

IPENZ Engineering Heritage Register Report

Musick Memorial Radio Station, Auckland

Written by: Karen Astwood
Date: 5 October 2015



Musick Point Air Radio Station, Howick, Auckland [29 August 1946]. Whites Aviation Ltd: Photographs. Ref: WA-03631. Alexander Turnbull Library, Wellington, New Zealand. <http://natlib.govt.nz/records/22901920>

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A. General information

Name: Musick Memorial Radio Station

Alternative names: Musick Memorial Centre; Musick Point Memorial Radio Station; Musick Point Aeradio Station; Musick Point Air Radio Station; Musick Point Radio Station; Musick Point Radio Receiving Station.

Location:

20 Musick Point Road

Bucklands Beach

Auckland.

Geo-reference: Latitude -36.847; Longitude 174.901.

Legal description: Lot 2 DP 158600 (CT NA107B/758).

Access information: Access to the site is via a long driveway through Howick Golf Course. The driveway terminates with a carpark which is approximately 150 metres away from the Musick Memorial Radio Station building. From here visitors can walk to and around the building and associated reserve. Access to the station's interior is by appointment with Musick Point Radio Group.

City/District Council: Auckland Council.

Location maps (courtesy of GoogleEarth)





IPENZ category: Engineering site.

IPENZ subcategory: Communications.

IPENZ Engineering Heritage number: 40.

Date registered: 19 October 2015.

Other IPENZ recognition: 'Musick Point Radio Station' plaque, unveiled on 12 January 2003.

Other heritage recognition:

- *Heritage New Zealand:* New Zealand Heritage List/Rārangi Kōrero, Te Naupata/Musick Point Historic Area (List no. 9335).
- *Local Authority District Plan:* Auckland Council District Plan Manukau Section (operative 2002). Schedule 6A – Buildings and Objects to be Protected, ID nos. 57 and 58. [Musick Point Memorial Building and Musick Point Emergency Radio Station].

B. Description

Summary

Musick Memorial Radio Station in Howick, Auckland, was constructed between 1939 and 1942. The station is a tribute to Pan American Airlines pilot, Captain Edwin Musick (1894–1938). He died pioneering long-distance air travel, which promised to reduce the effects of New Zealand's geographical isolation.

During the 1930s, Pan American Airlines and Britain's Imperial Airways made a number of survey flights to Auckland to investigate potential trans-Pacific Ocean and Tasman Sea routes. Telecommunication support was essential for setting up viable commercial services. A site, formerly called East Tamaki Head, was selected for a radio station. The headland and station were named in Musick's honour after he and his crew died during the first commercial flight from New Zealand to the United States of America in January 1938.

Musick Memorial Radio Station was also built with the purpose of providing maritime radio services for coastal and international shipping around Auckland – New Zealand's busiest port. It became an important communication facility in the Pacific campaign during the World War Two. By 1966, the Musick Memorial Radio Station was used solely for maritime and emergency radio services as all aeradio communications had been transferred to the international airport in Mangere.

The station was decommissioned on 30 September 1993 and is now leased to the Musick Point Radio Group. These amateur radio enthusiasts restore radio equipment at Musick Memorial Radio Station, maintain the building and operate radio call signs. Despite the removal of some of the structures in the late 20th century, such as the towers surrounding the Station, tower footings, an original air raid bunker and the staff housing at the south end of the site still remain.

Musick Memorial Radio Station represents the coming together of telecommunications and aeronautical technological advancement which made long-distance commercial air travel a reality for New Zealanders in the late 1930s. Leading New Zealand specialists, such as electrical engineer Ernest Hedley Roy Green (1898–1977), were involved in creating the world-class facility.

Historical narrative

Musick Point is a strategic headland site thought to have been settled early in New Zealand's human history. Its Māori names include Te Waiarohia o Ngariki and Te Naupata. Archaeological evidence suggests the site was fortified around the 17th century. The site was *tapu* from the early 19th century as a result of inter-tribal warfare. The uninhabited headland was acquired by missionary William Fairburn, and later the Crown, and called East Tamaki Head. In the 1920s, slightly further south, residential development began at Bucklands Beach.¹ The headland was mainly used as grazing area during the early colonial period until Musick Memorial Radio Station was established in the mid-20th century.²

In the early 20th century radio was becoming established in New Zealand and by the 1930s was a mass communications medium used for navigation and broadcasting.³ The Wireless Telegraphy Act (1903) authorised the State to establish stations for receiving and sending wireless telegraphy messages (radio). Its military and maritime potential led to a network of coastal radio stations being built in Wellington (1911), Auckland (1912), and several other locations (1913).⁴ Radio was mostly used in shipping until public broadcasting began in 1923. In 1937 the Marine Department started a programme of installing radio navigational beacons around New Zealand.⁵ The ability to transmit meteorological information by radio communication led to the 1930s 'golden age' of civil aviation in New Zealand. This included the establishment of the trans-Tasman and trans-Pacific air routes.⁶

¹ Alan La Roche, *Grey's Folly: A history of Howick, Pakuranga, Bucklands-Eastern Beaches, East Tamaki, Whitford, Beachlands and Maraetai* (Auckland: Tui Vale Publications, 2011), 137.

² "New Zealand Heritage List/Rārangi Kōrero - Te Naupata/Musick Point (List no. 9335)," Heritage New Zealand, accessed 13 March 2015, <http://www.heritage.org.nz/the-list/details/9335>. "Musick Memorial Radio Station," Ministry for Culture and Heritage, last modified 8 December 2014, <http://www.nzhistory.net.nz/media/photo/musick-memorial-radio-station>. La Roche, *Grey's Folly*, 133.

³ A. C. Wilson, *Wire and Wireless: A History of Telecommunications in New Zealand 1890–1987* (Palmerston North: Dunmore Press, 1994), 91–92, 115.

⁴ *Ibid.*, 94, 96. This included a station at Awarua, near Invercargill, in Southland (1913). "Telecommunications in New Zealand," Report of the Communications Commission (April 1977), 45–46.

⁵ E. R. Martin, *Marine Department Centennial History, 1866–1966* (Wellington: Marine Department, 1969), 66. The first marine radio beacon was installed in 1926, but because of "various causes" the programme of creating a network of beacons was not advanced until the late 1930s.

⁶ "Smith made flight possible," *News*, 31 March 1937, 4.

