

ENGINEERING HERITAGE STRATEGY 2011



Foreword

This Strategy has been prepared by the IPENZ Engineering Heritage Board. The purpose of this document is to set out a structured plan for IPENZ's ongoing engineering heritage activities of IPENZ. The Strategy has been developed after consultation with IPENZ Members and its Engineering Heritage Chapters.

It outlines a vision for engineering heritage and sets out the objectives to achieve that vision.

The strategy is in two parts:

- An overall plan for engineering heritage
- A detailed action plan setting out required actions and responsibilities.

Our vision for engineering heritage in the future is:

“New Zealand’s engineering achievements are widely recognised and valued”

Rob Wilkinson

Chairman

IPENZ Engineering Heritage Board

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1. Vision for Engineering Heritage:

Our vision for engineering heritage is:

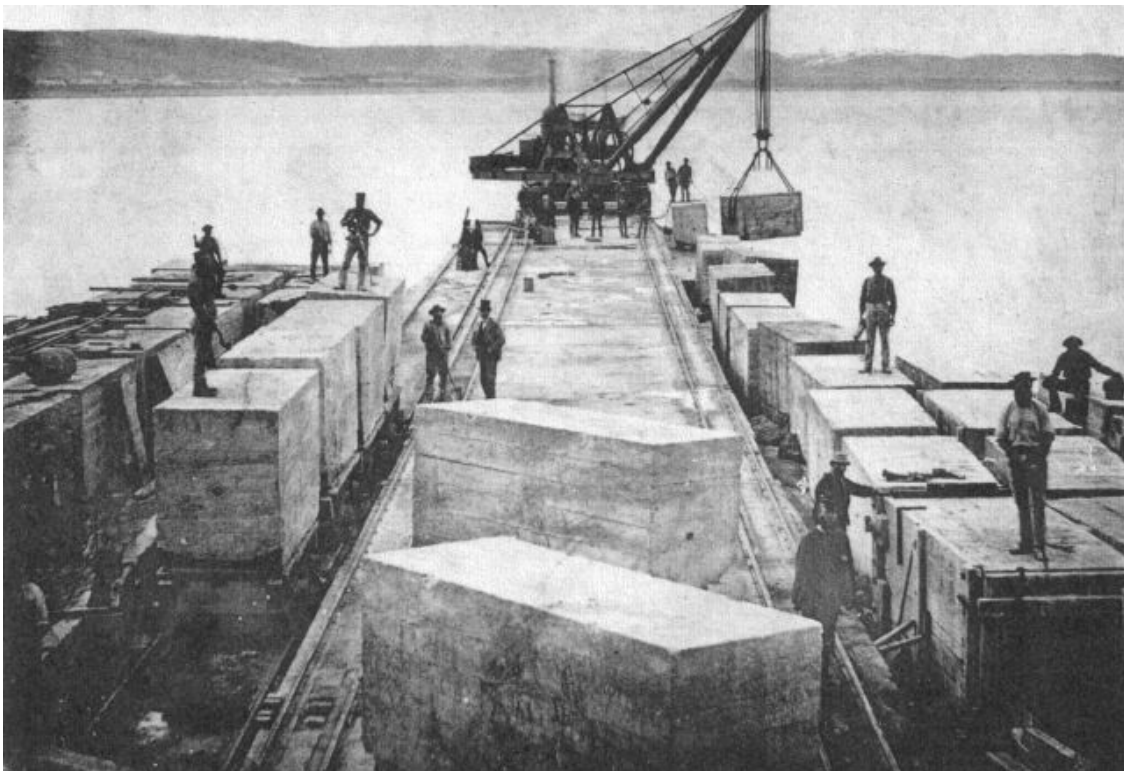
“New Zealand’s engineering achievements are widely recognised and valued”

2. Objectives For Engineering Heritage

To achieve this vision, the key objectives for New Zealand’s engineering heritage are to:

- Identify and record our engineering heritage resources
- Promote our engineering heritage’s protection, preservation and conservation
- Interpret and enhance understanding of our engineering heritage
- Use engineering heritage to enhance public understanding of the critical role engineering plays in modern society.

