade out the manuka and change the vegetation structure. Hakea can crowd out the manuka and other native species.

Two species of hakea are present in the area. Needlebush (*Hakea sericea*) is a serious weed in the shrublands of northern New Zealand because of its dense growth and rapid spread⁸⁵. It is able to produce seed when 4-6 years old and retains a large seed bank in its crown, which allows it to capitalise disturbed areas quickly after fire⁸⁶. Regular fires throughout much of the gumland vegetation have ensured its continued presence. It is also a fire hazard, maintaining dead lower branches that catch and suspend litter.

Willow-leaved hakea (*Hakea salicifolia*) does not rely on fire for much of its establishment. Instead it regularly releases seeds that germinate quickly and capitalise on any open or disturbed area (creating a seedlings bank).

Early aerial photographs dating back to 1940 reveal that the western gumland gully system once extended from Waitakere View Road to Great North Road. Gradual clearance for further Cemetery development has reduced it to its present extent. Very recent clearance is evident along the northern margin, along with piles of grave spoil and windblown rubbish.

The infertile podzolised soils that cover most of the Cemetery, combined with its frequent fire history, have probably induced and maintained the variety of gumland species on these sites. These include *Gahnia setifolia*, kumerahou (*Pomaderris kumeraho*), and *P. phyllicifolia* var. *ericifolia*, grass tree (*Dracophyllum sinclairii* (only a few plants recorded), dwarf cabbage tree (*Cordyline pumilio*), lancewood (*Pseudopanax crassifolius*), and akepiro (*Olearia furfuracea* (uncommon)).

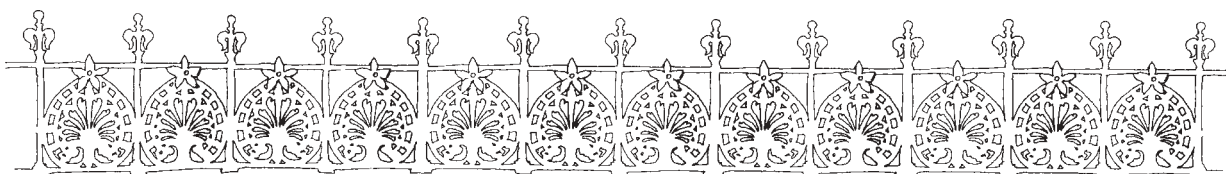


Kumeraho a typical gumland plant in Waikumete

The often sparse ground layer has the sedges *Lepidosperma laterale*, *Schoenus tendo*, *S. brevifolius*, and *Baumea teretifolia*, and tangle fern (*Gleichenia dicarpa*), *Lindsaea linearis*, and club moss (*Lycopodium deuterodensum*). A number of species of ground orchids that thrive in frequently disturbed environments are also present, including the regionally sparse *Caladenia atradenia*, *Caladenia bartlettii*, *Caladenia chlorostyla*, *Corybus cheesemani*, *Corybus oblongus*, *Gastrodia* aff. *sesamoides*, the regionally uncommon midge orchid (*Genoplesium pumilium*), kauri green hood (*Pterostylis agathicola*), the regionally declining *Pterostylis tasmanica*, trowel-leaved hood orchid (*Pterostylis trullifolia*), *Pterostylis* aff. *graminea*, the regionally vulnerable blue sun orchid (*Thelymitra aemula*), sun

⁸⁵ Webb et al, 1988 in Whaley et al, 1999, p.40.

⁸⁶ Williams 1992b in Whaley et al, 1999, p.40.





orchid (*Thelymitra pulchella*), the regionally declining sun orchid (*Thelymitra tholiformis*), the sun orchid *Thelymitra* aff. *longifolia* and blue sun orchid (*Thelymitra* aff. *pauciflora*).



Orchid

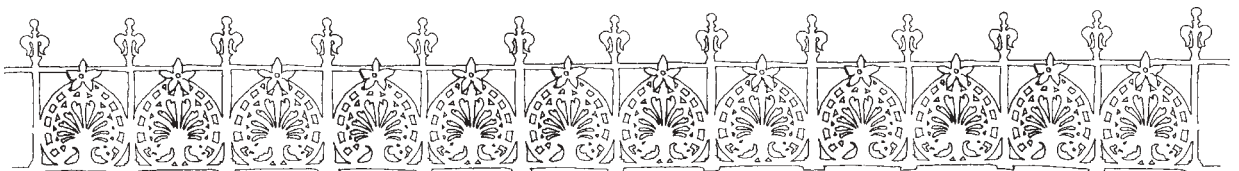
The two main gumland areas differ in the species they support and the degree of weed invasion, with the northern gumland having less weed invasion and more dense gumland vegetation, while the southern gumland is extensive weed invaded, but supports the greater numbers and variety of orchids and other uncommon native plants.