Despite the Wright Brothers' feats and South Island farmer, Richard William Pearce's "long hops"⁷ in his rudimentary flying machine, it wasn't until the air warfare of World War One that aircraft significantly advanced in the areas of design and capability. As a result flying schools were established in New Zealand.⁸ Although new aircraft technology now made longer travel distances possible, little progress was made in the 1920s to establish commercial flying in New Zealand.⁹ By 1935 regular national commercial flights operated between main centres. Within four years domestic air routes were supported by 15 aeradio stations around the country.¹⁰

A number of advances in air transportation occurred in 1937 that provided the impetus to build an internationally-focused aeradio station in Auckland. On 30 March 1937, Pan American Airlines pilot, Captain Edwin Musick and his crew from the United States of America (USA), landed a flying boat at Auckland's Mechanics Bay. They were investigating potential air routes across the Pacific Ocean.¹¹ Locals packed the waterfront to give the airmen a "royal welcome."¹² The captain was arguably the world's most famous pilot at the time and returned during another surveying flight later that year. Their arrival on 26 December was a day before a British Imperial Airways survey team flew in to scope routes from Europe.¹³ The growing possibility of international commercial travel led to the New Zealand, Australian, and British governments establishing Tasman Empire Airways Limited (TEAL) to service a proposed trans-Tasman link.¹⁴

Tragically, Edwin and his crew died in a mid-air explosion in early 1938, near Pago Pago in American Samoa.¹⁵ New Zealanders held this aviation pioneer in such high

⁷ Peter Aimer. "Aviation - The beginnings of aviation," in *Te Ara - the Encyclopedia of New Zealand*, last modified 15 March 2013, <http://www.TeAra.govt.nz/en/aviation/page-1>.

⁸ Ibid.

⁹ Peter Aimer. "Aviation - An aviation industry," in *Te Ara - the Encyclopedia of New Zealand*, last modified 13 July 2012, <http://www.TeAra.govt.nz/en/aviation/page-3>.

¹⁰ Peter Aimer, "Aviation - The main trunk route," in *Te Ara - the Encyclopedia of New Zealand*, last modified 13 July 2012, <http://www.TeAra.govt.nz/en/aviation/page-5>. "Annual Report of the Post and Telegraph Department for the Year 1938-39," in *Appendix to the Journals of the House of Representatives (AJHR) 1939*, F-1, 25, www.atojs.natlib.govt.nz. The use of radio for guiding aircraft was initially known as "aeradio." Wilson, *Wire and Wireless*, 115.

¹¹ "Clipper's Survey Opens New Skyway," *Auckland Star*, 31 March 1937, 5. New Zealand Heritage List/Rārangī Kōrero - Te Naupata/Musick Point.

¹² "Smith made flight possible," *News*, 31 March 1937, 4.

¹³ "First official airmail flight to San Francisco," Ministry for Culture and Heritage, last modified 29 October 2014, <http://www.nzhistory.net.nz/pan-am-begins-first-official-airmail-flights-from-auckland-to-san-francisco>. "New Zealand's Big Day," *Auckland Star*, 27 December 1938, 9.

¹⁴ Peter Aimer. "Aviation - International destinations," in *Te Ara - the Encyclopedia of New Zealand*, last modified 13 July 2012, <http://www.TeAra.govt.nz/en/aviation/page-6>.

¹⁵ "Radio Aids," *Evening Post*, 14 February 1939, 10.

esteem East Tamaki Head was renamed in his honour in mid-1940 and a memorial radio station built on the site.¹⁶ Even before his death the site was being considered for New Zealand's first international, ultra-modern, radio communications station. The headland location was chosen because it was sufficiently removed from electrical interference and because of its proximity to the Mechanics Bay flying boat base.¹⁷ Approximately 50 hectares of the headland was set aside by the Crown for the radio complex, as well as another eight hectares for a transmitting station five kilometres away on Oliver Road.¹⁸



Figure 1: Musick Point, Pakuranga, Auckland [14 January 1965]. Whites Aviation Ltd: Photographs. Ref: WA-63282-F. Alexander Turnbull Library, Wellington, New Zealand. URL: <http://natlib.govt.nz/records/23182075>.

Creating Musick Memorial Radio Station

Planning for the Musick Memorial Radio Station was coordinated by the Aeradio Committee, consisting of representatives from the Air, Education, Marine, and the

¹⁶ Secretary of the Hon. Geographic Board to Controller of Civil Aviation, Air Department, 6 May 1940. Archives New Zealand, R21938094.

¹⁷ "Telecommunications in New Zealand," 57. "Musick Site," *Auckland Star*, 15 April 1939, 7.

¹⁸ New Zealand Heritage List/Rārangi Kōrero - Te Naupata/Musick Point. Chris Foote, "Auckland Radio and Musick Point," *The Mail Coach*, 49 (April 2013), 146. The transmitting station was demolished in 1995 and the site has been developed for residential purposes.

Post and Telegraph Departments.¹⁹ Group Captain Thomas Martin Wilkes (1888–1958) chaired the Committee in 1938. He was a qualified pilot and the Controller Civil Aviation in the Air Department.²⁰ Ernest Hedley Roy Green (1898–1977), who chaired the Committee from 1939, was the Post and Telegraph Department’s radio engineering specialist in charge of their Radio Division.²¹ He was influential in the development of the Station’s facilities. Born in New Zealand and a science graduate of Auckland University College, Ernest’s career in the Department began in 1920 as an engineering cadet.²² He rose through the ranks to become the Department’s Engineer-in-Chief between 1946 and his retirement in 1959.²³ Ernest was also the London-based Institution of Electrical Engineers’ overseas representative in New Zealand. During his career he’s said to have taken “a prominent part in the development of new aids for both mercantile marine and civil aviation.”²⁴

Although a Public Works Department’s (PWD) construction project, the Station’s facilities were created in consultation with Green and others in the Post Office and Telegraph Department’s Radio Division. The Division would be in charge of operating and maintaining Musick Memorial Radio Station.²⁵ The Air Department also had a stake in the Station, which meant its top engineers and administrators would also have been involved during planning, construction and whenever subsequent works needed to be carried out at the Station. Some of the engineers associated with the project in the early period include: Frederick Selwyn Dyson (*circa* 1883–1970), PWD District Engineer, Auckland; Percival Vincent Charles Richard Miles (1885–1964), Post and Telegraph Department Engineer-in-Chief; William Newnham (1888–1974), PWD Engineer-in-Chief and Under-Secretary; Roland Harry Packwood (1892–1972), PWD District Engineer; and Thomas Cedric Victor Rabone (1891–1970), PWD Acting District Engineer.²⁶

¹⁹ Aeradio Committee, Minutes of Meeting held Tuesday 20th September 1938. Archives New Zealand, R21938094.

²⁰ “TM Wilkes,” Civil Aviation Authority of New Zealand, accessed 20 July 2015, http://www.caa.govt.nz/history/t_m_wilkes.htm.

²¹ “Obituary: E.H.R. Green,” *New Zealand Engineering*, 32:7 (July 1977), 170. ‘Corps of Signals,’ *New Zealand Herald*, 2 August 1938, 11.

