

## HMNZS STEADFAST – LANDSCAPE HISTORY & CONSERVATION REPORT

PREPARED FOR CHRISTCHURCH CITY COUNCIL

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DRAFT



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Cover image: Motukauatirahi-Cass Bay and the Royal New  
Zealand Armament Depot, VC Browne & Son, 1962

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## Executive Summary

HMNZS Steadfast is located at 64 and 86 Governors Bay Road in Motukauatirahi-Cass Bay. It is the site of the former Royal New Zealand Navy Armament Depot that was established and actively used between 1943-1961. The depot was second in seniority in New Zealand after Kauri Point in Auckland and a third depot in Shelley Bay, Wellington. The Steadfast buildings and structures are intimately linked to New Zealand's World War Two (WWII) history and since 1965, New Zealand government departments and the Navy League Sea Cadet Unit TS Steadfast. The setting of HMNZS Steadfast includes other WWII defence locations in Whakaraupō-Lyttelton Harbour, important views to landmarks of cultural significance, Outstanding Natural Landscapes and is connected to adjacent recreational reserves. HMNZS Steadfast is not currently scheduled as a heritage item in the Christchurch District Plan (CDP) nor listed as an Historic Place with Heritage New Zealand Pouhere Taonga (HNZPT). In the CDP the site sits within an Open Space Natural Zone, an Amenity Landscape and is adjacent to an Outstanding Natural Landscape. It also has views to an Identified Important Ridgeline.

HMNZS Steadfast is of local, regional and national heritage significance as the South Island Royal Navy Armament Depot and associated military buildings. The site is significant for the spectacular views of the dramatic volcanic crater rim ridgelines of Whakaraupō-Lyttelton Harbour, the historic rural landscape character and an ephemeral stream that flows through the site. The ridgeline and spurs are of particular significance to tāngata whenua with specific place names recording important landmarks, events and whakapapa of Motukauatirahi-Cass Bay. Further investigation is required to ascertain the value of the site to tangata whenua.

The site provides insights into mid-20th century military and defence building practices, with ten magazine stores that demonstrate the requirements for housing explosive materials. Strategically located, the magazine stores were embedded into the hillside as a deliberate attempt to camouflage the structures from visibility. Water reservoirs were located above the ammunition stores for firefighting should explosions occur in the magazines below and a detonation chamber was located below the ammunition stores, to ensure minimal damage to personnel or surroundings. Other structures built when the base was first established include the guard house/quarter master's lobby, the administration buildings/office, and the laboratory, which feature a similar utilitarian style. As the requirements of the base grew, buildings were dismantled from other naval bases and re-erected on site.

Other historic spaces and site elements associated with the armament depot include the military road with its two land bridges linking the ammunition stores, and the perimeter concrete post and barbed wire fence. The grounds surrounding the administration buildings at the site entrance on both sides of the stream are an area associated with naval activity (i.e. parades and naval exercises) with stone retaining walls, rock terracing, pedestrian bridges and pathways from the grounds west of the stream to the original parade ground and mast/flag station on the eastern side. Together, the various buildings, structures, and objects have significant group value as a collective military and naval architectural set, which was enhanced by relocated buildings from other naval sites and further developed in 1965 when the site was inherited by the government and leased by the Navy League Sea Cadets, TS Steadfast. The land was purchased by Banks Peninsula Council in 1999, after extensive community consultation and support, providing justification that the land would serve a recreational function for local and Christchurch communities.

The landscape and buildings appear to be in moderate to very poor condition. This is partly due to the February and June 2011 earthquakes, where boulders were thrown from the ridgeline above Cass Bay and

the ammunition store buildings penetrated by large rocks, leaving holes in their walls and roofs. The timber framed buildings are generally suffering from rotting timber joinery and cladding, failing internal linings, failing roof cladding (including asbestos cladding), animal infestations, microbiological growth, and water ingress issues caused by a combination of the aforementioned issues. The brick ammunition stores are generally suffering from blunt-force trauma caused by the aforementioned rockfall, as well as internal flooding, failing roof cladding, and severe microbiological growth. The main issues affecting the landscape are unkempt weed growth affecting the stream, hillside and historic road access, and the loss of character to the lower site where the historic streamside terracing, pathway and parade ground is overgrown by grass and weeds. Post-earthquake, new site elements have been installed from TS Cornwall which augment the narrative of the site's military history. A substantial stream planting programme by Whaka-Ora Healthy Harbour Ki Uta Ki Tai has been undertaken on the site since 2020, designed to reduce sedimentation into Whakaraupō-Lyttelton Harbour and improve site biodiversity and stream habitat.

This Landscape History and Conservation Report provides conservation and implementation policies to protect the significant features, fabric and spaces of HMNZS Steadfast using the ICOMOS NZ Charter for the Conservation of Places of Cultural Heritage Value 2010 (NZ Charter 2010) and the ICOMOS Historic Gardens (The Florence Charter 1981). The purpose of these policies is to: respect the site's historic identity, protect and conserve existing heritage fabric and those qualities that give the place its character, and to retain and protect the intended and designed experiential qualities of the place. Management guidelines are drawn from policy to protect significant fabric and ensure that the cultural heritage values of the site are retained, while also allowing for the structures and landscape of the site to be adapted to meet the amenity and safety requirements of both TS Steadfast and the local community. These guidelines also allow for the removal of features that detract from the overall heritage significance of the place or obscure fabric of greater heritage value. We recommend that HMNZS Steadfast be considered for scheduling in the Christchurch District Plan and that the place be managed as a heritage asset regardless of district plan scheduling, to retain the significant elements identified in this report.

# 1. Introduction

## 1.1. Purpose

Conservation Reports describe a place and its history, identify its significance and heritage values and determine how to manage a place according to this significance. The Christchurch City Council has commissioned this Landscape History and Conservation Report for HMNZS Steadfast to identify and assesses its cultural heritage values. The Plan provides strategies, guidelines and actions to allow for the appropriate conservation, management and maintenance of this place.

## 1.2. Approach and Methodology

This Conservation Report is consistent with Heritage New Zealand's Guidelines for the Preparation of Conservation Management Plans.<sup>1</sup> It also follows the internationally recognised Semple Kerr methodology in Conservation Management Plan: A Guide to the Preparation of Conservation Management Plans for Places of European Cultural Significance (7<sup>th</sup> Edition)<sup>2</sup> and the Illustrated Burra Charter: Good Practice for Heritage Places.<sup>3</sup>

## 1.3. Authorship

This document was prepared by Wendy Hoddinott, Heritage Landscape Architect from Gather Landscape Architecture, WSP Principal Conservation Architect Chessa Stevens and Alex Pirie, WSP Heritage Consultant.

## 1.4. Acknowledgements

The following people have supplied historic information, resources and other forms of assistance:

Maria Adamski, Asset Engineer, Parks - Building and Heritage, Christchurch City Council  
Jenny Healey, Chairperson, Cass Bay Residents Association and Reserves Management Committee  
Chris Nee, TS Godley Sea Cadets (previously TS Steadfast)  
Amanda Ohs, Senior Heritage Advisor, Christchurch City Council  
Jane Robertson, Author, Governors Bay  
Gareth Wright, Heritage Advisor, Christchurch City Council

## 1.5. Terminology

The following abbreviations have been used throughout this Conservation Report:

CBA	Cass Bay Residents Association
CDP	Christchurch District Plan
CRPS	Canterbury Regional Policy Statement
DSIR	Department of Scientific and Industrial Research
HMS	Her Majesty's Ship
HMNZS	Her Majesty's New Zealand Ship
HNZPT	Heritage New Zealand Pouhere Taonga
HNZPTA	Heritage New Zealand Pouhere Taonga Act 2014
ICOMOS	International Council on Monuments and Sites
NZAA	New Zealand Archaeological Association

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<sup>1</sup> Bowron & Harris, 1994

<sup>2</sup> Kerr, 2013

<sup>3</sup> Marquis-Kyle & Walker, 2004

ONL	Outstanding Natural Landscape
RAL	Rural Amenity Landscape <sup>4</sup>
RMA (1991)	Resource Management Act (1991)
RNZN	Royal New Zealand Navy
TS	Training Ship

## 1.6. Information Used to Inform This Assessment

A site visit was carried out on 29<sup>th</sup> April 2021 by Wendy Hoddinott, Heritage Landscape Architect from Gather Landscape Architecture, WSP Principal Conservation Architect Chessa Stevens and Alex Pirie, WSP Heritage Consultant. Wendy Hoddinott carried out further site visits on 18 October and 15 November 2021. Information regarding protected resources and heritage has been sourced from the Christchurch District Plan. Other documents used to inform this Conservation Report are limited to those listed in the Bibliography. They include a range of primary and secondary sources, published texts, unpublished reports, national and local authority legislation, press releases, certificates of title, survey plans, newspaper articles, archive records and internet sources.

## 1.7. Limitations

The following constraints apply to this Conservation Report:

- No invasive testing or analytical investigation has been carried out for the purpose of preparing this Landscape History and Conservation Report.
- While this Conservation Report contains advice on the current condition of the buildings, it does not comprise a structural or safety assessment or contain any kind of engineering advice.
- While this Conservation Report considers archaeological values, it does not contain an archaeological assessment, which can only be prepared by an appropriately qualified archaeologist.
- No consultation with HNZPT or māna whenua has been carried out as part of preparing this Conservation Report.

## 1.8. Images

Most of the images in this document were taken by the authors during the site visits mentioned above. All other images have been appropriately acknowledged.

## 1.9. Canterbury Earthquakes

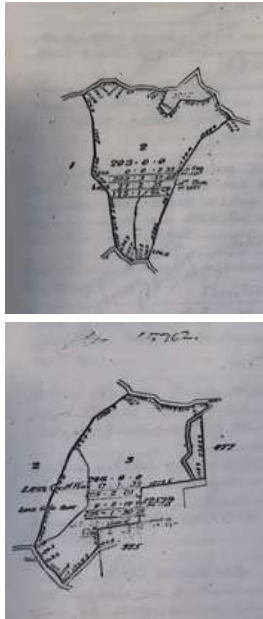
Banks Peninsula is an area of high seismic risk and as a result of the February and June 2011 earthquakes, many boulders were thrown from their positions along the ridgeline of Cass Bay, breaching the Steadfast perimeter fences bordering Whakaraupō Reserve. Several of the ammunition store buildings were penetrated by large rocks, extensively damaging some walls and roofs, and many boulders came to rest near the valley floor.<sup>5</sup> Much of the upper valley of HMNZS Steadfast is now within rockfall management areas (Figure 3), a key consideration in this Conservation Report.

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<sup>4</sup> “Areas on Banks Peninsula including Rural Banks Peninsula, Open Space Natural and Pāpakainga / Kāinga Nohoanga Zones that are not identified as outstanding natural features or outstanding natural landscapes” (CDP, Appendix 9.2.9.2.4 Schedule of Rural amenity landscapes)

<sup>5</sup> Letter to M. McCallum, Project Manager, Christchurch City Council from J. Dykstra and D. Macfarlane from URS. HMNZS Steadfast Reserve – Initial Rockfall Hazard Assessment, 17 July 2014

## 1.10. The Site – Legal Description

Site:	HMNZS Steadfast
Controlling Local Body:	Christchurch City Council
Physical Address of Site:	64 and 86 Governors Bay Road
Legal Description/Land Area:	Lot 1 DP 76703, 11.65 hectares (formerly Pt Lot 3 DP2983) Lot 1 DP 76704, 11.22 hectares (formerly Pt Lot 2 DP2983)
Summary History of Land Ownership: 	<p>1852 Rev. Edward Puckle pre-purchases section 268 and 483 (part of DP2983 and future Steadfast parcel) before arriving in New Zealand</p> <p>1865 Puckle sells sections 268 and 483 to the Crown</p> <p>1865 - R.M. Morten purchases a significant area of land in Cass Bay</p> <p>1880</p> <p>1910 R.M. Morten owns Lots 2 and 3 of DP2983</p> <p>1910 Miss Wallis and Messrs Wallis purchase 600 acres of Morten's land (5 subdivisions)</p> <p>1915 William George Butler Wallis purchases Lot 3, DP2983</p> <p>1915 Charles Wallis purchases Lot 2, DP2983</p> <p>1918 Lot 2 transfers to Joseph Wallis, then to George Wallis</p> <p>1933 Lot 2 transfers to Georgina Wallis, John Henry Wallis &amp; Joseph Wallis</p> <p>1943 Lot 2 transfers from John Henry Wallis to Robert William G. Loader</p> <p>1945* Land within Lots 2 and 3 set aside by the Crown for defence purposes</p> <p>1965* Defence gazette uplifted and new gazette created for government buildings</p> <p>Administering government departments:</p> <p>1979* Department of Science and Industrial Research (DSIR)</p> <p>1980* Department of Lands &amp; Survey</p> <p>1983* Department of Labour (to enable explosives storage)</p> <p>1997 New Certificates of Title allocated (CB44B/16 and CB44B/17)</p> <p>1999 Steadfast land purchased by Banks Peninsula District Council</p> <p>2006 Steadfast land transfers to Christchurch City Council (amalgamation)</p> <p>*Gazette notice issued</p>
Heritage Buildings / Structures in Christchurch District Plan	The landscape and buildings are not scheduled as historic heritage in the CDP. However the Council's Heritage Team intend to investigate the scheduling of the landscape and buildings as part of a future plan change.
Heritage New Zealand Pouhere Taonga Registrations:	The site and buildings are not currently listed as a heritage place by Heritage NZ Pouhere Taonga.
Archaeological Site:	The New Zealand Archaeological Association's Archaeological Site Recording Scheme website ArchSite shows that there is no recorded site at HMNZS Steadfast on their database. However Motukauatirahi-Cass Bay is a landscape associated with pre-1900 human activity and is protected under the archaeological provisions of the Historic Places Act.
Scheduled Trees or notable trees:	There are no trees scheduled in the CDP and no trees listed by the New Zealand Notable Trees Trust.
Christchurch District Plan Zoning:	HMNZS Steadfast sits within an <i>Open Space Natural Zone</i> and a <i>Rural Amenity Landscape (RAL)</i> . The site is adjacent to an <i>Outstanding Landscape</i> , with views to an <i>Identified Important Ridgeline</i> . Steadfast is also part of an area where <i>Mahaanui Iwi Management Plan Silent Files</i> apply. <sup>6</sup>

<sup>6</sup> This refers to places that are considered by Ngāi Tahu to be wāhi tapu and/or wāhi taonga. In some instances, the precise location of sacred places may not be disclosed by whānau (silent files).





Figure 1: Aerial view of Ōtautahi/Christchurch and Horomaka/Banks Peninsula, with Motukauatirahi-Cass Bay indicated.  
Source: Google Earth.



Figure 2: Aerial view of Motukauatirahi-Cass Bay with site of HMNZS Steadfast and prominent local landscape features indicated.  
Source: Canterbury Maps with graphic overlay, 2021.



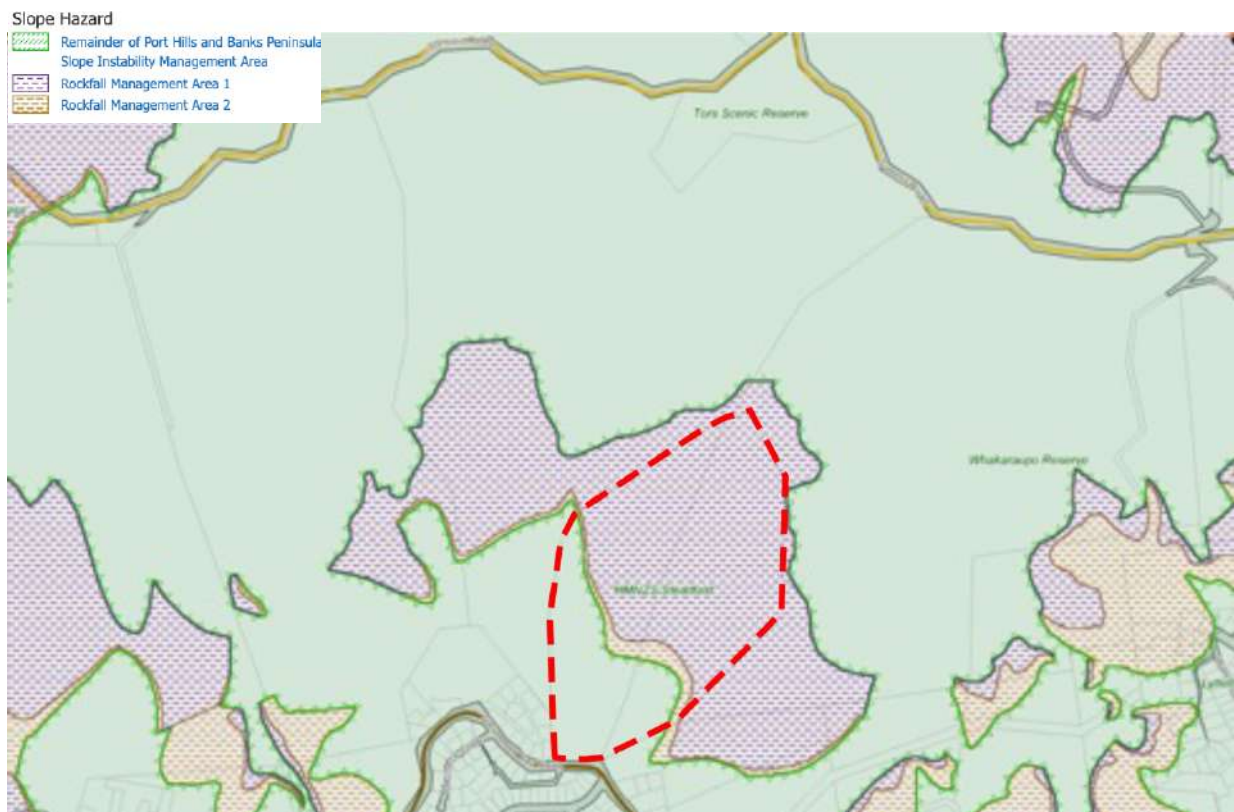


Figure 3: CDP Planning Map 5B showing Natural Hazards affecting the HMNZS Steadfast site.  
Source: CDP, 2021.



Figure 4: View from Steadfast towards the crater rim ridgeline and Te Moenga-O-Wheke/The Tors' Reserve.



## 2. Understanding the Place

### 2.1. Historic Background

#### 2.1.1 Geology and Original Vegetation

The geology of Whakaraupō-Lyttelton Harbour is the result of volcanic eruptions that began 12 million years ago and continued over 5-6 million years. Subsequent erosion destroyed and modified these original volcanic landforms, leaving a complex landscape of mountains, hills, valleys and coastline.<sup>7</sup>

Motukauatirahi-Cass Bay sits within the Lyttelton Volcanic Group landform, characterised by the “steep rocky slopes of the upper caldera rim with smoother more gentle lower colluvial slopes” towards the coast.<sup>8</sup> Warm volcanic springs have been found at Motukauatirahi-Cass Bay which would have been familiar to local Māori.<sup>9</sup> Geologist R.M. Laing discovered two springs on the western side of the bay in 1883 although the area has been modified since by the construction of road and recreational facilities.<sup>10</sup>

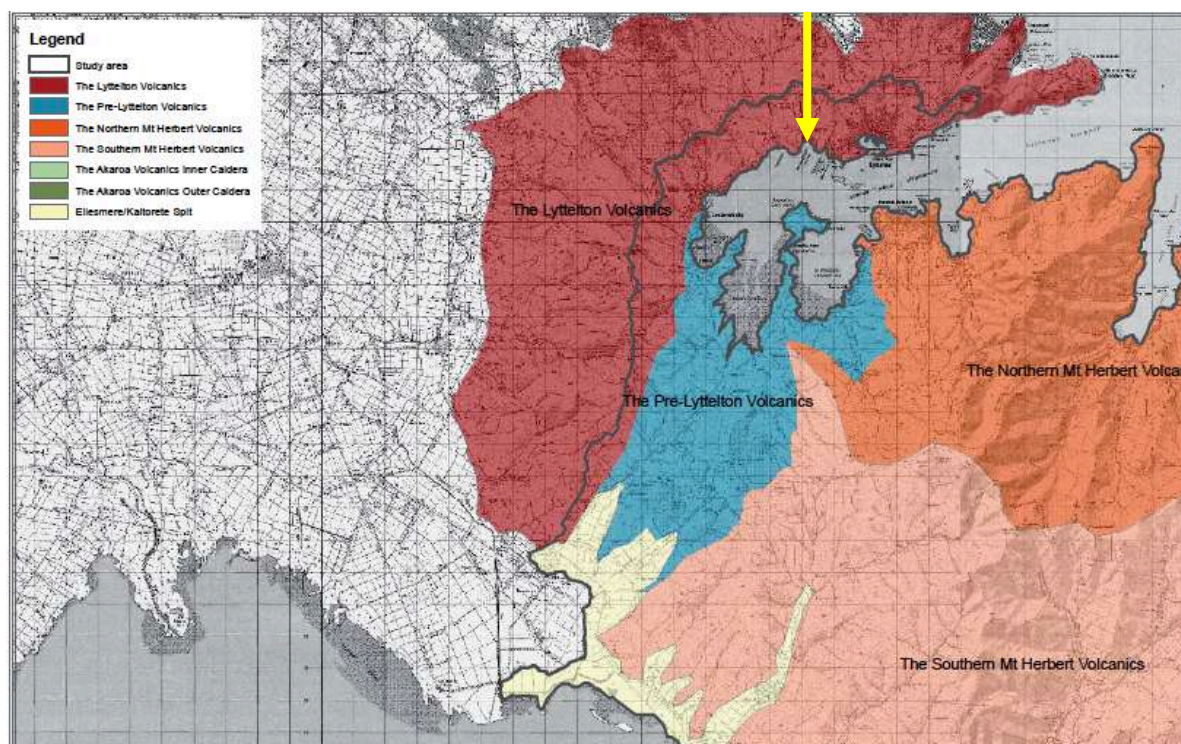


Figure 5: Broad landscape areas of Banks Peninsula, Motukauatirahi-Cass Bay is indicated.

Source: Banks Peninsula Landscape Study (2007, p. 39).

The deep, rich, well-drained soils of Motukauatirahi-Cass Bay are hillslopes of loess, mixed volcanic and loess colluvium on the slopes and upper shoulders, and rolling toe-slope fans with a whole range of subtle variations.<sup>11</sup> Here and across the wider Whakaraupō-Lyttelton Harbour these soils supported spectacular podocarp/hardwood forests prior to human settlement.<sup>12</sup> The fertile soils and shelter resulted in a dense and diverse forest canopy such as tōtara and mataī and a mix of hardwood canopy trees – māhoe, tarata (lemonwood), narrow-leaved lacebark and broadleaf. Beneath this would have existed a rich layer of ferns,

<sup>7</sup> Boffa Miskell, 2007

<sup>8</sup> Boffa Miskell, 2007, p38

<sup>9</sup> Robertson, 2021

<sup>10</sup> Given, 1983

<sup>11</sup> Lucas Associates, 2005

<sup>12</sup> Wilson, 2009

shrubs, climbers and epiphytes with a ground layer of mosses and herbs.<sup>13,14</sup> Many bush-shaded streams supported a rich diversity of aquatic and forest fauna. As a result of fire and other early land clearance methods the forest retreated to gullies, leaving little original native vegetation.

Prior to Māori occupation, climatic changes and natural fires caused limited and sporadic vegetation disturbance. Much greater vegetation disturbance was caused by Māori who were reliant on fire for their horticulture systems and almost every aspect of their daily lives.<sup>15</sup> The arrival of European settlers accelerated the loss of native forest on the Peninsula, as they harvested timber and cleared forest to create pasture for cattle.<sup>16</sup>

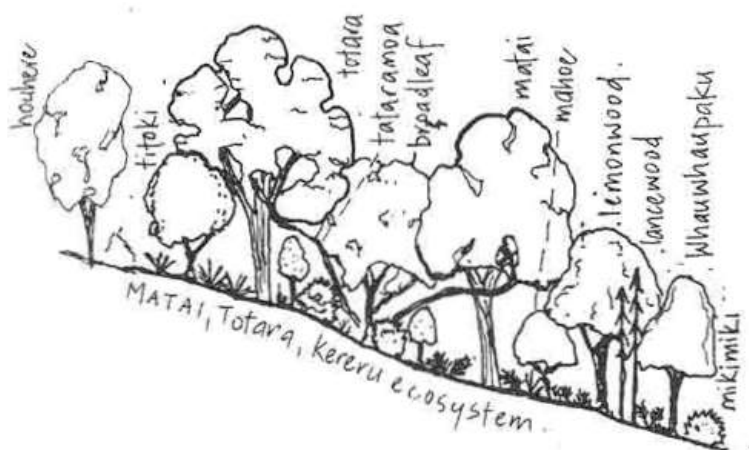


Figure 6: Example of original vegetation on the middle slopes of Motukauatirahi-Cass Bay before human settlement.  
Source: Lucas Associates, 2005, p13.

### 2.1.2 Māori Occupation and Use

The following information outlines Māori settlement and succession on Banks Peninsula and has been sourced from the report, *Banks Peninsula contextual historical overview and thematic framework*<sup>17</sup> commissioned by Christchurch City Council in 2014.

*Māori tradition recognises three waves of ancient settlement on Banks Peninsula /Te Pataka o Rakaihautū. The most distant wave, 'Te Tai Pamaoma', was that of the Waitaha people, who called Banks Peninsula Te Pataka o Rakaihautū (the foodstore of Rākaihautū).*

*The next and longest wave, 'Te Tai Roa', was that of the settlement of Ngāti Māmoe (the descendants of Hotu Māmoe) who migrated south from Poverty Bay attracted by the diversity of the South Island's resources. More warlike than the Waitaha, Ngāti Māmoe absorbed their predecessors into their own ranks and were responsible for constructing several early pā on the Peninsula.*

*Ngāi Tahu settlement came with the most recent wave, 'Te Tai Nui', around the mid eighteenth century. Over time, through warfare and intermarriage, Ngāi Tahu largely suppressed and assimilated Ngāti Māmoe, taking ownership and control of Te Pataka o Rakaihautū and eventually adopting much of the Waitaha history and traditions. By way of the 1996 Te Runanga o Ngai Tahu*

<sup>13</sup> Wilson, 2009

<sup>14</sup> Lucas Associates, 1998

<sup>15</sup> Beaumont, L., Carter, M., Wilson J., 2014

<sup>16</sup> Wilson, 2009

<sup>17</sup> Beaumont et al., 2014

*Act, Ngāi Tahu are the tangata whenua of the South Island and therefore the Treaty partner. Rūnanga with responsibility for the Banks Peninsula area are Te Hapū o Ngāti Wheke, (Rāpaki); Te Rūnanga o Koukourārata, (Port Levy); Ōnuku Rūnanga, (Akaroa); Wairewa Rūnanga, (Little River).<sup>18</sup>*

Tuahiwi is the home of Ngāi Tūāhuriri and has played a vital role in Ngāi Tahu history. The takiwā (district) of Te Ngāi Tūāhuriri Rūnanga centres on Tuahiwi and extends from the Hurunui to the Hakatere river and inland to the Main Divide. Nearby the famous Kaiapoi Pā was established by the first Ngāi Tahu ancestors when they settled Te Wai Pounamu. Kaiapoi Pā was the major capital, trading centre and point from which further penetration of the South Island occurred so the area is a genealogical centre for all Ngāi Tahu whānui (descendants). Kaiapoi Pā was established by Moki's elder brother Tūrākautahi who was the second son of Tūāhuriri, hence 'Ngai Tūāhuriri' is the name of the hapū of this area.<sup>19</sup>

The abundant food resources of Whakaraupō made the harbour an ideal location for early Māori settlement, and to protect those resources, pā began to appear on the defensible headland locations from around 1500 AD. Taununu's pā (Rīpapa Island) was the site of fierce conflict during the Kai Huanga (eat relation) feud.<sup>20</sup> Māori were present on Banks Peninsula throughout the years of European settlement with 40 of the 339 recorded in the 1842 census located in Whakaraupō.<sup>21</sup> There is evidence of both Māori and European defence installations throughout Banks Peninsula and in Whakaraupō-Lyttelton Harbour. These installations range from nineteenth-century gunfighter pā and settler blockhouse, twentieth-century World War One and Two structures and archaeology.<sup>22</sup>

Rāpaki sits adjacent to Motukauatirahi-Cass Bay, beneath the mountain Te Poho o Tamatea (the breast of Tamatea). Chief Te Rakiwhakaputa claimed the land for his people, laying down his Rāpaki and moving on while his son Wheke established the settlement.<sup>23</sup> Immediately east of Rāpaki, Motukauatirahi-Cass Bay means 'the large fire-making tree grove' and refers to the kaikōmako tree (*Pennatia corymbosa*), which was common throughout both Cass and Corsair Bays. Neighbouring Corsair Bay is known as Motukauatiiti (little fire-making tree grove) which also refers to the kaikōmako tree. Using the kauati method, kaikōmako was used to make fire by laying one piece of wood on the ground and rubbing another piece into it to make fire.<sup>24</sup>

Māori place names around Whakaraupō reference important landmarks and events that occurred. Several of these record the whakapapa of Motukauatirahi-Cass Bay (Figures 7 – 10). The names of these places recall stories of adventures and battles of the area. Overlooking Motukauatirahi is the ridge of Te Whakatakanga-o-te-ngārehu-o-te-ahi-a-Tamatea which refers to the famed explorer Tamatea Pōkai Whenua and his travelling party who were struck by a southerly storm on the hills above Rāpaki after an exploratory trip of Te Waipounamu.<sup>25</sup>

*By means of karakia, Tamatea appealed for help to Ngātoroirangi, āriki of the northern volcanoes of Tongariro and Ngāuruhoe, who assisted by sending ahi tipua (volcanic fire) from his mountains. The flames came down the course of the Whanganui River and across to Whakatū (Nelson), with some falling off on their journey, creating the hot springs at Hanmer. The flames burst out as a*

<sup>18</sup> Beaumont et al, 2014

<sup>19</sup> <https://ngaitahu.iwi.nz/te-runanga-o-ngai-tahu/papatipu-runanga/ngai-tuahiriri/> (accessed June 2021)

<sup>20</sup> Wilson et al, 2005

<sup>21</sup> Beaumont et al, 2014

<sup>22</sup> Beaumont et al, 2014

<sup>23</sup> <https://ngaitahu.iwi.nz/te-runanga-o-ngai-tahu/papatipu-runanga/rapaki/> (accessed October 2021)

<sup>24</sup> <https://www.kahurumanu.co.nz/atlas>

<sup>25</sup> <https://www.kahurumanu.co.nz/atlas>



*blaze above the hills overlooking Whakaraupō, giving warmth to Tamatea and his travelling party. Tamatea named the area where he received the ahi tipua as Te Whakatakanga-o-te-ngārehu-o-te-ahi-a-Tamatea, the place where the ashes of Tamatea lie.<sup>26</sup>*

Several features surround the bay with views out towards others. Te Moenga-o-Wheke ("The Tors") is prominent rocky outcrop along the ridgeline of Motu-kauati-rahi/Cass Bay and references Wheke, the son of Te Rakiwhakaputa, who sought to establish ahi kā [continuous occupation] in Rāpaki.

*He was a rangatira toa who would search the surrounding hills of Whakaraupō (Lyttelton Harbour) for Ngāti Māmoē refugees. It is said that he had camping places in the hills where he would sleep the night. One of these in the hills north-east of Rāpaki was named Te Moenga-o-Wheke – The Sleeping Place of Wheke. The hapū at Rāpaki, Te Hapū o Ngāti Wheke, are named after him, and the whare tipuna at Rāpaki is also named after him.<sup>27</sup>*

Ōtūherekio/Pony Point is the lower spur between Rāpaki and Motukauatirahi-Cass Bay, providing views across Whakaraupō-Lyttelton Harbour and Rāpaki marae.<sup>28</sup> Ōtaranui is the dominant hill overlooking Motukauatiti/Corsair Bay but is also observable from Motukauatirahi-Cass Bay.

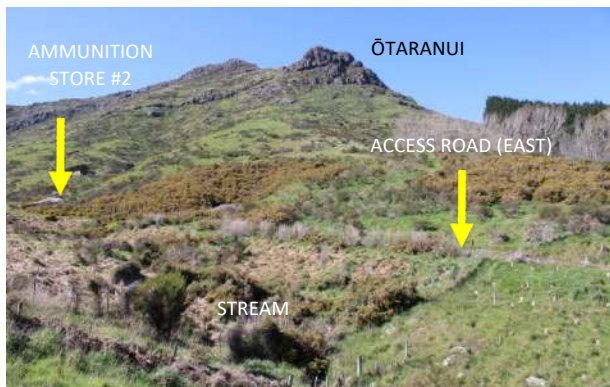


Figure 7: View east from within Steadfast – Ōtaranui is east of Steadfast and overlooks both Cass and Corsair Bays.



Figure 8: View north from within Steadfast – Te Moenga-o-Wheke/The Tors Reserve is a prominent rocky outcrop above.



Figure 9: View northwest of Te Poho-o-Tamatea (the breast of Tamatea), named after the explorer Tamatea Pōkai Whenua.

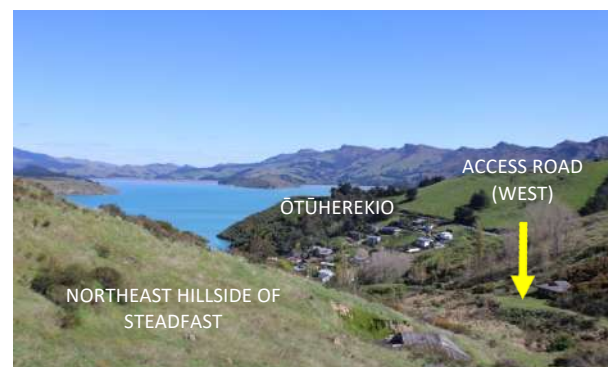


Figure 10: View southeast from the north boundary of Steadfast towards Ōtūherekio/Pony Point and Ōtamahua/Quail Island.

<sup>26</sup> <https://www.kahurumanu.co.nz/atlas>

<sup>27</sup> <https://www.kahurumanu.co.nz/atlas>

<sup>28</sup> <https://www.kahurumanu.co.nz/atlas>

### 2.1.3 European Settlement in Lyttelton Harbour and Cass Bay

In 1809, Captain Chase in his ship the *Pegasus*, was the first European to sail into Lyttelton Harbour, discovering that Banks Peninsula was not an island as Cook had suggested.<sup>29</sup> Flax trader Captain William Wiseman named the harbour Port Cooper, after his Sydney employer. A large influx of British and American whaling ships followed after 1835 and in 1838 Captain J-B Cécille made the first survey and chart of Whakaraupō-Lyttelton Harbour aboard his ship *Héroïne*, complete with sketch of the harbour entrance as viewed from the sea<sup>30</sup> (Figure 11).