To achieve our objectives IPENZ needs to collaborate with a wide range of partners.



3. Introduction to Heritage

Heritage is our legacy from the past It is what we live today, and what we pass on to future generations. Our cultural and natural heritage represents irreplaceable sources of life and inspiration. The United Nations Educational, Scientific and Cultural Organisation (UNESCO) provide the following definitions of heritage:

- “Cultural heritage refers to tangible and intangible cultural heritage including monuments, archaeological sites, shipwrecks, underwater ruins, traditions and performing arts
- Natural heritage refers to outstanding physical, biological and geological formations, habitats of threatened species of animals and plants and areas with scientific, conservation or aesthetic value.”

In New Zealand, the Resource Management Act defines historic heritage as “those natural and physical resources that contribute to an understanding and appreciation of New Zealand’s history and cultures, deriving from any of the following qualities: archaeological, architectural, cultural, historic, scientific or technological.”

The New Zealand Historic Places Trust (NZHPT) is New Zealand’s leading national historic heritage agency advocating for New Zealand’s national heritage. Their work includes identifying our heritage places, seeking to ensure they survive for appreciation by current and future generations, and fostering that appreciation by recording and sharing their stories.

The NZHPT believe that in protecting heritage we retain a sense of belonging – a physical reminder of where we have come from and what our children can look back on, with pride, as we do today. They believe this is a shared responsibility and work with private owners, developers, councils, iwi and other community, local and national organisations – such as IPENZ.

Engineering is a “discipline, fusing craft and creativity with scientific understanding and mathematical analysis”. Those in the profession use these skills to design structures, machines, devices, systems, and processes that continue to have an impact on society. (*Engineers in Nation Building*, 2002 p.13)

Engineering heritage exists in a variety of forms. The most commonly identified heritage entities are tangible items, projects, infrastructure and objects. Other forms include biographies and records of prominent engineers, intellectual achievements, and the full range of knowledge and information sources (paper-based, audio, photographic, electronic, museum collections, etc.) that record the existence and detail of this heritage.

Engineering heritage in New Zealand represents the engineering discipline’s major contribution to the building of New Zealand’s society and economy. Engineering heritage reflects the history of our social, economic and cultural development through many technological changes. Our society continues to be reliant upon engineering for its quality of life.

4. The Institution's interest and background in Engineering Heritage

IPENZ has an interest in engineering heritage because it contributes to IPENZ's Mission to uphold and promote the engineering profession and to provide leadership and engineering advice to society on key issues.

As the lead engineering organisation in New Zealand, IPENZ chooses to advocate to protect New Zealand's engineering heritage. A key element of protecting engineering heritage is to ensure the contribution engineering has made, and continues to make, to the development of our modern society is widely recognised and appreciated. Profiling engineering heritage is also a means of ensuring society understands the value of engineering and of the engineering profession.

IPENZ has a history of fostering the growth of interest in New Zealand's engineering heritage since the establishment of an engineering committee in Christchurch in 1981. The leading figures in this development were John Pollard and Dr George Mullenger. This group then became the National Engineering Heritage Committee (NEHC) in 1993 and Heritage Chapters formed in Auckland and Dunedin. It then organised the first Australasian Engineering Heritage Conference held in Christchurch in 1994 – an event that attracted delegates from mainly New Zealand and Australia, and strengthened the relationship with Engineering Heritage Australia.

A further development in Institution's heritage activities occurred leading up to New Zealand's sesquicentenary celebrations in 1990. The IPENZ "Engineering to 1990" project was a significant and very successful programme in which 68 heritage works around the country were identified and plaqued. This project did much to raise the profile of the engineering profession around New Zealand.

In 1995 the NEHC's base transferred to Auckland, and this committee organised the 2nd Australasian Engineering Heritage Conference in 2000. The following year the national responsibilities were taken over by the Wellington Engineering Heritage Chapter.