²² “Obituary: E.H.R. Green,” *New Zealand Engineering*. ‘Personal,’ *New Zealand Engineering* 1:2 (May 1946) 120.

²³ *Ibid.* This obituary notes that Green retired from the Post and Telegraph Department in 1955. However, Gordon McPherson, *From First to Last: Engineers-in-Chief of the New Zealand Post Office, 1863–1987* (Waikanae: Gordon McPherson, 2003) 14, states the year was 1959.

²⁴ “Obituary: E.H.R. Green,” *New Zealand Engineering*.

²⁵ “Guide Airmen,” *Auckland Star*, 10 June 1941, 5.

²⁶ Aerodromes: Point Musick Aeradio Station: Steel Towers. Archives New Zealand, R20121722. Aerodromes: Trans Tasman Radio Facilities: Musick Memorial Engineering Services: Drainage, Water Supply, Water Tower, Fire Protection, Electrical (Includes Standby Plant), Sewerage. Archives New Zealand, R20121754. Musick - Communication Services, Archives New Zealand, R21938094.

The radio station was built in two stages. The first began in 1939 with the instalment of a comprehensive system of masts and aerials, a small power substation and a temporary radio station building.²⁷ The transitional station building opened in August that year and the *Aotearoa* was the first TEAL flying boat to use the facility.²⁸ This aircraft went on to carry out a number of survey flights before the trans-Tasman service was officially launched on 30 April 1940. The first commercial flight from San Francisco arrived a few months later and was reported as having completed “the world aerial connection.”²⁹ Initially it was suggested four staff could run the temporary station but this increased to 20 when Musick Memorial Radio Station was completed.³⁰ Fabrication and installation of some of the permanent steel towers by important engineering works, Mason Brothers Engineering Company Limited, was due to be completed in 1939. This was extended to mid-1940 as Mason Brothers were involved in emergency defence work to create falsework for Whenuapai’s hangars.³¹

The second stage of the Musick Memorial Radio Station project involved creating the permanent station building and associated structures. The design process was initiated by Aeradio Committee in December 1938. The PWD’s Engineer-in-Chief John Wood (1880–1952) and Government Architect John Thomas Mair (1876–1959) were asked to start working on the project in earnest.³² The building’s design is credited to John Blake-Kelly (1913–1988), the project’s local PWD architect. The Station project came relatively early in John’s PWD career and eventually he became the Ministry of Works Government Architect in 1971.³³ His concept for the building and formal landscaping was to create the impression of a flying boat and its jet stream or landing wake (see Figure 1) when the site was viewed from the air.³⁴ Musick Memorial Radio Station was built during World War Two and because of its

²⁷ New Zealand Heritage List/Rārangi Kōrero - Te Naupata/Musick Point.

²⁸ “Annual Report of the Post and Telegraph Department for the Year 1939–40,” in *AJHR 1940*, F-1, 18, www.atojs.natlib.govt.nz. “Aotearoa Alights on the Waitemata,” *Auckland Star*, 28 August 1939, 11.

²⁹ “Clipper’s Flight,” *Auckland Star*, 18 July 1940, 8.

³⁰ TM Wilkes to Post and Telegraph Department Director General, 24 July 1939. Archives New Zealand, R21938094 “Radio Station,” *New Zealand Herald*, 2 September 1941, 9.

³¹ Memorandum for Under-Secretary of Works, Public Works Department, Wellington, 11 July 1940. Archives New Zealand, R20121722.

³² Thomas Martin Wilkes (Chairman Aeradio Committee) to John Wood (Public Works Department Engineer-in-Chief), 1 December 1938. Archives New Zealand, R21938094.

³³ Other examples of Blake-Kelly’s work include 1960s campus designs for Waikato University, Hamilton, and University of Canterbury’s Ilam campus, Christchurch, as well as the expansion concept for Otago University and, among the many other major projects he was involved with as Government Architect, the design team for the Beehive, Wellington. Rosslyn Noonan, *By Design: A Brief History of the Public Works Department Ministry of Works, 1870–1970* (Wellington: Government Printer, 1975), 305.

³⁴ Julia Gatley (ed.), *Long Live the Modern: New Zealand’s new architecture, 1904–1984* (Auckland: Auckland University Press, 2008) 38. New Zealand Heritage List/Rārangi Kōrero - Te Naupata/Musick Point.

military applications became a high priority project. Tenders were called for the reinforced concrete building on 8 July 1940 and the contract was awarded to Hamilton-based D.C. Street Construction Company Limited.³⁵ The main construction contract was given in September 1940.³⁶ Musick Memorial Radio Station was fully operational in late 1941.³⁷

Musick Memorial Radio Station's radio facilities were created based on recommendations from a December 1938 conference attended by representatives from New Zealand and Australia. It was equipped to handle aeronautical radio communications, maritime and emergency radio services, and gather and distribute meteorological information.³⁸ For effective medium to long distance communications, the Station had high and medium frequency wireless telegraph, medium frequency aeronautical radio communication, high and medium frequency direction-finders, and hand speed Morse code communication.³⁹ High frequency ground-to-air direction finding stations in other locations supported the Auckland station.⁴⁰ A Post and Telegraph Department service, Auckland Radio ZLD, was based in the Station.⁴¹ Pan American flight crew reported that at Musick Point "New Zealand has provided one of the finest aeronautical radio set-ups that there is anywhere".⁴²

Musick Memorial Radio Station's functions

During World War Two Musick Point was a strategic site. Its temporary and permanent radio station were vital communication centres in the South Pacific campaign. As a result, the site was strictly controlled by the military during this period.⁴³ Radio was a favoured communications method because it was easy to install and expand, and more difficult to intercept than telephone or telegraph.⁴⁴ New Zealand's facilities expanded dramatically and the range of radio services also rapidly increased, including using radio to listen to enemy ship radio and wireless facilities,

³⁵ "Guide Airmen Radio Memorial," *Auckland Star*, 10 June 1941, 5.

³⁶ "Shaped like an Aeroplane," *Auckland Star*, 6 September 1940, 6.

³⁷ "Radio Station," *New Zealand Herald*, 2 September 1941, 9.

³⁸ "Air Department (Report on the), for the Year 1938–39," in *AJHR 1939*, H-37, 8. "Radio Aids," *Evening Post*, 14 February 1939, 10.

³⁹ Doug Morris, *The Story of Auckland Radio: In memory of those who served with dedication, 1912–1993* (Auckland: Copy Out West, 2002), 18. Foote, "Auckland Radio and Musick Point," *The Mail Coach*, 146.