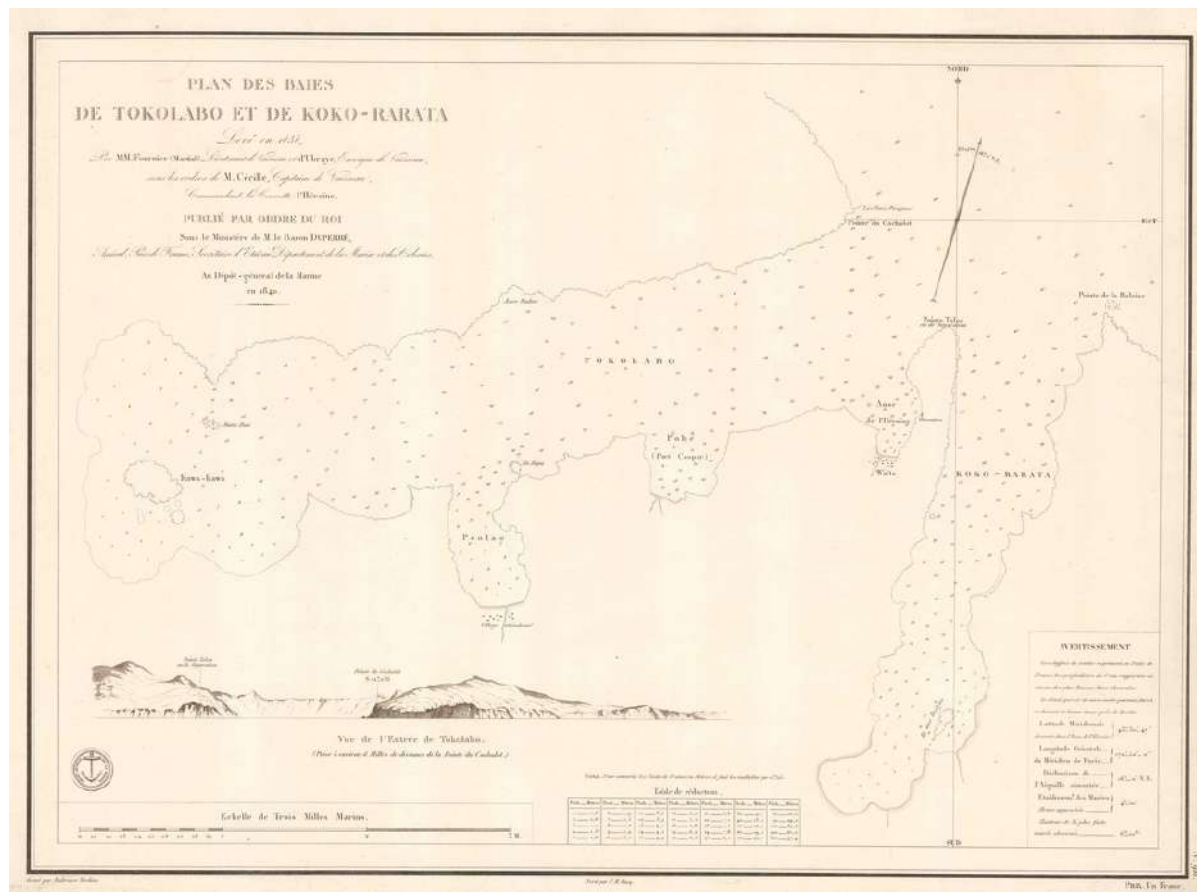


Figure 11: Captain J-B. Cécille's 1840 map of Tokolabo (Whakaraupō) Harbour, from his 1838 survey. The plan includes a sketch of the entrance to the harbour. Tokolabo was the French corruption of Whakaraupō, the Māori name for Port Cooper (Lyttelton). Kokorarata is Port Levy. Source: [https://alteagallery.com/view\\_product.php?prod\\_id=PROD100003223](https://alteagallery.com/view_product.php?prod_id=PROD100003223)

Thomas Cass arrived in New Zealand in 1841, as surveyor for the New Zealand Company (Figure 12). He returned to England and was hired by the Canterbury Association as assistant to Chief Surveyor Captain Joseph Thomas. In 1848 Cass returned to Port Cooper and along with Joseph Thomas was joined by fellow surveyors Charles Torlesse and Henry Cridland. Cass charted the harbour and the group set up camp in what was originally known as 'Port Lincoln' but eventually named after him as Cass Bay.<sup>31</sup> Crown agent Walter Mantell, who was working to secure land for the Crown joined them, his journal records showing that he helped move the group to Cavendish Bay (Lyttelton) on 20 July 1849. He volunteered to "go round to Cass's bay and fetch Crindland and Torlesse with their house. Pulled it down brought it round &

<sup>29</sup> Rice, 2004

<sup>30</sup> Rice, 2004

<sup>31</sup> Rice, 2004

helped(!) to put it up again. All right by night.”<sup>32</sup> A sketch in Mantell’s field-book shows the five relocated houses and a smithy soon after their move (Figure 13). All had been prefabricated in Hobart.<sup>33</sup> Late in 1850, the first four of ships chartered by the Canterbury Association to bring settlers to the new colony, arrived in Lyttelton Harbour. The name Port Cooper was officially changed to Port Victoria (after Queen Victoria) in 1849, when the harbour became a Port of Entry.<sup>34</sup> In 1851 Cass became the chief surveyor for the Canterbury Association.<sup>35</sup>



Figure 12: Thomas Cass (undated)  
Source: Alfred Charles Barker (1819-1873) Barker Collection, ID: 13/57, 4/102, CM.

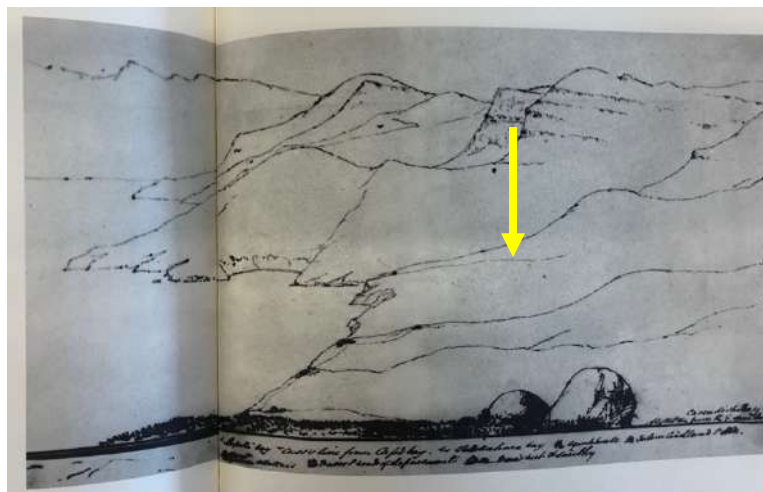


Figure 13: Sketch from Walter Mantell’s fieldbook looking east, of Lyttelton township and the five houses and smithy relocated from Cass Bay and erected on 20 July 1849. Cass’s ‘line of road’ from Cass Bay to the plains is indicated in the middle distance. Source: Maling, 1981, pp 72-73.

Initially Joseph Thomas determined to locate Christchurch at the head of the harbour and Port Lyttelton at Rāpaki,<sup>36</sup> the next bay west from Motukauatirahi-Cass Bay (Figure 14). He returned to Wellington to send these first maps and report back to England but ultimately decided that the amount of reclamation needed for a town at the head of the harbour would be too expensive. The site of Christchurch was consequently moved to the plains.<sup>37</sup> Another reason for his change of mind was that the 850-acre section of land in Rāpaki had been set aside as Native Reserve as part of the Port Cooper Purchase in 1849. Thomas moved the site of the new port from Rāpaki to Erskine, which was also then known as Cavendish Bay (now Lyttelton). In 1858 the harbour’s name changed again to Lyttelton Harbour, although the name appears to have been in use for almost a decade prior to the name change. Ownership of the native reserve in Rāpaki was confirmed in 1868 when the Native Land Court determined that ownership resided with 71 people belonging to Ngāti Wheke.<sup>38</sup>

<sup>32</sup> Maling, 1981, p72

<sup>33</sup> Maling, 1981

<sup>34</sup> NZ Spectator and Cook’s Straight Guardian, Vol. V, Issue 420, 11 August 1849, p4

<sup>35</sup> Robertson, 2021

<sup>36</sup> Rice, 2004

<sup>37</sup> Rice, 2004

<sup>38</sup> <https://www.kahurumanu.co.nz/atlas>





Figure 14: Cropped detail from Captain Thomas's 1849 map of Canterbury with intended locations for Lyttelton and Christchurch. Instead of Rāpaki, Port Lyttelton was moved further east to Erskine (also known as Cavendish) Bay.  
Source: National Library, Archives ID: R25435603, Series No. 23142.

In 1852 Reverend Edward Puckle of Heathcote Parsonage advertised 50 acres of freehold land in Cass Bay, "with or without 500 acres of adjoining pasturage."<sup>39</sup> Puckle had pre-purchased his land in England and had arrived as chaplain on the *Randolph* in December 1850.<sup>40</sup> Expecting sizeable accommodation when he arrived, he had brought with him his wife, six children and 70 tons of furniture which was stored on the seashore and slowly carried out by the tide.<sup>41</sup> Puckle's land in Cass Bay took some time to sell – he was one of many early settler clerics who appeared to engage in a form of 'landbanking'.<sup>42</sup> Puckle eventually sold sections 268 and 483 to the Crown on 8 December 1865 (Appendix 1). Both were part of the current Steadfast site (Figure 15).

<sup>39</sup> Lyttelton Times, Vol 2, Issue 69, 1 May 1852, p11 (supplement)

<sup>40</sup> Robertson, J., 2021

<sup>41</sup> South Canterbury Times, Issue 9143, 1 Sept. 1898, p4

<sup>42</sup> Robertson, J., 2021





Figure 15: Cropped detail of c.1864 Black Map showing road deviation plans through Cass Bay. Reverend Edward Puckle owned Sections 268 (part of the current Steadfast site) and 483 between 1850 and 1865.  
Source: National Library, Archives ID: R22667980, Series No. 23142.

During the mid to late 1800s, Cass Bay was used for grazing cattle, sheep and horses. By 1856 Eli Salt of “Cass’s Bay Run’ was advertising pasture for cows and calves in the Lyttelton times (Figure 16). Richard May Morten settled in Canterbury in 1860, and while it is not clear exactly when Morten purchased land in Motukauatirahi-Cass Bay, Crown Grant Plans shows he owned a portion of Cass Bay in 1880 (Appendix 2) and by 1910, the majority of the Bay.<sup>43</sup> Morten was a leading runholder, property developer and businessman, who at one point owned or leased the entire Port Hills from Saint Martins to Godley Head (11,000 acres).<sup>44</sup> Other farmers in the bay included John Webb who ran a dairy farm in Cass Bay between 1870 and 1878 and Roderick Gallagher whose dairy farm and house were threatened by a major bush fire that spread across Rāpaki, Cass Bay, Corsair and Dampier Bays in 1889.<sup>45</sup> With no provision for slaughterhouse facilities near Lyttelton, Cass Bay was initially the default place for town butchers to slaughter animals. Butcher George Hunt was listed as working at Cass Bay as early as October 1851.<sup>46</sup> Other butchers leasing a slaughterhouse in Cass Bay are listed as Garforth and Lee<sup>47</sup> and Owen and Dyer who took over the renewal of the same slaughterhouse license in 1892.<sup>48</sup> The slaughterhouse is recorded as the property of R.M Morten and was totally destroyed by fire in 1894<sup>49</sup> with Morten uninsured.

<sup>43</sup> DP2983, LINZ

<sup>44</sup> Ogilvie, 2009

<sup>45</sup> Robertson, 2021

<sup>46</sup> Robertson, 2021

<sup>47</sup> Globe, Vol XX, Issue 1373, 10 July 1878, p3

<sup>48</sup> Lyttelton Times, Vol LXXVII, Issue 9728, 18 May 1892, p4

<sup>49</sup> Lyttelton Times, Vol LXXXI, Issue 10269, 10 February 1894, p6

### CASS'S BAY RUN.

**M**R. E. SALT, having taken this run, is open to take in cows at £1 per head, and calves at 12s. per head, per annum. The greatest care will be taken of any stock entrusted to him.

N.B. The owners of all stock now depasturing upon such run are hereby requested to muster the same at E. Salt's stockyards in Cass's Bay aforesaid, in order that an account and delivery may be taken of the same.

863 c

Figure 16: Eli Salt was one of the earliest European settlers using Cass Bay for grazing.

Source: *Lyttelton times*, Volume VI, Issue 392, 6 Aug. 1856, p1.



Figure 17: Cass Bay abattoir was re-built from brick and concrete in 1902 to a state-of-the-art design (undated).

Source: Richard Wolfe Collection, Canterbury Museum, 1977.406.7.



Figure 18: Cass Bay abattoir (indicated) in Motukauatirahi-Cass Bay (undated). Part of the W A Taylor collection, one of many photographs taken during the 1920s but possibly earlier.

Source: W A Taylor Photograph Canterbury Museum, 1968.213.407.

In May 1901 the Lyttelton Borough Council purchased R.M. Morten's slaughterhouse site including the 55 acres of surrounding land.<sup>50</sup> As the first public abattoir in the district, the facilities were rebuilt and officially opened in 1902, having been designed by J.C. Maddison and erected by W.B. Scott (Figure 17).<sup>51</sup> At the opening ceremony the Lyttelton Times reported that, "those who had seen the other abattoirs which have been erected in the colony, freely expressed the opinion that the Lyttelton one was the most up-to-date."<sup>52</sup> Many locals recall the abattoir and offal discharge into Cass Bay which drew sharks to the area and eventuated in a barrier constructed in Corsair Bay to protect bathers while swimming. The Cass Bay abattoir operated until 1964 although aerial imagery shows it was still on the site in 1973 (Figure 70).

Abattoir discharge was not the only effect on sea life and the ocean. Over time silt accumulated in the harbour partly due to Harbour Board dredging of Lyttelton Harbour. In March 1897 Robert Anderson wrote to the *Lyttelton Times* concerned at the loss of oyster beds in Cass Bay explaining that, "...myself and many others formerly used to dredge for oysters from in a line between Church Bay and Cass Bay, nearly as far as Parson's Rocks. The bottom then was very hard live shell; but soon after dredging began the bottom gradually got softer, and at the present time is a dungeon of soft mud, and it would be impossible to move an oyster dredge over it."<sup>53</sup>

Land transport was difficult and expensive so it is likely that produce from Cass Bay travelled via sea to Lyttelton rather than land.<sup>54</sup> The early trail on the hills behind Cass Bay was considered as a possible road to Christchurch, however the idea was abandoned due to cost and the difficult terrain with its deep gullies and rocky volcanic bluffs.<sup>55</sup>

Towards the end of the nineteenth century, activities in Cass Bay expanded from farming to various recreational pursuits, including Lyttelton Football Club practices and in 1884 the Christ's College annual swimming races.<sup>56</sup> In 1892 the Lyttelton Martini-Henry Rifle Club opened a rifle range at Cass Bay, on land belonging to R.M Morten.<sup>57</sup>

R.M Morten died on the 20<sup>th</sup> of August 1909.<sup>58</sup> A survey plan commissioned for the attorneys of his estate shows the extent of Cass Bay Morten owned in 1910 (Figure 19).<sup>59</sup> The same year, the Press reported that Miss Wallis and the Messrs Wallis had purchased 600 acres of this land in five subdivisions.<sup>60</sup> Certificates of title show that in 1915, William George Butler Wallis of Governors Bay owned Lot 3<sup>61</sup> and Charles Wallis of Governors Bay, also of Governors Bay owned Lot 2. Lot 2 was transferred to various members of the Wallis family, until John Henry Wallis transferred his share to local farmer Robert William Loader in 1943 who in 1945 was owner of the area set aside for defence purposes.<sup>62</sup> The Steadfast parcel can be seen as the red

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<sup>50</sup> Lyttelton Times, Vol. CV, Issue 12515, 31 May 1901, p6

<sup>51</sup> Lyttelton Times, Vol CVII, Issue 12859, 4 July 1902, p3

<sup>52</sup> Lyttelton Times, Vol CVII, Issue 12859, 4 July 1902, p3

<sup>53</sup> Lyttelton Times, Vol XCVII, Issue 11211, 8 March 1897, p3

<sup>54</sup> Robertson, 2021

<sup>55</sup> Robertson, 2021

<sup>56</sup> Lyttelton Times, Vol LXI, Issue 7177, 29 February 1884, p6

<sup>57</sup> Lyttelton Times, Vol LXXVII, Issue 9652, 18 Feb. 1892, p2

<sup>58</sup> Lyttelton Times, Vol. CXX, Issue 15079, 21 August 1909, p10

<sup>59</sup> The red, dashed lines show the HMNZS Steadfast site, the plan used later to show the area gazetted for government buildings in 1965. Part Lots 1, 2 and 3 are also shown as part of the Summit Road Protection Area created in 1964.

<sup>60</sup> Lyttelton Times, Vol CXXI, Issue 15317, 28 May 1910, p3

<sup>61</sup> Certificate of Title, 297 227, Archives NZ Christchurch, R631020 – CH889 – 23/78/132 – Royal New Zealand Navy Armament Depot – Cass Bay – 1962-90

<sup>62</sup> Certificate of Title, 297 226, Archives NZ Christchurch, R631020 – CH889 – 23/78/132 – Royal New Zealand Navy Armament Depot – Cass Bay – 1962-90



dashed lines in the centre of the 1910 survey plan. In 1965 the same land would be uplifted and gazetted for government buildings.<sup>63</sup>



Figure 19: Extent of land owned by R.M. Morten at his death in 1910. The red dashed line around the Steadfast site shows the portion of land that was gazetted and set aside for defence purposes in 1945 and for government buildings in 1965.

Source: DP2983, LINZ.

#### 2.1.4 World War II and the Development of the Royal New Zealand Navy

New Zealand's response to the threat of war was 'fortification', which alongside the isolated island geography of New Zealand, had been strongly influenced by the defence fortifications of Māori hilltop villages.<sup>64</sup> British warships had visited New Zealand since the mid 1850s, as the new British Colony grew and conflict with Māori had increased.<sup>65</sup> In 1877 the New Zealand and Australian governments signed an agreement with Great Britain, agreeing to financially contribute to the cost of maintaining Royal Navy

<sup>63</sup> Certificate of Title, 20 July 1915, Archives NZ Christchurch, R631020 – CH889 – 23/78/132 – Royal New Zealand Navy Armament Depot – Cass Bay – 1962-90

<sup>64</sup> Cooke, P. 2000

<sup>65</sup> Cooke, P. 2000.

vessels in Australian and New Zealand waters.<sup>66</sup> In 1913 New Zealand initiated a naval organisation to crew ships employed in New Zealand waters, with the Naval Defence Act of 1913 passed to give effect to the decision. This meant the government could raise and maintain naval forces by regulations issued under authority of Orders in Council.<sup>67</sup> As part of the British Empire, New Zealand maintained a sea-going naval force and training centre, 'The New Zealand Division of the Royal Navy'. A Volunteer Reserve Force was formed in 1922, officered by and recruited from volunteers who did not follow the sea as a profession. World War II had a major effect on the New Zealand Naval Forces. The number of ships rose from five in 1939 to over 100 vessels of all types during 1944 (Table 1).

<b>New Zealand's Naval Forces – 1944</b> <b>Royal New Zealand Navy</b>
Cruisers: <ul style="list-style-type: none"> <li>- HMNZS <i>Gambia</i></li> <li>- HMNZS <i>Achilles</i></li> </ul>
Corvettes: <ul style="list-style-type: none"> <li>- HMNZS <i>Arabis and Arbutus</i></li> <li>- HMNZS <i>Tui and Kiwi</i></li> </ul>
Minesweepers <ul style="list-style-type: none"> <li>- 3 x 'Isles' Class</li> <li>- 19 x trawlers</li> <li>- 8 x converted coasters</li> </ul>
Patrol Craft: <ul style="list-style-type: none"> <li>- 12 x Fairmiles</li> <li>- 16 x HDMLs</li> <li>- 57 x requisitioned civilian craft</li> </ul>
Auxiliary Craft <ul style="list-style-type: none"> <li>- 7 Boom defence</li> <li>- 8 Degaussing duties</li> </ul>

Table 1: New Zealand's Naval Forces 1944.  
Source: Royal New Zealand Navy, 2002, p.18.

At the same time, there was a huge increase in personnel from 1939 to 1944. In 1939 permanent New Zealand Naval personnel totaled 8 officers, 716 ratings together with 74 officers and 541 ratings from the Royal Navy. In addition the Royal New Zealand Naval Volunteer Reserve (RNZNVR) totaled 70 officers and 600 ratings. By mid 1944 there were approximately 10,000 people in the RNZN and RNZNVR. About 3200 were serving with the Royal navy and about 540 in the Fleet Air Arm.<sup>68</sup>

New Zealand's harbours became important refuges given the country's geographical isolation, and self-sufficiency became crucial to New Zealand's defence system. As with other harbours in the main centres of New Zealand, the topography of Lyttelton Harbour offered a natural defensive position with its shelter and hills. A number of fortified works were fitted with heavy armament in various locations including the Godley Head 80<sup>th</sup> Coastal Defence Battery at the head of Lyttelton Harbour.<sup>69</sup> This was of pivotal

<sup>66</sup> History and Development of the Royal New Zealand Navy, TS Steadfast archives

<sup>67</sup> History and Development of the Royal New Zealand Navy, TS Steadfast archives

<sup>68</sup> Royal New Zealand Navy, 2002

<sup>69</sup> Beaumont et al., 2014

importance to the area's defences and by 1942, Japanese forces had advanced southwards. Anti-invasion defence works across Banks Peninsula during this time included the Tikao Bay Mine Depot, the Cass Bay Magazine Depot and the Wainui Battery.<sup>70</sup> The naval barracks, HMNZS Tasman was located in Lyttelton and commissioned on 20 January 1944 on the current oil storage facility (Figure 20). The complex provided accommodation for 200 officers and ratings and was used by the RNZN as a training facility for telegraphist and anti-submarine warfare.<sup>71</sup> It was formally decommissioned in 1957, with some buildings being relocated to other naval bases in the years immediately prior – such as the former Shipwright Store which was re-erected at the Cass Bay Naval Armament Depot as a garage in 1956/1957.



Figure 20: HMNZS Tasman, Lyttelton, 1952.

Source: <https://navymuseum.co.nz/explore/by-collections/places/hmnzs-tasman/>

New Zealand's naval forces entered World War II as a Division of the Royal Navy, purely as a national service.<sup>72</sup> However in 1941, King George VI approved the name of the Division as 'The Royal New Zealand Navy', changing the names of ships and establishments from HMS to HMNZS.<sup>73</sup> After the war, the Royal New Zealand Naval Volunteer Reserve was reconstituted, and drill and training commenced in 1948.<sup>74</sup> HMNZS Pegasus became the Canterbury Division, operating a training scheme for young boys through the New Zealand Navy League Sea Cadet Corps.<sup>75</sup>

<sup>70</sup> Beaumont et al., 2014

<sup>71</sup> <https://navymuseum.co.nz/explore/by-collections/places/hmnzs-tasman/>

<sup>72</sup> History and Development of the Royal New Zealand Navy, TS Steadfast archives

<sup>73</sup> History and Development of the Royal New Zealand Navy, TS Steadfast archives

<sup>74</sup> History and Development of the Royal New Zealand Navy, TS Steadfast archives

<sup>75</sup> TS Steadfast Archives



### 2.1.5 Development of Cass Bay as a Defence Site

From the mid 1930s there was a shortage of state houses in Lyttelton, and the Lyttelton Borough Council were looking for land to expand. The 55 acres Council owned and used to graze abattoir stock became an attractive prospect for housing or at least for holiday accommodation. A 1935 Press headline read,

*“Removal of abattoir at Lyttelton. It is expected that the Lyttelton Borough Council will shortly consider a proposal to remove the municipal abattoir from its present site at Cass Bay. Our photo’graph shows the beach and abattoir buildings, and the sites which would be available for week-end cottages.”<sup>76</sup>*



Figure 21: Municipal abattoir at Cass Bay in 1935. Abattoir to the right of the image.  
Source: Press, Vol LXXI, Issue 21515, 3 July 1935, p20

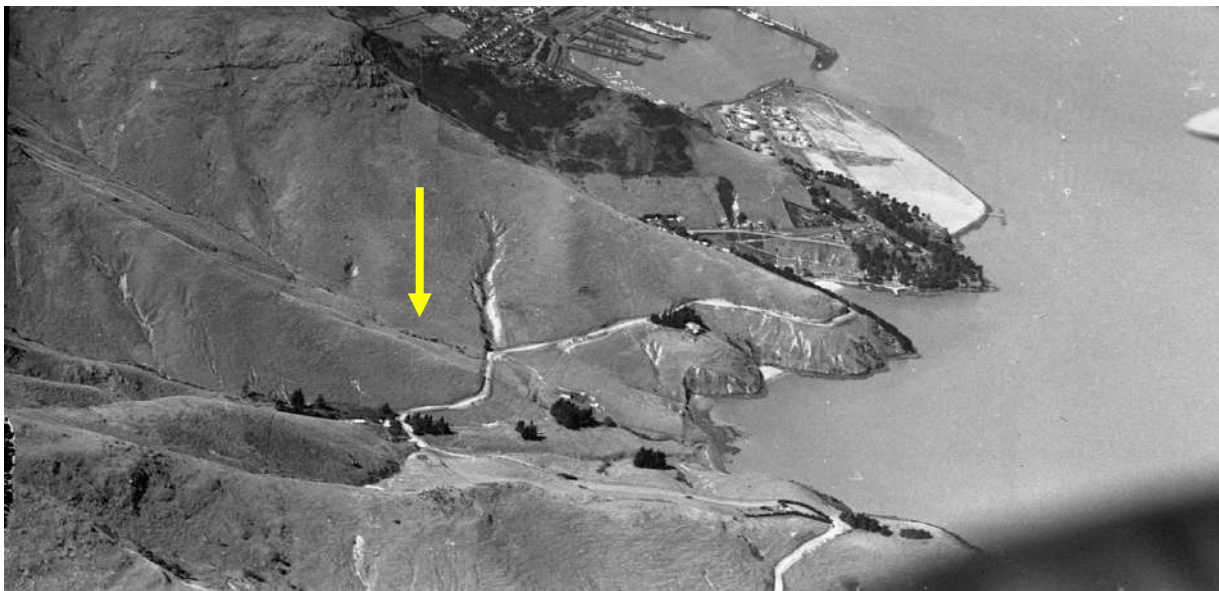


Figure 22: Motukauatirahi-Cass Bay in 1935 (Steadfast future location indicated).  
Source: V.C Browne & Son, PB0308-19.

<sup>76</sup> Press, Vol LXXI, Issue 21515, 3 July 1935, p20



During this time, there was a notable increase in the popularity of yachting and motor-boating around Lyttelton, with the notion of Cass Bay raised as an additional complement to Lyttelton.<sup>77</sup> However, Purau Bay, rather than Cass Bay, was selected as the preferred site for the new yacht harbour.

Then when war broke out in 1939, all housing and harbour development was put on hold. The rapid advancement of the Japanese forces in early 1942 placed New Zealand under direct threat of invasion, and as a result, many anti-invasion defenses were constructed around the country – including Canterbury. Initially, the Royal New Zealand Navy (RNZN) built a magazine site at Akaroa in 1942-1943, but this turned out to be unsuitable due to it being too far by road or sea from the port of Lyttelton, and so the RNZN turned to Cass Bay. Cass Bay was selected because it was largely uninhabited, was not visible from the Lyttelton Harbour heads, and could be accessed by sea.<sup>78</sup> A 1944 survey shows the portion of Cass Bay taken by the New Zealand government for defence purposes in February 1945 (Figure 23) and the gazette notice of 4 February 1945 (Figure 24). It includes an area of land on the south side of Governor's Bay Road – on which a house, referred to as the “navy house” was built - and a right-of-way down to the shore of Cass Bay (Figure 27).

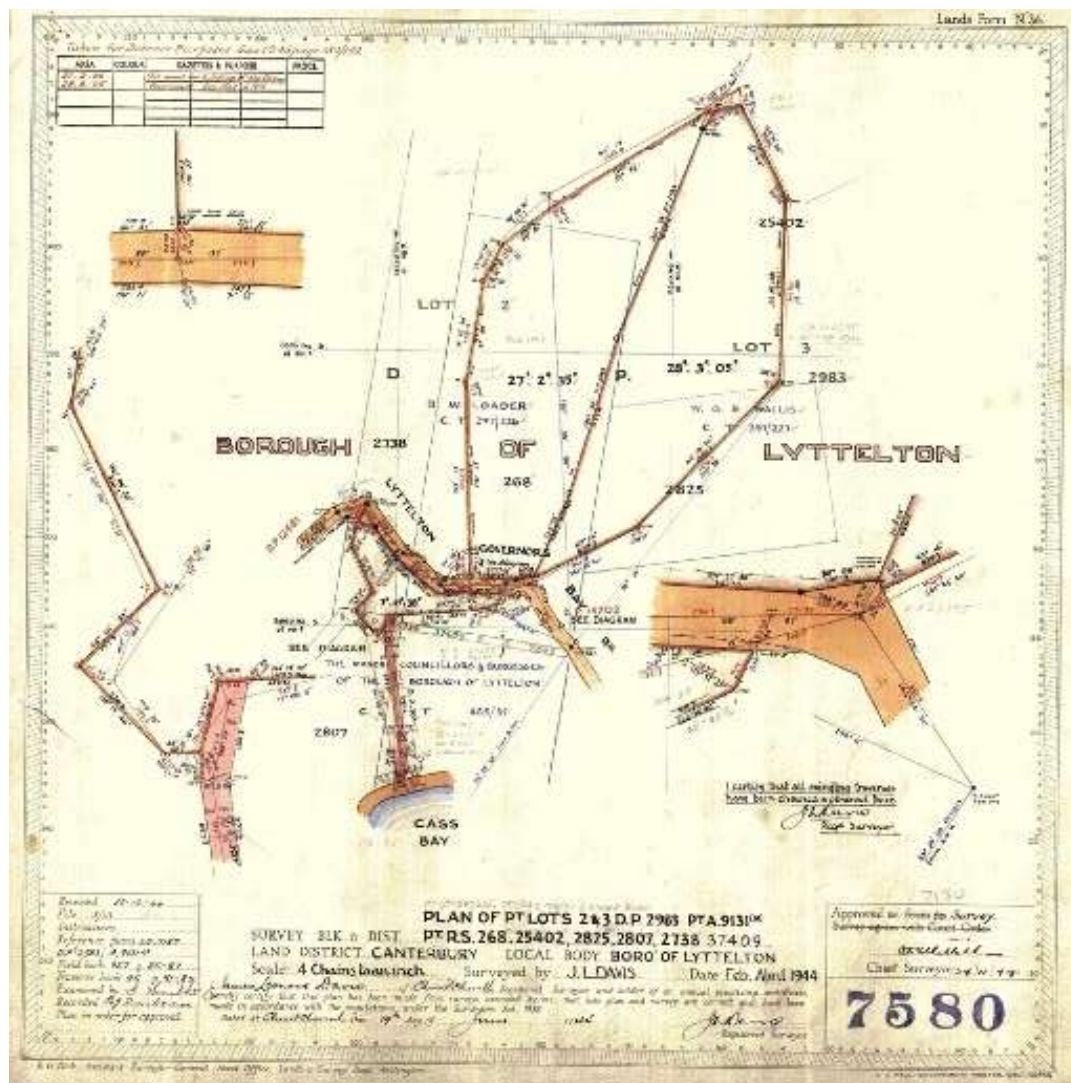


Figure 23: Survey plan DP 7580 showing the portion of land and right-of-way set aside in 1945 for defence purposes.  
Source: DP 7580, LINZ.

<sup>77</sup> Press, 9 December 1939, p7

<sup>78</sup> <http://lytteltonharbourjetties.blogspot.com/2019/06/cass-baymotukauatirahi.html>

*Land and a Right-of-way taken for Defence Purposes in the Borough of Lyttelton*

[L.S.] C. L. N. NEWALL, Governor-General  
A PROCLAMATION

IN pursuance and exercise of the powers and authorities vested in me by the Public Works Act, 1928, and of every other power and authority in anywise enabling me in this behalf, I, Cyril Louis Norton Newall, the Governor-General of the Dominion of New Zealand, do hereby proclaim and declare that the land described in the First Schedule hereto is hereby taken for defence purposes and that an easement over the land described in the Second Schedule hereto is hereby taken for defence purposes, vesting in His Majesty the King the full and free liberty, right, license, and authority in perpetuity to construct and use a right-of-way with the right for His Majesty's servants, agents, and workmen from time to time and at all times hereafter to go, pass, and repass with or without horses or other animals or vehicles over the said land for the purpose of access to the land described in the First Schedule hereto, such easement to be held appurtenant to the land described in the First Schedule hereto.

#### FIRST SCHEDULE

APPROXIMATE areas of the pieces of land taken :—

A.	R.	P.	Being
27	2	35	Part Lot 2, D.P. 2983 (parts Rural Sections 268 and 25402); edged red.
28	3	5	Part Lot 3, D.P. 2983 (parts Rural Sections 2825, 268, and 25402); edged red.
3	0	38	Parts Rural Sections 2738, 268, 2807, and 37409; edged red.

#### SECOND SCHEDULE

APPROXIMATE area of the piece of land over which an easement is taken : 2 roods 30.8 perches.

Being parts Rural Sections 2807, 268, 2738, and 37409; coloured pink.

All situated in the Borough of Lyttelton (Canterbury R.D.). (S.O. 7580.)

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## THE NEW ZEAL

All in the Canterbury Land District; as the same are more particularly delineated on the plan marked P.W.D. 120743, deposited in the office of the Minister of Works at Wellington, and thereon coloured as above mentioned.

Given under the hand of His Excellency the Governor-General of the Dominion of New Zealand, and issued under the Seal of that Dominion, this 10th day of February, 1945.

H. G. R. MASON,  
For the Minister of Works.

GOD SAVE THE KING!

(P.W. 23/857)

Figure 24: Gazette references for the area identified in red on Survey Plan DP7580, detailing the land and 'right-of-way taken for defence purposes on 10 February 1945.  
Source: *The New Zealand Gazette* 1945, No. 11, pp139-140.

Extract from *N.Z. Gazette*, 21 October 1965, No. 61, page 1814

*Land Held for Defence Purposes Set Apart for Buildings of the General Government in the Borough of Lyttelton*

PURSUANT to section 25 of the Public Works Act 1928, the Minister of Works hereby declares the land described in the Schedule hereto to be set apart for buildings of the General Government from and after the 26th day of October 1965.

#### SCHEDULE

##### CANTERBURY LAND DISTRICT

ALL those pieces of land situated in the Borough of Lyttelton, Canterbury R.D., described as follows:

A.	R.	P.	Being
27	2	35	Part Lot 2, D.P. 2983, being parts Rural Sections 268 and 25402, and being the land first described in Proclamation No. 2027, Canterbury Land Registry.
28	3	5	Part Lot 3, D.P. 2983, being parts Rural Sections 2825, 268, and 25402, and being the land secondly described in Proclamation No. 2027, Canterbury Land Registry.

As the same are more particularly delineated on the plan marked P.W.D. 120743 (S.O. 7580), deposited in the office of the Minister of Works at Wellington, and thereon edged red. Dated at Wellington this 1st day of October 1965.

PERCY B. ALLEN, Minister of Works.  
(P.W. 24/4796; D.O. 23/78/1/132)

R. E. OWEN, Governmental Printer, Wellington, New Zealand.

Figure 25: Gazette notice for the area set apart for government buildings in 1965. See also Figure 18.

Source: *The New Zealand Gazette* 1965, No. 61, p1814.

The armament depot consisted of ten brick and concrete magazines, an ammunition processing building, camp/administration buildings, a four-man hut, a guard house, a flag station, and fencing enclosing the entire complex. A navy gun was mounted adjacent to the Lyttelton-Governors Bay Road and passing traffic had to await a naval escort through the bay during wartime.<sup>79</sup>

A set of twin articles published in *The Press* in 1959 (fifteen years after the construction of the depot) describe the site and its various structures:

<sup>79</sup> <http://lytteltonharbourjetties.blogspot.com/2019/06/cass-baymotukauatirahi.html>

*"From the road can be seen the administration buildings, the timber gunwharf store, the Blue Ensign fluttering from the yard of a mast and naval guns pointing out over the harbour, all set in a neat lawn, rock garden, and young trees and shrubs. In the steep gully beyond and up to 400 feet (122 metres) above the highway are the partly concealed magazines containing hundreds of tons of weapons, explosives, and missiles and the laboratories where they are continually inspected and tested for safety and effectiveness. The arsenal's 56 ½ acres is bounded by a high security fence patrolled constantly by dockyard police. The guards are on duty 24 hours a day. There are 14 Navy-paid civilians (no women) manning the depot, who work with windows and doors open, even in the coldest weather.*

*The magazines are built of two brick walls 22 inches (560mm) apart and ventilation and temperature are controlled. Roofs are lightly made to channel explosions upwards. Floors are shiny black bitumastic for spark prevention. Wherever possible, non-ferrous metal or wooden fixtures are used and all ferrous metal, including the heavy outside steel sliding doors, are bonded to a main unit lightning arrester. The cleanliness of the magazines is clinical and the white walls and ceilings, silence, and still atmosphere give the impression of a sepulchre. The fact that there have been no explosions to date does not make one less anxious to be outside and away. And when one is told on reaching the open air once more that confidential symbols painted on the outside of each magazine door indicate to firefighters that the contents ignited will either burn fiercely, explode violently, or release poisonous gases. The information that reservoirs uphill contain 58,000 gallons (264,000 litres) of firefighting water does not seem quite as reassuring as it should.*

*Stores have included the jet take-off rockets for the American Antarctic expedition and railways gelignite and detonators held in custody during the waterfront strike of 1951.*

*The three naval guns guarding the entrance are used by traversing them up-gully. Although the guns are not old in years, they are now considered souvenirs by depot staff whose latest technical training is in the guided weapons field. Two are 4in' surface guns, of a quick-firing semi-automatic type. The third, built only in 1943, is a dual-purpose 4in' gun.*

*The Cass Bay Depot was built for the British Pacific Fleet in 1944 and closed between 1945 and 1950 when it was recommissioned as an armament depot flying the Union Jack. It was not for some years that the Union Jack was hauled down and replaced with the Blue Ensign although the depot was being manned by the RNZN. Since 1950, existing buildings have been modified and additional buildings constructed. An unusual feature of such a warlike place is the love of the staff for silviculture (the growing of trees). When the depot was reactivated nine years ago (1950) there were two trees on the property. Now there are 1100 trees, all planted by the staff who keep a list of every type and species. The interest in trees is three-fold – aesthetics, camouflage, and an anti-erosion measure."<sup>80</sup>*

Little information is available about the flower beds and rock garden and the list of 1100 trees has not been found. However a 1965 image (Figure 26) shows established vegetation and terracing either side of the stream in the lower part of the site with larger shrubs and trees visible further upstream. While aerials of this time don't appear to show extensive planting, the trees in the 1965 image may indicate some of the 1100 planted in the 1950s. The 1965 image also shows newly established trees located in drums (right of the photograph), presumably to protect the establishing trees from grazing sheep. The image also shows circular elements in the grass between the Drill Hall and Ward Room, which are most

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<sup>80</sup> Press, Volume XCVIII, Issue 29020 and 29022, 8 October and 10 October 1959, Page 8 and Page 18



likely the flower beds mentioned in the 1961 letter from the Resident Naval Officer to the Ministry of Works.<sup>81</sup> The flower beds look to be gone by the 1980s when they can no longer be seen in aeriels.