The need for nationwide representation as an engineering heritage committee was recognised in 2008 with the formation of the present structure of an Engineering Heritage Board (EHB). The EHB reports directly to the IPENZ Board and is supported by the regional Engineering Heritage Chapters located in Auckland, Wellington, Canterbury and Otago/Southland. The EHB Members and the Engineering Heritage Chapters are the key source of IPENZ's heritage activities.

The EHB is concerned that much of this country's engineering and industrial heritage is poorly recorded and accessing published information about this can be difficult. Public recognition of our engineering heritage by IPENZ, other organisations, and individuals, has to date been achieved through publishing pamphlets and books, establishing an engineering heritage website (www.ipenz.org.nz/heritage) and creating interpretation panels and plaques.

IPENZ has established the IPENZ Engineering Heritage Record as a means of identifying, recording and promoting New Zealand's engineering and technological heritage. The Record is a repository of information designed to assist those who want to explore, research and enjoy New Zealand's engineering heritage. The Record covers a wide range of subjects from a wide range of sources. While IPENZ has reviewed information in this Record to ascertain its general appropriateness, its aim is more to be a broad catch-all of information.

IPENZ also maintains an Engineering Heritage Register which is a register of New Zealand's engineering achievements of outstanding or special heritage significance. Information regarding Register items is more detailed and rigorous than that required for the Record, and the Register contains value assessments of individual items' importance. The Engineering Heritage Recognition Committee (EHRC), which is the delegated sub-committee of the EHB, formally assesses information on the register. In turn this assessment and the EHRC's recommendations are ratified by the EHB; the Register can thus be relied upon by the public as having been validated.

The Register and Record perform important roles in creating a platform for educating and advocating for preserving engineering heritage. Many sites of importance to New Zealand's engineering heritage are at risk, and many have been lost. Timber truss bridges, for example, were for a long time the most common type of long-span bridge in New Zealand, and hundreds were built. Very few now remain in either road or rail use and these are all under threat. IPENZ is able to take a role, where appropriate, in advocating for such places' preservation.

To ensure the necessary heritage activities are continued to be undertaken, co-ordinated and resourced, the EHB has developed this Engineering Heritage Strategy with its vision, objectives and actions.



5. National and International Context

In New Zealand the following legislation relates to heritage:

- The Historic Places Act 1993 aims to promote the identification, protection, preservation, and conservation of New Zealand's historical and cultural heritage. Under this Act the NZHPT is to maintain a register of historic places, historic areas, wāhi tapu, and wāhi tapu areas. This register is to be used to inform members, notify owners and assist with the protection of historic places, historic areas, wāhi tapu, and wāhi tapu areas.
- The Resource Management Act 1991 (RMA) requires local authorities to recognise and protect historic heritage from inappropriate subdivision, use and development. This Act also empowers local authorities to act as heritage protection agencies.
- The Local Government Act 2002 (LGA) requires local authorities to prepare long term council community plans and district or city plans. These plans can consider heritage aspects in the district or city.
- The Building Act 2004 (BA) governs all buildings and structures. In relation to heritage, the Act requires local authorities to facilitate the preservation of buildings of significant cultural, historical, or heritage value. In addition, a local authority has to adopt policy on dangerous, earthquake-prone and insanitary buildings and consider how the policy will apply to heritage buildings.
- The Conservation Act 1987 established the Department of Conservation (DOC) to (amongst other things) manage land and other natural and historic resources.
- The Public Records Act 2005 aims to enhance the accessibility of records that are relevant to New Zealand's historical and cultural heritage and to New Zealanders' sense of national identity.

6. Collaboration with Partners

Protecting New Zealand's heritage is a shared responsibility and engineering heritage is a part of this. There are common interests and overlaps with a wide range of partners.