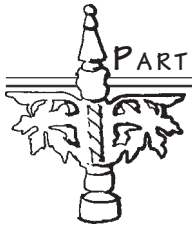
The northern gumland vegetation drains the hill top that forms the western boundary of Waikumete Cemetery and includes an area now known as Sunhill Scenic Reserve, bordered by Sunnyside and Awaroa Roads. The ridge tops of this area are vegetated in dense manuka and kanuka, and possibly because the vegetation is so dense it seems to provide little orchid habitat, with only occasional specimens of the orchids *Caladenia atradenia*, *Caladenia chlorostyla*, and *Pterostylis* aff. *graminea*. These species become more common within the southern portion of the area, between Amber Crescent, Waitakere View Road and the dirt track leading to the water tower. In this area are significant populations of *Caladenia atradenia*, *Caladenia chlorostyla*, *Pterostylis* aff. *graminea*, *Thelymitra aemula*, *Thelymitra colensoi*, *Thelymitra* aff. *pauciflora* and the occasional *Thelymitra tholiformis* and *Thelymitra* aff. *ixiodes*.

The southern gumland has been considerably more disturbed than the northern gumland - by human activity such as mountain biking and by fire caused by sparks from the railway, and, particularly over the last ten years, arson. In particular the most recently burned areas support large populations of *Caladenia atradenia*, *Thelymitra aemula*, *Thelymitra carnea*, *Thelymitra tholiformis*, *Thelymitra* aff. *ixioides*, and *Thelymitra* aff. *longifolia*, and the only known habitat for *Caladenia alata*, *Caladenia bartlettii*, *Genoplesium pumilum* and *Pterostylis tasmanica*. Much of the remaining gumland area contains a diverse mosaic of successional vegetation, as well as wattle forest and large areas dominated by pampas grass. Aside from the dense pampas infestations, the taller scrub and the wattle forest provides the only known Waikumete habitat for *Corybas cheesemanii*, *Corybus oblongus*, *Pterostylis agathicola*, *Pterostylis trullifolia*, and *Calystegia marginata*. It is also the main habitat for *Pterostylis* aff. *graminea* and the saprophytic orchid *Gastrocia* aff. *sesamoides* in the Cemetery. Weed issues remain the main threat to these unique native plants.

These gumland associations are considered rare in the Auckland Region and the remaining tracts within Waikumete have been identified as the most significant area of gumland vegetation remaining in the Waitakere area of the Tamaki Ecological District. The presence of the large populations of *Caladenia atradenia* and *Calystegia marginata* at its current extant southern limit makes Waikumete Cemetery nationally significant⁸⁷.

⁸⁷ de Lange and Crowcroft, 2001.





Mamaku Treefernland

This unit occurs in the gullies amongst the other scrub and forest types. Silverfern (*Cyathea dealbata*) and mamaku *C. medullaris* are the dominant canopy species. A range of species make up the low canopy/understorey and include mahoe (*Melicactus ramiflorus*), mapou (*Myrsine australis*), shining karamu (*Coprosma lucida*), hangehange (*Geniostoma rupestre*), mingimingi (*Leucopogon fasciculatus*), *Cordyline banksii*, heketara (*Olearia rani*), fivefinger (*Pseudopanax arboreus*), and garden hybrid *Pseudopanax* spp. The ground layer is sparse and includes *Oplismenus imbecillus*, hook grass (*Uncinia* spp.), *Nertera dichondrifolia*, kiokio (*Blechnum novaezealandiae*), and *Carex* spp.

Conifer Forest

The gullies in the eastern part of the Cemetery are dominated by what are now very natural looking stands of podocarps, kauri and broad-leaved species. A number of these gullies were planted in the late 19th and early 20th centuries with rimu (*Dacrydium cupressinum*), totara (*Podocarpus totara*), tanekaha (*Phyllocladus trichmanoides*), and kahikatea (*Dacrycarpus dacrydiodes*), with subsequent planting of puriri (*Vitex lucens*) rewarewa (*Knightia excelsa*), pukatea (*Laurelia novae-zelandiae*), and pohutukawa (*Metrosideros excelsa*)⁸⁸. However, aerial photographs taken in the 1940's reveal a number of older podocarps and kauri that are likely to have been present in the area at the time the Cemetery was established, indicating that remnants of the original forest may still remain.