Figure 26: Cropped image showing Cass Bay Naval Armament Depot planting, 1965. Two circular flower beds can be seen to the right of the image, between the Drill Hall and Garage. It is unclear what the two white, hexagonal shaped elements are either side of the stream. The anchor from TS Cornwall now sits atop the right hand element opposite the Ward Room. Source: VC Browne and Son, 9156-9162.



Figure 27: Cass Bay Naval Armament Depot aerial 1962. The navy house (circled) is located at the top of the right-of-way (dashed in red). Source: VC Browne and Son, 6808-6823.

<sup>81</sup> Letter from Resident Naval Office to Ministry of Works, 21 April 1961, Archives NZ Christchurch, R18988957 – CH150 – 41/3 - Navy Department Files – Cass Bay – Buildings and Services – 1979-83



Figure 28: Fire equipment and water pipe opposite the Drill Hall (see Figure 26 above), 1960s.<sup>82</sup>  
Source: TS Steadfast Archives, 1954-1994.

#### 2.1.5.1 The Armament Depot Buildings 1945 - 1965

Following the end of WWII, the Lyttelton Borough Council once again turned to the idea of using its land at Cass Bay for residential development. The Lyttelton Borough Empowering Bill, which would give the Council the power to subdivide and sell its land at Cass Bay, was passed in August 1946.<sup>83</sup> However, the Council was stymied in 1947. The Public Works Department (PWD) declined a request from the council that the Department should waive its claim to a right-of-way at Cass Bay so the council could form a road for the proposed sub-division. The Department was concerned about the risk from explosives, and began considering acquisition of the whole property.<sup>84</sup> The PWD advised the Lyttelton Borough Council that, if they were to open their land up for residential development, they would need to maintain a safety distance of 1,000 yards from the nearest points of all buildings within the depot. In response, the Council protested to the Minister of Defence against the decision to retain the depot as a permanent establishment. A naval representative met with the Mayor and the Town Clerk in Lyttelton to confirm that he could not recommend the abandonment and removal of the depot “in the present unsettled state of world affairs” as “in emergency, national security was dependent to an important degree upon dispersal of explosives, stores, oil, etc”.<sup>85</sup> Lyttelton Borough Council then passed a resolution in December 1947 that “for a period of five years, this Council will not dispose of the land owned by it at Cass Bay and that no further permits for building on that land be permitted for a similar project.”<sup>86</sup>

<sup>82</sup> Pers. Comm. C. Nee/W. Hoddinott, 17 December 2021

<sup>83</sup> Press, Volume LXXXII, Issue 24955, 16 August 1946

<sup>84</sup> Press, Volume LXXIII, Issue 25159, 15 April 1947

<sup>85</sup> Memorandum from the Naval Secretary to the Permanent Head of the Public Works Department, Wellington, dated 17<sup>th</sup> October 1947. Archives NZ, Christchurch.

<sup>86</sup> Memo to ‘the Officer-in-charge HMNZS ‘Tasman’ from Navy Office, Wellington, 15 Jan 1948, Archives NZ Christchurch, 1945-1950.

Parliamentary Papers record that three of the ten magazines at Cass Bay had been on loan to the Army during 1946;<sup>87</sup> but that, by 1947, “all explosives” had been transferred from the Cass Bay magazines to the Naval Armament Depot at Kauri Point in Auckland.<sup>88</sup> Other contemporary reports (including that quoted above) refer to the magazines as being emptied at this time;<sup>89</sup> and a memorandum from the PWD dated 7<sup>th</sup> July 1947 states that magazines 1 and 2 were the only ones waiting to be emptied and, as soon as this was done, the buildings would be made available for private lease.<sup>90</sup>

In September 1947, magazines 1 and 3 were let to Imperial Chemical Industries. Initially, they had requested only one of the magazines as well as the laboratory building, but subsequently found that the laboratory did not comply with their requirements. The remaining eight magazines were made available for lease to private businesses for storage purposes;<sup>91</sup> and the PWD District Architect was requested to draw up plans for conversion of “the office building” into flats to provide accommodation for naval personnel.<sup>92</sup> This may refer to what is now the officer’s accommodation building, but this cannot be confirmed on the basis of the available information. A memorandum from the PWD District Architect on 22<sup>nd</sup> July 1948 stated that a contractor – N. Caldwell of Christchurch – was appointed and would commence work later in the month. The work was completed by September.<sup>93</sup> In parallel, the PWD District Architect was asked to prepare plans for converting the “surplus army huts” in the Armament Depot to “married quarters”.<sup>94</sup> In February 1949, the Ministry of Works (MoW, formerly the PWD) called for tenders to carry out this work.<sup>95</sup> In the absence of plans or other documentation, it is assumed that the “army huts” referred to are the two huts that were joined together and later became the quartermaster’s accommodation building.

In October 1948 compensation was paid to the Lyttelton Borough Council for land taken in 1945 under Section 25 of the Public Works Act for an easement below Governors Bay Road, part of C.T. 485/89 which had been held in trust by the Council for an abattoir.<sup>96</sup>

Various international conflicts were responsible for the recommissioning of the Depot in 1950, among them the developing Cold War between the Soviet Union and its former wartime allies in the west which was causing instability in the Middle East, and the Korean Civil War.<sup>97</sup> Both conflicts drew the RNZN into committing naval resources to each cause, and a number of training drills and exercises were conducted in the Christchurch region in preparation for deployment.<sup>98</sup>

By mid-1950 the Depot was back in “full operation”;<sup>99</sup> and a memorandum from the Naval Secretary to the MoW District Engineer advised that the water supply equipment at the Depot was in need of repair. The

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<sup>87</sup> Appendix to the Journals of the House of Representatives, 1946 Session I, H-05 Royal New Zealand Navy Report of the New Zealand Naval Board

<sup>88</sup> Appendix to the Journals of the House of Representatives, 1947 Session I, H-05 Royal New Zealand Navy Report of the New Zealand Naval Board

<sup>89</sup> Press, Volume LXXIII, Issue 25206, 10 June 1947

<sup>90</sup> Memorandum from the Public Works Department P.W.23/857, dated 7 July 1947, Archives NZ, Christchurch.

<sup>91</sup> Memorandum from the District Chief Clerk to Christchurch businesses, dated 12<sup>th</sup> March 1948, Archives NZ, Christchurch.

<sup>92</sup> Memorandum from Lieutenant Schumacher RNZN to the District Architect, Public Works Department, Christchurch, dated 5<sup>th</sup> April 1948, Archives NZ, Christchurch.

<sup>93</sup> Memorandum for the Under Secretary, Public Works Department, Wellington for Contract Cass Bay – Conversion of Building to Flats, dated 20<sup>th</sup> September 1948, Archives NZ, Christchurch.

<sup>94</sup> Memorandum for the Officer-in-Charge HMNZS “Tasman” from the District Architect, Ministry of Works, dated 22<sup>nd</sup> July 1948, Archives NZ, Christchurch.

<sup>95</sup> Press, Volume LXXV, Issue 25729, 15 February 1949

<sup>96</sup> 4 October 1948, Archives NZ Christchurch, R189988959 – CH150 – 41/3 – part 2 – Navy Department Files – Cass Bay Naval Armament Depot and Residence – 1945-50

<sup>97</sup> <https://nzhistory.govt.nz/war/royal-new-zealand-navy/post-war-operations>

<sup>98</sup> <https://nzhistory.govt.nz/war/royal-new-zealand-navy/post-war-operations>

<sup>99</sup> Memorandum for the Naval Secretary, from the District Architect, Ministry of Works, Christchurch, dated 17 August 1950, Archives NZ, Christchurch.

pump used for refilling the reservoirs was damaged, and there was some deterioration of the fire protection equipment including perished hoses and deterioration of hose boxes.<sup>100</sup> A report prepared by the MoW District Architect at this time details the fire protection setup at the Depot, which included bell hydrants sited adjacent to each magazine, hose boxes placed at strategic positions, and a sprinkler system in two of the magazines.<sup>101</sup> Repairs to the reservoir pump and firefighting equipment were made, along with other repairs to the electrical services, loading banks, and accommodation buildings on the site.<sup>102</sup>

In 1951, a memorandum from the Navy Secretary to the MoW confirmed that that, notwithstanding the discussions that had been made in 1947, retention of the Depot was essential; and, further, that it was necessary to acquire all of the land within 1,000 yards of any buildings containing explosives to ensure public safety.<sup>103</sup> Recognising that the adjacent landowners were not happy about the possibility of compulsory acquisition, and noting that “Navy Department, Wellington, doesn’t seem to appreciate all the implications of the proposal”, the MoW recommended instead that the necessary land could be leased from the owners.<sup>104</sup> The response from the Navy was that it was also necessary to prohibit those land owners from building on or subdividing their land within the 1000 yard boundary.<sup>105</sup> Lyttelton Borough Council, the largest adjacent landowner, objected; and asked the Government to move the explosives out of Cass Bay instead.<sup>106</sup>

In 1956/1957, the HMNZS Tasman Shipwright Shop building was dismantled and relocated to Cass Bay to serve as a garage (Figure 29) but would eventually be used as the Girls Accommodation Block and referred to as ‘the Store’ building. A memo addressed to the Resident Naval Officer, HMNZS Pegasus, Christchurch, dated 9<sup>th</sup> May 1956 detailed the removal of the building from the HMNZS Tasman Base to the Cass Bay Site:

*“The above-described building [the Shipwright Shop] has been dismantled and removed from [HMNZS] Tasman and its re-erection at Cass Bay is virtually complete, the Depot’s vehicles being already housed...”<sup>107</sup>*

The memo also implied that the re-erection was done hastily for several reasons, including urgent stowage required for vehicles, the onset of winter which would have delayed re-erection works, other parties attempting to obtain the building, and the inability due to financial constraints to engage outside contractors to undertake the dismantling and re-erection work. The building was split into sections before being moved and was reportedly in very poor condition due to lack of maintenance. The total cost of the work was £75.

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<sup>100</sup> Memorandum for the District Engineer, Ministry of Works, Christchurch, from the Naval Secretary, dated 21 July 1950, Archives NZ, Christchurch.

<sup>101</sup> The magazine numbers aren’t stated. Letter to the Chief Naval Officer from the District Architect, Ministry of Works, Christchurch, dated 20 July 1950, Archives NZ, Christchurch.

<sup>102</sup> Archives NZ, Christchurch, CAXP CH150 2954 Box 530, 1945-1950

<sup>103</sup> Memorandum for the Commissioner of Works, Ministry of Works, Wellington, from the Navy Secretary, dated 13 February 1951, Archives NZ, Christchurch.

<sup>104</sup> Memorandum for the District Commissioner of Works, Ministry of Works, Christchurch, from the Commissioner of Works, Ministry of Works, Wellington, dated 20 July 1951, Archives NZ, Christchurch.

<sup>105</sup> Memorandum for the Commissioner of Works, Ministry of Works, Wellington, from the District Commissioner of Works, Ministry of Works, Christchurch, dated 31<sup>st</sup> July 1951, Archives NZ, Christchurch.

<sup>106</sup> Newspaper Article dated 18 September 1951, Archives NZ, Christchurch.

<sup>107</sup> Archives NZ Christchurch, R18988957 – CH150 – 41/3 - Navy Department Files – Cass Bay – Buildings and Services – 1979-83



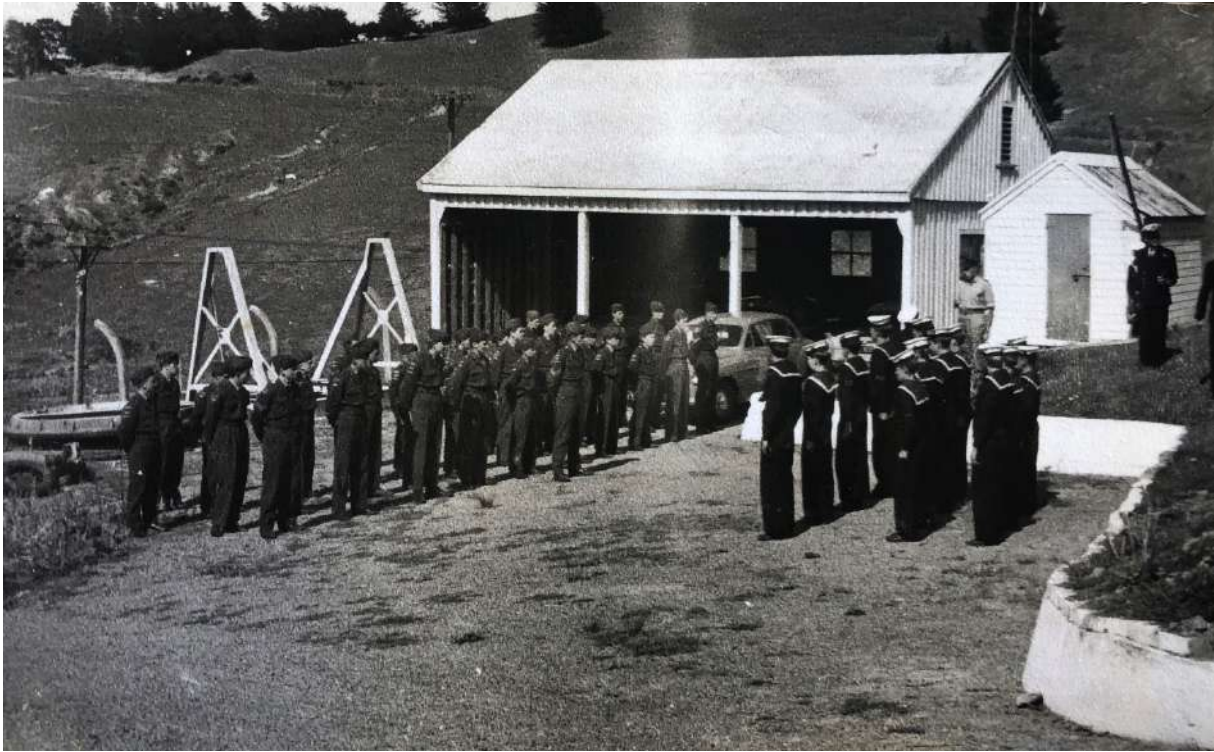


Figure 29: The Shipwright's Shop which was originally located at HMNZS Tasman, but dismantled and re-erected at Cass Bay in 1956 to serve as a garage.

Source: TS Steadfast Archives.

The *Press* reports that 15 tons of cargo including “old age high explosive” was removed from the Cass Bay Armament Depot in 1956 as part of “a final “Destoring” clean-up of the Tasman base”.<sup>108</sup> This was followed in 1959 and 1960 by reports that new ammunition was regularly brought by ship into Cass Bay and substituted for deteriorated or outmoded ammunition at the Depot, some of which was taken out to sea and dumped.<sup>109,110</sup>

In September 1959, the *Press* noted that a new reinforced concrete pit would be built at the Armament Depot by a private contractor working to Ministry of Works specifications. The purpose was to “confine any explosions that could take place during the stripping of dangerous pieces of ammunition.”<sup>111</sup> It is possible that this is the detonation chamber seen under construction and indicated in Figure 69.

<sup>108</sup> *Press*, Volume XCIV, Issue 28011, 4 July 1956

<sup>109</sup> *Press*, Vol XCIII, Issue 28946, 14 July 1959, p20

<sup>110</sup> *Press*, Vol XCIX, Issue 29264, 23 July 1960, p14

<sup>111</sup> *Press*, Vol XCVIII, Issue 290112, 29 September 1959, p14





Figure 30: Cass Bay Naval Armament Depot – bomb stripping pit excavation 1960.  
Source: Archives NZ, Christchurch, R20482164 – CH167/36r – Gch 857, 1960.



Figure 31: Cass Bay Naval Armament Depot – bomb stripping pit excavation 1960.  
Source: Archives NZ, Christchurch, R20482164 – CH167/36r – Gch 857, 1960.



Figure 32: Cass Bay Naval Armament Depot – bomb stripping pit wall construction, 1960.

Source: Archives NZ, Christchurch, R20482164 – CH167/36r – Gch 857, 1960.



Figure 33: Cass Bay Naval Armament Depot – bomb stripping pit wall construction, 1960.

Source: Archives NZ, Christchurch, R20482164 – CH167/36r – Gch 857, 1960.



Figure 34: The Drill Hall (rear) and the administration building (front), undated.

Source: TS Steadfast Archives



Figure 35: A helicopter next to ammunition store 5, undated, c.1968.

Source: TS Steadfast Archives, 1954-1994.



Figure 36: 1970-1974 aerial showing helicopter landing area adjacent to ammunition store #5 (indicated).

Source: Canterbury Maps, Historical Imagery, 2021.





Figure 37: Naval manoeuvres in Akaroa, 1950.  
Source: ALHI, ID: 1370-313-4



Figure 38: Naval manoeuvres in Akaroa, 1950.  
Source: ALHI, ID: 1370-313-5

In 1961, the Cass Bay Armament Depot was formally closed, and remaining ammunitions were reported as having been transported by HMNZS Endeavour to Auckland.<sup>112</sup> This process took several years, and while some reports state that the munitions were removed from the site by 1967,<sup>113</sup> the explosion of one of the magazines in 1980 (discussed below) suggests otherwise. Also in 1961, in response to a request from the Lyttelton Borough Council, the Naval Board agreed to surrender the Defence easement over the right of way from the Navy house to the water's edge (refer Figure 27) so that land might be formed and dedicated as a street.<sup>114</sup> By June 1962 the Naval Board had agreed to the Council taking ownership of the land. Comparison of historic aerials and recent Google Earth images indicate the house is still on the site.

A letter from the MoW Commissioner of Works dated 7 August 1962 states that the Navy would retain the land title and the use of magazines 9 and 10, while the Army requested use of “the store and office buildings”. The remaining buildings – being “eight magazines, a guardhouse, laboratory and open fronted garage” – were therefore to be made available to any Government Department that had a use for them.<sup>115</sup>

The District Commissioner of Works then sent out several letters to various departments asking if they had a use for the buildings. The Department of Scientific and Industrial Research (DSIR) which had been using buildings at the Cass Bay Armament Depot to test radio frequencies since the end of WWII,<sup>116</sup> requested ongoing use of magazine 6 which was approved on the condition that they advise what goods would be stored there.<sup>117</sup> The DSIR responded that their primary requirement at Cass Bay was installation of a low frequency ionosonde:

*This involves the installation of special electronic equipment, and will require a pair of feeder wires to be taken through a wall to run to an aerial system to be installed. None of this installation will interfere with any existing equipment or buildings, apart from the necessity to make two small holes about 1" diameter in the wall of the magazine for the aerial feeders. These holes could be easily and effectively filled after removal of the equipment.*

<sup>112</sup> <https://rnzncomms.org/nznbr-1961/>

<sup>113</sup> Lyttelton Review, May 2020

<sup>114</sup> Letter from J. Thompson Town Clerk to The Resident Naval Officer, 4 Dec. 1961, Archives NZ Christchurch, R18988957 – CH150 – 41/3 - Navy Department Files – Cass Bay – Buildings and Services – 1979-83

<sup>115</sup> Letter from J. T. Gilkison, MoW Commissioner of Works, to E. C. Smart, District Commissioner of Works, 7 August 1962, Archives NZ, Christchurch.

<sup>116</sup> Lyttelton Review, May 2020

<sup>117</sup> Letter from J. T. Gilkison, MoW Commissioner of Works, to the DSIR, dated 8 November 1962, Archives NZ, Christchurch.

*A better proposition from this point of view would be to utilize a room in the guard house, where the feeders could be passed through a window and thus avoid any holes having to be made. If therefore such space is still available, would you please regard this as formal application.*

*The magazine will be used in any case for the storage of scientific records, printed matter, and small electronic components. None of these comes into the “dangerous” classification, and even if the ionosonde has to be installed in the magazine, no damage to or effects on the floor is likely.<sup>118</sup>*

In 1964 a letter from the Council to the MoW advised that access to the water’s edge was no longer required owing to a new subdivision layout. What Council did require however was the right-of-way to the water’s edge be dedicated as a street.<sup>119</sup> The declaration was actioned the same year.

#### *2.1.5.2 The Armament Depot Landscape 1945 – 1965*

As this report notes, the depot was gradually closed following the end of WWII. In November 1945, the Public Works Department invited “Tenders for Grazing” of 59 acres at the depot<sup>120</sup> and all neighbouring landowners were invited to submit to “save ill feeling.”<sup>121</sup> W.D. Gebbie of Teddington was ultimately successful offering the highest rental of 40 pounds per annum.<sup>122</sup> A lease condition added on 24 December 1945, stated that it “shall be terminable by the department without notice, if necessary in a time of emergency.”<sup>123</sup> Grazing rights continued while the buildings were leased to various tenants.<sup>124</sup>

In 1950 it became clear that land surrounding the perimeter fence was prone to erosion and slipping, and trees were planted on both sides of the boundary with the adjoining landowner’s consent to enter and carry out the work.<sup>125</sup> Concern about under-runners caused by rabbit burrows and fence post holes was an ongoing issue, with particular concern about the area around the magazine excavations and the eastern boundary fence.<sup>126</sup> The grazing lease was consequently cancelled in 1951 given the erosion concerns, particularly since sheep were destroying ice plants planted on the batters behind the magazines to address the erosion. Deciduous tree planting of willows and poplars was carried out by July the same year.<sup>127</sup> In 1952 agreements were completed with owners of properties adjoining the naval armament depot (Charles Wallis and Eric Charles Allan) to carry out tree planting on their properties to deter erosion within the depot site.<sup>128</sup> Erosion prevention included using available loose rock around the area as well as “blowing to obtain facing rock.”<sup>129</sup>

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<sup>118</sup> Letter from C. O. Clinton, District Officer of DSIR, to the Commissioner of Works, dated 23 November 1962, Archives NZ, Christchurch.

<sup>119</sup> Letter from J. Thompson Town Clerk to MoW, 11 Sept. 1964, Archives NZ Christchurch, R18988957 – CH150 – 41/3 - Navy Department Files – Cass Bay – Buildings and Services – 1979-83

<sup>120</sup> Press, Volume LXXI, Issue 24718, 8 November 1945

<sup>121</sup> Memo from E.F. Evans, Acting District Engineer to Naval Officer in Charge, 28 Nov 1945, Archives NZ Christchurch, R189988959 – CH150 – 41/3 – part 2 – Navy Department Files – Cass Bay Naval Armament Depot and Residence – 1945-50

<sup>122</sup> Other tenders were from J.S. Bundy, C.A. Chinnery and R.W. Loader

<sup>123</sup> Letter to W.D. Gebbie, 24 December 1945 from the Acting District Engineer, Archives NZ Christchurch, R189988959 – CH150 – 41/3 – part 2 – Navy Department Files – Cass Bay Naval Armament Depot and Residence – 1945-50

<sup>124</sup> Letter from Ministry of Works to Mr Whitford, 17 October 1949, Archives NZ Christchurch, R189988959 – CH150 – 41/3 – part 2 – Navy Department Files – Cass Bay Naval Armament Depot and Residence – 1945-50

<sup>125</sup> Memo 9 August 1950, Archives NZ Christchurch, R18988960 – CH150 – 41/3 – part 3 – Navy Department Files – Navy Armament Depot – Cass Bay – 1950-52

<sup>126</sup> Memo 15 August 1950 to The District Engineer, MoW from the District Land Purchase Officer, Archives NZ Christchurch, R18988960 – CH150 – 41/3 – part 3 – Navy Department Files – Navy Armament Depot – Cass Bay – 1950-52

<sup>127</sup> Letter from W.F. Young, MoW to The District Land Purchase Officer, 19 July 1951, Archives NZ Christchurch, R18988957 – CH150 – 41/3 - Navy Department Files – Cass Bay – Buildings and Services – 1979-83

<sup>128</sup> Letter from District Land Purchase Officer at MoW to District Commissioner of Works, Archives NZ Christchurch, R18988960 – CH150 – 41/3 – part 3 – Navy Department Files – Navy Armament Depot – Cass Bay – 1950-52

<sup>129</sup> Letter from MoW to the Resident Naval Officer, 19 August 1959, Archives NZ Christchurch, R18988957 – CH150 – 41/3 - Navy Department Files – Cass Bay – Buildings and Services – 1979-83

In 1952 a request from the Officer in Charge for a culvert at the main entrance was approved with an estimate of three hundred pounds.<sup>130</sup> Investigations into tar sealing the graded shingle roads to the ammunition stores began in 1954, an important initiative for both cost and safety.<sup>131</sup> The roads were at a steep grade, 76 chains in length plus the fourteen approaches to the various magazines and buildings. Erosion, dust grass and weed growth were constant problems and the roads needed frequent regrading. In 1955 the Cass Bay Officer in Charge outlined his concerns to the Naval Secretary in Wellington regarding the roads at the Depot,

*The Royal NZ Naval Armament Regulations called for absolute cleanliness and freedom from grit in magazine workrooms and explosive store houses. To this end, labour and bitumastic are constantly being used on the floors of the buildings, all to little use because of the tramping in, of mud and grit off the roads. This has an effect upon the safety of this establishment as a whole because of the possibilities of sparks setting off an explosion.*

*It will be readily seen that tar sealing of these roads will eliminate all these costly items and give better traction for the vehicles, in their work of shifting ammunition and explosives, eliminate the dust menace from the magazines leaving the M.O.W. labourer free to keep tidy the gardens and grounds which he was initially placed here for, and leave my staff unimpeded to attend to their proper work, Armaments.<sup>132</sup>*

A notice to tenders was issued for the “top course and tar sealing” of the ammunition store access roads in October 1955<sup>133</sup> and February 1956, with a plan showing the areas for sealing attached to the tender documentation (Appendix 3).<sup>134</sup> The successful tenderers were Civil Engineers and Road Contractors, British Pavements (Canterbury) Ltd who were officially engaged on 2 March 1956.<sup>135</sup>

A Press article highlighted broader issues for the depot when in 1955 pranksters were caught rolling boulders down the hill onto the depot just for fun. A spokesman explained that, “people do not realise just how dangerous this practice is [...] One boulder striking the right spot could detonate the whole of the ammunition in the magazine.”<sup>136</sup>

It is clear that the Navy took pride in the condition of the armament depot grounds, which was highlighted by the retirement in 1961 of Mr C. Morris, the groundskeeper responsible for the gardens. A letter from the Resident Naval Officer to the Ministry of Works that same year commented that “it is requested that a suitable replacement be provide with the minimum delay to obviate any break in continuity with area maintenance which could lead to a major operation in putting lawns, flower beds and drains etc. back into reasonable order.”<sup>137</sup>

Maintenance of grass was an ongoing issue and in 1962 the Commissioner of Works noted that because of the “rough and steep terrain, it does not appear practicable to cut the grass with a machine and [it is] too

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<sup>130</sup> Letter from W.F. Young, M.o.W to Officer in Charge, HMNZS Tasman, 23 April 1952, Archives NZ Christchurch, R18988957 – CH150 – 41/3 - Navy Department Files – Cass Bay – Buildings and Services – 1979-83

<sup>131</sup> Letter from Officer-In-Charge, HMNZS Tasman to M.o.W, 22 Sept. 1954, Archives NZ Christchurch, R18988957 – CH150 – 41/3 - Navy Department Files – Cass Bay – Buildings and Services – 1979-83

<sup>132</sup> Letter from Officer in Charge RNZN Armament Depot Cass Bay to The Navy Secretary Wellington, 24 May 1955, Archives NZ Christchurch, R18988957 – CH150 – 41/3 - Navy Department Files – Cass Bay – Buildings and Services – 1979-83

<sup>133</sup> Press, Vol XCII, Issue 27802, 29 October 1955, p13

<sup>134</sup> Press, Vol XCIII, Issue 27896, 18 February 1956, p14

<sup>135</sup> Letter from British Pavements (Canterbury Ltd) to the District Commander of Works, 23 July 1956, Archives NZ Christchurch, R18995061 – CH160 – 4736 – Sealed Contracts – Cass Bay Naval Depot – Top course and tar sealing – 1956

<sup>136</sup> Press, Vol XCII, Issue 27806, 3 November 1955, p12

<sup>137</sup> Letter from Resident Naval Office to Ministry of Works, 21 April 1961, Archives NZ Christchurch, R18988957 – CH150 – 41/3 - Navy Department Files – Cass Bay – Buildings and Services – 1979-83



large an area to cut by hand.”<sup>138</sup> Recommendations were for a large quantity of sheep to be moved into the area for a short time after which it was thought a smaller flock could keep the growth in check. Gorse, broom, boxthorn along the road frontage and later scotch thistles were regular weed species reported during the 1960s, some of which encroached on the old storehouses.<sup>139</sup> Scotch thistles were reported to form the largest part of noxious weeds on the hills overlooking Cass Bay, the problem originating from the wind-borne seeds blown from the opposite side of the harbour.<sup>140</sup> 1960s aerials of the Steadfast site during show faint tracks from Ammunition Store #8 towards the west boundary and along the fence line travelling north (Figure 39). It is possible these tracks were used by patrol vehicles.



Figure 39: 1961 aerial showing faint tracks from Ammunition Store #8 towards the west boundary fence of Steadfast and along the fence line travelling north. Possibly the route of a patrol vehicle.

Source: SN 3152/27, <http://retrolens.nz> and licenced by LINZ CC-BY 3.0.

In 1964, the Ministry of Works received advice from the Navy Office in Wellington that arrangements were being made to uplift the Defence Reserve at Cass Bay. The letter included several intended actions including, use of the open garage and laboratory building by the Canterbury Sea Cadet Corps which was to be removed by them as soon as possible, and that the DSIR would use No. 6 magazine and a small hut at the area entrance. The 4 inch gun mounted at the entrance was gifted to the Dunedin Sea Cadet Corps, with a note that it would also be removed by them as soon as possible.<sup>141</sup>

#### 2.1.6 Government Buildings and the Navy League Sea Cadet Unit TS Steadfast, 1965 – 1990

The area set aside for defence was officially uplifted with a gazette notice issued on 1 October 1965 (Figure 25). The area was identified on the 1910 plan surveyed for the attorneys of R.M. Morten, delineating the area set aside for Government Buildings (Figure 19).<sup>142</sup>

<sup>138</sup> Letter from E.C. Smart, District Commissioner of Works to The Resident Naval Officer, 31 Oct. 1962, Archives NZ Christchurch, R18988957 – CH150 – 41/3 - Navy Department Files – Cass Bay – Buildings and Services – 1979-83

<sup>139</sup> Correspondence from the Banks Peninsula Noxious Weeds Control Committee to the MoW, 11 June 1965, Archives NZ Christchurch, R18988959 – CH150 – 41/3 – part 2 – Navy Department Files – Cass Bay Naval Armament Depot and Residence – 1945 -50.

<sup>140</sup> Letter from L.H. Stone of RNZAF Wigram to M.H. Mullany, MoW, 5 Feb 1971, Archives NZ Christchurch, R18988959 – CH150 – 41/3 – part 2 – Navy Department Files – Cass Bay Naval Armament Depot and Residence – 1945-50

<sup>141</sup> Letter from the Lieutenant Commander RNZN to MoW, 16 Sept 1964, Archives NZ Christchurch, R18988957 – CH150 – 41/3 - Navy Department Files – Cass Bay – Buildings and Services – 1979-83

<sup>142</sup> The New Zealand Gazette 1965, No. 61, p1814

In 1965, the DSIR agreed to share some of the buildings with the Navy League as premises for the training of the Naval Sea Cadet Unit TS Steadfast (see below).<sup>143</sup> Six of the ammunition stores, an old wooden house, a large store, and a garage were made available.<sup>144</sup> Some of these buildings, such as the Store (former Garage) and the Drill Hall, were moved on site from elsewhere as they were surplus to requirements in their original locations. The Drill Hall was relocated from the mothballed Tikao Bay naval facility at Akaroa.<sup>145</sup> The ammunition stores would be used for classrooms, clothing storage, recreation space and sleeping accommodation for weekend camps.<sup>146</sup>

In 1968, an article in The Star newspaper details the approval of “a new galley and mess hall” at Cass Bay for TS Steadfast, which would house 100 cadets and would allow the group to hold large weekend camps and training exercises.<sup>147</sup> The Drill Hall had already been relocated by this time, as evidenced by aerial photographs (Figure 28) and there is no other building on the site that would accommodate 100 people. In 1975 a safe by Samuel Withers & Co. Ltd was transported to Cass Bay from the New Zealand Post Office in Hereford Street, Christchurch.<sup>148</sup> It is unknown if the safe is in one of the buildings and further research should be carried out to determine whether it is still there.

#### 2.1.6.1 *Navy league Sea Cadets, TS Steadfast – 1965 onwards*

The first Navy League Sea Cadet Corps, TS Steadfast was established in Christchurch in 1929, the Canterbury Division of the New Zealand Navy League. The Christchurch branch Pegasus was the headquarters for the country until the 1940s and was set up to “train boys for the sea should they desire to make a career of the Navy and of preparing youths for citizenship.”<sup>149</sup> Other units followed in Dunedin (1938), Wellington (1941) and Auckland (1943). In 1958 TS Cornwall was established at both Sumner and Redcliffs<sup>150</sup> and until this time TS Steadfast had undertaken training exercises and camps at Rīpapa and Quail Islands. However once TS Cornwall formed, the new unit was given access to both Rīpapa and Quail Islands and in 1965 Steadfast were given permission to use some of the buildings and grounds of Cass Bay.<sup>151</sup> An article in the 1968 Press reported that,

“the highlight of the training at TS Steadfast is undoubtedly the week-end trips to the unit’s camp at Cass Bay in Lyttelton Harbour. For them, this is the life of a true sea cadet which gives them the chance to put all their theory of the classroom into practical use. Every Sunday officers take over boys who are available and they spend the day sailing, swimming and boat building.”<sup>152</sup>

<sup>143</sup> In 1958, a second Christchurch unit, TS Cornwall, was formed and merged with TS Steadfast to form TS Godley (as a result of the Christchurch earthquakes).

<sup>144</sup> <http://lytteltonharbourjetties.blogspot.com/2019/06/cass-baymotukauatirahi.html>

<sup>145</sup> <http://lytteltonharbourjetties.blogspot.com/2019/06/cass-baymotukauatirahi.html>

<sup>146</sup> <http://lytteltonharbourjetties.blogspot.com/2019/06/cass-baymotukauatirahi.html>

<sup>147</sup> ‘Cass Bay Building Approved’, TS Steadfast Archives, The Star, 1968

<sup>148</sup> Pers. Comm., M. Adamski/W. Hoddinott, December 2021

<sup>149</sup> Newspaper article dated January 1949 in TS Steadfast Archives, Book No. 1, p.9

<sup>150</sup> The Christchurch Star, February 19, 1968, p14

<sup>151</sup> Lyttelton Review, May 2020, Issue 255, p6

<sup>152</sup> The Christchurch Star, February 19, 1968, p14



Figure 40: Early recruitment flyer for the Sea Cadet Corps  
Source: TS Steadfast Archives to 1954, p100.

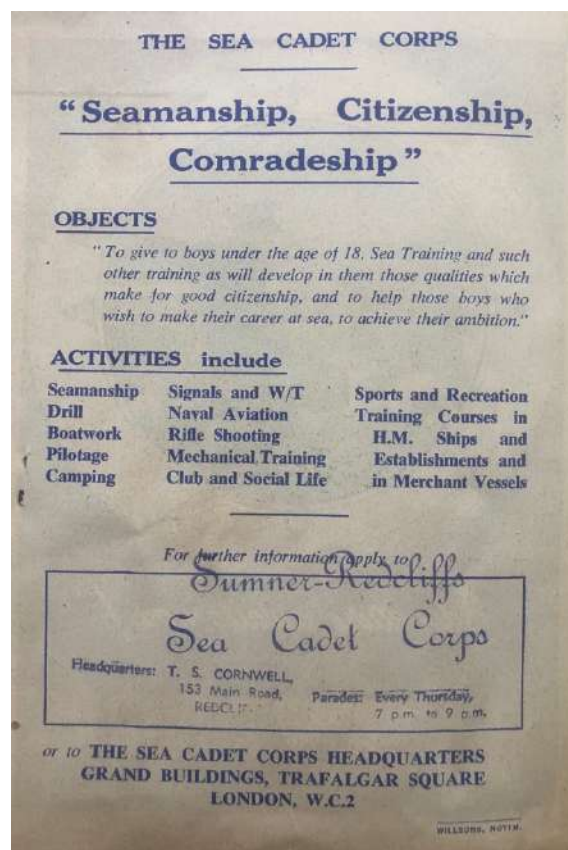


Figure 41: Early flyer identifying the activities available to Sea Cadets.  
Source: TS Steadfast Archives to 1954.