IPENZ needs to collaborate with partners to protect, preserve, and conserve engineering heritage sites and projects, to provide information and interpretation, to obtain and provide specialist advice, to profile and advocate for engineering heritage, and to locate funding for initiatives.

The following organisations are our partners and have key roles in helping to implementing this Strategy:

- The Ministry for Culture and Heritage, which aims to protect and promote New Zealand's heritage. The Ministry regulates the trade and export of protected objects, protects symbols of national identity, helps art galleries and museums host touring exhibitions, maintains national monuments (both here and overseas) and manages memorial projects, such as the Tomb of the Unknown Warrior.
- The NZHPT is the guardian of New Zealand's historic heritage. It works with the community, owners of registered heritage buildings, structures and sites, and local and national bodies to manage New Zealand's cultural heritage.
- The DOC, whose mission is to conserve New Zealand's natural and historic heritage for all to enjoy now and in the future. DoC achieves this by conserving, advocating and promoting natural and historic heritage.
- Local Authorities, which have roles under the Resource Management Act, Local Government Act, and the Building Act to recognise and protect historic heritage.
- The New Zealand Archaeological Association promotes and fosters research into New Zealand archaeology and is active in lobbying Government and Local Government for the protection of New Zealand's cultural heritage. It runs a national Site Recording Scheme, which contains the records of over 50,000 archaeological sites for the purpose of research and protection of the sites.
- Archives New Zealand which is the guardian of New Zealand's public archives. It gathers, stores and protects a wide range of material including documents, maps, plans, paintings, photographs and film, and ensures records of long-term value are kept permanently and are accessible.
- Owners of major infrastructure assets including state owned enterprises such as Transpower, Meridian Energy, Mighty River Power, Genesis Energy, KiwiRail; Crown entities, including the New Zealand Transport Agency and Housing New Zealand; private companies, such as Contact Energy, Telecom, New Zealand Post, electricity lines businesses, gas distribution companies, private companies and other owners of engineering heritage sites; major public and private engineering collections, such as those held at the Museum of New Zealand *Te Papa Tongarewa*, the Alexander Turnbull Library, Museum of Transport and Technology and Ferrymead Heritage Park.

7. IPENZ Engineering Heritage Policies

The policies associated with each of the objectives are listed below.

7.1 To identify and record our engineering heritage resources

Identifying and recording engineering heritage requires ongoing updates and additions to IPENZ's existing Engineering Heritage Record. This is held on the IPENZ website www.ipenz.org.nz/heritage. This section of the website needs to be as interactive and interesting as possible to encourage people to provide information and photographs on a regular basis. The EHB undertakes a formal evaluation process for items to be elevated to the Register. There is also a need to continue recording the life stories of the engineers who have made enduring contributions to New Zealand's engineering heritage.

IPENZ has already recognised a number of heritage items. These come mainly from the IPENZ "Engineering to 1990" project undertaken to mark the country's sesqui-centenary in 1990. In addition there are other works which have been recognised by plaques (such as New Zealand's Antarctic base at Ross Sea, or the Taipo Bridge in Westland). These items should all be included in the Record and if suitable be assessed for inclusion on the Register.

There are many museums and collections of engineering heritage interest throughout New Zealand, and many isolated collections of objects. These collections need to be recorded for IPENZ reference. IPENZ has also, by default, acquired a small collection of objects, and these need to be formally recorded, and researcher access facilitated as appropriate.

Accordingly, IPENZ needs to identify:

- Engineering heritage
 - Sites and projects on the IPENZ Engineering Heritage Record
 - Important sites and projects on the IPENZ Engineering Heritage Register by assessing an item's history, fabric and technology, and its social and economic impact
- Information about engineers
 - Recording oral histories or interviews of 'living treasures' and award winners
 - Preparing biographical records of past engineers
 - Collecting biographies of retirees
- Collections
 - Recording engineering related collections in New Zealand
 - Recording repositories of engineering heritage objects (e.g. trains, telephones, planes, boats).
 - Recording the IPENZ objects and archival collection.