Other native species present in the canopies that have either been planted or colonised naturally include small-leaved kowhai (*Sophora microphylla*), nikau (*Rhopalostylis sapida*), and titoki (*Alectryon excelsus*).

These gully forests now have well developed sub-canopy and understorey tiers that are substantially or solely native and include hangehange, mapou, karamu (*Coprosma robusta*), silverfern, pigeonwood (*Hedycarpa arborea*), ramarama (*Lophomyrtus bullata*), mahoe, garden hybrid (*Pseudopanax* spp., *Coprosma rhamnoides*), and mamangi (*C. arborea*). There is also notable podocarp and kauri regeneration.

Wetlands

There are a number of wetlands in the Cemetery. Most are found in the damp gully bottoms with one being contained within a seepage area beside Amber Crescent. Many have high numbers of invasive weeds including willow, weedy umbrella sedges (*Cyperus* spp.), kahili ginger, Japanese honeysuckle and pampas. In a number of areas these species are choking the waterways and are the dominant species in the understorey. Seeds and fragments of these species are easily dispersed by birds and washed downstream to colonise other areas.

Native species present include raupo, harakeke (*Phormium tenax*), *Baumea rubignosa*, *Carex lessoniana*, *C. virgata*, and pink-flowered bindweed (*Calystegia sepium*).

Burial Areas

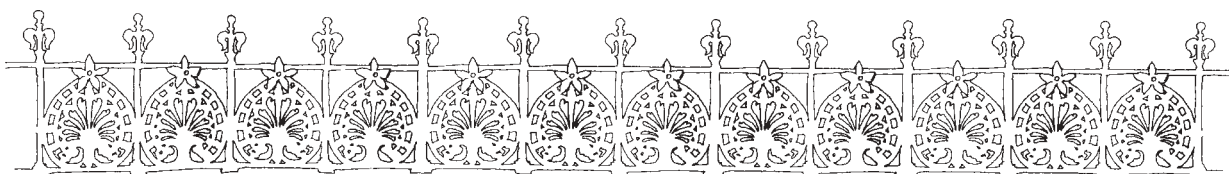
In addition to the native vegetation types found within the Cemetery, a number of native plants are found within the burial areas of the Cemetery, particularly the older areas. Native orchids and grasses in particular can be found in the less weed infested burial areas and these are the main habitats for the regionally vulnerable gum grass (*Dichelachne inaequilibriumis*), the regionally declining native paspalum (*Paspalum obiculare*) and the regionally vulnerable native oxtongue (*Picris burbridgei*). In addition the orchids *Microtis* aff. *parviflora*, *Microtis unifolia*, *Thelymitra carnea*, *Thelymitra colensoi*, *Thelymitra* aff. *longifolia* and *Thelymitra* aff. *pauciflora*.

Exotic Flora

The highly modified nature of the Cemetery, as a result of early land clearance, grazing and the development of surrounding land for residential subdivision, has seen many of the native plants and animals displaced by introduced species. These include species planted as part of the development of the Cemetery and for commemorative plantings as well as undesirable wind and bird dispersed species such as pampas and woolly nightshade.

A number are recognised as wildflowers and are actively managed in some parts of the Cemetery, but a number are identified as invasive and environmentally damaging. They are

⁸⁸ Cameron, 1988.





causing significant and sometimes irreversible damage to graves and monuments in the older parts of the Cemetery, as well as displacing native species in some areas such as gully bottoms and bush edges. Some species, such as the *Eleagnus* hedge, are of both historic interest and an ecological threat and need to be carefully managed.

Environmentally Damaging Plants

The Ecological survey undertaken for this Plan identified that Waikumete Cemetery and the adjacent Singer Park are home to many of the most invasive and troublesome herbaceous and woody weed species found within the Auckland Region. These include 9 of the 13 pre-eminent weeds of the Auckland Region⁸⁹ (refer Appendix 3 - Weed Species Present in Waikumete) that have also been identified as environmentally damaging plants in the Waitakere District Plan.