⁴⁰ "Telecommunications in New Zealand," 58. These support stations were established at opposite ends of New Zealand in 1938–39 at Kaitaia, Northland, and Awarua in Southland. "Public Works Statement," in *AJHR 1939*, D-1, 61, www.atojs.natlib.govt.nz.

⁴¹ Morris, *The Story of Auckland Radio*, 18.

⁴² "Musick Point: American Tribute," *Auckland Star*, 9 August 1940, 3.

⁴³ Rhys Thomas, "Musick Point Radio Station," in *Evolving Auckland: The City's Engineering Heritage*, ed. John La Roche (Christchurch: Wily Publications, 2011), 184.

⁴⁴ Wilson, *Wire and Wireless*, 137.

as well as the new British technique of radar (radio direction and range). Radar employs radio waves to detect reflecting surfaces so the speed and position of moving objects can be accurately calculated. This meant Post Office Department radio stations increased from 62 to 121 during the War. Hundreds of new radio receivers and transmitters were installed nationwide and in the South Pacific.⁴⁵

Initial activities at the Musick Memorial Radio Station extended to gathering naval intelligence and providing hand speed emergency telegraph links with the USA and Britain.⁴⁶ During 1940, radio operators were instructed to eavesdrop on transmissions from enemy stations and provide bearings for naval personnel to plot the coordinates of transmitters. This helped the Navy calculate the bearings of German warships and submarines in distant locations. There were also some personnel at Musick Memorial Radio Station who could interpret Japanese coded messages. Musick Memorial Radio Station was an invaluable source of naval intelligence to the USA.⁴⁷ The Musick Memorial Radio Station was also an important link with the New Zealand Coastwatcher Unit stationed on remote Pacific islands, which monitored Japanese military movements.⁴⁸

A central focus at the Station was also marine radio communications. As early as 1914 the Marine Department stipulated that New Zealand vessels of certain classifications had to install wireless telegraphy equipment. This was in line with international regulations after radio played a significant part in rescue efforts during the sinking of the *RMS Titanic* (1912).⁴⁹ New Zealand's first navigational radio beacon was created in 1926 at Cape Maria Van Diemen, Northland.⁵⁰

After World War Two, 24-hour aviation and maritime communications continued to operate from Musick Memorial Radio Station. With the increasing volume of air traffic responsibility for civil air services, including aeronautical radio communications, transferred from the New Zealand Post Office Department to the Air Department's Civil Aviation Branch. This resulted in the allocation of the upper floor of the Musick Memorial Radio Station to the Civil Aviation Branch in 1952, while the Post Office's radio activities took place on the ground floor.⁵¹

⁴⁵ Ibid. Howard Robinson, *A History of the Post Office in New Zealand* (Wellington: Government Printer, 1964), 243.

⁴⁶ Morris, *The Story of Auckland Radio*, 20.

⁴⁷ Foote, "Auckland Radio and Musick Point," 149–50.

⁴⁸ Thomas, "Musick Point Radio Station," 185.

⁴⁹ Wilson, *Wire and Wireless*, 92. The 1914 regulations related to international trade vessels and those routinely carrying more than 150 people.

⁵⁰ "Telecommunications in New Zealand," 48. "Aid to Navigation," *New Zealand Herald*, 23 October 1926, 10.

⁵¹ "Telecommunications in New Zealand," 57. Foote, "Auckland Radio and Musick Point," 150–51.



Figure 2: Operators (L to R), L J Young, N [Masters?] and E Ritchie at work, Musick Point Air Radio Station, Howick, Auckland [29 August 1946]. Whites Aviation Ltd: Photographs. Ref: WA-03635-F. Alexander Turnbull Library, Wellington, New Zealand. <http://natlib.govt.nz/records/30654146>.

Late 20th century changes

In 1957, Auckland's international high-frequency aeronautical communication was transferred to the airport in Mangere because residential development in the area around the Station was increasing electrical interference. In 1965–66, the Civil Aviation Branch followed. Regional maritime and emergency radio services became the sole focus of Musick Memorial Radio Station.⁵²

As a result of deregulation, the Coast Radio Service at Musick Memorial Radio Station was taken over by Telecom in March 1987. It continued to provide Morse Code service for commercial shipping and maritime services as this form of communication was favoured by foreign fishing vessels required to relay their daily positions. Two years later, when Telecom changed from a State Owned Enterprise to a private company, technology had developed to the point where the station's remaining services were out-of-date. Therefore, ZLD coastal radio service, then the longest running in New Zealand, transmitted its last message on 31 September 1989.⁵³ In September 1993, the maritime and emergency radio communications that

⁵² Thomas, "Musick Point Radio Station," 186. New Zealand Heritage List/Rārangī Kōrero - Te Naupata/Musick Point.

⁵³ Morris, *The Story of Auckland Radio*, 159–60. ZLD had been operating for 81 years when it was closed and had been based at Musick Memorial Radio Station since its completion.

had operated from Musick Memorial Radio Station since 1942 were decommissioned and the station closed.⁵⁴

The unused Station building then began to fall into disrepair. In 1999 the Suburban Amateur Radio Club, which became the Musick Point Radio Group, formed an agreement with Telecom for the use and care of Musick Memorial Radio Station. This was later formalised with a fixed-term lease. The Musick Point Radio Group's activities include cataloguing and restoring vintage radio equipment that had been used in the Station, as well as the transmitting station on Oliver Road (demolished in 1995). Other vintage radio equipment is also housed at Musick Memorial Radio Station. The Group's members are licensed to operate the amateur radio station call signs ZL1ZLD and ZL1ZLF from the building.⁵⁵ Spark (formerly Telecom) still has mobile telephone operations in the building and it and other telecommunications companies have aerials on and around the building.

⁵⁴ "Auckland Radio ZLD," Musick Point Radio Group, accessed 9 September 2015, <http://musickpointradio.org/auckland-radio-zld/>.

⁵⁵ "The Station Today," Musick Point Radio Group, accessed 30 July 2015, <http://musickpointradio.org/musick-memorial-radio-station-today/>. "Musick Point," Musick Point Radio Group, accessed 10 July 2015, <http://musickpointradio.org/musick-point/>.

Social narrative

Communications and transport

As an island nation located on the far reaches of the British Empire, isolation was problematic for New Zealand because of the economic, social and political issues this created. As a result, telecommunications technologies were eagerly adopted. The first example of telecommunications connecting New Zealand with the rest of the world was the trans-Tasman telegraph cable installed in 1876.