Figure 42: Boatwork and Seamanship were part of the practical training of the Navy League Sea Cadets. RNZN boatshed is in the background, c.1968  
Source: TS Steadfast Archives, 1954-1994.



Figure 43: Navy League Sea Cadet Sports Day, c. 1968  
Source: TS Steadfast Archives, 1954-1994.





Figure 44: View towards Steadfast c.1968. The mast is in its original location, east of the stream.  
Source: TS Steadfast Archives, 1954-1994.



Figure 45: TS Steadfast cadets and firefighting practice on Steadfast site. The laboratory can be seen in the background.  
Source: TS Steadfast Archives, 1954-1994.

Eventually open to girls and young women, the navy league sea cadets offered training and leadership for young people between the ages of thirteen and eighteen, interested in developing maritime and life skills.<sup>153</sup> Among the various training and camp activities enjoyed by cadets since the 1940s (e.g. boatwork, seamanship, firefighting, signalling, musketry and camps), the unit performed site maintenance tasks during their association with the place.<sup>154</sup> Periodic detention workers have been engaged since the 1980s to carry out site maintenance tasks including native planting along the Governors Bay Road boundary and soil relocation from north of the Drill Hall to level the bank opposite the road adjacent to the stream. As the native vegetation along the road boundary began to screen the TS Steadfast signage, the cadets erected a new sign in its current position inside the gate alongside the main driveway (2006-7).<sup>155</sup> The local padre started the tradition of painting stones white which continues with the sea cadet corps today.

After the February 2011 earthquakes, TS Cornwall's buildings were damaged and eventually demolished so the two units were amalgamated. Several site features from TS Cornwall were brought to the Steadfast site and installed between the stream and the west entrance road including a mine, an anchor, a bell and a 7-inch, 7-ton gun barrel.<sup>156</sup> The gun was originally located at the Officers' Point emplacement (Timeball Station site) during the late 1800s, and soon after moved to Erskine Point (above the Torpedo Museum) before decommissioning in c.1904.<sup>157</sup> In 1934 the gun was scrapped and the barrel rescued by the Redcliff Sea Cadets. It was located outside TS Cornwall headquarters on the main road until being relocated at Steadfast as part of the amalgamation of the two units.<sup>158</sup> The mine sits atop what was an artesian water well.<sup>159</sup>

<sup>153</sup> Lyttelton Review, May 2020, Issue 255, p6

<sup>154</sup> TS Steadfast Archives

<sup>155</sup> Pers. Comm. C. Nee/W. Hoddinott, 29 September 2021

<sup>156</sup> Pers. Comm. C. Nee/W. Hoddinott, 29 September 2021

<sup>157</sup> <https://districtplan.ccc.govt.nz/Images/DistrictPlanImages/Statement%20of%20Significance/Banks%20Peninsula/HID%201136.pdf>

<sup>158</sup> <https://districtplan.ccc.govt.nz/Images/DistrictPlanImages/Statement%20of%20Significance/Banks%20Peninsula/HID%201136.pdf>

<sup>159</sup> Pers. Comm. C Nee/W. Hoddinott, 17 December 2021



Figure 46: TS Steadfast cadets replace signage along the front boundary fenceline, prior to roadside planting) c.1980s.  
Source: TS Steadfast Archives, 1954-1994.



Figure 47: New signage in place along the front boundary, c.1980s.  
Source: TS Steadfast Archives, 1954-1994.

#### 2.1.6.2 From DSIR to the Department of Labour 1979 – 1990

In 1979 the land and buildings were transferred from the DSIR to the Department of Lands and Survey. Soon after, the Department of Labour advised that it required the property for use as an explosives storage depot. While funding took time to secure, transfer of control to Department of Labour was made on 1 December 1980 at the “current market value” of \$75,500.<sup>160</sup> On 27 May 1982 the Minister of Works and Development altered the site’s designation from ‘Department of Scientific and Industrial Research for an Ionosphere Station’ to the ‘Department of Labour Magazine (Explosives and Dangerous Goods Storage and Disposal) and Protection Area’. The conditions included locating an internal fence of similar construction to the perimeter fencing of the site uphill of Magazine 10, with a lockable gate on the vehicular access. Vehicular access to all storage facilities were also to be upgraded to provide safe vehicular access and shaped to facilitate the disposal of stormwater runoff via water tables and culverts to the watercourse running through the property. It was also suggested that eroded areas be planted.<sup>161</sup> The gazette notice was finally issued on 2 June 1983.<sup>162</sup> Grazing continued into the 1980s leased by two local farmers, Messrs Porteous and Cunningham. No rental was required but the gentlemen were responsible for a portion of the rates.<sup>163</sup>

In January 1980, ten tonnes of high explosive in magazine 8 was blown up by thieves who broke into the site. The *Press* report refers to the site as an “ammunition dump” and describes at least three of the magazines as being “packed with explosives”.<sup>164</sup> As noted above, this does not accord with statements made in the *Lyttelton Review* that the site had been cleared of munitions in 1967;<sup>165</sup> and indicates that either the report was incorrect, or that new munitions were brought to the site for storage between 1967 and 1980.

<sup>160</sup> Letter from District Property Office to District Commission of Works, 18 December 1980, Archives NZ Christchurch, R631020 – CH889 – 2/78/132 – Royal New Zealand Navy Armament Depot – Cass Bay – 1962-90

<sup>161</sup> Letter from Lyttelton Borough Council to Ministry of Works, 27 May 1982, Archives NZ Christchurch, R631020 – CH889 – 2/78/132 – Royal New Zealand Navy Armament Depot – Cass Bay – 1962-90

<sup>162</sup> NZ Gazette, 2 June 1983, No. 76, p1725.

<sup>163</sup> Memo from Secretary of Labour Wellington to District Commissioner of Works, 17 Apr. 1980, Archives NZ Christchurch, R631020 – CH889 – 2/78/132 – Royal New Zealand Navy Armament Depot – Cass Bay – 1962-90

<sup>164</sup> Burglars trigger ‘atom blast’, TS Steadfast Archives, The Press, 7<sup>th</sup> January 1980

<sup>165</sup> Lyttelton Review, May 2020





Figure 48: A 1980 article describing the destruction of one of the ammunition/magazine stores.  
Source: TS Steadfast Archives.



Figure 49: Ammunition store 8 prior to the explosion, c.1980.  
Source: CCL-StarP-05135A



Figure 50: Ammunition store 8 after to the explosion, 1980.  
Source: CCL-StarP-05136A



Figure 51: Refurbishment of the access road by RNZ Army Engineers, c.1980s.  
Source: TS Steadfast Archives, 1994-



Figure 52: Ammunition stores access road and original power poles which still appear to be in place, c.1980s.  
Source: TS Steadfast Archives, 1994-

In June 1984 Lyttelton Borough Council expressed concern to the Department of Labour regarding holes in the security fence and that the gates were often left open or easily crossed. More concerning given the insecure perimeter fencing was that magazine 9 (in the lower part of the site) was being used for explosive storage, which was counter to Council conditions. Discussions were ongoing and requests made that security be improved.<sup>166</sup>

1989 records show HMNZS Steadfast was still being grazed by Mr B.M. Porteous living on Governors Bay Road in Cass Bay who was offered to continue his lease of the land. The terms and conditions were that he would be responsible for fencing within the site boundary, the maintenance of fencing and water supply and the control of noxious weeds and pests.<sup>167</sup>

### 2.1.7 Post World War Two - Residential Development and Recreation Reserves

In December 1945, after the delays of WWII, subdivision plans for Cass Bay re-emerged, with the Press noting that “authority will be sought from the Government to subdivide council land at Cass Bay into residential sections on modern town-planning lines.”<sup>168</sup> It wasn’t until 1965 and after the completion of the Lyttelton Road tunnel, that the first 76 sections appeared on the market (Figure 53). The Press suggested that this could be the beginning of “major seaside housing development around the harbour.”<sup>169</sup> The Cass Bay Residents Association formed in the 1960s and has been an active presence in the community since this time.<sup>170</sup> Aerial images show that the public abattoir was still on site in 1973 (Figure 70), but had been removed by 1980 (Figure 72).



Figure 53: Sale plan for Cass Bay with asking prices, Lyttelton Harbour, c.1965.  
Source: Canterbury Museum, CMU1418.

<sup>166</sup> Letter from G.T. Broker, Lyttelton Borough Council to Department of Labour, 21 June 1984, Archives NZ Christchurch, R631020 – CH889 – 2/78/132 – Royal New Zealand Navy Armament Depot – Cass Bay – 1962-90

<sup>167</sup> Letter to the Area Manager Occupational Safety and Health (sender’s name missing), 6 July 1989, Archives NZ Christchurch, R631020 – CH889 – 23/78/132 – Royal New Zealand Navy Armament Depot – Cass Bay – 1962-90

<sup>168</sup> Press, Vol. LXXXI, Issue 24761, 29 December 1945, p4

<sup>169</sup> Press, 10 November 1965

<sup>170</sup> Pers. Comm. J. Healey/W. Hoddinott, 18 October 2021





*Figure 54: The new road built for the proposed subdivision to Cass Bay, with the HMNZS Steadfast site at the bottom right of the image (1965).*

*Source: VC Browne and Son, 6808-6823.*

In 1999, before Banks Peninsula District Council's (BPDC) amalgamation with Christchurch City Council in March 2006, the BPDC purchased the Steadfast site using funds from their Reserves Development Account.<sup>171</sup> Extensive consultation was carried out with communities from Lyttelton to Little River, identifying that Cass Bay residents were keen to see more walking tracks linked to Lyttelton, the foreshore and the Summit Road and a facility for a play group and community activities.<sup>172</sup> The intent of the purchase was to complement other Council owned reserves in the Bay, using the lower part of the site as a community and recreational facility for Cass Bay residents.<sup>173</sup> Surveyors were engaged to subdivide the upper part of the land into two lifestyle blocks and a new sealed road was constructed over the military road to the two proposed house sites.<sup>174</sup> Electrical, telephone, water and sewage services were also

<sup>171</sup> Lyttelton Review, May 2020, Issue 255, p6

<sup>172</sup> Lyttelton Review, May 2020, Issue 255, p6

<sup>173</sup> Lyttelton Review, May 2020, Issue 255, p8

<sup>174</sup> Lyttelton Review, May 2020, Issue 255, p8

installed. A 2004 aerial shows no new road surface on the site, but by 2006 the road is in place (Figure 74). As a result of the proposed subdivision, land and buildings available to the Sea Cadets were reduced to the area west of the stream (below the internal fence line).<sup>175</sup> Accordingly, the cadets relocated their parade ground to the lawn west of the stream and secured the mast and flagpole onto the gun turret east of the Garage. In anticipation of the proposed subdivision a Heritage Covenant was prepared in 2005 between New Zealand Historic Places Trust (NZHPT) and Banks Peninsula District Council. The covenant contained a diagrammatic layout of the buildings and structures with heritage significance, including a dam located above the reservoirs (Figure 55).<sup>176</sup>

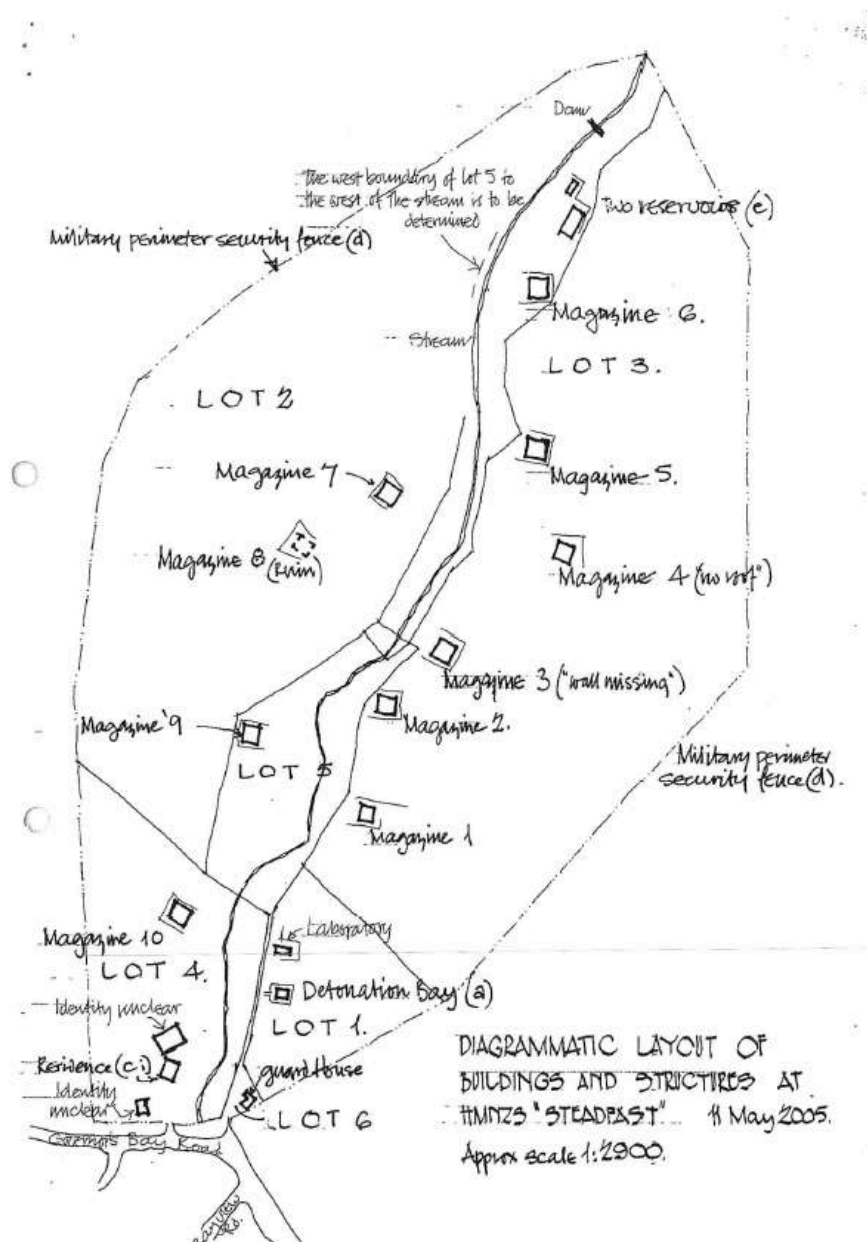


Figure 55: Diagrammatic layout of buildings and structures containing heritage significance at HMNZS Steadfast. The plan was prepared by NZHPT ahead of the proposed subdivision as part of a Heritage Covenant between Banks Peninsula District Council and NZHPT. Source: CCC Heritage Files.

<sup>175</sup> Pers. Comm. C. Nee/W. Hoddinott, 29 September 2021

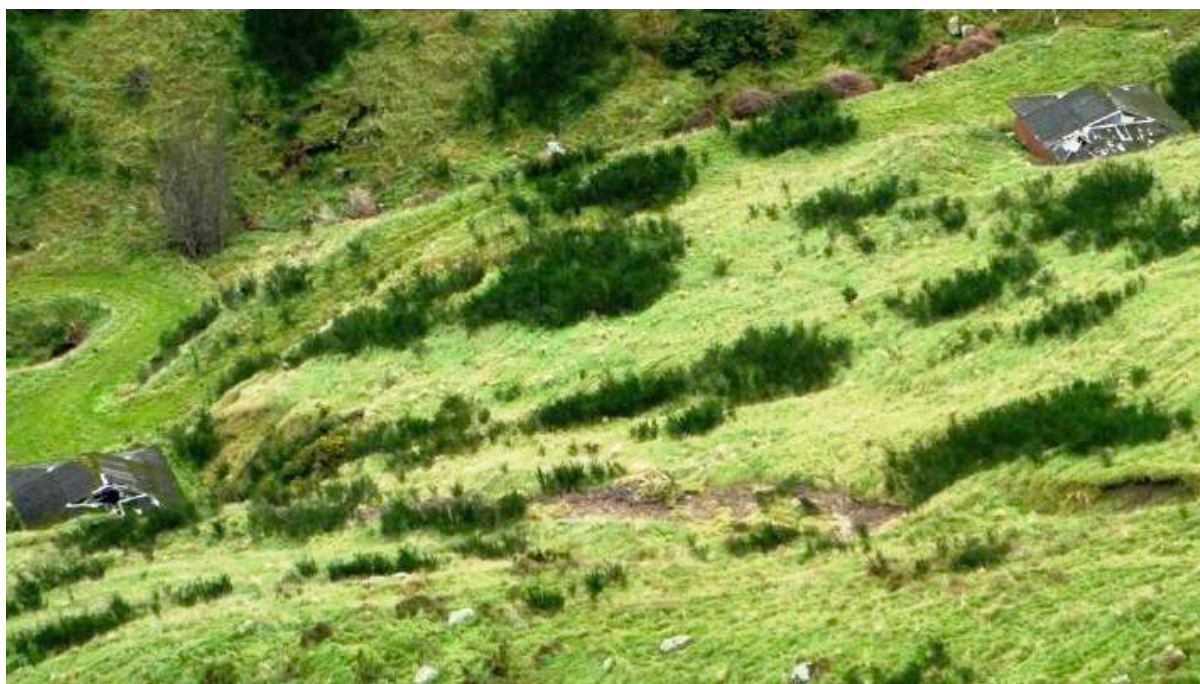
<sup>176</sup> Correspondence between Jim Espie, Conservation Architect for HPTNZ and Kathy Jarden, Property Officer at Banks Peninsula District Council, 2 May 2005, CCC Heritage Files.

However the subdivision never occurred and the covenant never registered.<sup>177</sup> Following amalgamation the buildings continued to be used as they were previously, by TS Steadfast and the Cass Bay Residents. There was no formal tenure.

#### *2.1.7.1 The 2010/2011 Canterbury Earthquakes and Their Impact on HMNZS Steadfast*

The 22 February 2011 earthquake was just a few kilometres east of Cass Bay and while it registered 6.3 on the Richter scale, the peak ground acceleration was one of the greatest ever recorded. The shallow depth of the earthquake and proximity to the epicentre impacted the area dramatically and many boulders were thrown from their positions along the ridgeline, breaching the site's perimeter fences bordering Whakaraupō Reserve. Several of the ammunition store buildings were penetrated by large rocks, leaving large holes in their walls and roofs. The site was closed and the Sea Cadets returned approximately two years later.

An Initial Rockfall Hazard Assessment of the Steadfast site was carried out by URS on 15 May 2014, to determine potential rockfall source areas that could affect the Steadfast site, particularly the mid to lower slopes where Christchurch City Council were keen to carry out maintenance. Aerial images taken after both the 22 February 2011 and 13 June 2011 earthquakes show that both events initiated substantial rockfall from the steep slopes above, particularly from the south side of Te Moenga-o-Wheke/The Tors Reserve. Many boulders came to rest near the valley floor within the Steadfast boundary.<sup>178</sup>



*Figure 56: Rockfall damage to the ammunition stores. Fallen boulders can be seen on the slopes in the foreground and in the valley floor in the background.*

*Source: J. Dykstra, URS, 2014.*

The report concluded that the greatest risk to individuals was from “rockfall originating directly upslope, or within an approximately 30 degree cone centred along the “fall line” above them.<sup>179</sup> The authors recommendations were to limit time spent in the upper slopes, minimise time spent in or near the main valley bottom, local gullies, slopes directly below bluffs and slopes on the upper northwest part of the

<sup>177</sup> Pers. Comm. M. Adamski/W. Hoddinott, December 2021

<sup>178</sup> J. Dykstra and D. Macfarlane, URS (2014). HMNZS Steadfast Reserve – Initial Rockfall Hazard Assessment, 17 July

<sup>179</sup> J. Dykstra and D. Macfarlane URS (2014). HMNZS Steadfast Reserve – Initial Rockfall Hazard Assessment, 17 July



catchment, and to avoid the area completely during and after potential trigger events of heavy rainfall and moderate to strong ground shaking.<sup>180</sup> Signage was also recommended to ensure public awareness of high rockfall risk in the area.

A 2015 map produced by Aecom identified High, Medium and Low Hazard Rockfall Zones within Steadfast and a potential new route through the centre of the site. A 'No Stopping' Zone was also identified within the site (Figure 57). In 2016, a Geotechnical Engineer and Council staff member surveyed the hillside and remediated some rockfall source zones to allow the new track to be built connecting the valley with the Crater Rim Walkway (Figure 58).<sup>181</sup>

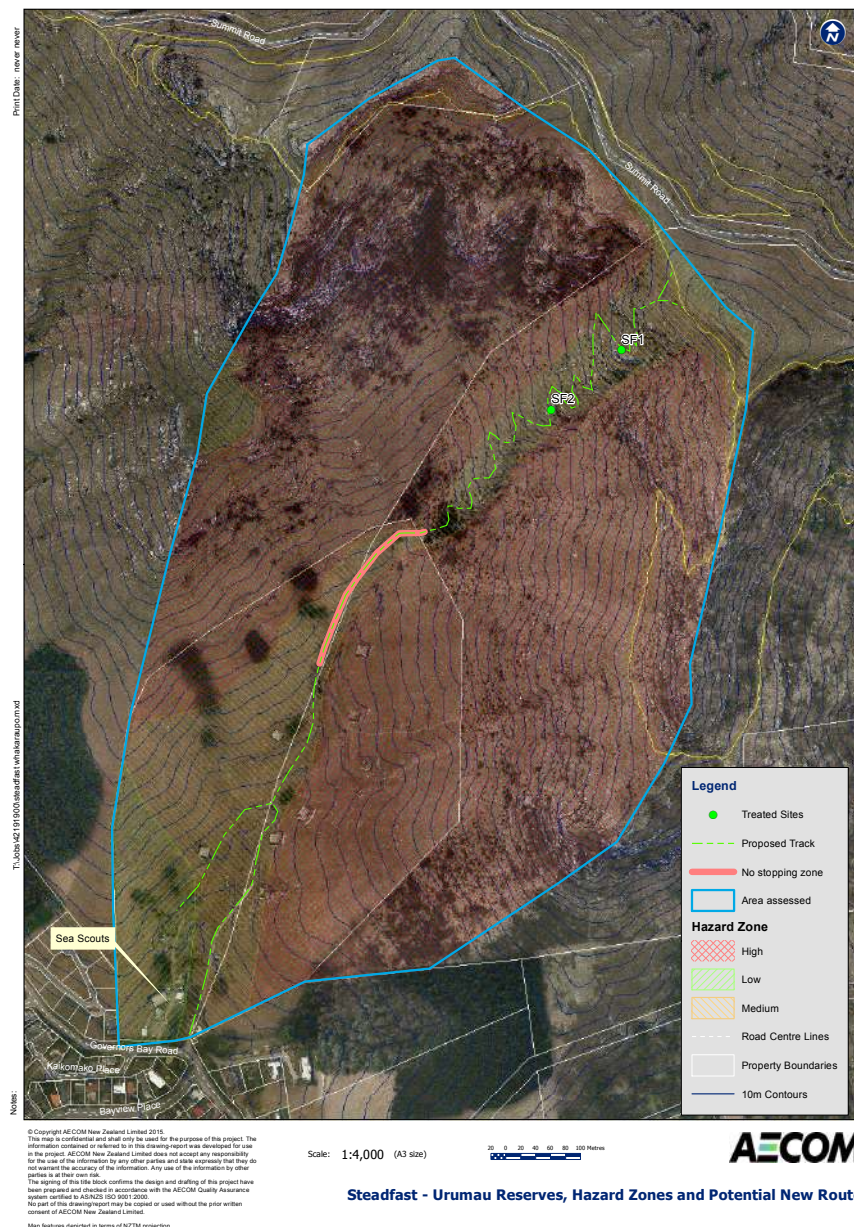


Figure 57: Steadfast to Whakaraupō Reserve - Hazard Zones and Potential New Route.  
Source: Aecom, 2015.

<sup>180</sup> Letter to M. McCallum, Project Manager, Christchurch City Council from J. Dykstra and D. Macfarlane from URS. HMNZS Steadfast Reserve – Initial Rockfall Hazard Assessment, 17 July 2014.

<sup>181</sup> Pers. Comm. M. Adamski/N. Singleton, email dated 6 December 2021.

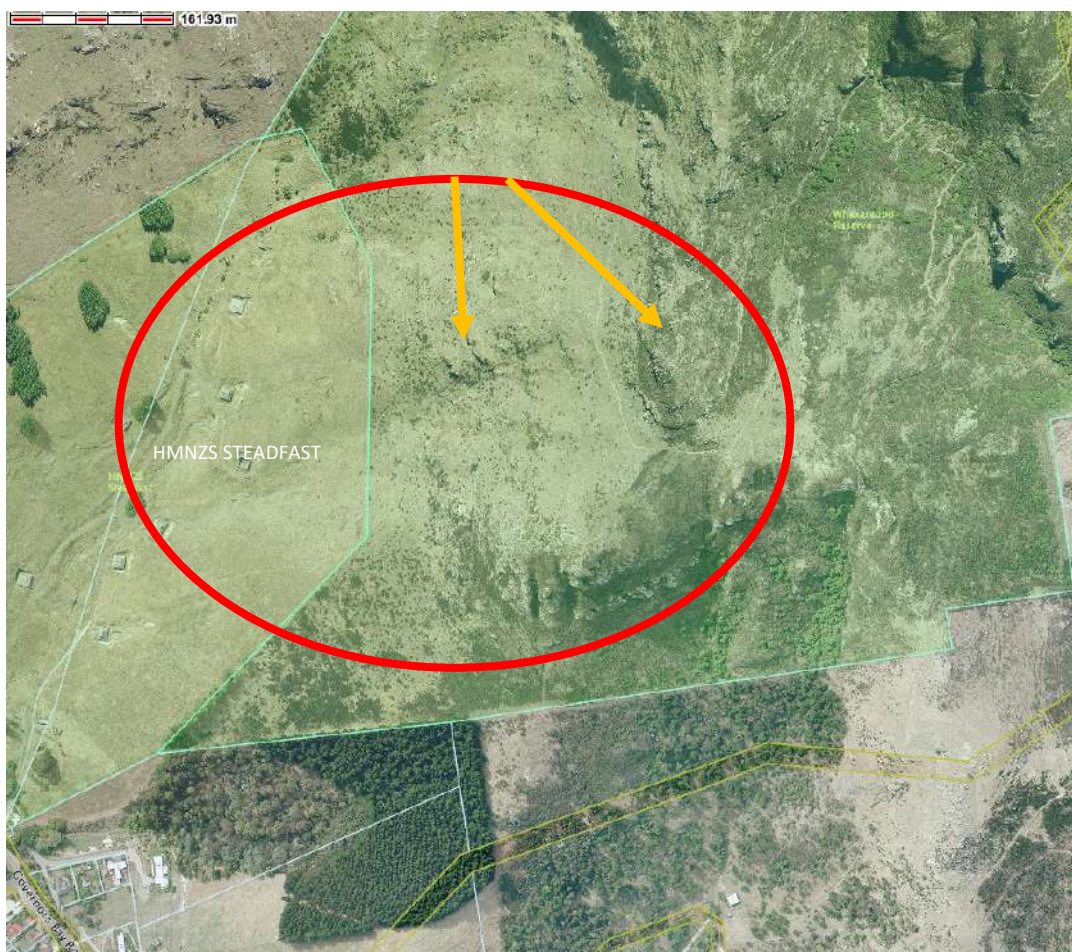


Figure 58: In 2016, a Geotechnical Engineer and Council staff member surveyed the hillside and remediated some rockfall source zones to allow the new track to be built connecting the valley with the Crater Rim Walkway.  
Source: N. Singleton, 2021.

#### 2.1.7.2 Recreation Reserves and Ecology of the Site

Whakaraupō Reserve (87 ha) sits immediately east of Steadfast, and The Tors Scenic Reserve (5.3 ha) is located immediately above. Whakaraupō Reserve has been closed since the earthquakes. These reserves are linked to other Council and Department of Conservation reserves further afield through the Crater Rim Walkway, the Christchurch 360 Trail and the Summit Road. Smaller coastal reserves extend around the foreshore and are linked to similar reserves in Corsair Bay and Lyttelton by the Head to Head Coastal Walkway. Corsair Bay Reserve extends into Cass Bay at the edge of residential development, connecting with Cass Bay Walkway Reserve and a pedestrian link to Cass Bay Place. Here, Cass Bay Playground Reserve is connected on two sides with Ōtūherekio Reserve/Pony Point which wraps around the Ōtūherekio headland.<sup>182</sup> The 2007 *Banks Peninsula Landscape Study* noted that the headland around Cass and Corsair Bay were people's favourite places on the peninsula. The landscape within the Steadfast enclosure is maintained and managed by the Sea Cadet Unit TS Godley and the Royal New Zealand Naval Volunteer Reserve.

No ecological study has been undertaken for the site. However a 2018 fish survey report found that where stream reaches in Cass Bay were in natural condition, with pools and boulders, considerable numbers of banded kōkopu were found. Banded kōkopu are not considered threatened nationally but are rare in Canterbury and the authors noted that substantial improvement could be made to the habitat in the Cass

<sup>182</sup> Smith, P. and Grimwood, S., 2018



Bay streams.<sup>183</sup> Since August 2020, a stream planting project at HMNZS Steadfast has been working to help deliver the outcomes of the Whaka-Ora Healthy Harbour Catchment Management Plan which includes improving habitat for such species.<sup>184</sup> The planting initiative is a collaboration between Christchurch City Council, Environment Canterbury, Te Hapū o Ngāti Wheke, Te Rūnunga o Ngāi Tahu, Lyttelton Port Company and the Lyttelton Harbour communities. In 2020 the local community planted over 2,000 locally sourced seedlings alongside the lowest section of the stream on the site.<sup>185</sup> In 2021, stage two was completed with another 3000 seedlings planted further upstream. Stage three will occur in 2022 and extend to the top of the stream within the Steadfast site. Once established, the aim is that these plants will eventually provide shelter to increase biodiversity, reduce sedimentation into the harbour and encourage the natural regeneration of other native plant species. Several community organisations have an interest in this project and are involved in regular watering and maintenance including the Navy Cadets, Cass Bay Reserves and Management Committee, Cass Bay Residents Association, the Whaka-Ora Community Advisory Group and Conservation Volunteers New Zealand.<sup>186</sup>



*Figure 59: Streamside planting project at HMNZS Steadfast, August 2021. The project is an part of the Whaka-Ora Healthy Harbour initiative and over 5,000 locally sourced seedlings have been planted since 2020.*

*Source: <https://www.healthyharbour.org.nz/news/cass-bay-planting-day-a-success-despite-weather/>*

Since amalgamation the Sea Cadets have made a number of attempts to secure formal tenure, to provide security and justify their investment in the buildings. Discussions with the Council Parks Unit in 2019 led to a proposal that the buildings be gifted to the Sea Cadets with a grounds lease. The proposal was publicly notified, leading to a request from the community that a development plan for the site be prepared before decision on the future of the buildings.

Early in 2021, a draft landscape plan was developed for the HMNZS Steadfast site with the aim to “ensure ongoing community access to the park and buildings, including new Council use agreements with longstanding occupant TS Godley.”<sup>187</sup> Consultation on the draft plan closed on 10 May 2021 with staff considering feedback and final changes before approval by the Te Pātaka o Rākaihautū/Banks Peninsula Community Board later in 2021. The Cass Bay Residents Association have requested a Māori name for the site and that it be formally gazetted as a reserve.<sup>188</sup> This Landscape History and Conservation Report is one of the short-medium term actions undertaken before implementation of the draft landscape plan (Appendix 4).

<sup>183</sup> Email correspondence from Duncan Gray to Katie Noakes, 23 October 2019

<sup>184</sup> The outcomes of the initiative are to reduce sedimentation in Whakaraupō-Lyttelton Harbour and at the same time improve biodiversity and habitat for indigenous species

<sup>185</sup> Pers. Comm. J. Healey/W. Hoddinott, 19 October 2021

<sup>186</sup> <https://healthyharbour.org.nz/news/whaka-ora-plans-native-planting-for-steadfast/>

<sup>187</sup> <https://ccc.govt.nz/the-council/haveyoursay/show/402>

<sup>188</sup> <https://ccc.govt.nz/the-council/haveyoursay/show/402>

At its meeting on Monday 6 December, Te Pātaka o Rākaihautū Banks Peninsula Community Board resolved to:

1. Approve the HMNZS Steadfast Reserve Landscape Plan and Tracks plan 2021 as shown in Attachments A & B of the agenda for the meeting;
2. Request that staff investigate and report back to the Board on the submitted suggestions relating to a Te Reo Māori name for the park, along with information on the existing name; and
3. Request that staff investigate and report back to the Banks Peninsula Community Board on the submitted suggestions for gazetting the land as reserve.



*Figure 60: Streamside planting project at HMNZS Steadfast, 2021.*



### 2.1.8 Comparative Analysis – Munitions Storage Facilities

When the threat of WWII to New Zealand became clear in 1941 and 1942 with German and Japanese naval raiders venturing into southern hemisphere waters, several defence sites were rapidly established across the country. These took a range of forms and purposes, including:

- Camps and bases, used for the housing and basic training of troops
- Training areas, used for the large-scale training operations simulating real-world situations
- Storage facilities, used to store ammunitions and other weaponry/materials
- Forts and batteries, used as strategic outposts for surveillance of approaching enemy vessels with active artillery

The HMNZS Steadfast site can be categorised as a storage site – one of many built across the country in the early 1940's, placed strategically so that the ammunition could easily be transported to a port when required. As a naval armament depot, the Cass Bay site stored ammunitions for use by the RNZN.

Storage sites usually feature a number of simple heavy-duty utilitarian buildings built from brick or concrete to withstand accidental explosions from the interior, and damage from the exterior which would detonate the ammunitions within. The structures would be spaced out to prevent chain reaction explosions, and hidden in the folds of the landscape where possible. Other sites and structures similar to the Cass Bay Naval Armament Depot, now the TS Steadfast site, are described below.

#### 2.1.8.1 Belmont Magazines, Wellington

More than 60 structures used for storing munitions made up the "Belmont magazines" on farmland in the western hills of Lower Hutt, all built between 1942 and 1944.<sup>189</sup> Of the 355,000 budget allocated to building ammunition accommodation across the country in 1941, \$200,000 of the funds went towards the Belmont site which covered 32 acres.<sup>190</sup>



Figure 61: Belmont magazine stores, Wellington.  
Source: Peter Hodge



Figure 62: Belmont magazine store, Wellington.  
Source: Stuff.co.nz

<sup>189</sup> <https://www.stuff.co.nz/national/last-post-first-light/106280391/explosive-shell-found-by-kids-was-likely-missed-during-wwii-pack-up-historian-says>

<sup>190</sup> Belmont Regional Park History

### 2.1.8.2 Bunker Hill Former Magazine Store, Ngāruawāhia

The red brick munitions storage depots at Bunker Hill were built between 1938 and 1945 a short distance away from the Hopuhopu Army Camp to handle the vast amounts of artillery shells and gun casings that were being housed before being sent up to Auckland by rail and truck, and then onwards by sea to the various theatres of war where Kiwi troops were fighting.<sup>191</sup>



Figure 63: Former military defence magazine store, Ngāruawāhia.  
Source: Stuff.co.nz



Figure 64: Former military defence magazine store, Ngāruawāhia.  
Source: Stuff.co.nz

### 2.1.8.3 Former Magazine Stores, Alexandra

Selected by army officers in October 1942, the Letts Gully armament depot was on a gravel ridge 3.2km northeast of Alexandra, away from any centre of population, but within 4.8km of the railway station.<sup>192</sup> The depot had a series of nine ammunition stores built in 1943 and a laboratory, much like the Cass Bay depot, for checking that stored ammunitions were not deteriorating.<sup>193</sup> Twenty men guarded the complex and lived on site in cottages. The compound also included a kitchen, mess-room, showers, and a water supply drawn from the Manuherikia irrigation race.<sup>194</sup>



Figure 65: Former military defence magazine store, Alexandra.  
Source: Otago Daily Times



Figure 66: Former military defence magazine store, Alexandra.  
Source: Stuff.co.nz

<sup>191</sup> <https://www.stuff.co.nz/life-style/homed/latest/117320154/waikato-war-bunker-site-for-sale-with-explosives-warning>

<sup>192</sup> <https://www.odt.co.nz/lifestyle/home-garden/ammunition-cosy-transition>

<sup>193</sup> <https://www.odt.co.nz/lifestyle/home-garden/ammunition-cosy-transition>

<sup>194</sup> <https://www.odt.co.nz/lifestyle/home-garden/ammunition-cosy-transition>

## 2.2. Chronological Summary

The table below provides a timeline of key events relating to HMNZS Steadfast and Motukauatirahi-Cass Bay.