Most of these species are also national and regional surveillance plant pests, as identified by the ARC Pest Management Strategy and National Pest Management Strategy. Collectively they prevent and/or severely limit the establishment of native seedlings and/or kill host plants, which in the long term leads to a change in the overall structure and composition of native communities. Species identified are all terrestrial. No aquatic weeds were found to be present in the Gaden Stream and its associated wetlands.

A range of problem weeds have invaded the extensive areas of native shrubland in the western parts of the Cemetery and Singer Park. These include Australian species such as Eucalyptus spp., willow-leaved hakea (*Hakea salicifolia*) and wattle species such as black wattle (*Acacia mearnsii*) and brush wattle (*Paraserianthes lophantha*). These species, some of which require fire to release their seeds, now dominate the canopy in places.

Pampas (*Cortaderia jubata* and *C. selloana*) is also a problem weed in these secondary communities as it is able to recover rapidly after fire from burnt tiller bases, forming thick impenetrable clumps. Gorse (*Ulex europaeus*) also regenerates rapidly in these communities after fire, but is not considered a serious threat as it can eventually be overtopped by manuka

and is a good nursery crop for young native seedlings. Other species such as bone-seed (*Chrysanthemoides monillifera*) also capitalise on the disturbed/open areas created by fire.

In gullies, stream sides and wetland areas, kahili ginger (*Hedychium gardenerianum* - local very dense swards), willows (*Salix* spp. - associated with wetlands), kikuyu grass (*Pennisetum clandestinum*), pampas, and bulbil watsonia (*Watsonia bulbifera*) are often found growing together in the understorey and margins. In some of these areas these species are the dominant cover.

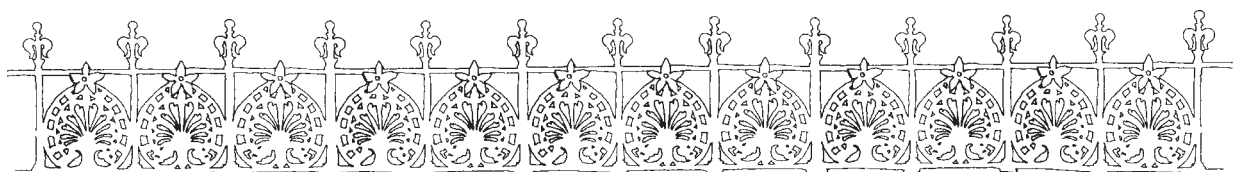
The worst of the ground cover weeds in these communities are wandering Jew (*Tradescantia fluminensis*), Mexican daisy (*Erigeron karvinskianus*), Selaginella kraussiana, mistflower (*Ageratina riparia* - local in eastern gullies) and tuber ladder fern (*Nephrolepis cordifolia*).

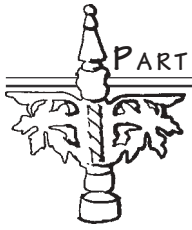
These areas also contain a number of species of problem lianes, some of which are rapidly creating a dense canopy "carpet" in some areas of the Cemetery. Species include climbing asparagus (*Asparagus scandens*), Ivy (*Hedera* spp. Helix), moth plant (*Araujia sericifera*), and Japanese honey-suckle (*Lonicera japonica*).

The most invasive of the woody weeds present in gully canopies/sub-canopies include Sydney golden wattle (*Acacia longifolia*), black wattle, silver poplar (*Populus alba*), maritime and radiata pines, monkey apple (*Acmena smithii*), tree privet (*Ligustrum lucidum*), Chinese privet (*L. sinense*) and woolly nightshade (*Solanum mauritianum*).

Problem weed trees also exist in amenity plantings throughout the Cemetery. In particular, mature trees of monkey apple (a national surveillance plant pest and identified as a threat to all types of forests and shrublands) need to be removed. This species, with its widely bird-dispersed seeds and ability to regenerate in shaded environments, is invading many of the natural areas within the Cemetery. This is particularly evident in some of the gullies where carpets of seedlings are present and saplings and young trees are common in the sub-canopy/understorey.

⁸⁹ Whaley et al, 1999.





Phoenix palm, present as mature individuals in the eastern part of the Cemetery and in the soldiers' area, are also potentially invasive and need better management. Removal or poisoning of the female palms will prevent the continued spread of this species. Young palms are already well established in the old grave areas and several were recorded in the understorey of the gully that runs from Crocus Road to Watsonia Road. Appropriate alternatives that also provide fruit for native birds would be puriri, matai, kahikatea and totara.