Technology for the fast and efficient transport of physical items and people was slower to develop. International air services were greatly anticipated in the late 1930s because they promised to further diminish New Zealand's geographical isolation by providing the fastest commercial travel and international mail services.⁵⁶ A number of exploratory survey flights across the Pacific Ocean were completed by various countries and companies in the mid-to-late 1930s. However, before establishing commercial services radio navigational facilities were required. This provided impetus to build Musick Memorial Radio Station.⁵⁷

Before international commercial flights, "air mail" from England came to New Zealand on ships. This postal service depended on what vessels were available in Australian ports, so scheduling was erratic. The last stage across the Tasman Sea by ship could take more than a week to reach New Zealand.⁵⁸ In comparison, a record-breaking *Aotearoa* trans-Tasman flight in late 1939 took just over seven hours.⁵⁹ The ten and a half day journey for air travellers and mail from England was described as "a major advance in man's conquest of time and distance."⁶⁰ The inaugural Auckland to Sydney air mail service was on 30 April 1940.⁶¹ As many as 40,000 letters could be transported in each flight.⁶² Among the early contents were photographs reprinted in New Zealand newspapers of forces mobilising in Europe, bringing the realities of World War Two to the other side of the world.⁶³

⁵⁶ "Tasman Air Mail," *New Zealand Herald*, 6 May 1940, 6. The inauguration of the trans-Tasman air service was described as "an event of magnitude... For New Zealand and Australia the service represents a new link which in the future will be a great binding force between the two countries in cutting down transit time."

⁵⁷ "Annual Report of the Post and Telegraph Department for the Year 1938-39," 25.

⁵⁸ "Overseas Air Mails," *Evening Post*, 30 March 1939, 11.

⁵⁹ "Aotearoa's Record," *Courier-Mail*, 2 August 1939, 7.

⁶⁰ "New Zealand-England in 10 ½ days: Conquest of distance," *News*, 18 August 1939, 7.

⁶¹ "Tasman Air Link," *New Zealand Herald*, 26 April 1940, 8.

⁶² "Tasman Air Mail," *New Zealand Herald*.

⁶³ For example, "Pictures by Tasman Air Mail – German Troops in Oslo," *New Zealand Herald*, 3 May 1940, 4.

New Zealand's economy relied heavily on coastal and international shipping for importing and exporting cargo. Musick Point Radio Station provided integral services for these activities as well.

Because of her geographical position and the importance of overseas trade to her economic well being [sic], New Zealand's maritime radio services are regarded as an essential adjunct to shipping services....The presence of these radio services has not attracted the public attention that their importance really merits – having regard to the safety of life and other considerations.⁶⁴

In particular, by the mid 20th century coastal and international shipping around Auckland was heavy, with the port handling one third of the country's exports and almost half of its imports.⁶⁵ It was New Zealand's busiest port with the largest net tonnages for both coastal and international shipping by the late 1930s.⁶⁶ Therefore, the marine communications centred at Musick Point were not only essential to seafarer's safety but important to New Zealand's economy.

Musick Memorial Radio Station also provided invaluable communications support for inhabitants on isolated harbour islands around Auckland, such as Raking and Little Barrier. Islanders provided the Station with current meteorological information and emergency communications went through Musick Memorial Radio Station, as well as requests for supplies.⁶⁷

Commemoration

The Station and surrounding area was dedicated as a national memorial to Captain Edwin Musick, a pilot from the USA whose pioneering flights across the Pacific enthralled New Zealanders. Only days before Edwin's death an Imperial Airways First Officer described the Pan-American pilot as a respected, wonderful flyer who "...never takes a chance. That is why he has built up so great a reputation and why he has lived to do more than 10,000 hours in the air."⁶⁸

⁶⁴ "Telecommunications in New Zealand," 45.

⁶⁵ CH Williams (ed.). "Dec. 23 Auckland," *New Zealand Journey: Royal Visit 1953–54* (Wellington: Secretary of Internal Affairs, 1953), n.p.

⁶⁶ 'Section E – Trade of Ports,' in *The Official New Zealand Yearbook, 1938*, Statistics New Zealand, accessed 21 July 2015, https://www3.stats.govt.nz/New_Zealand_Official_Yearbooks/1938/NZOYB_1938.html#idsect1_1_113005.

⁶⁷ "A trip back in time to Musick Point," Radio New Zealand, Sounds Historical broadcast, 21 December 2014, <http://www.radionz.co.nz/national/programmes/soundshistorical/audio/20161294/a-1946-visit-to-the-musick-point-radio-station>.

⁶⁸ Examples: "Atlantic Route," *New Zealand Herald*, 7 January 1938, 11; "Atlantic Survey," *Evening Post*, 8 January 1938, 7.



Figure 3: Commander of clipper flying-boat replies to reception at Auckland: Captain Musick speaking at the harbour board function, 29 December 1937. Sir George Grey Special Collections, Auckland Libraries, AWNS-19371229-50-2.

The captain and his fellow long-distance aviation pioneers were symbols of the anticipated social and economic benefits of international air travel. The fate of the *Samoan Clipper* reportedly shocked and saddened New Zealanders, who had embraced Edwin as one of their own.⁶⁹ The comments of the President of the Auckland Chamber of Commerce, WR Fee, seem reflective of New Zealanders' sentiments at the time:

There is no thought of nationality in our grief. We had learnt to revere Captain Musick and his officers as we would our own kith and kin, and our deep and spontaneous sympathy went out to the relatives of those very gallant gentlemen who have given their lives, not only for the progress of their own country, but for the progress and advancement of this Dominion.⁷⁰

Prime Minister Michael Savage (1872–1940) expressed his admiration for Edwin, saying he “impressed everyone with his unassuming manner and fine character” when they had met only few weeks prior.⁷¹ Within weeks the Government was thinking about a memorial in the form of a radio beacon, or something similar. In February 1939 the Government announced its plan to name Auckland's aeradio station the “Musick Memorial Station” and the headland site's name would be changed to Musick Point.⁷²

⁶⁹ Examples: “The Air Disaster,” *New Zealand Herald*, 14 January 1938, 8; “Loss of Clipper,” *New Zealand Herald*, 14 January 1938, 12.

⁷⁰ “Lost Clipper,” *Auckland Star*, 20 January 1938, 8.

⁷¹ “Loss of Clipper,” *New Zealand Herald*. Savage had given Musick a gift which he was supposed to give to USA President, Franklin Roosevelt, had the flight been successful. “Clipper Leaves,” *New Zealand Herald*, 3 January 1938, 11.

⁷² “Radio Aids,” *Evening Post*, 14 February 1939, 10.