7.2 To promote the protection, preservation and conservation of our Engineering Heritage

With our engineering heritage identified and recorded, there is a need to ensure it is protected, preserved and conserved. The Register, in particular, needs to be used to advocate for the protection of important heritage places. When a new item is placed on the Register, for example, IPENZ should encourage the local authority to list it in its District Plan as a heritage item, therefore providing it with more protection under the RMA. The Register report should also be used as the basis for a nomination for historic place registration with the NZHPT if the item is not already registered.

IPENZ can also take a very positive role by educating public and private owners of heritage places about the item's values, to encourage owners to respect and maintain them. Information from both the Record and the Register can be provided to owners about their sites.

There could be a role, on occasion, for IPENZ to advocate for protecting engineering heritage where it is at risk of being significantly modified or destroyed. This advocacy could involve, for example, in the media, or directly with owners or local authorities. These actions depend on the IPENZ Register being developed into a "quality brand" – to the point where, if external people are told a site is on the IPENZ Register, they will realise it is of importance to New Zealand's heritage.

Photographs, plans, books and objects also form important elements of our engineering heritage and need to be held in suitable repositories. Where items are held by IPENZ itself, these items need to be well cared for and recorded, and where appropriate made accessible for researchers. IPENZ should, in most cases, act as a facilitator for people who desire to place their collections with suitable repositories, rather than acquire the objects for the IPENZ collection.

Accordingly, on an ongoing basis we need to:

- Ensure sites and projects are advocated for, protected, preserved and conserved
- Ensure photographs, plans, books and objects are held in suitable repositories.



7.3 To interpret and enhance the understanding of engineering heritage

Our engineering heritage needs to be made accessible to enable existing and future generations to be informed about the major contribution engineering has made to the building of New Zealand's society and economy. This is achieved by creating *in situ* interpretation panels and plaques about sites and projects, providing publicly accessible information on the IPENZ Engineering Heritage website and in other publications, creating oral histories, and fully recording the details and locations of photographs, plans, and objects.

One of our roles is to also provide professional advice to third parties, such as the NZHPT and local authorities about the importance of engineering heritage and particular items.

Accordingly we need to interpret and enhance the understanding of engineering heritage by:

- Fully cataloguing and labelling existing and new IPENZ engineering heritage collection objects
- Ensuring heritage information is accessible
- Providing interpretation panels and plaques for sites and projects
- Providing advice on engineering heritage to third parties.

7.4 To use engineering heritage to enhance public understanding of the critical role engineering plays in modern society.

Promoting engineering heritage is a means of developing improved public understanding of the value of engineering and engineers within New Zealand society. Our engineering heritage needs to be communicated to a wide variety of audiences including the general public, tourists, IPENZ Members, and researchers. Communication channels include the website, newspapers, and other media such as radio and television.

Enhancing public understanding of our engineering heritage can be achieved by:

- Hosting an Australasian Engineering Heritage Conference every 10 years
- Arranging and publicising launches, plaque unveilings and exhibitions
- Publicising to the public, owners and local authorities the entry of new items into the IPENZ Register
- Publishing brochures, books, audio and audio visual programmes
- Arranging Branch events, talks and walks
- Maintaining and promoting the IPENZ Engineering Heritage website.

8. Action Plan

Separate to this Strategy is an Action Plan that sets out the tasks, timeframes and the responsibilities of the various contributors. The actions align with the Strategy objectives with an additional series of actions relating to collaboration with partners.

The EHB is relatively new and a number of the systems and processes are still in the early stages of development. The Action Plan schedules the immediate priorities that are needed to ensure that appropriate systems are established; it also schedules on-going activities.

9. Monitoring and Review

The Strategy and the Action Plan will be monitored by the EHB.

The Strategy is intended to be a document that reflects on-going heritage activity and it is therefore intended that it be reviewed every three years.

The Action Plan is a more dynamic document and as it consists of ongoing actions, will be reviewed on a regular basis by the EHB.





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