Another potentially troublesome tree is an Australian *Leptospermum* species present in Azalea Gully and now established in the gully understorey. This species potentially has similar habitat and life cycle requirements to manuka and as a result may compete with manuka in the gumland environments.

Wildflower Sanctuary

A significant part of the uniqueness of the developed parts of Waikumete is the existence of a diverse range of naturalised wildflowers (refer Appendix 6: Wildflowers in Waikumete, for detailed species list). This is the largest collection of these plants in the world outside their home countries. These wildflower varieties, mainly from Southern Africa, account for about 60 of the exotic plant species recorded within the Cemetery. They produce flowers on a regular basis, with spring being the most prolific flowering season. Bulbed or corned monocots also flower at this time. These include snowflake (*Leucojum aestivum*), *Freesia refracta*, *Sparaxis tricolor* and *Tritonia lineata*. The most common species found in the Cemetery are *Ixia polystacha*, *Sparaxis bulbifera*, *Babiana stricta*, *Watsonia meriana*, *Watsonia borbonica* and *Romulea sp.* In addition, less common species found in the Cemetery include Naples onion (*Allium neapolitanum*) (seen only once), and *Ixia paniculata* (not seen for some time).

Many of these varieties are either the relics of weeds of the English countryside (meadow plants), the progeny of garden ornamentals⁹⁰ planted on and around the graves in the older parts of the Cemetery, or planned plantings as part of the development of the Cemetery. Species such as ixias, watsonia, oxalis, old-fashioned roses, English roadside grasses, periwinkle and ivy were particularly popular as grave

plantings in the 19th century. It is important to maintain representative samples of these collections as they make a significant contribution to the Cemetery's visual and nostalgic quality.

Many of these species have now become naturalised and have spread over the older part of the Cemetery. They can be identified in many areas from Narcissus Drive to Glenview Road, except the mown areas in the northeast corner from the Jewish area (refer Map 4, Appendix 15). In spring and early summer when the wildflowers are in bloom they provide one of the finest displays of wildflowers in New Zealand⁹¹.

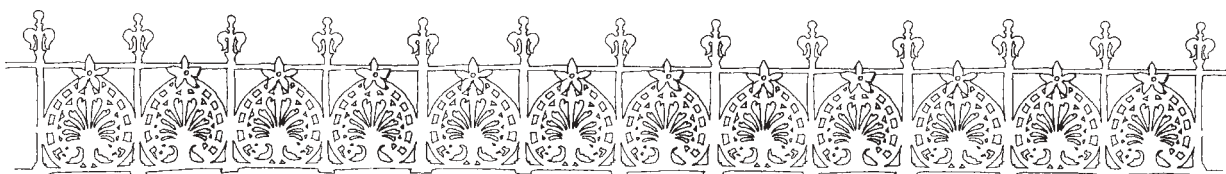
In recognition of the botanical significance of these wildflowers, an area of one hectare in the southeast corner of the Cemetery was set aside in 1993 as a Wildflower Sanctuary. The Friends of Waikumete have an agreement with the Cemetery Manager to manage the sanctuary, which consists mainly of a targeted weed removal and mowing programme



Wildflower sanctuary

⁹⁰ Cameron et al, 1997.

⁹¹ Cameron et al, 1997.





over the summer months aimed at controlling species such as bulbil watsonia and pampas that are considered invasive. Bulbil watsonia is a particular problem as a result of its dense growing form and the quantity of seed nodules that each flower head produces.

Some of the best examples of a number of species are outside the sanctuary and can be found along both sides of Daffodil Drive in Wesleyan C, Presbyterian B & C, and Non Conformist B. This, along with the relative significance of the number of species and extent of wildflowers in the Cemetery, provides a compelling argument to extend the Wildflower Sanctuary.

Heritage Trees and Commemorative Plantings

In the late 19th and early 20th centuries a number of the gullies in the Cemetery were planted with native trees including rimu, totara, tanekaha, ponga and kahikatea. These are now sizeable trees that have a good native understorey. In places this understorey forms a continuous native corridor

through the Cemetery. Early aerial photographs (1940) reveal that many of these podocarps were planted in regular lines along the gullies. The most significant of these plantings, planted in 1935 by Charles Craig, is located in the gully between Freesia Road and Crocus Lane and includes all of the species mentioned above. There are large numbers of seedlings establishing themselves as well as a variety of understorey species.