The Station was officially opened on 12 January 1942 – marking the fourth anniversary of the deaths of the *Samoan Clipper's* crew.⁷³ The opening ceremony was attended by USA consular representatives and the New Zealand's Prime Minister Peter Fraser (1884–1950) who used the occasion to emphasise the political friendship between the USA, Britain, and New Zealand, and their co-operation in the war effort.⁷⁴

The building's entrance hall is a commemorative space for the continuing recognition of the significance of the captain and his colleagues, and by association long-distance air travel. In March 1954, his widow, Cleo, donated two large memorial medals which were presented at a ceremony attended by a number of dignitaries, including the USA Consul. Cleo eventually visited Musick Memorial Radio Station in the summer of 1963–64.⁷⁵ Another plaque was unveiled marking the 50th anniversary of his death in 2003 and the building was rededicated.

Community connections

From the outset it was anticipated that the presence of the Station and its associated works would interest the public. The road provided access for workers but also the general public who after World War Two were allowed to use the Point for leisure activities, aside from a restricted area directly around the Station and its direction finding towers.⁷⁶ Howick Golf Course, developed in the mid-20th century, occupies a large section of the Point. The Post Office Department also aimed to increase public recreational use by implementing a series of management plans in the late 1970s and early 1980s. As a result the public had “unimpeded access to the land surrounding the receiving station building at Musick Point as well as access to the coastline.”⁷⁷

Thought was given to the development of the Musick Point site after deregulation. This was strongly opposed by the local community who produced a 1,200-signature petition against residential zoning of the land.⁷⁸ There is ongoing development pressure in the area. In 2002, the Musick Point Trust formed. One of the group's objectives is to advocate for Musick Point remaining public land and accessible, as

⁷³ “Flier's Memorial,” *New Zealand Herald*, 7 January 1942, 6.

⁷⁴ “Common Aim,” *Auckland Star*, 12 January 1942, 6. “Together in Peace and War,” *Evening Post*, 13 January 1942, 4.

⁷⁵ ‘Musick Memorial Radio Station’, Ministry for Culture and Heritage, updated 8 December 2014, <http://www.nzhistory.net.nz/media/photo/musick-memorial-radio-station>.

⁷⁶ “Getting Ready,” *Auckland Star*, 8 August 1939, 11.

⁷⁷ Question for Oral Answer (Reply due 9.8.78). Archives New Zealand, R16130298

⁷⁸ New Zealand Heritage List/Rārangi Kōrero - Te Naupata/Musick Point.

well as to support the Musick Point Radio Group's efforts to conserve the Station.⁷⁹ Trust members have included local community representatives as well as representatives from the Auckland Art Deco Society and IPENZ's Auckland Engineering Heritage Chapter.⁸⁰

The 2003 rededication of the building was attended by USA Ambassador Charles J Swindells, local dignitaries and residents, former staff, and engineering heritage, radio and aeronautical enthusiasts. It was estimated between 1,500 and 2,000 people attended the event. An IPENZ plaque, acknowledging the engineering heritage value of the Station, was also unveiled.⁸¹ Te Naupata/Musick Point was recognised as a Historic Area on Heritage New Zealand's New Zealand Heritage List/Rārangi Kōrero in 2010. The heritage significance of Musick Memorial Radio Station strongly contributes to the Historic Area, as well as other aspects such as the area's importance to Māori.⁸²

⁷⁹ "1231949 Musick Point Trust Incorporated: New Incorporated Society," Companies Office Societies and Trusts Online, accessed 30 July 2015, http://www.societies.govt.nz/cms/customer-support/learn-about-our-online-services/banner_template/SOCAGENT.

⁸⁰ Thomas, "Musick Point Radio Station," 186.

⁸¹ "Minutes of IPENZ National Committee for Engineering Heritage Auckland Chapter," 20 February 2003, 3. Heritage Promotion, IPENZ. It was estimated that between 1,500 and 2,000 people attended the event.

⁸² New Zealand Heritage List/Rārangi Kōrero - Te Naupata/Musick Point. There is also an associated Heritage New Zealand Wahi Tapu: New Zealand Heritage List/Rārangi Kōrero - Te Naupata (List no.9334).

Physical narrative

The Musick Memorial Radio Station building was the focus of a larger telecommunications complex, north of Musick Point and Clovelly Roads. It included telecommunications equipment and structures, and support buildings, spread out over Musick Point. The clear delineation between the residential area and the Musick Point reserve, with Musick Memorial Radio Station isolated some distance away at the tip, is an important element reflecting the need for dislocation from electrical interference for successful radio reception and transmission. Many intact, or partially remaining, features integral to the Station's operations were initially constructed in the mid-20th century. The complex was altered over time as requirements changed.

The heritage assessment includes land in the original Musick Point Post Office Reserve and the surface and subsurface features directly associated with the Station's telecommunications activities. The main extant and remnant features of the complex include: the Musick Memorial Radio Station building and its entrance landscaping, the associated pole, towers, and their footings, small outbuilding, the emergency bunker, and the former staff housing and building foundations at the southern end of Musick Point. The modern and historic radio communications equipment housed in Musick Memorial Radio Station, as well as other chattels and archive material associated with its operations between 1940 and 1993 and the amateur radio operations since then, are also important components in the site's significance.

Not included in the assessed area is an associated transmitting station nearby at Oliver Road, Howick. The transmitting station, built in the same period as Musick Memorial Radio Station, was demolished in 1995. The Ocean Point subdivision and Maclean's College playing fields occupy the site.⁸³

Landscaping and features associated with Musick Memorial Radio Station

Overlooking the Tamaki River was a small weatherboard building at the beginning of the straight stretch of road to the Station. This was built in 1939 as the temporary high frequency receiving station. When superseded by the permanent Station it was used for staff accommodation and then converted into a residence.⁸⁴ Built during the same period was a very high frequency (VHF) direction finding hut, on the opposite side of the road heading towards the Point. Near to the hut were four medium frequency

⁸³ Ian Walker, "Auckland Radio ZLD – Architecture and History," New Zealand Association of Radio Transmitters, accessed 27 February 2015, www.nzart.org.nz/assets/branches/sarc/architecture2.htm.

⁸⁴ Morris, *The Story of Auckland Radio*, 30.

direction finding towers (approximately 300 metres southwest of the Station building).⁸⁵ These structures no longer exist. However, other staff housing still remains opposite the temporary receiving station site. The six houses northwest of the Musick Point/Clovelly Road intersection were built in the late 1950s for Civil Aviation Administration staff and their families.⁸⁶ Just south was further accommodation. The hostel building and annex were demolished.⁸⁷

Reflective of the construction era and the Station's military importance, a concrete air raid bunker was constructed about 200 metres from the Station building.⁸⁸ This is located east of the driveway, close to the Station's boundary with Howick Golf Course.



Figure 4: Air raid bunker at Musick Memorial Radio Station, Auckland, 5 May 2015. Karen Astwood, IPENZ.