Table 2: Chronology of Events

PERIOD	EVENT
From c.1200	Māori settlement of Te Pataka o Rakaihautū/Banks Peninsula by Waitaha and successive migrations of Ngāti Māmoe and Ngāi Tahu
1809	Captain Chase in his ship the <i>Pegasus</i> is the first European to sail into Lyttelton Harbour
1815	First Europeans set foot on Banks Peninsula
1827	Lyttelton Harbour is known as Port Cooper, named by flax trader Captain William Wiseman after his Sydney employer
1835	Large influx of British and American whaling ships are using Port Cooper (Lyttelton Harbour)
1838	Captain J-B Cécille makes the first survey and chart of Whakaraupō-Lyttelton Harbour aboard his ship <i>Héroïne</i>
1841	December. Thomas Cass first arrives in New Zealand as a surveyor for the New Zealand Company
1848	The Canterbury Association forms and Cass is hired as assistant to Captain Joseph Thomas 'Kemps Deed' is signed by sixteen Ngāi Tahu chiefs, selling a large part of the South Island Canterbury Association sends Captain Joseph Thomas to select and survey a site for the new settlement. Thomas Cass and Charles Torlesse assist. Thomas Cass charts Port Cooper and in July the group set up camp in Cass Bay
1849	Rāpaki Native Reserve 875 is set aside as part of the Port Cooper Purchase The site of Christchurch is located on the Canterbury Plains after initial intention at the head of the harbour and Port Lyttelton at Rāpaki The name of Lyttelton Harbour changed from Port Cooper to Port Victoria
1850	Reverend Edward Puckle arrives in Lyttelton having pre-purchased land in Cass Bay
1851	Butcher George Hunt is listed as working in Cass Bay
1856	Eli Salt of 'Cass's Bay Run' advertises pasture for cows and calves
1852	Puckle advertises 50 acres of freehold land in Cass Bay 'with or without 500 acres of adjoining pasturage'
1860	R.M. Morten begins purchasing land in Cass Bay
1865	Puckle sells sections 268 and 483 to the Crown
1870 - 1878	John Webb runs a dairy farm in Cass Bay
1876 - 1878	Slaughterhouse renewals requested by Garforth and Lee
1892	Lyttelton Martini-Henry Rifle Club opens rifle range at Cass Bay on R.M Morten's land
1883	Warm volcanic springs discovered at Motukauatirahi-Cass Bay by Geologist R.M. Laing
1884	Christs College annual swimming races are held in Cass Bay
1889	A major bush fire spreads across Rāpaki, Cass, Corsair and Dampier Bays
1892	Lyttelton Martini-Henry Rifle Club opens rifle range at Cass Bay on land belonging to R.M Morten
1901	May. Lyttelton Borough Council purchases the abattoir site and 55 acres of surrounding land from R.M. Morten
1902	Public abattoir built
1909	August. R.M Morten dies
1910	Survey commissioned for the attorneys of Morten's estate

	600 acres of Morten's land in five subdivisions is sold to Miss Wallis and Messrs Wallis
1929	TS Steadfast, the first New Zealand Navy League Sea Cadet Unit is established in Christchurch
1935	Lyttelton Borough Council announces intention to remove municipal abattoir
1939	World War Two breaks out. All housing and boat harbour development put on hold
1945	February. Portion of Cass Bay surveyed and set aside for defence purposes. Gazette notice issued. Armament depot initially built for the British Pacific Fleet
	Cass Bay Armament Depot is closed and recommissioned as an armament depot
	Tenders issued to lease the 59 acres of grazing land at the depot
	December. Subdivision in Cass Bay announced by Lyttelton Borough Council
1949	Ministry of Works invite tenders to convert the army huts into living quarters
1950	Cass Bay Armament Depot is 're-activated'
1955	Larrikins are reported rolling boulders down the hill onto the depot for fun
1955-1956	Tenders for top course and tar sealing issued
1958	Breakaway sea cadet unit <i>TS Cornwall</i> establishes at Sumner and Redcliffs
1956-1957	Shipwright Shop building at HMNZS Tasman is dismantled and re-erected at Cass Bay Naval Armament Depot to serve as a garage
1959	1100 trees reported on Steadfast (for aesthetics, camouflage and anti-erosion)
1959-1961	Detonation chamber under construction
1964	Lyttelton Road Tunnel opens
	Lyttelton Borough Council closes public abattoir in Cass Bay
1965	October. Defence area is set aside for government buildings. Gazette notice issued
	TS Steadfast gain permission to use the government buildings and grounds at Cass Bay
	First 76 sections appear on the market for Cass Bay subdivision, 20 years after the Council's initial announcement
1980	Ammunition store (magazine) no. 8 explodes
1998	Ablutions block constructed on the site
1999	Banks Peninsula District Council purchases Steadfast site
c.2005	Surveyors engaged to subdivide upper part of the land on eastern side of the stream into 2 lifestyle blocks
	New sealed road constructed on east gate access road with electrical, telephone, water and sewage services are installed
2006	March. Banks Peninsula District Council amalgamates with Christchurch City Council
2006/7	Sea Cadets erect new sign inside the gate as native vegetation begins to cover existing signage on Governors Bay Road boundary fence
2011	February. Canterbury earthquakes cause rockfall into Cass Bay and Steadfast site
	TS Steadfast and TS Cornwall merge to become TS Godley
2013	June. Strong aftershocks initiate rockfall into Cass Bay
	Amalgamation of Navy League Sea Cadet Units <i>TS Steadfast</i> and <i>TS Cornwall</i> to form <i>TS Godley</i>
2018	Ecology report discovers banded kokopu in stream that flows through Steadfast
2020	July. Whaka-Ora Healthy Harbour Ki Uta Ki Tai Stream Planting Project – local community groups plant 2,000 native seedlings
2021	August. Stage two of the Steadfast Stream Planting Project – local community plant 3,000 native seedlings



### 2.3. Aerial Chronology

The following images depict an aerial history of the HMNZS Steadfast landscape over time and are to be read alongside Table 2: Chronology of Events.

1925



Figure 67: Aerial of Motukauatirahi-Cass Bay and the abattoir site (indicated) in 1925, prior to development of the naval armament depot.  
Source: Canterbury Maps, 2021.

1941



Figure 68: Motukauatirahi-Cass Bay 1941, prior to development of the naval armament depot.  
Source: <http://retrolens.nz> and licenced by LINZ CC-BY 3.0

1961



Figure 69: Motukauatirahi-Cass Bay and the naval armament depot, 1961. The detonation chamber appears to be under construction (indicated) and all ammunition stores intact. Source: SN 3152/27, <http://retrolens.nz> and licenced by LINZ CC-BY 3.0.

1973

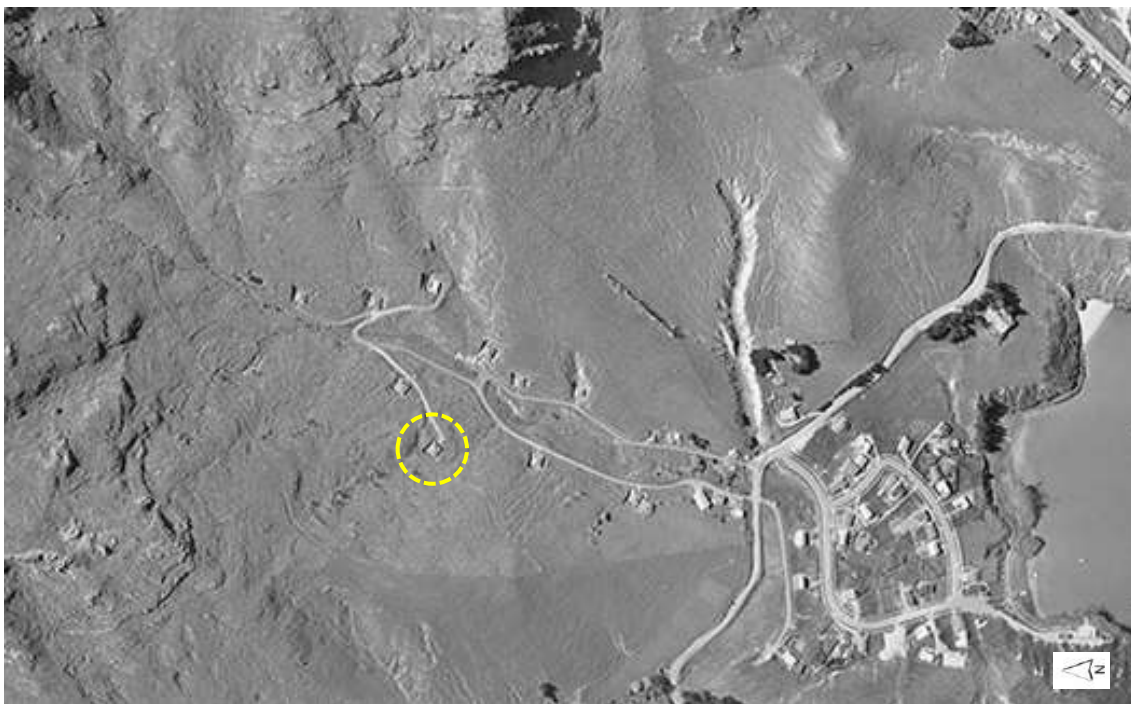


Figure 70: Motukauatirahi-Cass Bay and the naval armament depot 1973. Ammunition store #8 is still intact (indicated). Source: SN 2634, M/45, <http://retrolens.nz> and licenced by LINZ CC-BY 3.0



1970-1974



Figure 71: Cropped view of grounds around the administration buildings at the naval armament depot, 1970-74. Note the driveway east of the Store (former garage). Landscaped terraces (with stone retaining walls) can be seen in the lower part of the site alongside the stream and two pedestrian bridges (B) with a pathway enabling access across the stream. Other elements include the mast/flagpole (M) and RNZN parade grounds (P) located in their original positions east of the stream and the turret (T) which was a mounting structure on which a gun was located.

Source: LINZ, Canterbury Maps, Historical Imagery, 2021.

1980-1984



Figure 72: Motukauatirahi-Cass Bay and the naval armament depot 1980-84. After the explosion of ammunition store #8 (indicated).  
Source: Canterbury Maps, 2021.

1990 - 1994



Figure 73: Motukauatirahi-Cass Bay and the naval armament depot 1990-94.  
Source: Canterbury Maps, 2021.



2006



Figure 74: Motukauatirahi-Cass Bay and the naval armament depot 2006. The newly sealed road for the proposed subdivision (part of the original military road) is in place (indicated). The sea cadets are restricted to using the grounds and administration buildings west of the stream below the internal fence.  
Source: Google Earth, 2021.

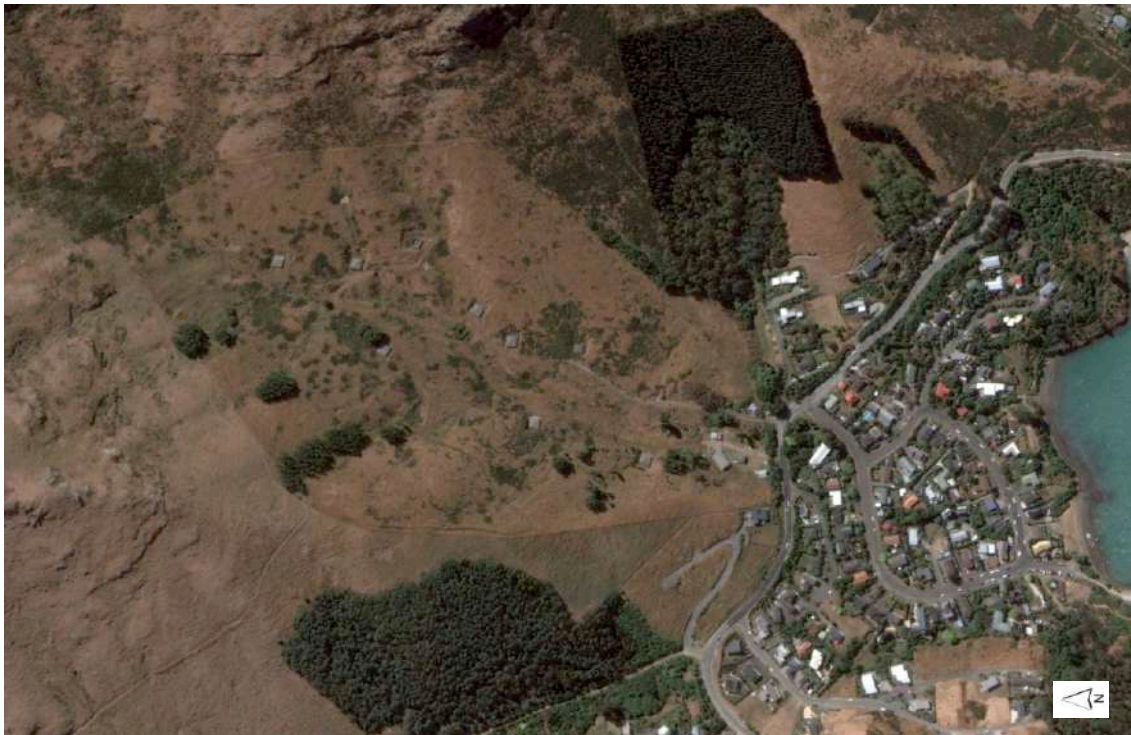
2011



Figure 75: Motukauatirahi-Cass Bay and the naval armament depot site, 2011.  
Source: Google Earth, 2021.

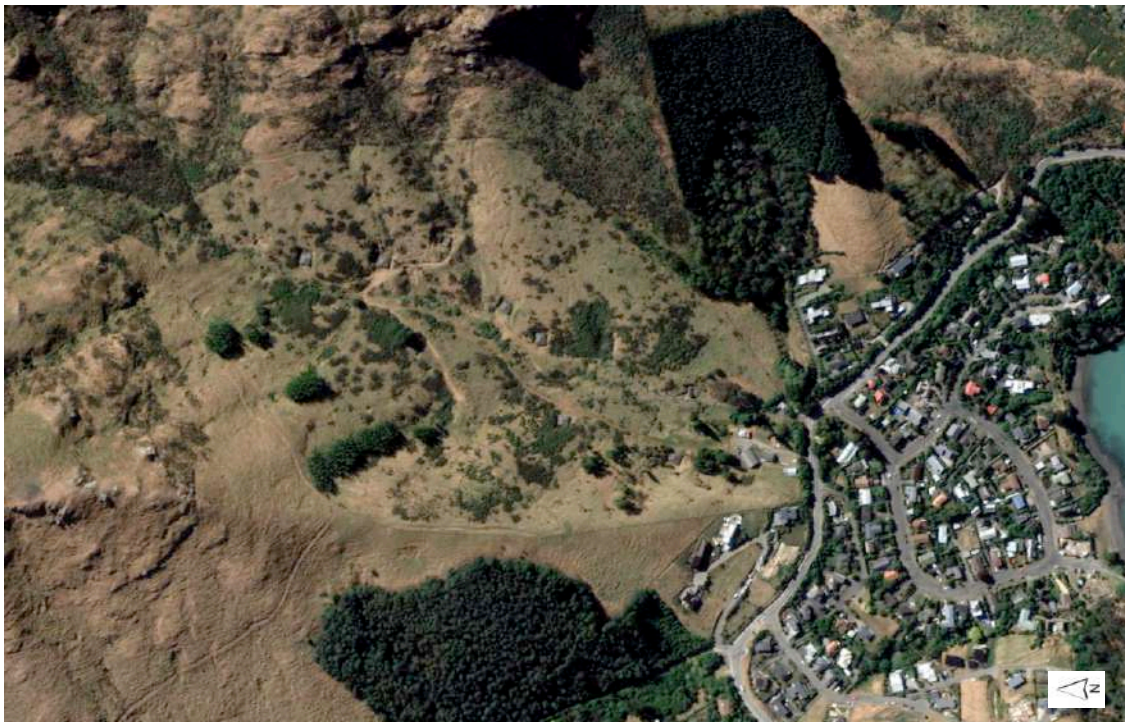


2015



*Figure 76: Motukauatirahi-Cass Bay and the naval armament depot site, 2015. Increasing weed species spread throughout the site.*  
Source: Google Earth, 2021.

2019



*Figure 77: Motukauatirahi-Cass Bay and the naval armament depot, 2019.*  
Source: Google Earth, 2021.



### 3. Understanding the Place – Physical Evidence

This description is based on the historic research outlined in Section 2 and a site visit to HMNZS Steadfast on 29 April 2021. Conversations with stakeholder representatives Chris Nee from TS Godley and Jenny Healey, Chair of the Cass Bay Residents Association and Reserves Management Committee, have also informed this description. Locations of specific site fabric and features relevant to HMNZS Steadfast and setting<sup>195</sup> are shown below in Figure 79 - Figure 81. The integrity of these elements is discussed in more detail in Section 3.4.



*Figure 78: Ammunition Stores #3 and #4 with Ōtaranui behind.*

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<sup>195</sup> Setting is defined in the ICOMOS New Zealand Charter 2010, as “the area around and/or adjacent to a place of cultural heritage value that is integral to its function, meaning and relationships. Setting includes the structures, outbuildings, features, gardens, curtilage, airspace and access ways forming the spatial context of the place or used in association with the place. Setting also includes cultural landscapes, townscapes and streetscapes; perspectives, views and view shafts to and from a place; and relationships with other places which contribute to the cultural heritage value of the place. Setting may extend beyond the area defined by legal title and may include a buffer zone necessary for the long-term protection of the cultural heritage value of the place.”



### 3.1. Location Plan - Setting

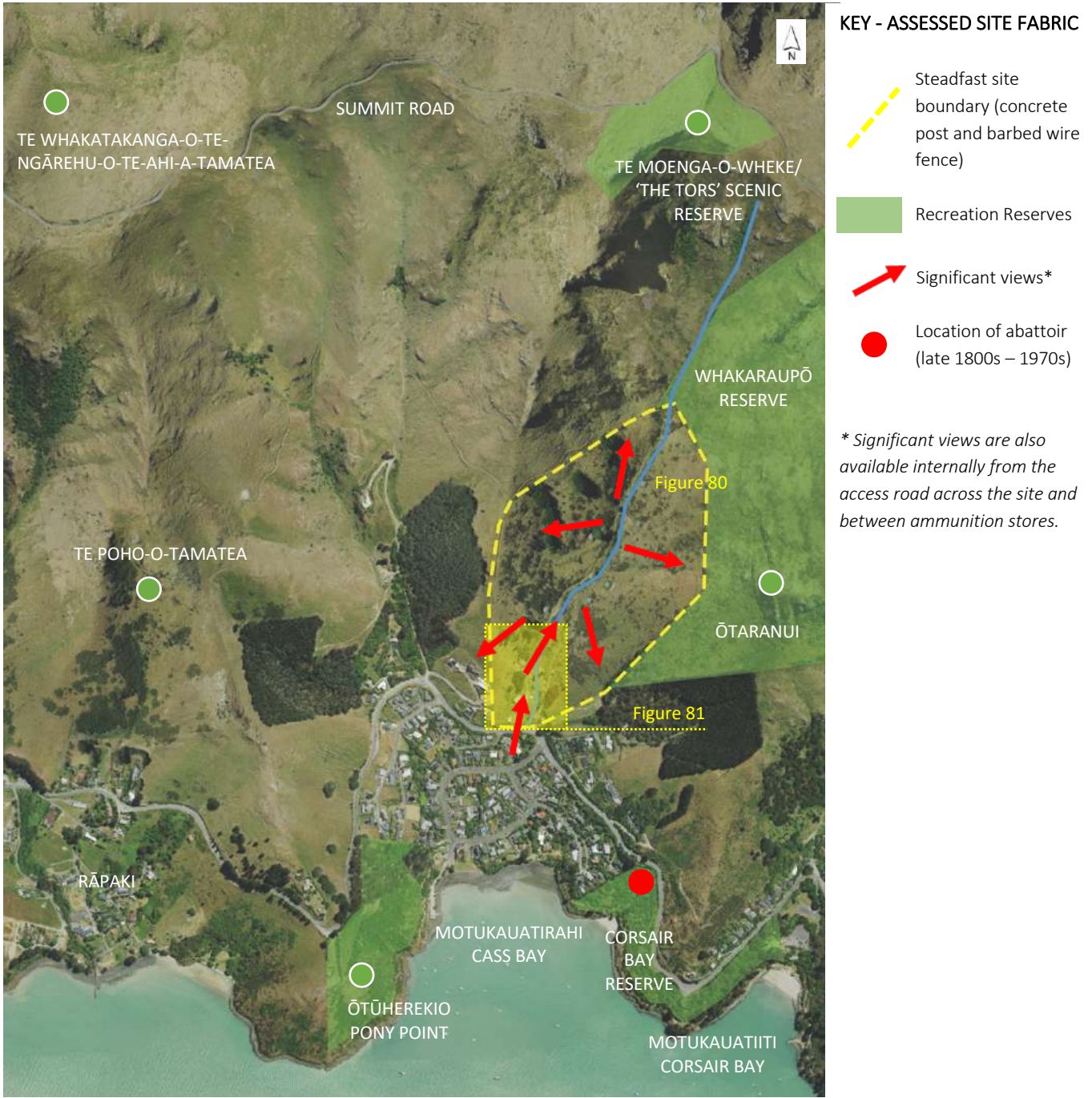


Figure 79: HMNZS Steadfast setting.  
Source: Canterbury Maps, 2021 with graphic overlay.



### 3.2. Location Plan – Buildings

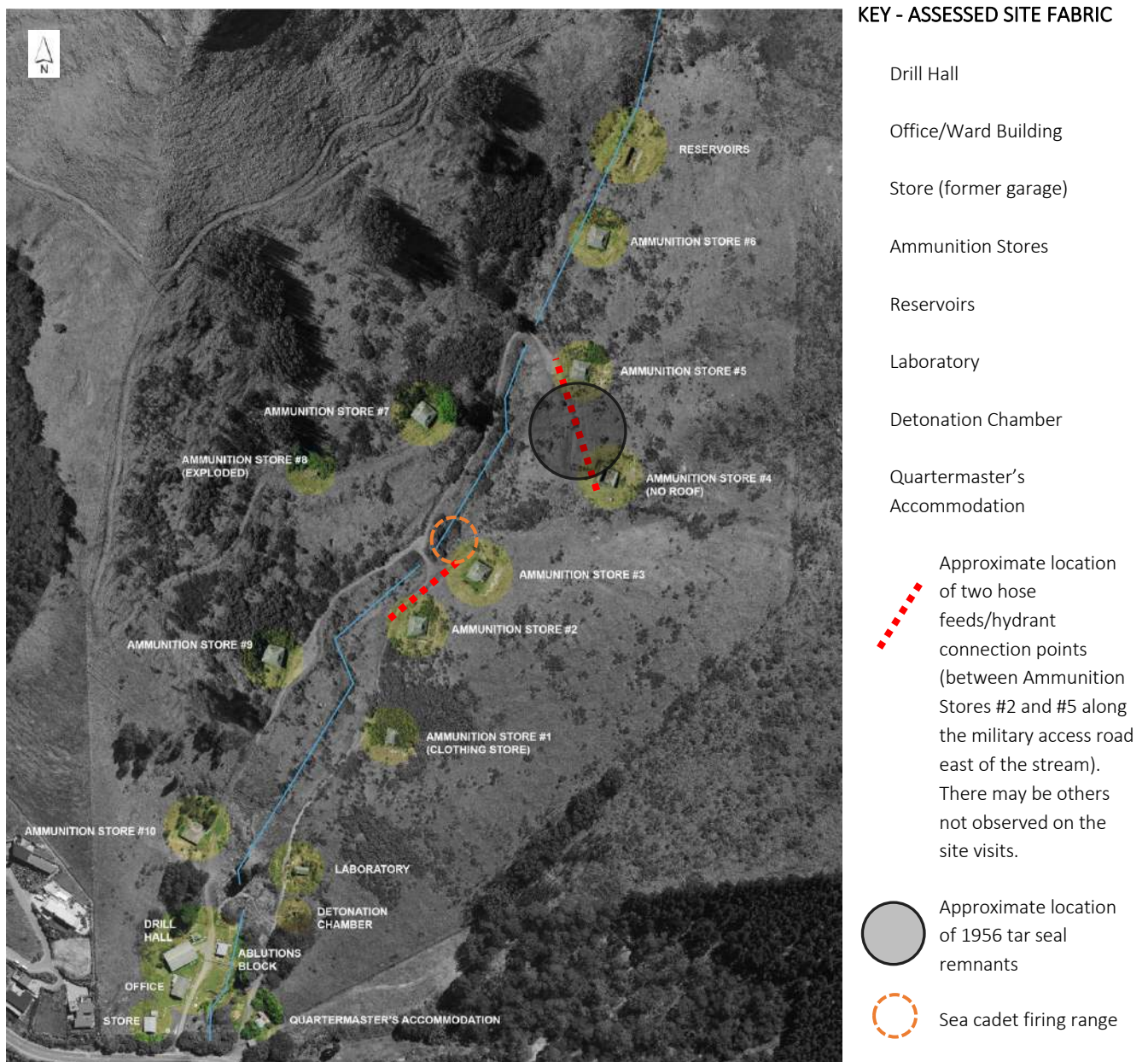


Figure 80: HMNZS Steadfast buildings and access roads. NB: Different diagrams of the site provided by different sources show that ammunition store buildings #4 and #5 are numerically interchangeable. For the purposes of consistency, all references to these ammunition stores in this report are as noted above. Source: WSP



### 3.3. Location Plan – Lower Site Spaces and Elements

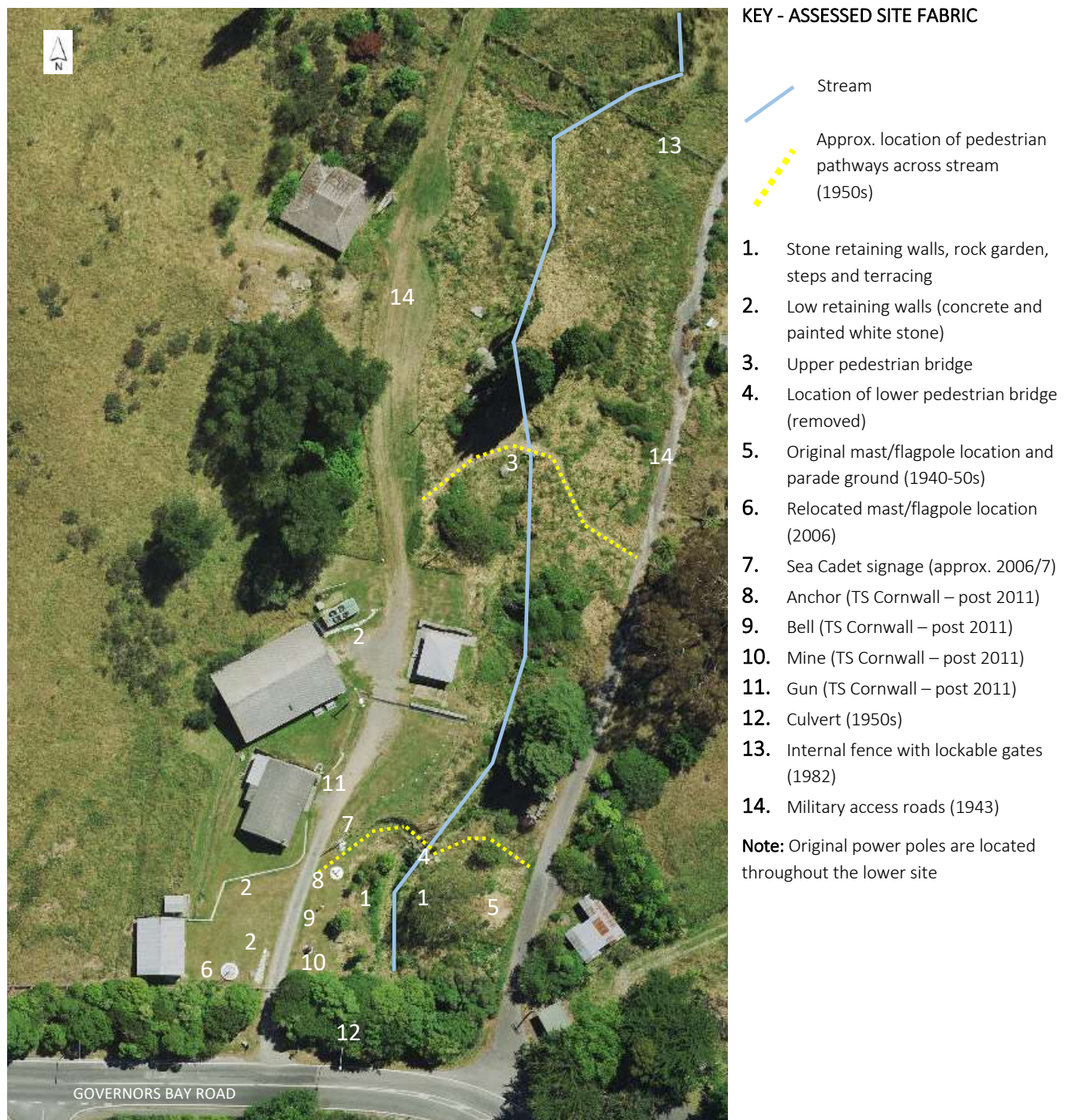


Figure 81: HMNZS Steadfast lower site spaces and elements.  
Source: Canterbury Maps, 2021 with graphic overlay.



### 3.4. Physical Description and Condition of the Site and Setting

#### 3.4.1 Setting, Views and Experience

HMNZS Steadfast is located on the northern side of Whakaraupō-Lyttelton Harbour in Motukauatirahi-Cass Bay. The site sits within a Rural Amenity Landscape in the CDP and is adjacent to an Outstanding Landscape which is defined by the volcanic crater rim of the Port Hills and the steep bluffs above the Steadfast site. These ancient lava flows and dikes are clearly visible from Steadfast, giving way to a gentler gradient through the site and down to the water.<sup>196</sup> Spectacular views extend from Steadfast, across the headlands of Cass Bay, towards Ōtamahua/Quail Island and the wider Whakaraupō-Lyttelton Harbour. The site is close to several City Council owned reserves in Cass Bay and is immediately adjacent to Whakaraupō Reserve to the east and to Te Moenga-O-Wheke/'The Tors' Reserve above. The Crater Rim Walkway and Summit Road also lie immediately above the site. Steadfast borders Governors Bay Road, and on the lower side of the road is the residential area of Cass Bay, almost permanently occupied by people who work in Lyttelton or Christchurch.<sup>197</sup> Ōtūherekio/Pony Point and Corsair Bay Reserve are located below Governors Bay Road along the coastline. Boulders are evident throughout Steadfast, with many having been displaced from the ridgeline above during the 2010/2011 Canterbury earthquakes. The ammunitions stores are tucked neatly into the hillside, so views of the buildings vary across the site.



Figure 82: Views from Steadfast to Te Moenga-o-Wheke/The Tors Reserve and ridgeline, an Outstanding Natural Landscape.



Figure 83: Views to Ōtūherekio/Pony Point, Ōtamahua/Quail Island, and Whakaraupō-Lyttelton Harbour.

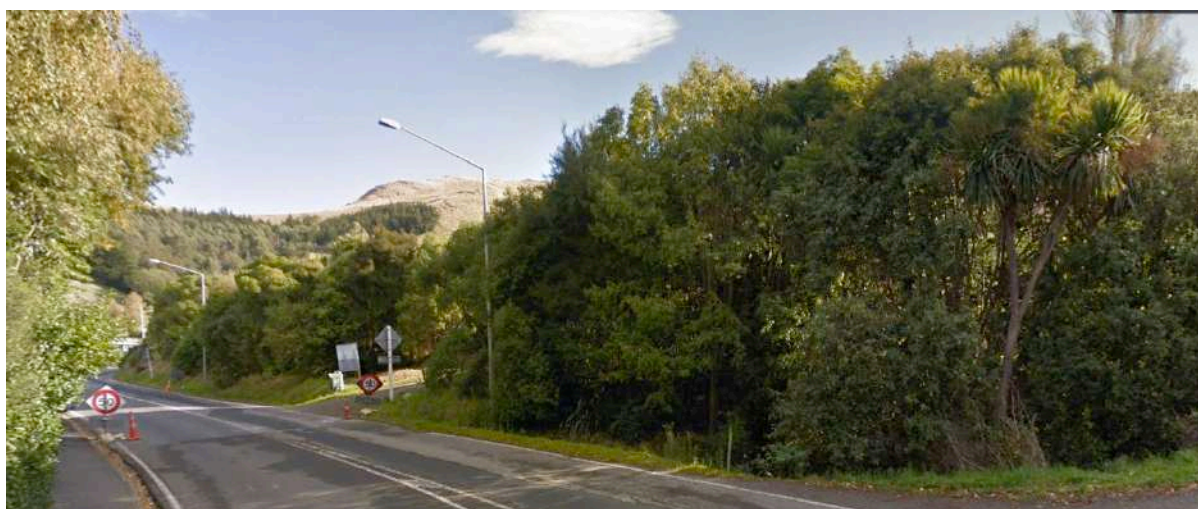


Figure 84: Dense vegetation along Governors Bay Road is a visual barrier to the site.  
Source: Google Earth Street View, 2021.

<sup>196</sup> Boffa Miskell, 2007

<sup>197</sup> Beaumont, L. et al, 2014



*Figure 85: The rockfall source areas located immediately above Steadfast pose an ongoing risk for people using the upper parts of the site.*

### 3.4.2 Ecology and Vegetation

Steadfast is set within the Port Hills Ecological District<sup>198</sup> and no original vegetation appears to exist on the site although some naturally regenerating native species such are evident. The hillside is open and dominated by modified grassland, with much of the area covered in seeded tree and invasive weed species such as silver and black poplar, gorse, grass, thistles and muehlenbeckia. Remnant trees from the 1950s planting do not appear to be evident. An ephemeral waterway runs through the centre of the site and is one of several in the catchment that drain the hills above. Banded kōkapu have been found in the stream and significant native planting has been undertaken by the local community along the stream banks. The stream enters a culvert at Governors Bay Road where dense native vegetation lines the road boundary.



*Figure 86: Native tree and shrub planting along the stream through the lower area of Steadfast (remnants of the RNZN rock garden).*



*Figure 87: Native tree and shrub planting undertaken by community along the upper reaches of the stream.*

<sup>198</sup> Boffa Miskell, 2007, p79





Figure 88: Mature pine and eucalyptus trees east of the stream alongside the 2006 access road.



Figure 89: Large patches of gorse and suckering poplars.



Figure 90: View of native tree planting from 64 Governors Bay Road entrance. The planting was carried out by PD workers engaged by TS Steadfast in the 1980s.<sup>199</sup> This vegetation now screens the site from the road.

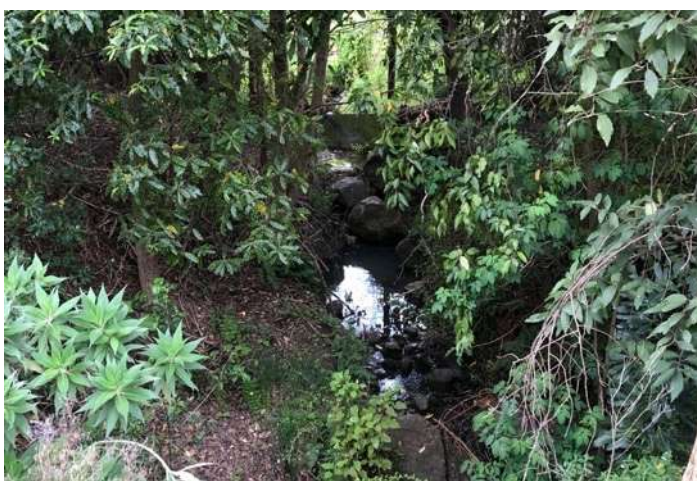


Figure 91: Stream as it enters native planting along the Governors Road boundary.



Figure 92: Culvert and stone retaining wall at Governors Bay Road. It is likely the culvert was installed in 1952 as part of the armament depot siteworks.

<sup>199</sup> Pers. Comm. C. Nee/W. Hoddinott, 29 September 2021





*Figure 93: Large poplar trees, blackberry and other weed species have encroached on the waterway.*



*Figure 94: Suckering poplars have spread throughout the site.*



*Figure 95: Drainage issues are evident with historic and recent drainage channels constructed on the site.*





Figure 96: Eroded stream bank.