In addition to native plantings there have also been a number of plantings of exotic species. These include the plantings of macrocarpa and eucalyptus in 1918 and other later plantings associated with the development of areas of the Cemetery.

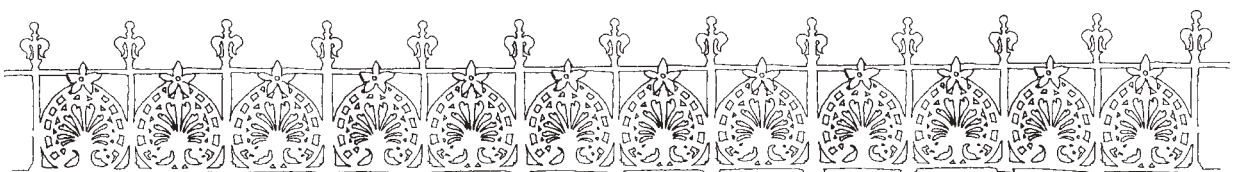
One of the most significant exotic plantings is that of various eucalypt species (refer Appendix 7: Eucalypt Species Present in Waikumete Cemetery, for species list), many of which were planted as shelter belts prior to the Cemetery opening in 1886. The gumland clay soils found in Waikumete

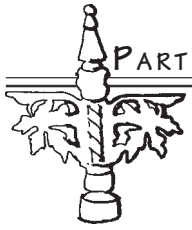


Historic eucalypts



Historic eucalypts





are well suited to eucalypts, especially stringybarks (*E. eugenioides*, *E. obliqua*, *E. capitellata*) and blackbutts (*E. pilularis*). The 28 species of eucalypt recorded in the Cemetery make the Waikumete collection one of the most diverse collections in New Zealand⁹², and include a number of eucalypt species that are considered to be rare.

It is important that the heritage plantings are clearly identified, as a number of the eucalypt species have self-seeded in other areas of the Cemetery. Of particular concern are the ones that are present in areas such as the native gumlands. Eucalypts in these areas can potentially alter or threaten the long term viability of these areas by directly competing with native gumland species, by accumulating masses of flammable dead leaves and bark around their bases, and possibly by producing allelopathic (chemical substances that act as growth inhibitors) that could prevent the establishment of native species near them.

Any further native amenity plantings should be made of appropriate species (i.e. from the gumland or lowland podocarp/kauri/broadleaved or podocarp/broadleaved forest species lists in Bellingham (1997)). If possible they should also be eco-sourced from within the Auckland Ecological Region. Non-native amenity plantings need to be undertaken with care to avoid the introduction of species that may become invasive in the future. It is intended that the Landscape and Enhancement Plan will include a list of suitable species.

Fauna Values

The ecological survey undertaken for this Plan included surveys of herpetofauna (reptiles and amphibians such as lizards and frogs), freshwater fish and terrestrial invertebrates. Over a thousand specimens were collected during the course of the survey (refer Appendix 8: Fauna in Waikumete). The species identified indicated that the fauna of the Cemetery and the adjoining Singer Park are typical of disturbed habitats in the Auckland Region, particularly as they relate to disturbed areas of 'bush'.

There is a lower bio-diversity than in comparable fauna samples of native forest in, for example, the Waitakere Ranges. For some species the level of diversity may also have

been affected by the dry conditions experienced with collecting techniques, such as direct observations at night, as many insect species prefer the humidity before rain.

Insect Fauna

The passionvine hopper (*Scolypopa australis*) was particularly abundant and was recorded as feeding on many hosts. This insect was noted on some dying karamu and together with the grey planthopper (*Septhena cinera*), associated with lesions on raupo leaves. Many of the small fly species found are common varieties with wide distribution and breed in decaying vegetation, marshy areas or grassland.

Populations of a number of biological control agents were also found in the Cemetery. These included the gorse spider mite (which causes intense webbing of gorse - since this mite was only recently introduced to the Waitakere region, this record is considered significant), and gorse seed weevils (*Apion ulicis* whose larvae feed in developing gorse seeds) which were also found to be abundant. The plant bug (*Lopus decolor*) was also found. This species has only once been recorded previously in New Zealand in the Cavalli Islands off the Northland coast.