Between 1938 and 1939, a comprehensive system of masts and aerials were installed at Musick Point, and a small power substation and temporary radio station

⁸⁵ Morris, *The Story of Auckland Radio*, 30, 32–33.

⁸⁶ Music Point Receiving Station site plan. Air Department, Civil Aviation Branch, 1952. Archives New Zealand, R16096628.

⁸⁷ Ibid. Morris, *The Story of Auckland Radio*, 165. The hostel was demolished in 1964. The residential area can be seen in: Aerial view of Musick Point, Howick, Auckland. Whites Aviation Ltd: Photographs. Ref: WA-49259-G. Alexander Turnbull Library, Wellington, New Zealand. <http://natlib.govt.nz/records/22675741>.

⁸⁸ Morris, *The Story of Auckland Radio*, 72.

were constructed. These were superseded within two years when construction began on the permanent station building in 1940. The towers in close proximity around the Station were removed in the late 20th century, but their concrete foundations remain. Musick Point Radio Group have since erected two towers (east and west of the Station) using these original footings.⁸⁹

The formal garden plan and landscaping features were an important part of the Station's design, elevating the complex above the purely functional, appropriate to the Station's memorial function. The driveway entrance leading from the carpark to the Station is lined with mature plantings and approximately 150 metres long. Its original features include the entrance gate pillars and planters. These features are at opposite ends of the driveway and are in the same Art Deco style as the Station. In a break in the plantings, about 50 metres from the Station building, is a fibreglass pole erected in the early 21st century on the timber base of an early transmission pole. This is a centre point feed for the large antenna carried across the driveway from the western to eastern masts.⁹⁰



Figure 5: Musick Point Air Radio Station, Howick, Auckland [29 August 1946]. Whites Aviation Ltd: Photographs. Ref: WA-03628. Alexander Turnbull Library, Wellington, New Zealand. <http://natlib.govt.nz/records/23031352>.

⁸⁹ Karen Astwood, "Musick Memorial Radio Station site visit notes, 5 May 2015," Musick Memorial Radio Station file, IPENZ.

⁹⁰ Pers Comm. Ann Walker to Karen Astwood, 12 August 2015. Musick Memorial Radio Station file, IPENZ.

A gabled temporary building to the west of Station became the gardener's shed, but was originally where ZLD services were operated between 1941 and the commissioning of the Station in 1942.⁹¹ In the late 1980s this was removed and replaced with a galvanised steel kitset garage building. An original or early small concrete building remains close to the garage and the west tower.⁹²



Figure 6: Concrete outbuilding and west radio tower, Musick Memorial Radio Station, Auckland, 5 May 2015. Karen Astwood, IPENZ.

Musick Memorial Radio Station

The Station building is located towards the northern end of Musick Point. The building has a four-storey central tower, east and west single level wings, and a northern apsidal two-storey section which is highly glazed. The main entrance is on the south side of the central tower. To the west of the entrance is the IPENZ engineering heritage recognition plaque, unveiled in 2003.

The vestibule was designed as a Memorial Hall and features various plaques, mostly dedicated to Captain Edwin Musick and the *Samoan Clipper's* crew. In the wing west of Memorial Hall were facilities for on-duty staff, such as administrative, bedroom and kitchen areas.⁹³ The east wing has operational plant, such as a generator room.

⁹¹ Morris, *The Story of Auckland Radio*, 27–28.

⁹² "Musick Point Site Plan 1946–87," Musick Memorial Radio Station file. IPENZ.

⁹³ Morris, *The Story of Auckland Radio*, 26.

By 1946, the Station's ground and first floor was staffed 24 hours per day by approximately 60 employees. The lower floor's work spaces were divided into bays with a variety of uses and corresponding telecommunications equipment. There were bays providing:

- Small coastal ship radio telephone facilities connecting isolated islands with the mainland, such as Rakino and Little Barrier Islands
- Mercantile shipping support for vessels entering or leaving Auckland or Wellington's port
- Aircraft and ship bearings – a service generally used during storms or fog
- Ground to air communications between Auckland and Australia and New Caledonia
- Communication between other radio stations at Rose Bay in Australia, and Lafala Bay and Suva Aeradio in Fiji
- Messages to and from Norfolk and Lord Howe Islands and Noumea in New Caledonia
- Maintaining contact with the high frequency direction finding station at Awarua, Southland.

Through the Memorial Hall is a control room and the Musick Point Radio Group's telecommunications museum, featuring rare items such as a transmitter from the Oliver Road site. The north end of the building is an operations room with reconditioned mid-20th century transmitters.⁹⁴

Teletype machines were a main feature of the first floor. The Mechanics Bay meteorological office machine functioned 24 hours a day. The other machines linked with Pan American Airlines' offices in central Auckland and the Royal New Zealand Air Force at Whenuapai.⁹⁵ Over the subsequent decades the equipment was upgraded as technology advanced, gradually becoming more automated. In 1993 the station featured equipment such as multiple channel tape recorders and dictaphones recording all day and night.⁹⁶ This floor is where the Musick Point Radio Group spend most of their time as it features their Morse code and radio equipment.

Levels two to four feature support facilities and equipment for the Group's activities and the telecommunications companies' aerials on the roof.⁹⁷

⁹⁴ Astwood, "Musick Memorial Radio Station site visit notes, 5 May 2015."

⁹⁵ "A Trip Back in Time to Musick Point," Radio New Zealand.

⁹⁶ Morris, *The Story of Auckland Radio*, 154–57.

⁹⁷ Astwood, "Musick Memorial Radio Station site visit notes, 5 May 2015."

Comparative analysis

Musick Memorial Radio Station was one of four radio stations whose creation was motivated by the need to support the first commercial trans-Tasman and trans-Pacific flights, as well as expand maritime and other radio communications facilities. The other stations were at Rose Bay in Sydney, Lord Howe Island and Awarua in Southland.⁹⁸ All four provided aeradio navigational facilities. There was point-to-point radio network between all, except Awarua. However, that station had a point-to-point connection with Musick Memorial Radio Station.⁹⁹

The Rose Bay station was part of the flying boat base and its construction began in 1938.¹⁰⁰ The base closed in 1977 and buildings and facilities associated with radio and flying boat operation seem to have been demolished around that time.¹⁰¹

The Lord Howe Island radio station facilities for trans-Tasman flights were completed in 1939.¹⁰² The radio station services seem to have stopped soon after flying boat routes to the island ceased in 1974.¹⁰³ However, the associated towers were only demolished in the early 21st century, with a top section being preserved in the local museum. The museum also holds other items associated with the radio services. The station building has been converted into a Post Office.¹⁰⁴

There was already a maritime radio station at Awarua (opened 1913) when international commercial flight support infrastructure began being planned in the late 1930s. Aeradio and improved marine services were installed at the site from 1939, including a high frequency direction finding station and towers, and a new receiving station completed in 1940.¹⁰⁵ Awarua Radio ZLB, the maritime radio frequency,

⁹⁸ "Final Stages," *Auckland Star*, 22 June 1939, 12. Altogether, it was estimated that around 80 radio stations would be utilised to support the trans-Tasman and trans-Pacific flights by transmitting meteorological information to these main radio stations.