Figure 97: Mature pine and eucalyptus species may pose an issue with limb failure over time.

### 3.4.3 Boundaries, Circulation and Spaces

There are two entrance gates to the site, 64 and 86 Governors Bay Road. Current access to the site is from 86 Governors Bay Road along the original military road which is now a gravel driveway that runs between the lower level administration buildings. Access is currently restricted to the sea cadet unit below the internal fence west of the stream. The gates are locked prohibiting public access.



Figure 98: Access to Steadfast is from 86 Governors Bay Road on the original military road which is now a gravel driveway between the administration buildings.



Figure 99: 64 Governors Bay Road is now a secondary access to the site following the original military road. The road was sealed in 2005/2006 as part of an unrealised subdivision proposal.

The gravel driveway surface terminates at a grassed car park alongside the stream and continues in grass from this point to the 10 ammunition stores and two reservoirs above. The road crosses the stream at two points in the upper valley, these 'land bridges' were presumably built up as part of the original road to access the ammunition stores. Asphalt from early road sealing is still visible in places (Figure 106).





Figure 100: The military road is still in use. The gravel surface terminates at a grassed area alongside the stream before continuing in grass to the ammunition stores and reservoirs above.



Figure 101: View south towards Whakaraupō-Lyttelton Harbour along the original military access road (west of the stream).



Figure 102: Land bridges were created across the stream for military vehicles, enabling easy access to ammunition stores on both sides of the valley.



Figure 103: View west towards Te Poho-o-Tamatea and the military roads that traversed the site.



Figure 104: The ten ammunition stores are tucked discreetly into the landscape. The location of the helicopter pad is likely to have been in front of the lower ammunition store.



Figure 105: Likely location of helicopter pad.





*Figure 106: Remnants of asphalt seal from the original military road on the upper slopes of the site.*



*Figure 107: The 'unclimbable' curved concrete post and barbed wire boundary fence was installed to secure the naval armament depot and surrounds the entire site.*

The entire Steadfast site is surrounded by a curved concrete post and barbed wire fence (Figure 107) with an internal fence (1982) running the width of the site between the ammunition stores and the administration buildings. Remnants of farm fences likely used for early grazing are also visible on the site. Close to the administration buildings, two pedestrian bridges have traditionally crossed the stream with the lower bridge leading to what was originally the parade grounds alongside the mast.<sup>200</sup> The lower bridge was removed recently.



*Figure 108: The mast and parade grounds were originally located east of the stream (indicated). The pathway can clearly be seen in aerials (Figure 71) and is still evident from one side of the stream to the other.*

<sup>200</sup> Pers. Comm. C. Nee/W. Hoddinott, 29 September 2021.





*Figure 109: Built in 1982, an internal fence crosses the width of the site separating the administration buildings from the ammunition stores. Posts from fences for grazing are also located throughout the site.*



*Figure 110: Concrete posts surround one of two reservoirs at the top of the site.*



*Figure 111: Upper pedestrian bridge close to the administration buildings.*



*Figure 112: The parade grounds that were located east of the entrance at 64 Governors Bay Road are now overgrown.*



*Figure 113: Gorse and weed species encroach on access roads.*





Figure 114: A section of the upper valley roads has been lost to erosion.



Figure 115: The subdivision road sealing is cracked, broken and overgrown with gorse, grass and weeds.



Figure 116: Car park area adjacent to the stream bank was filled some years ago without compaction and is now sinking.



Figure 117: Drainage channels are a trip hazard.



Figure 118: Pedestrian bridge has been removed.





*Figure 119: Damage to Governors Bay Road/front boundary fence. The fence wire appears to have been cut leaving a large hole.*



*Figure 120: Concrete post and rail fence, north boundary. Posts lean toward the site, with likely damage the result of rockfall immediately above.*

#### 3.4.4 Site Elements

The lower part of the stream is bordered by stone retaining walls and terraces on both sides and is likely to have been completed during the 1950s and 60s when the site was known for its attractive gardens visible from Governors Bay Road. The terraces are now obscured by long grass, but the stone steps are still evident and indicate a pathway down to the stream and across the other side. Native seedlings have been planted into the banks of the stream as part of the Whaka-Ora Healthy Harbour Initiative.



*Figure 121: Lower stream with stone retaining walls and terracing covered in grass. This area was most likely created in the 1950s when 1100 trees were reported to be planted on the site and the gardens were a showpiece viewable from Governors Bay Road.*



*Figure 122: Stone retaining wall and stone step edges lead to a bridge (recently removed) with a pathway to the east side of the stream where the mast and parade ground were originally located.*

Elements re-located by TS Steadfast west of the stream include the TS Steadfast signage and the mast and flagpole set into what was the original gun turret. Both structures were relocated from their original positions. Elements relocated from TS Cornwall since the 2011 earthquakes include a mine located on top of a disused water pump, an anchor, a bell, and a gun.





Figure 123: The mast was moved from its original site west of the stream to the front entrance at 86 Governors Bay Road. It was concreted into the base of the original gun turret and the gun relocated to Dunedin.



Figure 124: TS Steadfast Sea Cadets signage to the right of the entrance road and other elements from the amalgamation with TS Cornwall, including a bell (beneath the sign) and a mine.



Figure 125: Anchor and cannon brought to Steadfast from TS Cornwall after amalgamation of the two sea cadet units as TS Godley at Cass Bay.

East of the stream, the 2005 tar seal extends along the original military road from the eastern entrance at 64 Governors Bay Road. An informal native plant nursery west of the road contains a dilapidated shed with boxes and rubbish strewn along the stream bank. A portion of land east of the stream above the internal fence was also used as the sea cadet's firing range until boulders from the 2011 earthquakes landed in the centre blocking visibility across the range.





*Figure 126: TS Steadfast firing range and flagpole. The range hasn't been used since the February 2011 earthquakes when boulders rolled into and blocked visibility on the site.*



*Figure 127: Original stone terracing, rock garden, steps and pathway are difficult to distinguish in the long grass. Rubbish and large dead branches were also found in this area.*



*Figure 128: An informal native plant nursery west of the road contains a dilapidated shed with boxes and rubbish strewn along the stream bank.*

### 3.4.5 Retaining Walls

Several retaining walls associated with the buildings on site are in various states of deterioration. Timber retaining walls behind the Store (previously the Garage) and the Drill Hall are broken and have collapsed in places and are in urgent need of repair. Concrete and brick retaining behind the Ward Room is in better shape and appears stable although inspection is required to ensure safety. Low concrete and stone retaining walls (painted white) can be found across other parts of the lower site. The concrete wall forms the edge to what was once the entrance of the original Garage (Figure 132).





Figure 129: Timber retaining walls behind the Store, previously the Garage.



Figure 130: Timber retaining wall behind the Drill Hall.



Figure 131: Concrete block and brick retaining wall behind the Ward Room requires inspection..



Figure 132: White concrete retaining wall, previously the edge to the Garage entrance.



Figure 133: Stone retaining walls are located throughout the lower part of the site. Many of the stones were originally painted white by the local padre and the tradition continuesd with the TS Steadfast sea cadets.



Figure 134: Stone retaining wall in front of the Drill Hall.





*Figure 135: Behind the Garage - deteriorating retaining wall.*



*Figure 136: Retaining wall between the Garage and Small Store is falling apart.*



*Figure 137: Power pole at HMNZS Steadfast, 1960s.*



*Figure 138: Same location today. While some power poles are likely to have been replaced, others may have been installed during the RNZN's use of the site.*



### 3.5 Physical Description and Condition of the Buildings

The buildings on the site today are a combination of structures from both the armament depot and the TS Steadfast eras. Their history and condition are described below.

The CCC Parks Condition Assessment Criteria have been used to grade the condition of each of the buildings. These criteria are as follows:

Condition	Description
Very Good (No work required)	Secure weatherproof structure, designed to appropriate standards and well maintained. Safe site Likely to perform effectively under current maintenance regime for 25+ years.
Good (Only minor work required if any)	As 1 but showing signs of superficial wear, tear and deterioration or not up to appropriate standards. Normal maintenance needed to prevent initial stages of decay or dereliction commencing. Needs to be re-inspected in the medium term. In 10 – 25 years deterioration expected, but unlikely to fail.
Moderate (Work required but asset still serviceable)	Functionally sound structure. Early stages of decay or dereliction are becoming evident with minor components requiring replacement or repair, or reactive maintenance costs rising. Failure unlikely within 5 years
Poor (Substantial work required in short term, asset barely serviceable)	Building not functioning properly and high maintenance costs arising Structural integrity becoming affected. No immediate risk to health and safety but work required within 5 years to ensure asset remains safe.
Very Poor (Major work or replacement required now)	Serious structural problems having a detrimental effect on the performance of the asset. Site safety at risk. Failure imminent or maintenance costs excessive. Major work or replacement required urgently.

An Asbestos Management Survey Report and Register, completed in May 2019 by Chemsafety, has been used to identify buildings where asbestos is present. A summary of building condition is provided in Table 3 below.

#### 3.5.1 Girls' Accommodation Block (Former Garage) and Store Hut

The Girls' Accommodation Block, formerly the garage – more accurately described as a carport (Figure 29) - was moved onto the site onto the site in 1956/1957, and placed onto a concrete slab foundation. Following its transportation, the three portals were infilled with doors and windows added so that the building could be used as a classroom. The dentilled frieze on the front of the building, the posts, and the angled brackets in the corners of the former openings at each end remain intact, and the timber cladding

on the other three sides appears to be original. More recently, it has been converted into sleeping accommodation. The exact date of these alterations is unknown.

**The overall condition of the Girls' Accommodation Block is poor.** Exterior paint is badly worn and there is rot in the timber bargeboards and fascias, and in some of the wall cladding. Windows are failing and/or have been temporarily repaired. There is cracking to the concrete slab, and microbiological growth indicating damp conditions. Wall and ceiling linings are failing, with ceilings linings bowing and showing signs of water damage; and all are uninsulated. Asbestos has been identified in the soffit lining, and is presumed to be present in the interior wall plastering, switchboard, and in the roofspace. The building does not meet the accessibility requirements of the NZ Building Code.

Currently, it is proposed that this building will be adapted for use by the Cass Bay Residents Association as a community space. As part of this proposal, it is planned to remove the internal wall, install a new floor slab, insulate and reline the building, install new doors on the north elevation, install new toilets and kitchen, and make the building accessible.



*Figure 139: The Girls' Accommodation Building, formerly the garage, and adjacent flag station. The small store building is on the right.*



*Figure 140: The Girls' Accommodation Building, formerly the garage. The small store building is in the foreground.*



*Figure 141: The Girls' Accommodation Building*



*Figure 142: Rotten bargeboards and other roofing elements.*



Figure 143: Concrete ramp to entrance.



Figure 144: Suspended ceiling tiles failing.



Figure 145: Exposed concrete walls and floor with evidence of some microbiological growth.



Figure 146: Window glazing bars failing and boarded over in some areas.



Figure 147: Entranceway with timber planks in the place of stairs.



Figure 148: Entranceway with timber planks in the place of stairs.

The small store hut adjacent to the former garage may have been relocated to the site, although this has not been conclusively established. It is visible in its current position in Figure 29 which dates to the 1960s. It has been used for various purposes by TS Steadfast including a communications room, but is now used for storage.

**The overall condition of the Store Hut is very poor.** There is widespread deterioration of the cladding, there is no spouting or flashing at the building barges or fascias, and there is evidence of leaking inside. The wall and ceiling linings are deteriorating, and there are holes.



At present, it is understood that no new use is not proposed for the hut, but that it may be used for storage. However, general maintenance will be required for the building to be usable.



Figure 149: Store hut next to the Girls' Accommodation Building



Figure 150: Condition of the store hut barge and fascia



Figure 151: Condition of the store hut cladding



Figure 152: Condition of the store hut interior



Figure 153: Condition of the store hut interior

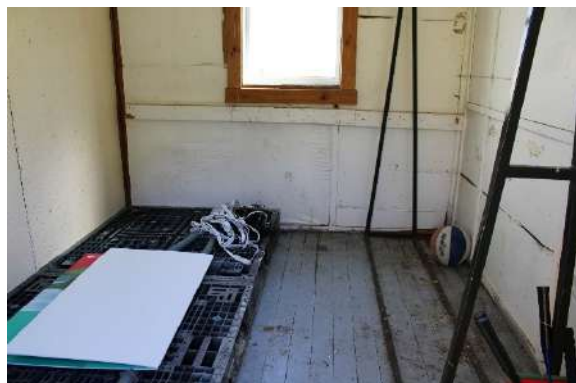


Figure 154: Condition of the store hut interior

### 3.5.2 The Office/Ward Room

The date of construction of this building, and whether it was relocated or built onsite, has not been established from the information available. However, it is evident that the building has been on this site since 1961 when it appears in an aerial photograph (Figure 72). It is assumed to be the building that was converted into two flats that is referred to in memoranda in 1947. Since this time, it has been converted back into a single building; and is now used for accommodation. It includes bedrooms, a living area, kitchen, and two bathrooms, one of which has external access only. Between the kitchen and living area, and within the living area, walls have been removed.

**The overall condition of the Office/Ward Room is poor.** Roofing sheets are deteriorated and some have broken at the edges. The guttering has failed. Exterior paintwork has worn away and there is evidence of rot in some places. There are broken and deteriorated windows and hardware. Floor levels are uneven and the floor, wall and ceiling linings are failing. It is unclear what impact the removal of walls may have had on the overall building structure. Asbestos has been identified in the roofing (including flashings), rainwater goods, soffits, and vinyl floor tiles; and is presumed to be present in the switchboards, electrical wiring, and potentially some wall linings.

It is understood that HNZMS Steadfast wish to refurbish this building and continue to use it for officer accommodation, with bedrooms and bathrooms, kitchen and living area. This work would include repiling; stripping out and replacing internal linings and finishes, fixtures and fittings; and rearranging the existing external-access bathroom so that it can be accessed without the need to go outside.



Figure 155: The office/ward room



Figure 156: The office/ward room



Figure 157: Severely deteriorated roof cladding.



Figure 158: Severely deteriorated roof cladding.





Figure 159: Paint flaking exposing timber underneath to elements.



Figure 160: Paint flaking exposing timber underneath to elements.



Figure 161: Rotten timber and failing guttering.



Figure 162: Missing timber allowing moisture to enter the building and broken window.

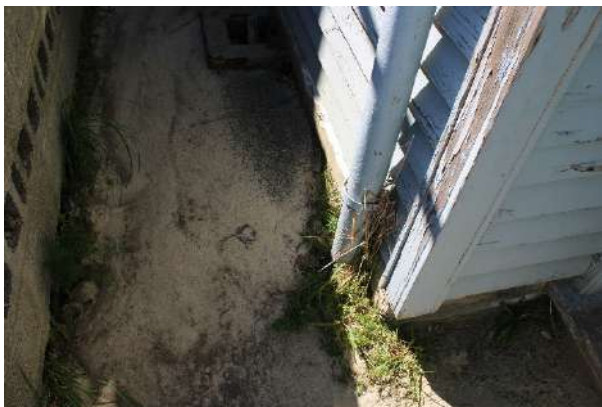


Figure 163: Vegetation growth and flaking paint.



Figure 164: Failing guttering and subsequent water damage to soffit.





Figure 165: Bathroom to the office.



Figure 166: Damaged windows.



Figure 167: Kitchen space with failing ceiling linings.



Figure 168: Fireplace to the communal space.

### 3.5.3 The Drill Hall

The drill hall was originally located at the Tikao Bay Naval Base in Akaroa, before being dismantled and reconstructed at the TS Steadfast site after 1961 when it is evident in an aerial photograph (Figure 72). It is believed that the building was constructed during WWII, c.1943. When it was dismantled, “pieces” of the building were numbered so that they could be reinstated in their correct positions. These numbers are still visible on the roof trusses. Initially just a large open space that was used to store trucks and machinery, TS Steadfast installed a kitchen at one end of the hall and, later, closed off part of the space with internal walls and ceiling to provide sleeping accommodation.

**The overall condition of the Office/Ward Room is poor.** Some roof sheets are broken, and there are points where daylight is visible from the inside of the building. Some windows are broken and all are deteriorating. The exterior paintwork is failing and there are signs of rot, particularly where the building is not well exposed to sunlight and remains damp for long periods, exacerbated by poor ventilation. There are signs of cracking developing in the concrete slab. Wall linings, which were installed by HMNZS Steadfast, have been damaged and/or are coming away from the framing. The kitchen would fail to meet

the requirements of the NZ Building Code. Asbestos has been identified in the roofing (including flashings), rainwater goods, and heating wire insulation; and is presumed to be present in the switchboard, electrical wiring, and potentially some wall linings.

It is understood that HNZMS Steadfast wish to refurbish this building and continue to use it as their main facility, including accommodation and kitchen facilities; and to expand the building to provide for accommodation that will no longer be housed in the former garage.



*Figure 169: The drill hall, moved onsite after 1965 from Tikao Bay in Akaroa.*



*Figure 170: The drill hall (right) as viewed from across the gully.*



*Figure 171: Damage to Drill Hall sliding doors.*





Figure 172: Microbiological growth to guttering.



Figure 173: Damage to timber window frames.



Figure 174: Damage to windows.



Figure 175: Failing guttering and downpipes.



Figure 176: Severely damaged bargeboards, flaking paint exposing timber beneath, plywood covering hole in the building.



Figure 177: Damaged bargeboards and roof cladding, rotten timber below.





Figure 178: Severely deteriorated roof cladding.



Figure 179: Damaged timber window frames.



Figure 180: Failing guttering.



Figure 181: Failing retaining wall.



Figure 182: Ceiling structure of the drill hall.



Figure 183: Lack of weathertightness to roof edges.



Figure 184: Evidence of pigeon infestation to gable end external grilles.

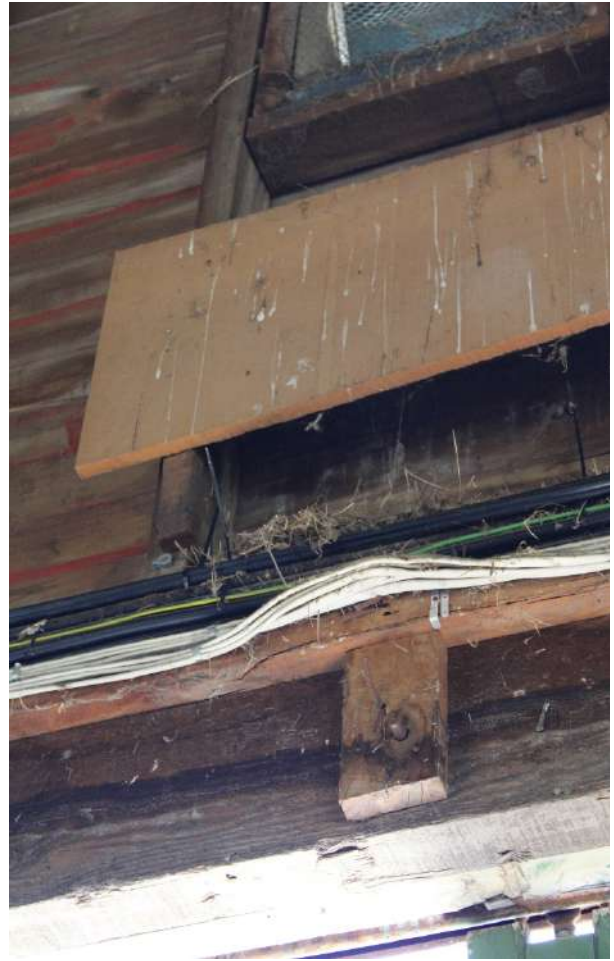


Figure 185: Evidence of pigeon infestation to gable end external grilles.





Figure 186: Evidence of pigeon infestation to roof and lack of weathertightness.



Figure 187: Charred beam from historic fire, and covered hole in the ceiling where chimney originally existed.



Figure 188: Exposed framing where internal linings have failed.



Figure 189: Kitchen with exposed concrete floor, failing ceiling linings, and external hole covered with plywood.





Figure 190: Covered hole in wall compromising weathertightness to building.



Figure 191: Internal partitions built by TS Steadfast to create additional accommodation spaces.



Figure 192: The 'numbered' pieces of the roof truss in the Drill Hall, taken apart and reassembled on site.



Figure 193: The 'numbered' pieces of the roof truss in the Drill Hall, taken apart and reassembled on site.

#### 3.5.4 The Ablutions Block

The ablutions block was transported to the site from Wigram Base during the late 1990s. Prior to this, the former detonation chamber was being used as the ablutions block. Its construction date is unknown, but the materials used – including the aluminium frame joinery and exterior cladding - indicate that it is likely to have been built c.1980s-1990s.

**The ablutions block is in moderate condition.** There are some early indications of deterioration occurring.

It is understood that HMNZS Steadfast will continue to use this building as their ablutions block, but that it will be upgraded, and this will require some internal rearrangement.



Figure 194: The ablutions block.



Figure 195: The ablutions block.

### 3.5.5 The Ammunition Stores

The ten ammunition stores or magazines were constructed on the site in 1943 when the Cass Bay Depot was established. Their construction is described in Section 2.1.5.1 above. Number 1 is referred to as the Clothing Store.<sup>201</sup> Number 10 is used for storage by HMNZS Steadfast. There are also items being stored in Number 9. The others remain largely empty.

**Generally, the magazines are in poor or very poor condition.**

Number 8, which “exploded” in 1980 (see Figure 48), has been almost completely destroyed save for the concrete foundations and door frame (Figure 218 and Figure 219). The inner walls and some of the outer walls of number 5 are still standing, but the roof has been destroyed (Figure 216 and Figure 217). The reasons behind its destruction are unknown.

Several of the magazines were damaged by rockfall during the Canterbury Earthquakes, leaving gaping holes in the walls and roofs. Even where they are intact, the magazine roofs and gables are deteriorating, with brittle sheet cladding breaking or falling away. Gutters are blocked with living or dead plant material, or have failed. Steel doors are corroding and many have seized. Microbiological growth is prevalent on both the exteriors and interiors, and many have also been graffitied. Some are waterlogged and are unable to drain. Ceiling linings are broken or have holes. Many show signs of pest infestation. Asbestos has been identified in the roofing, flashings, gutters, downpipes and soffits. Contamination of the ground around magazines 4 and 8 is strongly suspected. We understand that HMNZS Steadfast intend to continue using magazine 10 for storage.



Figure 196: The magazine store closest to the main camp buildings, known as ‘#10’ by the TS Steadfast community.



Figure 197: The roofs of the magazine stores hidden amongst the hillside.

<sup>201</sup> Pers. Comm. C. Nee/W. Hoddinott, 29 September 2021





Figure 198: The magazine stores on the hillside.



Figure 199: One of the magazine stores.



Figure 200: Microbiological growth to guttering.



Figure 201: Corrosion to steel sliding doors.



Figure 202: Failing internal linings.



Figure 203: Internal flooding.





Figure 204: Severely deteriorated roof cladding



Figure 205: Severely deteriorated roof cladding and damage to guttering.



Figure 206: Severely deteriorated roof cladding



Figure 207: Biological growth to guttering.



Figure 208: Flooding caused by roof penetration.



Figure 209: Roof penetration caused by rockslide.





Figure 210: Rock which caused damage to structure



Figure 211: External damage to double layer brick wall caused by rockslide.



Figure 212: Damage to brick wall exterior.



Figure 213: Damage to brick wall exterior.





Figure 214: Damage to one of the magazine stores caused by a rockfall, exposing the separated double brick wall structure.



Figure 215: One of the magazine stores with views across the harbour.



Figure 216: Magazine store number 5, with no roof.



Figure 217: Interior of magazine store number 4.



Figure 218: The remains of magazine store 8, which exploded in 1980.



Figure 219: The remains of magazine store 8, which exploded in 1980.

### 3.5.6 Reservoirs

Now disused, two water reservoirs at the very top of the sloping site were intended to be used for fighting fires, should any of the buildings on site catch fire. A number of the original hydrant connection points are also scattered around the site.

**The reservoirs are in very poor condition**, and it is not expected that they will ever be repaired or reused.





Figure 220: The larger of the two water reservoirs.



Figure 221: The smaller of the two reservoirs.



Figure 222: A hose feed/hydrant connection system (indicated) was located along the military road east of the stream.



Figure 223: One of the hose feed/hydrant connection points along the military road east of the stream.

### 3.5.7 The Laboratory

The laboratory, used for testing the stability of the munitions and weaponry stored onsite, was constructed on the site when the Cass Bay Depot was established. TS Steadfast used the building as accommodation for their senior cadets until they vacated the eastern side of the site.

**The former laboratory is in very poor condition.** There is vegetation growing directly next to the building that has penetrated the wall cladding. Weatherboards are unpainted and rotting. The roof sheets, which contain asbestos, are brittle and breaking, and there are no gutters. Windows are broken or badly damaged, wall linings are cracked and ceiling linings are bowing. Pest infestation (bird and rodent) is widespread.

It is understood that there are no particular plans for this building at present.



*Figure 224: The laboratory.*



*Figure 225: The laboratory.*



*Figure 226: Laboratory exterior, showing rotten timber, deteriorated roof cladding, and microbiological growth to guttering.*



*Figure 227: Interior of laboratory building showing severe pigeon infestation and failing wall/floor/ceiling linings.*





Figure 228: Pigeon infestation to interior.



Figure 229: Severe wall cracking and window damage.

### 3.5.8 The Former Detonation Chamber

The detonation chamber was initially used for detonating ammunition during the site's time as an armament depot (Figure 30), but was converted into the ablutions block during TS Steadfast's occupation of the site. Showers were installed in the "wings" of the chamber, and toilets were built on top. **The structure is now a ruin and is not expected to be reused.**



Figure 230: The entrance to the detonation chamber.



Figure 231: The interior of the detonation chamber.



Figure 232: The interior of the detonation chamber.



Figure 233: Washbasins inside the detonation chamber.

### 3.5.9 The Quartermaster's Accommodation Building

Formerly the guardhouse and the quartermaster's accommodation building, this was originally two buildings that were joined together, with varying floor levels. This building was later used by TS Steadfast as the female accommodation block before the former garage was converted for this purpose. Since this point, it has been infrequently used as accommodation, but not by TS Steadfast.

**The quartermaster's accommodation building is in very poor condition.** Weatherboards are unpainted and rot is widespread. The roof sheets, which contain asbestos, are brittle and breaking, and gutters are failing. Windows are broken or badly damaged. Wall and ceiling linings are decaying in places, and the floor levels and stairs are uneven. Pest infestation (bird and rodent) is widespread.

It is understood that there are no particular plans for this building at present, although there is a possibility that it will be available for community use.



Figure 234: The quartermasters accommodation, formerly the guardhouse, c.1980s (undated).



Figure 235: The quartermasters accommodation today, formerly the guardhouse.





*Figure 236: Gable end of the building showing flaking paint and rotten timber.*



*Figure 237: Gable end of the building showing flaking paint and rotten timber.*



*Figure 238: Rotten timber cladding and window framing to the exterior of the building.*



*Figure 239: Interior of the building.*

### 3.6 Physical Condition Summary

Table 3: Summary of Building and Landscape Condition Issues Observed

ITEM	CONDITION	OBSERVED ISSUES	REMEDATION REQUIRED
<b>Setting, Views and Experience</b>			
Views from Governors Bay Road into HMNZS Steadfast	Poor	<ul style="list-style-type: none"> <li>Dense vegetation screens views into site</li> </ul>	Limb and top trees to restore views, thin out planting
Rockfall hazard		<ul style="list-style-type: none"> <li>Rockfall hazard and management area - 2016 was the last inspection above the site, noting that 'some' remediation was completed</li> </ul>	Check to ensure all remediation was completed and if necessary, carry out an inspection to assess whether further remediation is required
<b>Ecology, Vegetation and Drainage</b>			
Streambank and waterway	Moderate - Poor	<ul style="list-style-type: none"> <li>Erosion and invasive weed species</li> </ul>	Remove all invasive weed species
Vegetation	Poor	<ul style="list-style-type: none"> <li>Invasive weed species (e.g. suckering poplar, thistles, grass, gorse &amp; muehlenbeckia)</li> </ul>	Remove invasive weed species and contain gorse to selected areas as nurse crops for native restoration
Mature trees	TBC by Arborist	<ul style="list-style-type: none"> <li>Potential limb failure over time</li> </ul>	Inspection by arborist
Lawn around administration buildings	Moderate - Poor	<ul style="list-style-type: none"> <li>Waterlogged areas in winter months</li> <li>Drainage channels hidden by long grass</li> </ul>	Inspection by experienced contractor to ensure site drainage is effective
<b>Boundaries, Circulation and Spaces</b>			
Access roads and 'land bridges' to ammunition stores	Good - Poor	<ul style="list-style-type: none"> <li>A section of road has been lost to erosion (upper road, east of stream)</li> <li>Broken and failing seal (from 2005)</li> <li>Overgrown with gorse and weeds in places</li> </ul>	Stabilise eroding road - may involve planting Repair broken and failing seal Clear all roads and drainage channels
Boundary fences	Moderate	<ul style="list-style-type: none"> <li>Large hole in front boundary fence</li> <li>Rockfall damage to north boundary fence</li> </ul>	Repair all boundary fences Adaptation for community access
Pedestrian bridge (upper)	Poor	<ul style="list-style-type: none"> <li>Possible rotten timber</li> </ul>	Inspect for rot and repair/replace if necessary
Pedestrian bridge (lower)	Not Found	<ul style="list-style-type: none"> <li>Missing</li> </ul>	Reinstall bridge
Parade ground	Very Poor	<ul style="list-style-type: none"> <li>Overgrown with grass/weeds</li> </ul>	Clear grass and weeds, maintain in as close to original state as possible



Original rock garden, terracing and pathway (both sides of stream)	Poor	<ul style="list-style-type: none"> <li>Long grass, dead branches and rubbish covering terraces</li> <li>Possible unstable rocks</li> </ul>	Clear grass, weeds and debris to maintain visibility of rocks and terracing. Stabilise loose rocks
<b>Site Elements</b>			
Firing range	Poor	<ul style="list-style-type: none"> <li>Rockfall on site renders firing range unusable</li> </ul>	Remove rocks to clear sightlines
Reservoir fence remnants	Very Poor	<ul style="list-style-type: none"> <li>Disturbed fenceposts and broken wire</li> </ul>	Conserve reservoir fences and install a new perimeter fence around them
<b>Buildings/Structures</b>			
HMNZS Tasman Shipwright Store - Former Garage – Girl's Accommodation Block	Poor	<ul style="list-style-type: none"> <li>Accessibility</li> <li>Rotten exterior timber</li> <li>Windows failing</li> <li>Inadequate floor/wall/ceiling linings</li> <li>Failing windows</li> <li>Failing retaining wall</li> </ul>	Re-roof the building in its entirety. Conserve historic exterior weatherboard, timber detailing and trims, and make like-for-like repairs where rotten. Replace windows and doors on the east elevation with new timber frame joinery. Remove internal linings and internal wall complete (if required), insulate and reline. Repaint the building entirely. Lay new flooring as required. Repair retaining wall.
Office/Ward Building	Poor	<ul style="list-style-type: none"> <li>Failing guttering</li> <li>Rotten external timber</li> <li>Broken windows, and deteriorating windows</li> <li>Uneven floor levels</li> <li>Inadequate floor/wall/ceiling linings</li> </ul>	Re-roof the building in its entirety. Conserve historic exterior weatherboard, timber detailing and trims, window and door joinery, and make like-for-like repairs where rotten. Replace broken glazing. Remove internal plasterboard or fibrous plaster linings if required but retain timber linings to the greatest possible extent. Install internal access to bathroom at the rear. Refit bathrooms and kitchen. Repaint the building entirely. Lay new flooring as required.
Drill Hall	Poor	<ul style="list-style-type: none"> <li>Failing guttering</li> <li>Rotten external timber</li> <li>Failing retaining wall</li> <li>Broken windows, and deteriorating windows</li> <li>Inadequate floor/wall/ceiling linings</li> <li>Failing weathertightness</li> <li>Pigeon infestation</li> <li>Failing asbestos roof cladding</li> </ul>	Re-roof the building in its entirety. Conserve historic exterior weatherboard, timber detailing and trims, window and door joinery, and make like-for-like repairs where rotten. Replace broken glazing. Remove internal wall and false ceiling linings where present. Insulate and reline walls and false ceilings as required. The roof trusses should remain exposed in the main body of the building.

			Remove and refit kitchen equipment, heating, electrical and fire safety services. Lay new flooring as required.
Ammunition Stores	Poor to Very Poor	<ul style="list-style-type: none"> <li>• Brick wall damage, structural in some cases</li> <li>• Microbiological growth</li> <li>• Biological growth</li> <li>• Failing guttering</li> <li>• Internal flooding</li> <li>• Severe corrosion of metal doors</li> <li>• Failing asbestos roof cladding including dislodged friable material in and around buildings</li> <li>• Missing roof (number 5)</li> <li>• Graffiti</li> </ul>	<p>All magazines except number 10 should be kept behind a secure line so that they cannot be accessed by the public or by TS Godley for health and safety reasons unless or until a long term strategy for their maintenance, use and access is developed.</p> <p>Magazine number 4, and the surrounding area, should be cleared of all loose and friable asbestos material, and the burnt-out car next to the building should be removed.</p> <p>The ground around magazines 4 and 8 should be checked for contamination and this should be addressed.</p> <p>Where magazines 3, 6 and any others are damaged, loose asbestos material and brickwork should be cleared away from the buildings.</p> <p>Magazine 10 is the most accessible magazine, being closest to the buildings at the bottom of the site; and is in the best condition, having remained in regular use by TS Steadfast.</p> <p>Magazine 10 should be made safe, including clearance of any loose or friable asbestos roofing, guttering, soffit lining, etc. Doors should be cleaned down, treated for corrosion, and repainted.</p> <p>A long term strategy for conservation of the magazines is necessary.</p>
Laboratory	Very Poor	<ul style="list-style-type: none"> <li>• Rotten timber</li> <li>• Pigeon infestation</li> <li>• Wall cracking</li> <li>• Window damage</li> <li>• Failing asbestos roof cladding</li> </ul>	Detailed condition and structural assessments of these buildings should be carried out to determine the extent to which they can be repaired.
Quartermasters	Very Poor	<ul style="list-style-type: none"> <li>• Rotten timber</li> </ul>	Adaptive reuse of these buildings should be considered in



Accommodation		<ul style="list-style-type: none"> <li>• Rodent infestation</li> <li>• Failing asbestos roof cladding</li> </ul>	accordance with the policies set out in Section 6 below.
Detonation Chamber	Good	<ul style="list-style-type: none"> <li>• Accumulated debris, however remaining walls are in good condition</li> </ul>	Inspect the ruin and clear of all plant growth (including overhanging growth), rubbish and debris to ensure that it is safe for access.
Retaining Walls behind buildings (Store, Ward Room, Drill Hall)	Very Poor	<ul style="list-style-type: none"> <li>• Rotten, collapsing and failing timber</li> </ul>	Detailed condition and structural assessments of these retaining walls should be carried out to determine the extent to which they can be repaired

## 4. Assessment of Heritage Significance

### 4.1. Significance Criteria

The assessment of heritage significance is a subjective process and at present there is no legislative procedure or established common methodology for assessing the heritage significance of a place in New Zealand. There are however a variety of precedents and guidelines particularly relevant to the New Zealand context. These include the ICOMOS New Zealand Charter for the Conservation of Places of Cultural Value (2010), the Resource Management Act (1991), and the Heritage New Zealand Pouhere Taonga Act (2014). This report uses the following criteria outlined in the CDP, outlined below:

- *Historical and Social significance*
- *Cultural and spiritual significance*
- *Architectural and aesthetic significance*
- *Technological and Craftsmanship significance*
- *Contextual significance*
- *Archaeological and Scientific significance*

#### 4.1.1 Historic and Social Significance

*Historical and social values that demonstrate or are associated with: a particular person, group, organization, institution, event, phase or activity; the continuity and/or change of a phase or activity; social, historical, traditional, economic, political or other patterns.*

HMNZS Steadfast is part of Motukauatirahi-Cass Bay which has high historic significance for Ngāi Tahu, Ngāti Māmoe and Waitaha before them, where as part of the wider landscape of Whakaraupō-Lyttelton Harbour, the abundant food resources made it an ideal location for settlement. Historic and social significance of HMNZS Steadfast includes views to important landmarks and locations of events for tangata whenua, that record the whakapapa of Motukauatirahi-Cass Bay as part of the broader Horomaka/Banks Peninsula landscape. Cass Bay was named after Canterbury Association Surveyor Thomas Cass, who surveyed Lyttelton Harbour and lived in Cass Bay before moving to Lyttelton in 1849.