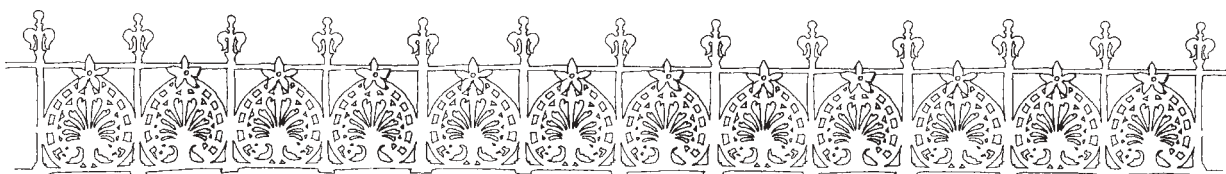
Soil Fauna

Approximately 10,000 individual invertebrates were collected during the course of the ecological survey. There are large numbers of species and individuals of Acari (mites), Collembola (springtails), Pseudoscorpiones (false scorpions), Coleoptera (beetles), significant numbers of Diplopoda (millipedes), Isopoda (woodlice), and Amphipoda (sandhoppers). The number of Carabidae (ground beetles) collected was low, indicating reduced environmental health. It is possible that this could also be related to the time of year the survey was undertaken, which was following a drought summer.

Herpetofauna

Only a limited number of species were found. Stick insects and katyids were common. No lizard species were found. One copper skink (*Cyclodina aenea*) was found in a litter sample collected near the stream at the eastern (Great North Road) boundary. These are the most common skinks found in Auckland gardens. Consideration needs to be given to undertaking regular herpetofauna surveys in the Cemetery, as

⁹² M.D. Wilcox, 1998.





their abundance is a good overall measure of ecosystem health and diversity.

Freshwater Fish

Two surveys for freshwater fish were undertaken during the time that the Conservation Plan was being prepared. The first was undertaken as part of the general ecological survey undertaken by Field Studies⁹³ in the summer of 1999. McGlynn undertook a follow-up survey in May 1999⁹⁴. Both surveys identified concerns with the practice of dumping grave spoil into the gullies above survey sites. This practice needs to be discontinued as it leads to sedimentation in stream beds and alters the chemical composition of the water itself, leading to changes in both habitat and species composition. Concerns were also expressed about bank stability around the newly constructed pathway at Amber Crescent, where the material

next to the banks was found to be loose and in need of cover to stop it eroding into the stream.

The initial survey sampled pools in Amber Crescent Gully, Azalea Gully, and pools adjacent to Parade Road and Freesia Road. Water is typically slow flowing and frequently weed-infested. Three species of fish were positively identified, being banded kokopu (*Galaxias fasciatus*), long-finned eel (*Anguilla haackeri*), and red-finned bully (*Gobiomorphus huttoni*). The most common species were red-finned bully and banded kokopu, with large numbers of shrimp (*Paratya* sp.) and freshwater crayfish (*Paremeophrops planifrons*) also recorded.

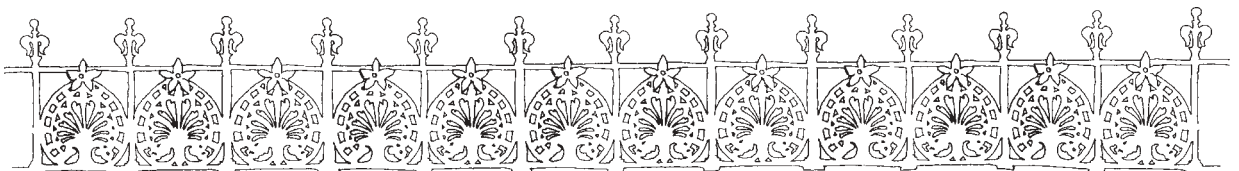
The second survey ranged over 6 different locations and 19 discrete sites within the Cemetery and included all the areas initially surveyed above. Significant numbers of banded

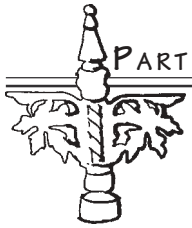


Aerial view of gumland vegetation

⁹³ Whaley et al, 1999.

⁹⁴ McGlynn, 1999.





kokopu were found, with the highest densities recorded in the bottom pool below Parade Road and also in the bush catchment between Freesia Road and Crocus Lane. Sizes ranged from 46mm to 196mm. The age range was biased towards juvenile fish and several large adults were gravid (in egg), indicating that breeding is occurring within the leaf litter and vegetation alongside stream banks. These results identify that the Cemetery is an important refuge for this native galaxid species and every attempt should be made to maintain these areas in a manner that continues to provide a viable breeding habitat for them.