⁹⁹ "Tasman Air Mail," *New Zealand Herald*, 15 February 1939, 14.

¹⁰⁰ "1935-1938, History of Negotiations," *Sydney Morning Herald*, 9 June 1938, 11.

¹⁰¹ "Rose Bay, Sydney today!" The Flying Boat Forum, accessed 4 August 2015, <http://theflyingboatforum.forumlaunch.net/viewtopic.php?f=42&t=424>.

¹⁰² Roger Meyer, "The Early Days of Aeradio on Lord Howe Island," The Airways Museum and Civil Aviation Historical Society, accessed 10 August 2015, <http://www.airwaysmuseum.com/Aeradio%20Lord%20Howe%20Is%20early%20days.htm>.

¹⁰³ "Telecommunication and communication," from *Lord Howe Island: 1788–1988*, available at Lord Howe Island, accessed 10 August 2015, <http://www.lordhoweisland.info/library/transport.pdf>. For example, the last Morse code telegram was sent from Lord Howe Island in 1975.

¹⁰⁴ Pers Comm. Ian Hutton to Karen Astwood, 10 August 2015. IPENZ.

¹⁰⁵ "Awarua Radio VLB – ZLB," QSL.net, accessed 10 August 2015, <http://www.qsl.net/zl4pz/zlb/chrono.html>.

closed in 1991 - two years before Auckland Radio ZLD at Musick Memorial Radio Station.¹⁰⁶ The direction finding station was demolished. However, concrete tower foundations survive in the fields surrounding the remaining station buildings. The receiving station has been converted into a residence. The Awarua Communications Museum, at the site, has archival material relating to the station. As part of an Australian university's auroral research program there are TIGER high frequency phased antenna array at Awarua farm. This property also features several Venture Southland satellite earth stations.¹⁰⁷

With the exception of Rose Bay in Sydney, there are some remnants of the radio services associated with first international commercial flights at sites in New Zealand and Lord Howe Island. The Awarua site and Musick Memorial Radio Station have retained some radio and telecommunications functions. These functions at Musick Memorial Radio Station are much reduced compared with its original services but are in keeping with them. The Awarua radio station, a smaller complex, was an important part of the international network but was secondary to Musick Memorial Radio Station. There were numerous maritime radio stations around New Zealand, of which Musick Memorial Radio Station and the site at Awarua are good remaining examples.

Flying boats landed at Mechanics Bay, Auckland and the TEAL and Pan American administration buildings and the TEAL workshop were completed in 1939.¹⁰⁸ Further facilities, such as a hangar and concrete ramp, were added by the late 1940s.¹⁰⁹ All remnants of the base had been demolished by the late 1960s and the ramp was integrated into port wharf extensions.¹¹⁰ International commercial flights were well established by the time a flying boat base was opened for regular service at Evans Bay, Wellington, in 1950.¹¹¹ Within New Zealand, Musick Memorial Radio Station is the prime surviving site directly associated with the establishment of commercial international air travel, because early flying boat bases have been demolished.

¹⁰⁶ "Awarua Radio ZLB," Maritime Radio, accessed 11 August 2015, <http://maritimeradio.org/awarua-radio-zlb/>.

¹⁰⁷ Pers Comm. Rex Johnson to Karen Astwood, 10 August 2015. IPENZ.

¹⁰⁸ Tasman Empire Airways Ltd, Mechanics Bay, Auckland. Whites Aviation Ltd: Photographs. Ref: WA-11143-G. Alexander Turnbull Library, Wellington, New Zealand. <http://natlib.govt.nz/records/23214027>.

¹⁰⁹ Mechanics Bay, Auckland. Whites Aviation Ltd: Photographs. Ref: WA-23464-G. Alexander Turnbull Library, Wellington, New Zealand. <http://natlib.govt.nz/records/22855725>.

¹¹⁰ Mechanics Bay, Auckland. Whites Aviation Ltd: Photographs. Ref: WA-68647-G. Alexander Turnbull Library, Wellington, New Zealand. <http://natlib.govt.nz/records/22486630>.

¹¹¹ Chris Maclean, "Wellington places - Wellington Harbour," from *Te Ara - the Encyclopedia of New Zealand*, last modified 14 November 2012, <http://www.TeAra.govt.nz/en/photograph/13462/flying-boats>.

Key physical dates

1938–1939	Site preparation and installation of a network of masts and aerials, a small power sub-station, temporary radio station, and residences.
1940	Construction of the permanent Station begins. Further steel antenna towers constructed.
1941	Station completed.
<i>circa</i> 1950s	Civil Aviation Authority housing constructed.
1964	Residential hostel demolished.
<i>circa</i> 1965–74	Hostel annex and direction finding station demolished.
<i>circa</i> 1987	Original gardeners shed replaced.
30 September 1993	Musick Memorial Radio Station decommissioned and removal of chattels and redundant structures begins.
April 1994	Receiving masts are removed from the site.
Early 21st century	Musick Point Radio Group constructs east and west towers and central antenna feed pole.

C. Assessment of significance

Musick Memorial Radio Station has considerable significance in New Zealand's telecommunications and aviation history. It was an essential component in establishing an international network of radio facilities which made long-distance flights possible and effectively linked the English-speaking world by air travel from the late 1930s and early 1940s. Musick Memorial Radio Station was the main New Zealand site for this. It's special because it's a rare surviving facility associated with New Zealand's first commercial international aviation services.

This tribute to Edwin Musick (1894–1938) at Musick Point reflects the importance New Zealanders placed on lessening geographical isolation through fast and efficient international travel, air mail and their respect for the aviation pioneers who made this possible. Top civil service engineers from the Public Works and Post and Telegraph Departments were involved in creating what was a world-class radio communications station at the time.

Musick Memorial Radio Station also has significance because it provided vital marine radio support services to local and international shipping around Auckland for over 50 years. These services ensured the efficient and safe running of New Zealand's busiest port, making Musick Memorial Radio Station economically important to the country. Musick Memorial Radio Station was also of value as a lifeline for inhabitants of isolated islands around Auckland and the military applications of its facilities in the Pacific theatre during World War Two.

Therefore, the Musick Memorial Radio Station is of sufficient engineering heritage to merit inclusion of the IPENZ Engineering Heritage Register.

D. Supporting information

List of supporting information

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