The HMNZS Steadfast site has high historic significance for its establishment, and active use, as a naval armaments depot from 1943-1961. The site was the Royal New Zealand Navy's South Island base, second in seniority to Kauri Point in Auckland. The place, and its extant buildings and structures, are linked to NZ's WWII history – one of the most important global historical events in modern history. Equally, the site has historic significance for its association with the Naval Sea Cadets – specifically TS Steadfast, now known as TS Godley, who have been associated with the site since 1965 – more than half a century. Motukauatirahi-Cass Bay has high historic and social significance as a nineteenth century pastoral landscape prior to the 1945 and 1965 gazette notices issued by government who compulsorily acquired land from farmers for defence purposes, initially for the naval base in 1945 and then for the government buildings in 1965. The land has historic and social significance for the grazing practices that continued alongside government acquisition. The site has high significance for the Banks Peninsula District Council's purchase of the land for community use and to expand the number of reserves and walking tracks in the area.



#### 4.1.2 Cultural and Spiritual Significance

*Cultural and spiritual values that demonstrate or are associated with the distinctive characteristics of a way of life, philosophy, tradition, religion, or other belief, including: the symbolic or commemorative value of the place; significance to Tāngata Whenua; and/or associations with an identifiable group and esteemed by this group for its cultural values.*

Motukauatirahi-Cass Bay has high cultural and spiritual significance for its proximity to Rāpaki and the broader landscape of the Port Hills and Whakaraupō-Lyttelton Harbour. The Māori place names of this area reference the prominent outcrops, landscape features and events that record the whakapapa of Motukauatirahi-Cass Bay. HMNZS Steadfast has high cultural significance as part of the historic farming landscape of Motukauatirahi-Cass Bay and the acquisition of land and subsequent development to secure ammunition storage post WWII. The site has a long association with naval training exercises and its cultural significance is enhanced by its continued use as a place of sea cadet assembly, exercises and camps. Steadfast has high cultural significance for the purchase of this land by Banks Peninsula Council prior to amalgamation with Christchurch City Council, with extensive community consultation and support for purchase providing justification that the land would serve a recreational function for the local community and wider Christchurch. Since the development of stream planting on the site and the 2021 landscape discussion plans, the site is continuing to develop cultural value in community connection to the place.

#### 4.1.3 Architectural and Aesthetic Significance

*Architectural and aesthetic values that demonstrate or are associated with: a particular style, period or designer, design values, form, scale, colour, texture and material of the place.*

Steadfast has high architectural and aesthetic value. The site is set immediately below the rugged relief of the volcanic crater rim with its steep bluffs and spectacular views are available from the site towards Ōtamahua/Quail Island and Whakaraupō-Lyttelton Harbour. The HMNZS Steadfast site has high architectural and aesthetic significance for its military buildings, built in a utilitarian style commonly used for defence structures. The collection of magazine stores embedded into the hillside are the most prominent architectural feature of the site, all employing the same standardised design with separated brick walls, hipped roofs, and steel sliding doors. The buildings are set either side of an ephemeral waterway which has a visual and spatial relationship with the buildings. The vehicle access road has high architectural significance, providing access to the ammunition stores in the upper valley. The spacing and setout of the magazines ensures that, should one explode, there would be no damage to other buildings; and that it is not possible to view them all from any one position on the site.

Other structures built when the base was first established in 1943, such as the guard house/quarter master's lobby, the administration buildings/office, and the laboratory, are also of architectural significance. These structures are built from timber in a similar utilitarian style to the magazines, reflecting their wartime construction, though with less need for withstanding explosive incidents than their storage counterparts. Buildings which were moved on to the site at a later date, such as the drill hall (moved from Akaroa Naval Base), and the store/garage (from HMNZS Tasman), have similar architectural significance as they were constructed on naval sites for naval activities. The various objects, such as the mast/flag station, signage, bell, gun battery, mine, and anchor, all contribute to the naval architecture of the site, however the bell, gun battery, mine and anchor are all elements from TS Cornwall which were integrated into the site after amalgamation of the two sea cadet units. Together, the various buildings, structures, and objects have significant group value as an architectural set, extended and added to in 1965 when the site was inherited by TS Steadfast. The set of buildings, mostly designed to government specifications and military requirements, are a group of structures which adhere to the utilitarian military style of the time which

specified simplistic building form and shape, use of readily available materials, and minimal use of colour. Such sets of military structures are rare. The ablutions block has no architectural or aesthetic significance and detracts from the heritage values of the other structures.

The grounds surrounding the administration buildings at the site entrance on both sides of the stream have high architectural and aesthetic value as an area that has historically been associated with activity (parades and naval exercises) and aesthetic planting. These elements include the stone terracing, pedestrian bridges, and pathway from the grounds west of the stream to the original parade ground and flag station east of the stream.

#### 4.1.4 Technological and Craftsmanship Significance

*Technological and craftsmanship values that demonstrate or are associated with: the nature and use of materials, finishes and/or technological or constructional methods which were innovative, or of notable quality for the period.*

The HMNZS Steadfast site has exceptional technological significance for its insight into mid-20th century military and defence building practices. The ten magazine stores demonstrate the consideration and necessary requirements for housing explosive materials, with widely separated double brick walls with heavy duty steel sliding doors to contain any detonations that may occur within the buildings. The lightweight design of the roofs was intended to channel explosions upwards and to draw impact away from the walls of the building. Fireproof materials, including asbestos, and a lack of ferrous fixings were specifically required to limit damage to the buildings and their occupants. The strategic placement of the magazine stores which are embedded into the hillside were a deliberate attempt to camouflage the structures from visibility. The spacing of the magazine stores was also intentional – by storing the ammunitions in separate distanced buildings, an accidental explosion would mean only the contents of that singular store would be lost.

The two water reservoirs at the highest point of the site also have technological significance – their strategic placement, along with several hydrants located adjacent to the gully, indicate preparedness for firefighting should any explosions occur in the magazine stores below. The detonation chamber also has technological significance – the design ensuring that planned detonations of ammunitions could be routinely undertaken with minimal damage to personnel or their surroundings.

#### 4.1.5 Contextual Significance

*Contextual values that demonstrate or are associated with: a relationship to the environment (constructed and natural), a landscape, setting, group, precinct or streetscape; a degree of consistency in terms of type, scale, form, materials, texture, colour, style and/or detail; recognised landmarks and landscape which are recognised and contribute to the unique identity of the environment.*

HMNZS Steadfast has high contextual significance as the setting for the Royal New Zealand Navy Armament Depot and associated military buildings, as one of a number of strategic defence locations within Whakaraupō-Lyttelton Harbour. Other high value heritage items associated with WWII defence in the harbour include Godley Head 80<sup>th</sup> Coastal Defence Battery at the head of Lyttelton Harbour and Rīpapa and Quail Islands which are associated with the Navy League Sea Cadets TS Steadfast who carried out training exercises and camps at both places. HMNZS Steadfast is also associated with HMNZS Tasman, located at Naval Point in Lyttelton and from which at least one naval building was relocated to the Cass Bay Armament Depot. Contextual significance includes the right-of-way set aside by government for defence purposes, below Governors Bay Road that enabled beach access so that ammunition could be



conveyed to waiting barges. HMNZS Steadfast has high contextual significance for its position as second in superiority to Kauri Point in Auckland and the only naval base in the South Island.

Steadfast has high contextual significance for the ephemeral stream that flows through the centre of the site, its historic rural character and the visual amenity of the dramatic crater rim ridgelines and Whakaraupō-Lyttelton Harbour. The ridgeline and spurs are of high contextual significance to tāngata whenua with specific place names recording important landmarks, events and whakapapa of Motukauatirahi-Cass Bay.

#### 4.1.6 Archaeological or Scientific Significance

*Archaeological or scientific values that demonstrate or are associated with: the potential to provide information through physical or scientific evidence an understanding about social historical, cultural, spiritual, technological or other values of past events, activities, structures or people.*

The HMNZS Steadfast site has potential to provide evidence of nineteenth century farming practices and human activity on the site. The buildings and other structures that remain on the site – including the reservoirs and remains of the firefighting system, for example - have the potential to educate visitors as physical evidence of the design, construction and running of military bases as well as naval and general military practices during WWII and the Cold War period; and the disestablishment of redundant naval bases and the destruction of superfluous ammunition. Additionally, the site has the potential to provide information pertaining to the conversion of disestablished military bases into scientific research facilities and cadet training bases. See Policy 13 for potential opportunities for interpretative material that could be used on the site to effectively illustrate its history.

## 4.2. Statement of Overall Significance

HMNZS Steadfast is a site of local, regional and national significance and has high contextual significance as the setting for the South Island Royal Navy Armament Depot and associated military buildings. The site was one of a number of strategic defence locations within Whakaraupō-Lyttelton Harbour and has high contextual and aesthetic significance for views of the dramatic crater rim ridgelines and historic rural landscape character. The ridgeline and spurs are of high contextual significance to tāngata whenua with specific place names recording important landmarks, events and whakapapa of Motukauatirahi-Cass Bay. Further investigation is required to ascertain the value of the site to tangata whenua.

The site has exceptional technological significance for its insight into mid-20th century military and defence building practices, including ten magazine stores that demonstrate the requirements for housing explosive materials. Both technologically and aesthetically the site has high significance for the strategic placement of magazine stores which are embedded into the hillside as a deliberate attempt to camouflage the structures from visibility. Water reservoirs above the ammunition stores have high technological significance indicating preparedness for firefighting should explosions occur in the magazines below; as does the detonation chamber design which ensured that planned detonations of ammunitions could be routinely undertaken with minimal damage to personnel or their surroundings. Other structures built when the base was first established in 1943, such as the guard house/quarter master's lobby, the administration buildings/office, and the laboratory, are also of architectural significance and feature a similar utilitarian style.

Other historic spaces and site elements associated with the armament depot include the military road with its two land bridges linking the ammunition stores, and the perimeter concrete post and barbed wire

fence. The grounds surrounding the administration buildings at the site entrance on both sides of the stream are an area associated with naval activity (i.e. parades and naval exercises) with stone retaining walls, rock terracing, pedestrian bridges and pathways from the grounds west of the stream to the original parade ground and mast/flag station on the eastern side.

Together, the various buildings, structures, and objects have significant group value as an architectural set, extended and added to in 1965 when the site was inherited by TS Steadfast. The ablutions block has no architectural or aesthetic significance and detracts from the heritage values of the other structures. The informal nursery and associated paraphernalia is also intrusive.

Steadfast has high cultural and social significance for the Banks Peninsula Council's purchase of this land prior to amalgamation, with extensive community consultation and support providing justification that the land would serve a recreational function for local and Christchurch communities.

### 4.3. Inventory and Heritage Significance Assessment

Each element of HMNZS Steadfast has particular significance associated with that feature's authenticity as well as the historic, cultural, architectural, technological, contextual and archaeological significance described above outlines the degree of authenticity and significance for each element, with a summary of this significance based on the criteria outlined below.

#### 4.3.1 Degree of Authenticity

The ICOMOS NZ Charter defines 'authenticity' as the credibility or truthfulness of the surviving evidence and knowledge of the cultural heritage value of a place. The assessment of authenticity in Section 4.3.3 is based on the identification and analysis of the evidence and knowledge gathered for this Conservation Report.

Levels of authenticity of features within HMNZS Steadfast are assessed using the following scale:

##### *Exceptional Authenticity (A)*

The element is known to be original and/or provides exceptionally credible or truthful evidence of cultural heritage values through form, fabric, technology, use or setting.

##### *High Authenticity (B)*

The element is known to be historic and/or contributes to credible or truthful evidence of cultural heritage values through form, fabric, technology, use or setting.

##### *Some Authenticity (C)*

The element is recent fabric and/or makes a limited contribution to evidence of cultural heritage values of the structure in its form, fabric, technology, use or setting.

##### *Little or No Authenticity (N)*

The element is recent fabric and/or makes no contribution to evidence of cultural heritage values of the structure in its form, fabric, technology, use or setting.

#### 4.3.2 Degree of Significance

Degrees of significance of features within the landscape are assessed using the following scale:

##### *High*

Makes an essential and fundamental contribution to the overall significance of the place and must be retained.

##### *Moderate*

Makes an important contribution to the overall significance of the place and must be retained where possible and practicable.

##### *Some*

Makes a minor contribution to the overall significance of the place.

##### *Neutral/Intrusive*

Limited significance or detracts from the overall heritage significance of the place or obscures fabric of greater heritage value.

#### 4.3.3 Assessment of Landscape and Built Fabric Significance

Table 4: Assessment of Landscape and Built Fabric Significance

FABRIC	AUTHENTICITY	SIGNIFICANCE	COMMENTS
<b>Contextual Heritage Setting</b>			
Landscape Setting	A	High	The broader landscape is significant as the setting of the HMNZS Steadfast site. It contains historical and cultural associations as well as visual and spatial relationships.
<b>Views</b>			
From Governors Bay Road into HMNZS Steadfast	A	High	The lower 'landscaped' part of the site has historically been visible from Governors Bay Road.
Between ammunition stores and other significant heritage fabric	A	High	Strategic placement contributes to the site's historic legibility and coherence.
To broader cultural features	A	High	The landscape features of Whakaraupō-Lyttelton Harbour contribute to the legibility of HMNZS Steadfast and the historic development of the site.



FABRIC	AUTHENTICITY	SIGNIFICANCE	COMMENTS
Site Layout	A	High	<p>Steadfast is a rare example of a mid-20<sup>th</sup> century military and defence site, the layout having changed little since its early development.</p> <p>The layout of the magazine stores tucked into the hillside demonstrate historic use patterns and associations and makes an important contribution to the site's overall legibility and coherence.</p>
<b>Ecology and Vegetation</b>			
Stream	A	High	While modified, the stream makes an important contribution to the site's legibility and coherence, reinforcing the ecological values of the site and setting.
Lawn (administration area)	A	High	The maintained lawn areas around the administration buildings in the lower portion of the site have a lengthy association with Steadfast.
Whaka-Ora Ki Uta Ki Tai streamside planting initiative	C	Moderate	Contributes to the legibility of the place, reinforcing the historic ecological planting patterns and visual amenity of the site.
Native vegetation – Governors Road boundary	C	Some/Intrusive	Contributes to the legibility of the place, reinforcing the historic ecological planting patterns and visual amenity of the setting. However unkempt growth has become intrusive and requires maintenance.
Exotic weed species (gorse)	N	Intrusive/Neutral	Intrusive on access roads and a fire risk when left to spread unchecked. However selected areas of gorse can be useful as a nurse crop to facilitate native plant regeneration.
Invasive weed species (poplar, blackberry, thistle, grass, muehlenbeckia)	N	Intrusive	Competes with indigenous vegetation and has no direct historic connection with the site.
<b>Boundaries, Circulation and Spaces</b>			
Military access roads and land bridges	A	High	Historic photographs of roads and buildings within the site suggest that

FABRIC	AUTHENTICITY	SIGNIFICANCE	COMMENTS
			the road circulation patterns have a high degree of historic authenticity and have changed little since the establishment of the armament depot.
Concrete post and barbed wire fences	A	High	Despite penetration by rockfall and damage along the Governors Bay Road boundary, the original boundary fences have remained relatively intact and continue to delineate the parcel of land set aside for defence purposes in 1945.
Stone retaining wall, rock garden, terracing, and pathway to/from and including the parade ground	A	High	Modifications to the streambank to create gardens and pathways dates back to the 1950s with strong visual linkages that reflect associations between historic use, local materials, and landscape character.
Reservoir fence remnants	A	High	Contributes to the legibility of the site and use of grazing/landscape maintenance during RNZN occupation.
Internal fence (1982)	A	High	Associated with use of the site over the past forty years as part of its evolving pattern of use.
Military access road - tar seal remnants	A	High	Installed in the 1950s and associated with RNZN use of the site.
Pedestrian bridges (one removed)	A	High	Contributes to the legibility of the site and associations between historic use and landscape character.
Helicopter landing area	A	High	Contributes to the legibility of the site and associations between historic use and landscape character.
Potential track from Ammunition Store #8 to and along the fence line	A	High	Possibly an informal patrol route within the Armament Depot. If so, it contains a high degree of authenticity and has changed little since RNZN use of the site
Road seal from east entry gate to proposed subdivision	N	Neutral	Associated with proposed subdivision plans in 2005.
<b>Site Elements</b>			
Mast/flagpole	A	High	Despite being moved from the east side

FABRIC	AUTHENTICITY	SIGNIFICANCE	COMMENTS
			of the stream to the west, the mast/flagpole is one of the earliest elements associated with defence on the site.
Hose feeds to and from reservoirs	A	High	Associated with RNZN use of the site. Strategic placement indicates preparedness for firefighting should any explosions occur in the magazine stores below.
Governors Bay Road culvert	A	High	Installed in the 1950s and associated with RNZN use of the site.
White stone retaining walls	A	High	Contributes to the legibility of the site and associations with the early days of the TS Steadfast Navy League Sea Cadets.
Remnant timber fenceposts	A	High	Contributes to the legibility of the site and use of grazing for maintenance during RNZN occupation.
TS Steadfast signage	C	Some	While the signage is recent it contributes to the legibility of the site and historic use by the TS Steadfast Navy League Sea Cadets
Sea Cadet firing range	C	Some	Associated with historic use by the TS Steadfast Navy League Sea Cadets
Mine, anchor, bell and gun (TS Cornwall)	C	Neutral	These elements are part of the broader Navy League Sea Cadet history but with no direct historic association to the site.
Power poles	A	High	It is likely that many of the power poles were installed during the 1950s and are therefore associated with the RNZN use of the site.
Dam (above the reservoirs)	A	High	It is possible that the dam noted above the reservoirs in the NZHPT Diagrammatic Plan (Figure 55) is identifiable.
Native plant nursery structures	N	Neutral/Intrusive	Has no authentic historic association with the site. The placement and deteriorating state of the elements is intrusive.
<b>Buildings/Structures</b>			



FABRIC	AUTHENTICITY	SIGNIFICANCE	COMMENTS
HMNZS Tasman Shipwright Store - Former Garage – Girl's Accommodation Block	B	Moderate	Lower authenticity as relocated from another site, and because of conversion into accommodation, including the addition of external and internal walls; but of moderate significance to the place as a contributing building of the complex.
Store Hut	A	Moderate	This small building was likely relocated at a similar time as the former garage, and has not been significantly changed. However, as a storage building, it is not as significant as many of the other buildings on the site.
Office/Ward Building	B	High	This building has been modified over time, beginning with conversion into two flats during the 1950s. Areas of historic fabric – including TG&V or matchlining in the service rooms of the building, windows and doors, and floors – should be conserved where possible.
Drill Hall	B	High	Lower authenticity as relocated from another site, but of high significance to the place as a key building of the complex. The history of this building extends back to WWII, and the numbering of elements for its relocation are an important aspect of this story.
Ablutions Block	N	Intrusive	Added in 1990s.
Ammunition Store 1 (Clothing Store)	A	High	Known as the clothing store by the HMNZS Steadfast Community.
Ammunition Store 2	A	High	
Ammunition Store 3	A	High	Damaged by rockfall
Ammunition Store 4 (No Roof)	B	High	This ammunition store has lost its roof which has compromised its authenticity and legibility when compared to the other ammunition stores, although the walls are still standing.

FABRIC	AUTHENTICITY	SIGNIFICANCE	COMMENTS
Ammunition Store 5	A	High	
Ammunition Store 6	A	High	Damaged by rockfall
Ammunition Store 7	A	High	
Ammunition Store 8 (Exploded)	C	High	This is the ammunition store that exploded in 1980. Though only the concrete base and metal framing of the door remains, the place still has high significance.
Ammunition Store 9	A	High	
Ammunition Store 10	A	High	
Reservoir 1 (Large)	A	High	
Reservoir 2 (Small)	A	High	
Laboratory Building	A	High	These buildings are part of the original Depot and have high significance for this reason. They are also relatively unmodified, although the Quartermaster's Accommodation building appears to have been altered more than the Laboratory.
Quartermaster's Accommodation	B	High	
Detonation Chamber	B	High	There is very little left of this structure, and its past conversion into an ablutions block has compromised its authenticity; however, what remains should be conserved as a ruin of an original and purpose-built structure.

## 5. Framework for Conservation Policies

This Conservation Report is a policy document for a place of significant cultural heritage value. It is relevant for practitioners involved in any future refurbishment, maintenance and conservation of heritage fabric relating to HMNZS Steadfast. Copies of this document must also be submitted with future applications for resource consent or other statutory procedures.

### 5.1. Regulatory Requirements

There are a variety of regulatory and non-regulatory requirements particularly relevant to the New Zealand context. Regulatory requirements include the:

- Resource Management Act (RMA) 1991
- Canterbury Regional Policy Statement
- Local Government Act 2002
- Christchurch District Plan
- Heritage New Zealand Pouhere Taonga Act 2014
- Building Act 2004
- Earthquake Prone Building (EQB) Amendment Act

### 5.2. Conservation Principles

Non-regulatory requirements include conservation principles prepared by established heritage conservation organisations, to provide direction on how places of cultural heritage value are to be managed. The following documents are particularly relevant:

- ICOMOS NZ Charter for the Conservation of Places of Cultural Heritage Value (2010)
- ICOMOS Historic Gardens (The Florence Charter 1981)
- Christchurch Heritage Strategy 2019 – 2029
- Heritage New Zealand Archaeological Guidelines and Templates
- Heritage New Zealand Sustainable Management of Historic Heritage Guidance Series
- Te Tiriti o Waitangi Principles
- Whaka-Ora Healthy Harbour Ki Uta Ki Tai



### 5.3. Threats Identification

A key aspect in the management of heritage places is the identification of threats to heritage values and the implementation of appropriate actions to remove or ameliorate any potential or actual damage. Poorly informed decisions risk the integrity and authenticity of heritage structures, compromising their significance. Threats to HMNZS Steadfast are discussed below and are rated against the risk matrix in Table 5. The management of these threats are addressed by conservation policies and recommendations in Section 6.

		IMPACT				
		Insignificant	Minor	Moderate	Major	Extreme
LIKELIHOOD	Almost Certain	Medium	High	High	Very High	Very High
	Likely	Medium	Medium	High	Very High	Very High
	Possible	Low	Medium	High	High	Very High
	Unlikely	Low	Low	Medium	High	High
	Very Unlikely	Low	Low	Medium	Medium	High

Table 5: Risk matrix for HMNZS Steadfast.

#### 5.3.1 Failure to Recognise Heritage Significance to Māori (High Risk)

Māori heritage is a matter of national significance within the Resource Management Act and the landscape of HMNZS Steadfast has played an historic role in the culture and traditions of iwi pre-European settlement. Where places hold significance to Māori, it is vital that tāngata whenua are involved in the identification and protection of Māori heritage values. Iwi are to therefore be involved in identifying any tangible and intangible values that this place holds for them, to ensure the formulation of appropriate protection mechanisms. Failure to involve local iwi may constitute a threat to the complete understanding and protection of the site's heritage values. It may also breach Council's heritage strategy: *Our Heritage, Our Taonga – Heritage Strategy 2019–2029* and other legislation.

#### 5.3.2 Loss of Heritage Values (Very High Risk)

Changes of land use/incompatible land use within the Steadfast site has the potential to threaten the historic values of both the site and the wider landscape. This also applies to the inappropriate use or repurposing of heritage structures (refer to 5.3.7 below).

There is potential for new planting to block views between the ammunition stores and other significant heritage fabric thereby weakening the heritage and aesthetic values of the site and its legibility.

Failure to carry out regular monitoring and assessment of the site's heritage fabric through the skills of appropriately qualified specialists can contribute to a loss of heritage values. This is particularly true in the case of the stone retaining walls, terracing, rock garden and pathway across the stream in the lower portion of the site. The 1980s native planting along the Governors Bay Road boundary is now of a size that it obscures historic views into the site. Since TS Steadfast's amalgamation with TS Cornwall, elements from

the Cornwall site have been introduced to Steadfast (the anchor, bell, gun and mine) and could potentially be confused as original TS Steadfast features.

### 5.3.3 Environmental Conditions (High Risk)

Local environmental conditions, including the presence of pollution, water, wind and temperature fluctuations can adversely affect the condition of heritage landscapes and structures.

#### 5.3.3.1 Extreme Weather Events (High Risk)

Extreme weather events associated with anthropomorphic climate change are becoming more common. High winds, rainfall, erosion and flooding associated with these events pose a threat to all places, including HMNZS Steadfast and its wider setting.

#### 5.3.3.2 Rainfall and drainage

Long and relatively deep drainage channels have been constructed throughout the site to deal with rainwater runoff, much of this during the early establishment of the site. Deep channels are evident along the road accessways and throughout the grassed areas. While improvements have been along the driveway east of the Ward room during TS Steadfast occupation of the site, drainage continues to pose a threat to buildings with many channels regularly blocked with weed growth. In addition the channels pose a fall/trip hazard particularly when grass obscures these areas.

#### 5.3.3.3 Erosion

As with much of the hills around Whakaraupō-Lyttelton Harbour, HMNZS Steadfast sits within a Slope Instability Management Area in the CDP. Erosion and rockfall have been two of the most significant threats to the site since the establishment of the armament depot. Records show rockfall has occurred on the site in the past, outside of an earthquake event. It is therefore essential that potential for rockfall is considered when determining public use of the site. While grazing has been an effective method of grass and weed control, it has also historically exacerbated erosion. It is essential that potential for erosion is considered when allocating areas for grazing and measures are put in place to minimise this, including fully fencing the waterway from grazing animals.

#### 5.3.3.4 Plant Disease or Death (High Risk)

The Whaka-Ora Stream Planting initiative is an important programme designed to improve biodiversity and habitat for indigenous species and reduce erosion and sedimentation into Whakaraupō-Lyttelton Harbour. The community volunteers have contributed significant hours to this task and continue to hand water the plants using long hoses attached to taps within the Steadfast buildings. The loss of this planting and other naturally occurring indigenous vegetation on the site would significantly impact the ecological and aesthetic values of HMNZS Steadfast and weaken its developing ecological integrity. While large-scale events are difficult to predict, preventative actions to minimise any loss that may occur through disease or lack of water must form part of the planned programme of site monitoring.

#### 5.3.3.5 Limb failure of large trees

Limb failure of large trees pose a risk to the site, its buildings and structures, and its occupants. Regular arboricultural assessments and systematic tree hazard evaluations are needed to ensure the structural soundness of all mature trees on the site and to identify any signs of potential limb failure.

#### 5.3.3.6 Organic Growth

Moss, lichens, and plant material evident on the fabric of buildings and structures may appear innocuous; however, they can cause permanent staining, trap moisture, and cause or exacerbate deterioration of materials. These issues can be addressed as part of general maintenance.

#### 5.3.3.7 Airborne Pollutants

As HMNZS is accessible by vehicles, buildings and structures within the area are at risk from staining and deterioration that can be caused by airborne pollutants. These pollutants can cause staining and deposits to accumulate on surfaces which can cause damage. This can also be addressed as part of routine maintenance.

#### 5.3.4 Maintenance (Very High Risk)

##### 5.3.4.1 Poor or No Maintenance (Very High Risk)

Lack of maintenance is one of the most common causes of deterioration in heritage landscapes and structures. While the tar seal surface of the subdivision road is not heritage fabric, it has been placed over an historic access road which is now in a state of disrepair with surface large cracks and gorse that covers the entire width.

While the buildings that remain in use by T.S. Godley are in better repair than those that are not in use, all buildings and structures at HMNZS Steadfast have deteriorated as a result of years – if not decades - of deferred maintenance. As a result, parts of the site are not safe to access, particularly around the damaged ammunition stores; there is widespread pest infestation of disused buildings; and there are weathertightness issues with buildings that remain in use. This deterioration will continue to increase at an exponential rate if deferred maintenance is not addressed. This can be addressed through a maintenance plan.

##### 5.3.4.2 Invasive Vegetation and Weed Species (Very High Risk)

Invasive weed species such as suckering poplar, thistles, blackberry, gorse and grass pose a risk to the waterway, streamside planting, access roads and pedestrian pathways. While gorse is a useful nurse crop for native seedlings, unmanaged it is a risk to vehicle and pedestrian circulation through root growth, overhanging and entwining with the road and choking the waterway. The invasive native climber *Muehlenbeckia australis* is also choking the waterway and if left unchecked could smother restoration planting.

##### 5.3.4.3 Inappropriate Repair (High Risk)

Poorly specified or inappropriate repairs are as much, if not more of a threat to heritage structures as lack of maintenance. Remedial works should be carried out in accordance with the policies in Section 6. Like-for-like material replacement is desirable, and will require careful specification, detailing and construction monitoring.

#### 5.3.5 Seismic Event (Very High Risk)

Like the rest of Canterbury, Banks Peninsula is subject to relatively rare earthquakes which result from faulting sedimentary rocks underneath the Lyttelton volcanic mass. HMNZS Steadfast sits within Rockfall Management Areas 1 and 2 in the CDP. Rockfall into the HMNZS Steadfast site from the ridgeline above, as a result of the 2011 Canterbury earthquakes illustrates the site is at very high risk of damage and potential injury as a result of a future seismic event.

#### 5.3.6 Fire (Very High Risk)

Damage caused by fire is the greatest worldwide threat to heritage places. This is especially the case in New Zealand where the majority of our historic buildings are partially or entirely constructed in timber. Fires may be caused by natural events, arson, electrical faults, repair works, accidents or carelessness. The damage caused by fire can be substantial, resulting in partial or complete destruction. Cass Bay has been exposed to the threat of fire many times since human settlement and several of the buildings are of timber construction.



Cass Bay has a long history of fires, including fires occurring in the bay during the last two years running. There are challenges accessing sufficient water to Steadfast in such cases. As part of the community planting initiative, two temporary water tanks are being installed on site as a secondary water supply, each with a fire attachment in case of emergency.<sup>202</sup> The large areas of gorse pose a fire hazard to the site and while there is potential use as a nurse crop, this must be contained in selected areas.

#### 5.3.7 Use (High Risk)

Current use of HMNZS Steadfast as a recreational amenity space is compatible with the heritage value and purpose of the place. Visitor activities must be managed appropriately to avoid damage to heritage fabric, vandalism, further erosion and rockfall. Managing vehicle and visitor use will be key to ensure the long-term conservation of the site.

##### 5.3.7.1 Current Use (Low Risk)

Steadfast is currently used by TS Godley and the local community for various local meetings and community events.

##### 5.3.7.2 Change of Use (Medium Risk)

The conservation of a place is generally facilitated by that place serving a useful purpose. Proposals are in place to open HMNZS Steadfast for public use as a recreation reserve with shared bike and walking tracks. Opening the site up offers opportunities for greater visibility and reduction of negative behaviour. However greater accessibility may also increase opportunities for vandalism and graffiti and protective measures may be required.

#### 5.3.8 Contamination (High Risk)

Asbestos Containing Materials (ACM) are present in almost every building at HMNZS Steadfast, including loose and friable material, especially where buildings have been damaged. While these materials remain there is an ongoing risk to both the structures themselves, and the wider site, will become so badly contaminated by these materials that they are no longer able to be safely used. ACMs need to be urgently encapsulated and/or cleared from the entire site.

#### 5.3.9 Vandalism (Medium Risk)

As a large area with many abandoned buildings, there are multiple cases of vandalism throughout HMNZS Steadfast in the form of graffiti.

#### 5.3.10 Wildlife and Pests (Medium Risk)

The various buildings and structures of HMNZS Steadfast, especially those which are currently abandoned or are empty and are awaiting remediation work, are vulnerable to inhabitation by birds, rodents and possums. This damage is not just superficial. It can undermine the weathertightness and structural integrity of buildings – particularly timber framed buildings - or cause contamination that can only be addressed by entirely removing and disposing of affected building fabric. Buildings should be made secure against wildlife and pests even when they are not in regular use. Pest management systems, such as trapping and poison, may need to be considered.

#### 5.3.11 Information Loss (Low Risk)

Potential loss of archival material is a threat to the heritage values of HMNZS Steadfast. Should damage or destruction occur to any part of the site, a lack of, incomplete or outdated site records (both plan and photographic) would be an impediment to any necessary conservation work. It is critical that sufficient physical and documentary evidence from the site exists to enable reconstruction without speculation.

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<sup>202</sup> Pers. Comm. J. Healey/W. Hoddinott, 15 November 2021

Similarly, it is essential that gaps in understanding of the site's past are pursued to prevent misinformation and ensure accurate conservation, restoration, and interpretation.

#### 5.3.12 Future Development (Medium Risk)

Inappropriate or unsympathetic development and use of neighbouring land poses a risk to the area. As far as possible it will be important to ensure that a holistic approach to managing the area and its setting is adopted, and that any development is sympathetic to HMNZS Steadfast's existing heritage fabric.

#### 5.3.13 Financial (High Risk)

Lack of funds to carry out repairs and maintenance is a common occurrence with heritage places and structures. Given the local, regional and national value of HMNZS Steadfast, ongoing financial support must be sought for upkeep of the site.

#### 5.3.14 Interpretation (Low Risk)

While Steadfast may be well known to the Navy, sea cadets and local community, it is less familiar to those with no direct connection to the site. Its historic linkages and developmental history relative to defence sites around Whakaraupō-Lyttelton Harbour and other associated places in New Zealand is not well appreciated or understood. The site would benefit from a more in-depth explanation, albeit modest in scale and location.

## 6. Conservation Policy

The following Conservation policy statements provide best practice guidance on any anticipated or unforeseen future works intended for HMNZS Steadfast. They are informed by the Heritage Assessment and Statements of Significance outlined in Section 4 and must be examined by any practitioners or individuals contemplating the physical change of HMNZS Steadfast.

Each policy considers the statutory requirements noted above and provides general conservation best practice. Policy statements are written in italics, with supporting commentary and implementation guidance below each statement.

### Policy 1: ICOMOS NZ and ICOMOS Historic Gardens (The Florence Charter 1981)

***All work carried out within HMNZS Steadfast are informed by sound conservation practice and in accordance with the ICOMOS New Zealand Charter for the Conservation of Places of Cultural Heritage Value and ICOMOS Historic Gardens (The Florence Charter 1981).***

The ICOMOS NZ Charter has been formally adopted by Heritage New Zealand, the Department of Conservation, and a number of territorial authorities. The Charter identifies eight conservation processes (Non intervention, maintenance, stabilisation, repair, restoration, reconstruction, adaptation and interpretation). Typically one or a combination of these processes is appropriate to effect an optimum level of conservation. A copy of the charter is provided in Appendix 5.

The Florence Charter recognises gardens as historic monuments with their own special character and provides a set of principles and guidelines for the preservation of historic gardens. The Charter outlines strategies for the 'maintenance conservation, restoration and reconstruction of gardens including their plans, vegetation, structural and decorative features and use of water.'<sup>203</sup>

### Policy 2: Kaitiakitanga

***Take into account the principles of Te Tiriti o Waitangi and recognise the special relationship, responsibilities and guardianship role of tāngata whenua with regard to Ōtautahi Christchurch and HMNZS Steadfast.***

The Treaty of Waitangi recognises and guarantees the protection of tino rangatiratanga (sovereignty) and empowers kaitiakitanga (guardianship), a customary practice exercised by tāngata whenua over their taonga such as sacred and traditional places, built heritage, traditional practices, and cultural heritage resources.

### Policy 3: Legal and Administrative Protection

***All work carried out within HMNZS Steadfast shall be in accordance with national and local legislation, in particular the Heritage New Zealand Pouhere Taonga Act 2014, the Reserves Act 1977 and the Christchurch District Plan.***

HMNZS Steadfast is a place associated with activity prior to 1900, therefore an Archaeological Authority from Heritage New Zealand will be required for any works within or that impact on the site.

### Recommendation:

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<sup>203</sup> [http://www.getty.edu/conservation/publications\\_resources/research\\_resources/charters/charter31.html](http://www.getty.edu/conservation/publications_resources/research_resources/charters/charter31.html)



- I. That HMNZS Steadfast along with its Setting is considered for scheduling and protection in the Christchurch District Plan.
- II. Formerly gazette HMNZS Steadfast with the appropriate classification under the Reserves Act 1977. Include a name change to reflect both Māori and European values.

#### Policy 4: Current and Future Use

***Any new use or change proposed for the landscape and buildings of HMNZS Steadfast must not detract from the heritage values of the place. Use of these features shall not place built and natural elements at risk.***

Any proposed use of the buildings and structures of HMNZS Steadfast should contribute to their long term survival. Any new additions or adaptations deemed appropriate to install are to be made in such a way that if removed in the future, the essential form and integrity of the landscape would be unimpaired. Any adaptation or new work is to respect the experiential qualities of the landscape.

As HMNZS Steadfast has been used primarily by T.S. Godley Sea Cadets for over 50 years, their continued use of the site is encouraged. This will require periodic alteration and upgrade of the buildings that are used for their activities, including sleeping accommodation for cadets of different ages and genders, ablutions and sanitary facilities for cadets of different ages and genders, meal preparation and dining facilities, and storage for equipment. Such alteration and upgrade work must be carried out in accordance with the significance ratings assigned to each of the buildings in Table 4.