It is also significant that high numbers of koura (native freshwater crayfish) were recorded. This species is a key indicator of stream health as they are particularly susceptible to siltation and chemical loading. The number of koura observed during the second survey was quite high compared to other more natural areas such as Northland's East Coast.

Giant kokopu have been recorded downstream of the Cemetery. It is possible that this species may be present in the Cemetery or, if not, that it could recolonise with habitat improvements.

The riparian margins of many of the sites surveyed were inundated with invasive weed species. Of particular concern were wandering Jew, kahili ginger, mistflower, pampas and climbing asparagus. Collectively these species alter and displace watercourses when not rigorously controlled. Watercourses become matted and overgrown, resulting in very shallow and frequently eutrophic conditions that lead to the eventual loss of fish habitat. Any weed control should be undertaken with care as cleared banks will be more prone to erosion and silt run off.

The overhanging banks and vegetation cover that characterise the stream are prime habitat for many native fish species such as banded kokopu. However, it is also important to ensure that there is sufficient water flow and access down to the sea to cater for the full life cycle of this species. Banded kokopu appear to require elevated flows for the eggs to be re-immersed and hatch. Once hatched, the young go to sea and then return about 100 days later. Although they are reasonable climbers, it is important that every effort is made to give the fish unimpeded access to and from the sea.

In addition to weed control and revegetation, existing streamside maintenance programmes being undertaken at the Cemetery need to ensure that shaded pools are maintained throughout the entire catchment. This is particularly important if fish are to survive in summer and/or during periods of low flow. Vegetated margins are also important in order to maintain viable populations of species such as banded kokopu, which are intolerant of high water temperatures (i.e. above 20°C).

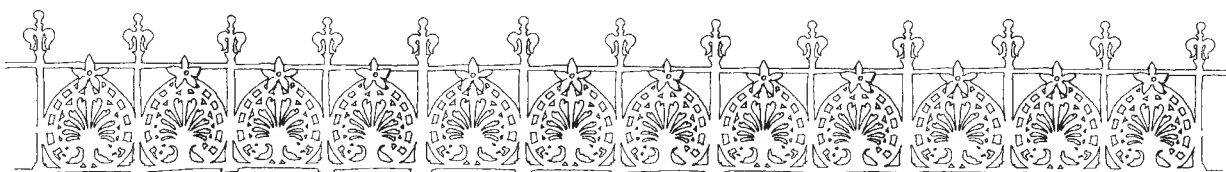
Aquatic Macroinvertebrates

Aquatic macroinvertebrates include all those lower species of animals such as snails, worms, crustaceans and mayflies. They are an important component of a self-sustaining environment and collectively, in aquatic environments, are highly reliable indicators of environmental health.

Populations in Gaden Stream and its wetlands were found to be characteristically low. In a number of the sites surveyed, species collected were predominantly made up of invertebrates that are tolerant of low oxygen levels and organic enrichment. These included chironomids, small crustacea (such as koura), and the common water snail (*Potamopyrgus*).



Grey warbler





Bird Life

Most of the native bird species found within the fragmented habitats remaining within the Cemetery are either highly adaptable and/or mobile. These include tui, silvereye, grey warbler and fantail, all of which have been regularly observed within the Cemetery. However, introduced birds such as sparrows, magpies, thrushes, mynas and blackbirds contribute most of the avian diversity and abundance in many of the Cemetery's natural areas. Grassland areas, particularly in the older parts of the Cemetery, are a favoured habitat for pheasants and quail.

In order to maintain this level of species diversity it is important to maintain a variety of habitats and food sources, ranging from the vegetated bush gullies to the tall grass and weed areas in the older parts of the Cemetery. Continued revegetation programmes should also be encouraged.

Animal Pests

In an area as large as Waikumete, with its diverse range of habitats, it is highly likely that there are resident populations of noxious animals. Rats are known to nest in the dense heads of phoenix palms. Rabbits are also present and have the potential to damage graves in the older parts of the Cemetery with their burrowing. A black rabbit is a particular favourite of many regular visitors to the Cemetery.

Possum sign has been observed in Watsonia Way Gully. The presence of many old trees as well as bushed gullies provide a wealth of sleeping, feeding and breeding places for possums. Stoats and ferrets may also be present. Periodic checks need to be undertaken to determine the effects that any of these species may be having. Permanent bait stations for possums and rats may well be worth considering in some of the older parts of the Cemetery where the presence of these species is known.