The Cass Bay Residents' Association (CBRA) also uses buildings on the site for community events, and this use is likely to become more regular in the future. At present, there is no single building that is both large enough and specifically dedicated to this use. It is proposed to adapt at least one building on the site for this purpose. As for any alterations and upgrades carried out to meet the needs of T.S. Godley Sea Cadets, any alterations made to adapt buildings for use by the CBRA or other community groups should be carried out in accordance with the significance ratings assigned to the buildings in Table 4.

***Monitoring to gauge the impact of public use on the landscape shall be part of an ongoing maintenance programme. Actions must be taken to manage landscape use if particular forms of use appear to be causing damage.***

The site is owned and managed by the Christchurch City Council and the lower site (below the internal fence line) is occupied and maintained by the T.S. Godley Sea Cadets. The CBRA also use buildings on the site for community events. It is expected that this arrangement will be formalised in a lease agreement between each party and CCC. These lease agreements should require a minimum level of deterioration monitoring and maintenance of the structures that each party is using, and the site as a whole. This may be best done through a joint committee. Where a party's activities cause damage to the site, that party should be required to rectify this under the lease agreement. A joint committee to oversee management and maintenance of the site.

#### Implementation:

- I. Any changes to the timber-frame buildings and structures on the site must be planned and carried out in accordance with their significance as per Table 4, while ensuring that they are safe, structurally stable, weathertight, and fit for purpose. Wherever possible, the overall form of the buildings and their physical fabric should be retained and repaired; in particular:

- a. the superstructure, the exterior elevations (including fenestration and wall cladding), and overall form of the Drill Hall;
- b. the exterior elevations (including fenestration and wall cladding), historic interior flooring and wall linings, and overall exterior form of the Office/Ward Building, the Laboratory and the Quartermaster's Accommodation building;
- c. the side and rear elevations of the former Shipwright Store/Garage (now the Girls Accommodation Block);
- d. the remaining concrete walls and floor of the detonation chamber.

Generally, the interior layout of the buildings may be altered provided that this does not involve unnecessary removal of fabric identified above, or undermine their structural integrity.

- II. A long term strategy for conservation of the magazines should be developed. This long term strategy should consider, in particular:
  - a. the extent of public access to the magazines that can be safely provided for;
  - b. possible adaptive reuse options for the magazines, particularly those that are still whole and complete;
  - c. the extent to which the magazines that are damaged should be repaired and/or how to address health, safety and access issues with these magazines;
  - d. how to execute repair of the magazines.
- III. The historic road access can play an important role as recreational pathways linking Steadfast to Whakaraupō-Lyttelton Harbour, Corsair Bay and Ōtūherekio Reserves. Selected portions of the internal and external fenceline may be removed to provide these connections (see Policies 5 and 12).
- IV. Conditions of Steadfast use must be clearly defined and activities monitored to ensure the physical fabric, topography, archaeology and heritage values are protected.
- V. Council will monitor use of the buildings and landscape via an annual inspection and photographic record of key locations to record evidence of any physical deterioration. Both Council and lessee committee will maintain a record of visitors and events. Monitoring to include oversight by the lessee committee.

#### Recommendation

Continue historic use of the RNZN helicopter landing area outside ammunition store #5. Maintain this part of the site as a mown area for rescue helicopter use.

#### Policy 5: Retention of Significance

***Heritage features, spaces and fabric shall be retained wherever possible as a way of conserving the cultural significance of HMNZS Steadfast. Any intervention must be carried out relative to the determined significance of individual elements.***

Article 4 of the Florence Charter states that 'the architectural composition of the historic garden includes: 'its plan and its topography; its vegetation including its species proportions, colour schemes, spacing and respective heights; its structural and decorative features; and its water, running or still, reflecting the sky.'

The design and layout of the HMNZS Steadfast landscape, particularly those elements assessed as High significance in Section 4, are important cultural and natural objects. Any necessary conservation or arboricultural work in respect of these elements must ensure minimum intervention, yet as much as is needed to ensure their future retention. Intervention is to be limited to processes of stabilisation, maintenance, repair, restoration or reinstatement, and in the case of significant vegetation, propagation and life extending horticultural and arboricultural practices. Heritage features, spaces and fabric assessed as non-contributory have no heritage significance and make no appreciable contribution to the place. They may be retained for functional reasons, providing fabric of greater significance is not obscured or removed. Intrusive elements are to be removed.

#### Implementation:

- I. The designed layout of HMNZS Steadfast must be retained. This includes the significant landscape fabric noted in Section 4.3.3 including views, ecology and vegetation, boundaries, circulation and spaces and site elements.
- II. Stabilisation of individual heritage items are to be carried out to arrest the process of decay.
  - Protect, stabilise and maintain all streamside retaining walls, stone steps, rock garden terracing and pedestrian bridges. The upper pedestrian bridge and all rock placement is to be inspected by an experienced building contractor to ensure both bridge and stones are secure and that they remain in their original position where possible. This may require reassembly to ensure stability.
  - Protect remnants of 1956 tar seal on the eastern access road (close to Ammunition Store #5). Remnants are to be inspected by an experienced building contractor and protected accordingly to ensure their longevity.
- III. Any required repairs and remedial work shall be carried out as soon as practicable.
  - Perimeter fencing is to be inspected by an experienced building contractor and repaired to ensure the fence is secure.
  - Repair broken tar seal surface from 2005/6 subdivision proposal along east entrance access road.
  - Stabilise eroded sections of access road beyond the tar seal on the eastern side of the stream.
  - Retain original reservoir fences and install a new perimeter fence surrounding both reservoir and remnant fences to ensure safety. The new fences must be designed to minimise visual alteration to the surrounding elements and spaces and their interpretation.
  - Repair retaining walls behind the Store, Ward Room and Drill Hall. Where possible repair in situ and if retaining walls must be removed for repair, record construction before moving back.
- IV. Where practicable, landscape features identified as having a significant association with the site are to be restored or reconstructed.
  - Restore and maintain pathway from the grounds west of the stream to the parade ground on the eastern side. This pathway has relevance in terms of traditional use and historic connections across the stream (Figure 71 and Figure 81).
  - A new pedestrian bridge to be reconstructed to its original form in the lower section of the site, to restore lost architectural value and access across the stream. The bridge will be



designed to minimise visual alteration to the surrounding elements and spaces and their interpretation.

- Restore circular flower beds between the Ward Room and the Store, and carry out further research to determine the species likely to have been planted here.
- Consider reinstatement of the reservoirs (e.g. there is potential for water storage to establish planting, assist with fire-fighting etc.).

- V. Remove all fabric identified as detracting from the cultural heritage value of HMNZS Steadfast.
- Remove native plant nursery rubbish in consultation with owner.

***Any new additions or adaptations deemed appropriate to install at HMNZS Steadfast are to be made in such a way that, if removed in the future, the essential form and integrity of the landscape would be unimpaired.***

Section 21 of the ICOMOS NZ Charter states that,

“The conservation of a place of cultural heritage value is usually facilitated by the place serving a useful purpose. Proposals for adaptation of a place may arise from maintaining its continuing use, or from a proposed change of use.

Alterations and additions may be acceptable where they are necessary for a compatible use of the place. Any change is to be the minimum necessary, must be substantially reversible, and have little or no adverse effect on the cultural heritage value of the place.

Any alterations or additions are to be compatible with the original form and fabric of the place, and avoid inappropriate or incompatible contrasts of form, scale, mass, colour, and material.

Adaptation must not dominate or substantially obscure the original form and fabric, and must not adversely affect the setting of a place of cultural heritage value. New work is to complement the original form and fabric.”

While the native plant nursery is not original fabric, adaptation to support its activity on the site is appropriate, particularly given its niche role in propagating and growing-on locally eco-sourced plants with seed sources from the harbour side of the Port Hills. In this way the nursery aligns with the principles of the ICOMOS Charter, by enabling HMNZS Steadfast to serve a useful purpose.

#### Implementation:

- I. Where a part of the landscape needs to be adapted for a new use, ensure that the landscape context of the site is respected such that its heritage significance is not compromised or obscured.
- II. Conditions of use of the landscape are to be clearly defined, and activities monitored to ensure the physical fabric, including landscape layout, tree cover, topography, archaeology, and heritage values are preserved.
- III. Any modifications or refurbishment of the landscape and setting are to be designed and carried out by referring to Chapter 4: Assessment of Significance and these Conservation Policies. The

designed experiential qualities of the landscape must be respected alongside built and planted heritage fabric.

#### Policy 6: Fabric From Different Time Periods

***The contribution made by fabric from other periods shall be considered without placing emphasis on any one value at the expense of others.***

Section 5 of the ICOMOS NZ Charter states that respect for surviving evidence and knowledge is an important part of acknowledging the time and contributions of all periods without unnecessary emphasis on any one value over others.

#### Implementation:

- I. The Steadfast layout (i.e., the heritage items identified in Section 4 and the relationships between them) is to be maintained in their existing configuration.

#### Policy 7: Knowledge, Skills, and Techniques

***All work within HMNZS Steadfast shall confirm to internationally recognised standards of best practice and knowledge.***

Any work carried out within HMNZS Steadfast is to be planned and specified on the advice or under the supervision of appropriately qualified heritage landscape architects, arborists, engineers and conservation architects specialising in historic buildings and structures from stone and/or other conservation professionals; and carried out by appropriately experienced tradespeople. Traditional techniques and materials are preferred, however modern techniques and materials that offer conservation benefits may be appropriate.

#### Implementation:

- I. Where repairs and fabric assessment are required, this is to be required by appropriately qualified and experienced professionals as outlined in Policy 5.

#### Policy 8: Setting and Site Conditions

***The Setting of HMNZS Steadfast is an integral aspect of its heritage significance and must therefore be conserved. There is a need to protect HMNZS Steadfast from a loss of integrity and definition.***

It is important that *HMNZS Steadfast* is not considered in isolation but that all proposed change is considered within the wider context of the *HMNZS Steadfast* Setting. Every effort must be made to ensure the wider Setting is a compatible one. Any adjacent land use or development must complement the site in terms of design, proportions, scale and materials and must not undermine its integrity or setting or negatively affect the heritage significance and acquired aesthetic qualities.

#### Implementation:

- I. Carefully monitor adjoining boundaries of the property for potential development that may negatively impact the heritage values and acquired experiential qualities of HMNZS Steadfast. Make every effort to mitigate or minimise any adverse effects caused by the activity.

## Policy 9: Spaces and Views

***Due to their subtle and intangible nature, spaces are a vulnerable entity within HMNZS Steadfast. Yet spaces are a critical element in the maintaining the historic integrity and experiential qualities of the place.***

Historic spaces, views, connections and relationships between HMNZS Steadfast and its setting must be respected and maintained. Any new structures in the vicinity must be sited where they do not impact on the site visually, nor obscure viewpoints to and from the site. While the amalgamation of TS Cornwall is compatible with the heritage values of the site and fits in with the ongoing history of TS Steadfast, the location of the artefacts (e.g. the anchor, mine, bell and gun) could have been more effective by considering locations that relate to past use of the site.

### Implementation:

- I. The historic relationship between buildings and landscape must be retained and the views protected from visual intrusions or any other change detrimental to their character. Views to identified heritage items, i.e. those noted in Section 4 must be protected. The visual connections to and from these significant features provide a greater appreciation of HMNZS Steadfast and its history within the context of Whakaraupō-Lyttelton Harbour.
- II. Maintain the cut lawn in the lower part of the site to ensure the historic aesthetic, association and use of the place.
- III. Any new items or structures located on the site are to be located with careful consideration to their relationship with other parts of the site. They are to be clearly identified as new, date stamped, not detract from or obscure fabric of high value and have a clear connection to the site.
- IV. Remove rocks that block sightlines within the Sea Cadet firing range .
- V. Ensure temporary water tanks installed as part of the Whaka-Ora planting are located discreetly into the landscape.
- VI. Limit the amount and placement of all signage, ensuring that it conforms to a high standard of design and is based on a well-considered system to minimise visual intrusions. All infrastructural elements must be high quality and unified in appearance.

### Recommendation:

Explore the potential of formalising what appears to be one of the original patrol routes - from Ammunition Store #8 towards the west boundary and along the fence line travelling north (Figure 240). There appear to be a number of tracks within HMNZS Steadfast (other than the military road) that could be formalised as part of walking tracks within the site.





Figure 240: 1961 aerial showing the faint tracks visible on the 1961 aerial which appear to lead from Ammunition Store #8 towards and alongside the north boundary fence line.

Source: SN 3152/27, <http://retrolens.nz> and licenced by LINZ CC-BY 3.0.

#### Policy 10: Vegetation Management and New Planting

***The designed layout of HMNZS Steadfast is to be conserved and those plantings that have historic and aesthetic values maintained.***

The Cass Bay Stream Planting Project is an important initiative towards providing shelter to increase biodiversity, reduce sedimentation into Whakaraupō-Lyttelton Harbour and encourage the natural regeneration of other native plant species. The initiative plays an important role in developing the history of Motukauatirahi-Cass Bay and provides perceptible linkages to the past.

Article 12 of the Florence Charter states that ‘those species of trees, shrubs, plants and flowers to be replaced periodically must be selected with regard for established and recognised practice in each botanical and horticultural region, and with the aim to determine the species initially grown and to preserve them.’

Unkempt weed and grass growth poses a risk to the access roads, stream and restoration planting through root growth, overhanging, and entwining with the stream. This growth also poses a fire risk.

#### Implementation:

- I. Engage a qualified ecologist and arborist to inspect the site, to identify any possible remnant plant species. Any poplars on the site are likely to be early plantings to stabilise the hillside but have become invasive and require removal.

- II. Re-establish the ecological integrity of the area by preparing a vegetation plan and if not already carried out, a weed management strategy to protect and manage existing vegetation, in conjunction with Cass Bay Reserves Management Committee and the Whaka-Ora Healthy Harbour planting initiative. This plan is to include guidance on the management or removal of existing vegetation/weeds (i.e. (poplar trees and their suckers) and management of grass areas. Determine appropriate areas for grazing and ensure all native restoration planting is fenced and secure from grazing animals.
- III. Ensure all planned vegetation will not encroach any significant heritage buildings or structures over time. Any vegetation that intrudes upon buildings may cause damage and should be removed and kept clear of buildings at all times.
- IV. Stabilise hills behind ammunition stores by planting with low growing, non-invasive native species to halt erosion.
- V. Continue to extend streamside planting as part of the existing revegetation initiatives outlined in Whaka-Ora Healthy Harbour Ki Uta Ki Tai. These initiative must align with the guidelines in the Indigenous Ecosystems of the Lyttelton Harbour Basin (Kahikatea and Mataī Ecosystems) according to specific site conditions.
- VI. All seeds and plants should be ecologically sourced from within the Port Hills Ecological District, ideally using seed sources from the harbour side of the hills.
- VII. All streamside planting is to respect the rock garden, terracing and pathways in the lower section of the site so that the terracing remains visible. Pathways must be maintained so they are clear of planting, grass and weeds.
- VIII. A qualified arborist is to inspect the Steadfast front boundary planting. Vegetation is to be 'limbed' to retain views into the site and 'topped' where growth is excessive and encroaching power lines. Consider removal of selected plants if necessary.
- IX. A qualified arborist is to inspect all large trees on the site and provide advice and guidance for all work associated with their removal and/or maintenance.

#### Policy 11: Ongoing Care and Management

***HMNZS Steadfast is a site of local, regional and national significance as well as a popular recreational space. Regular scheduled and professional maintenance is fundamental to conservation of HMNZS Steadfast and is necessary to retain the significance of the place.***

Article 11 of the Florence Charter states that 'continuous maintenance of historic gardens is of paramount importance. Since the principal material is vegetal, the preservation of the garden in an unchanged condition requires both prompt replacements when required and a long-term programme of periodic renewal.'

Maintenance is an important process in the conservation of heritage items. A cyclical maintenance programme for *HMNZS Steadfast* is to include actions which effectively maintain significant heritage fabric. Maintenance is to plan for climate change and align with the sustainable aims of Council through maintaining the site to a standard that reflects its use and reduces energy use (e.g., types of vehicles and equipment used to operate and maintain the place).

Inspections are to be carried out by a suitably qualified maintenance contractor. Regular inspections will reveal the need for any catch-up maintenance. Such inspections are to include a checklist of issues that

impact on heritage fabric. Cyclical and catch-up maintenance are to be closely coordinated with other Policies in this Plan. The most recently developed heritage conservation principles and appropriate material technologies are to be applied to maintenance issues. Guidelines must be updated regularly, particularly as philosophy and technology changes.

#### Implementation:

- I. Adopt a regular site focused tree management and maintenance programme for HMNZS Steadfast. This programme is to include regular, systematic tree hazard evaluation surveys of large trees by a suitably qualified Arborist. Monitoring programme is to be reviewed at least 5-yearly.
- II. Ensure all historic access roads and pathways identified in Section 4.3.3 are maintained so that they are clear of weed species (e.g. gorse) and drainage channels are free of vegetation and visible. Determine area of original parade grounds and maintain as part of interpretation strategy to reveal historic site fabric.
- III. Inspect all drainage on the site to ensure heritage fabric is protected.
- IV. Inspect all heritage fabric regularly for signs of deterioration or damage.
- V. Prepare a Fire Management Strategy that incorporates conservation principles to protect the heritage fabric of the site, as part of risk-preparedness for anticipated fire. Consider the flammability of existing plant species and create green breaks with fire retardant, locally eco-sourced trees and plants where possible.
- VI. Continue to secure a reliable water supply for potential fire hazards alongside preparation of a Fire Management Plan.
- VII. Maintenance practices must aim to reduce the carbon footprint of the site in order to reduce overall carbon emissions and optimise carbon sequestration.

#### Policy 12: New Work

***Any work carried out within HMNZS Steadfast shall not diminish heritage values.***

Conservation processes shall take into account the heritage values of *HMNZS Steadfast* including the historic spatial organisation of the site (i.e., heritage fabric noted in Section 4.3.3). Original materials of the site are to be respected. Where remedial work is required, aim to preserve rather than replace historic material.

***No new element or work shall be permitted which is inconsistent with the objectives and policies set out in this Conservation Report.***

New work to a significant place is only acceptable if there is sufficient information to understand the impacts of the proposal on the significance of the place, including its setting and archaeology.

#### Implementation:

- I. Each of the timber frame buildings has previously been altered on the interior, although to differing extents. Future internal alterations and rearrangement of spaces are acceptable, but must be planned in consultation with a Conservation Architect.
- II. None of the buildings at HMNZS Steadfast are to be extended unless such extensions are planned in consultation with a Conservation Architect.



- III. A new pedestrian bridge is to be reconstructed to its original form in the lower section of the site, to restore lost architectural value and access across the stream. The bridge will be designed to minimise visual alteration to the surrounding elements and spaces and their interpretation.
- IV. Avoid locating new elements that have no direct or compelling relevance to the site.
- V. Any modifications or refurbishment of the setting must be designed and carried out by referring to Chapter 4: Assessment of Significance and these Conservation Policies. The designed experiential qualities of the landscape must be respected alongside built and planted heritage fabric.

### Policy 13: Interpretation

***Interpretation actively engages people with the meaning or significance of a place, enhancing public understanding of places of cultural heritage value and their conservation.***

Interpretation within HMNZS Steadfast as it relates to the wider context of Banks Peninsula provides an opportunity to highlight historical linkages and much of its developmental history.

Article 25 of the Florence Charter states that, ‘interest in historic gardens should be stimulated by every kind of activity capable of emphasising their true value as part of the patrimony and making for improved knowledge and appreciation of them.’

There are opportunities to enhance visitor understanding of the history of the designed Garden and the people associated with HMNZS Steadfast. The significance of heritage fabric is not always obvious and interpretation provides a way of revealing the value of a place beyond what can be seen. It is important that interpretive devices are subtle, unobtrusive and do not dominate the site.

#### Implementation:

- I. Create a cohesive interpretation strategy that includes both Māori and European places of significance.
- II. Extend the interpretation strategy to incorporate places and buildings (past and present) that relate to the broader setting of HMNZS Steadfast (e.g. historic context and landscape features identified in Figure 79 - Figure 81).
- III. Integrate all interpretation sympathetically with the character, setting and cultural and natural significance of HMNZS Steadfast. Ensure there is no adverse effect on landscape quality, tangible or intangible values.
- IV. Any interpretation is to be consistent with Christchurch City Council standards and other interpretation in the area. Where appropriate, consider innovative means to interpret HMNZS Steadfast, its setting and adjoining associated sites. This could include QR codes and access to virtual information off-site as well as connection to local sources (e.g. Lyttelton Museum).

### Policy 14: Adoption and Review of This Conservation Report

***The cultural heritage significance of HMNZS Steadfast shall be retained. Conservation must be integrated into all management procedures as an essential component to safeguard the heritage values of the place. Provide for a ten-yearly review of this Conservation Report.***

This Conservation Report is to be adopted immediately.

A review of the Conservation Report provides the opportunity to include additional information and/or any changes that may occur due to changes in significance or levels of authenticity. Review also provides an opportunity to monitor the ongoing effectiveness of the policies contained in this document. Generally, a review will build on the existing document and the records kept. It will include a physical inspection as well as a desktop assessment.

In addition to the ten-yearly review, the Conservation Report will need reviewing whenever a major change to the structure or Setting is proposed, new information is discovered, the place is impacted by a natural disaster or damaging event or the plan has been prepared with a limited scope or specifically to address a certain situation due to limited resources.

#### Policy 15: Research and Documentation

***All conservation work and the introduction of any new works relating to HMNZS Steadfast shall be appropriately documented and added to the archive as and when work is carried out.***

Documentation of conservation work may include cleaning or repairs to any built fabric, the removal of any significant vegetation and the introduction of new plantings or other landscape elements. Records shall be kept and made accessible to statutory stakeholders.

Recording and documenting the landscape over time through documentary research and physical investigation, including site-based assessments and materials testing, is vital to planning for future conservation of HMNZS Steadfast.

#### Implementation:

- I. A record of all works carried out on or in relation to HMNZS Steadfast must be maintained. This is to include records of research, 'before and after' photographs to record the change, test results, reports, drawings, specifications, details of any new discoveries or new evidence revealed, and maintenance work.
- II. Photographs are to be kept in secure archives and managed in line with accepted archival standards to maximise the longevity of the record.
- III. Conduct further research into:
  - the dates and events surrounding R.M. Morten's land purchase in Motukauatirahi-Cass Bay (1965-1880);
  - the list of tree species and flower beds created during RNZN occupation in the 1950s (See Section 2.1.5) and any Ministry of Works records available;
  - sourcing images of the pedestrian bridge (removed) in the lower section of the site for reconstruction purposes;
  - the faint tracks visible on the 1961 aerial (Figure 39) which appear to lead from Ammunition Store #8 towards and alongside the north boundary fence line;
  - the dam above the reservoirs, noted in the 2005 NZHPT diagrammatic layout of the buildings and structures containing heritage significance (Figure 55);
  - all original power poles within HMNZS Steadfast and the date they were installed;
  - the hexagonal shaped elements located either side of the stream and visible in a 1965 image of the site (Figure 26);
  - the artesian water well, on which the TS Cornwall mine is now located;
  - whether the safe by Samuel Withers & Co. Ltd still exists on the site.

## 7. Treatment Methodology

The following treatment methodologies are related to the physical condition of heritage fabric, the Threats identified in Section 5 and Policies in Section 6. Specific management strategies are identified in the Management Plan in the following section (Table 6). Typology and materials have been used to frame the methodology to avoid repetition.

### 7.1. Timber Frame Buildings

Other than the magazines, the remaining buildings at HMNZS Steadfast are timber frame buildings that were constructed in utilitarian fashion using readily available materials that were not necessarily expected to be durable for a life of 50+ years.

Each of the building has its own unique features; however, the treatment methodologies for all buildings will be similar, and the key tasks are outlined below.

#### 7.1.1. Asbestos Roofs, Spouting and Soffits

Asbestos containing materials (ACMs) are a significant health and safety risk. The timber frame buildings at HMNZS Steadfast typically have corrugated asbestos roofing and flashings, and some have asbestos spouting and soffit linings. Their roofing has become brittle and broken in some places, or is allowing moisture ingress.

All ACMs should be removed from these buildings, particularly those that are to be repaired, restored and used in the near term (being the Drill Hall, the Office/Ward Building, and the former Girls Accommodation Block). ACM roofing and flashings should be replaced with corrugated metal roofing and companion flashings; ACM spouting should be replaced with continuous metal spouting or PVC; and ACM soffits should be replaced with fibre cement sheet.

Where it is not possible to remove ACMs, or it is necessary to delay their replacement, they must be fully sealed to ensure complete encapsulation.

Note that ACMs can only be assessed, removed and disposed of by appropriately licensed professionals.

#### 7.1.2. Timber Cladding, Trims and Detailing

The timber frame buildings at HMNZS Steadfast typically have bevel-back timber weatherboard cladding, cover boards, fascias, bargeboards and baseboards. The former Girls Accommodation Block has board-and-batten cladding on the rear and sides, with a board-and-batten frieze on the front (east) façade. Below this frieze the walls have been infilled and clad in weatherboard.

Paintwork is generally worn on all buildings, and bare timber is exposed in places. There are localized areas of microbiological growth adhered to the buildings, and areas of rot, particularly in fascias and bargeboards.

Prior to commencing any repair works, samples should be taken from each building to confirm the presence of lead paint. Where this is found, appropriate health and safety measures will need to be followed.

All timber cladding, trims, and other detailing should first be cleaned down to remove all loose and peeling paint, and to fully reveal the extent of rot and other deterioration that may be present. This cleaning should be carried out using a low-pressure water wash (not a high pressure waterblast) followed by sanding.



Paint samples should be taken during the preparation to establish the historic colours if possible.

Rusting nails should be punched, painted with rust-inhibiting paint, filled and sanded before repainting the building.

Small areas of rot should be treated using an appropriate wood-repair compound. Large areas of rot that cannot be treated should be cut out, and the fabric should be replaced like-for-like, including timber species and element profile.

All timberwork should then be repainted.

#### 7.1.3. Timber Frame Windows

With the exception of the former Girls Accommodation Block, all existing timber frame windows in all buildings should be retained and repaired.

Paint samples should be taken during the preparation to establish the historic colours if possible.

Small areas of rot should be treated using an appropriate wood-repair compound. Large areas of rot that cannot be treated should be cut out, and new timber pieced-in. Where the entire window sash is rotten, or piecing-in will not achieve an acceptably durable result, the sash may be replicated using like-for-like timber.

Broken glass should be removed and replaced with new glass. Loose or cracked window putty should be raked out, and all windows should be re-puttied before repainting.

All windows should be repainted on both the exterior and interior.

Windows in the east façade of the former Girls Accommodation Block are a later addition to the building, and are also in poor condition. These windows may be removed and replaced with new joinery to suit the adaptation of this building into a community facility. New joinery must be timber-frame and simply detailed to ensure that it is in keeping with the architectural style and era of the building, and the other timber frame buildings on the site.

#### 7.1.4. Sliding Timber Doors (Drill Hall)

These doors should be taken down and the sliding gear removed before they are repaired and prepared for re-painting as per the timber cladding.

The track should be removed and it, along with the sliding gear, should be cleaned down, rust-treated, and repainted following the same methodology as the steel doors of the magazines described below. The components should then be reassembled, and the sliding gear should be lubricated as required to ensure doors can be operated with ease.

#### 7.1.5. Other Doors (Exterior and Interior)

Where doors are solid timber, they should generally be retained, except the exterior doors in the east elevation of the former Girls Accommodation building. Doors that are retained may be removed from their frames for preparation and refinishing if it is too difficult to do this insitu, but must be reinstated into their correct frames. Where doors are to be moved, they should be moved with their frames and preferably with their architraves.

Where doors are not solid timber (for example, hollow core), they may be retained or replaced.

Paint samples should be taken during the preparation to establish the historic colours if possible.

Any doors that are jamming should be eased. Hardware can generally be replaced if this is required.

#### 7.1.6. Floors

Generally, floor finishes in all buildings can be removed and replaced.

Where the floor is a raised timber floor, and there are solid timber T&G floorboards, these are not to be removed. If re-piling of a building is required, the floors are not to be cut to provide access. An alternative method of access (from the side of the building) is to be provided. If this is not possible, floorboards must be lifted in their entirety to provide access to the subfloor.

If floorboards are to remain uncovered, they should be sanded (to the minimum extent necessary) and finished with an appropriate clear coat product.

#### 7.1.7. Interior Linings

##### 7.1.7.1. Timber Linings - Office/Ward Building

The Office/Ward Building has timber TG&V lining (or match lining) in the service areas at the rear. These linings are generally in good condition and should be retained as they are significant fabric and cannot be easily replaced.

Where it is desirable to create internal access to the bathroom that is currently only accessible by going outside, these linings may be carefully removed and salvaged for making repairs in other areas.

##### 7.1.7.2. Other Interior Linings

Interior linings include plasterboard, fibrous plaster, hardboard, and composite sheet materials. While some of these linings may be historic, the majority have been added or replaced over time; and they are in poor condition. These linings should therefore be replaced. This also provides an opportunity for the walls and ceilings of the buildings to be insulated; and for more durable products to be installed.

Where there are existing skirting boards and architraves, these should be carefully removed, labelled on the rear side with pencil, and reinstated once new linings are installed. The same should be done with cornices where it is possible to remove these without breakage. Where it is not possible to retain skirting boards, architraves and cornices, they should be replaced with like-for-like materials in like-for-like profiles.

Care should be taken when existing wall linings are removed so as to avoid damaging the wall framing; and so that any historic fabric layers below these linings are not damaged. Where historic layers are revealed, these should be recorded, and restoration considered under the advice of a Conservation Architect.

It should be noted that it is possible that wall linings or finishes contain ACMs or other hazardous materials. This should be confirmed by a specialist before proceeding with removal.

#### 7.1.8. Exposed Roof Trusses (Drill Hall)

The roof trusses and purlins in the Drill Hall should remain exposed, regardless of any other alterations that take place in this building. These members may be contaminated with asbestos due to the ACM roofing that is directly fixed to the purlins, and is unsealed on the underside. A licensed assessor should confirm the extent of contamination and the appropriate method of cleaning and (if required) sealing the timber to ensure that the building is safe to use.

If the roof is to be insulated, this should be done directly below the roof, which is to be replaced.

### 7.1.9. Internal Alterations Generally

Each of the timber frame buildings has previously been altered on the interior, although to differing extents. Future internal alterations and rearrangement of spaces are acceptable, but must be planned in consultation with a Conservation Architect.

### 7.1.10. Extensions Generally

None of the buildings at HMNZS Steadfast are to be extended unless such extensions are planned in consultation with a Conservation Architect.

## 7.2. Magazines

Magazine 8 is almost completely destroyed. The remains of the concrete door frame and foundations can be preserved as a ruin in the same manner as the Detonation Chamber.

Magazine 4 no longer has a roof, and it is not recommended that the roof be replaced or the building otherwise made weathertight, at least in the short term. It would be suitable to conserve what remains of this magazine as a ruin.

Magazine 10 is expected to remain in use by T. S. Godley, most likely as a storage space (for which it is used presently). It is also in front of the fence that forms a secure line between the lower site and the other magazines. Therefore, remediation of this magazine is to be prioritised over the others. It is essential that this magazine be made safe, secure and weathertight.

Magazines 3 and 6 have large holes in their walls and roofs due to rockfall. With Magazine 6, in particular, it would be difficult to remove the large rocks that are now inside the building. While their long term conservation is being considered, Magazines 3 and 6 should be made safe. It is not reasonably expected that they will be repaired or otherwise made weathertight in the short term.

### 7.2.1. Asbestos Roofs, Spouting, and Soffits

As for the timber frame buildings, the roofs, spouting and soffits of the magazines are ACMs.

The roof of Magazine 4 has largely been destroyed, and the roofing material is scattered throughout the building and around the site. This area should be cleared of all loose and friable ACMs, and the surrounding site assessed for contamination and remedial measures taken.

The roofs of Magazines 3 and 6 have been damaged by rockfall, and some material is scattered in and around the buildings. As for Magazine 4, these areas should be cleared of all loose and friable ACMs. Given the large holes in the walls, it is not considered necessary to replace the damaged roofing immediately. This can be addressed as part of a long term strategy to conserve the magazines.

In the short term, it is likely that Magazine 10 will remain accessible to T. S. Godley and other users of the site. The ACMs at this magazine should therefore be sealed to ensure complete encapsulation in the short term, and replacement should be considered within the next five years.

As part of a long term strategy to conserve the magazines, it is recommended that all ACM roofing and flashings should be replaced with corrugated metal roofing and companion flashings; ACM spouting should be replaced with continuous metal spouting; and ACM soffits should be replaced with fibre cement sheet.



### 7.2.2. Brickwork, Concrete Door Frames and Ring Beams

Generally the reinforced brickwork that forms the outer and inner walls of the magazines, the concrete ring beam that connects the walls, and the concrete door frames, are solid and sound, except where there has been damage as a result of rockfall.

Where bricks have been dislodged and/or are hanging from the building by their reinforcing rods, these should be carefully removed and stored within or adjacent to the building. They should be stored on raised timber pallets, not laid on the ground.

Where brickwork repairs are to be made, this should be done using salvaged bricks from the same building or, if this is not possible, salvaged bricks from another magazine that is not going to be repaired. The repairs should be carried out like-for-like, laid in the existing pattern using a compatible mortar. The mortar is likely to be cementitious; however, this should be confirmed through sample analysis before repair works are carried out.

If the buildings are to be cleaned, this can be carried out using a low-pressure super-heated water wash, supplemented with scrubbing by natural bristle brushes if required. Water blasters or other high pressure equipment should not be used.

### 7.2.3. Steel Doors

The doors of Magazine 10, particularly the outer doors, need to be operable for the building to be secure. Repair of these doors should be prioritized. Repair of the other magazine doors can be addressed as part of their long term conservation.

If the necessary work to the doors cannot be undertaken in-situ then they will need to be removed and taken offsite.

The doors should be cleaned by way of grit blasting to completely remove rust, dirt and surface build-up, and loose or flaking paint. Paint samples should be taken during the process to establish the historic colours if possible. Sound paintwork may be left so long as it is well adhered. The doors should be eased (if insitu), lubricated as required to ensure ease of operation, and repainted.

### 7.2.4. Concrete Slab Floors

Generally, the condition of the concrete slabs in each magazine is sound, although many of them are flooded.

Where a magazine is flooded, and there is no asbestos contamination, the water should be removed by brushing-out or water vacuum, and the floor can be cleaned by water washing (not water blasting). Where these magazines can easily be made weathertight or obvious drainage issues can be easily addressed, this work should be carried out.

Where there is asbestos contamination (likely in Magazines 3 and 6), instruction should be sought from an appropriately qualified professional.

## 8. Management Plan

Table 6: Management Plan for HMNZS Steadfast. Please see Figure 80 and Figure 81 for locations.

STRATEGY	MAINTENANCE TASK	RESPONSIBILITY	RECOMMENDED TIMEFRAME (YEARS)				
			IMMEDIATE	< 1	1 - 4	5 - 10	AS REQUIRED
Protect the public from health and safety risks associated with the magazines, including building collapse and contamination	Reinforce the existing fence to ensure there is a secure line preventing access to magazines 1-9	Christchurch City Council/T.S. Godley	✓				
	Remove abandoned and burnt-out vehicle adjacent to Magazine 4						
Address asbestos contamination across the site	Clear the site of all loose and friable asbestos material, particularly around the magazines where roofs have been damaged	Christchurch City Council/Experienced contractor	✓				
	Remove and replace, or encapsulate (as a minimum), asbestos materials on all other buildings		✓				
	If asbestos remains onsite, commission an Asbestos Management Plan		✓				
Provide for long term conservation and use of Magazines 1-9	Prepare a long term strategy for conservation of the magazines that addresses, in particular: public access; possible adaptive reuse options; retention and repair of the magazines that are still whole and complete; and how to address health, safety and access	Christchurch City Council/Experienced contractor		✓			

STRATEGY	MAINTENANCE TASK	RESPONSIBILITY	RECOMMENDED TIMEFRAME (YEARS)				
			IMMEDIATE	< 1	1 - 4	5 - 10	AS REQUIRED
	issues with the magazines that are damaged. Implement this strategy						
Repair, restore and make safe Magazine 10 for use as a storage area by T. S. Godley	Remove and replace the roof, guttering and soffit lining, an any other asbestos containing materials Dehumidify. Clean down, ease, rust-treat and repaint sliding doors to ensure full operation	Christchurch City Council/Experienced contractor/T. S. Godley		✓			
Maintain Magazine 10	Clean (wash down) the building, clear gutters and drains	T. S. Godley (tenant)			✓		
	Make like-for-like replacements of any damaged or deteriorated materials to ensure weathertightness and security	Christchurch City Council/ T. S. Godley (tenant)				✓	
	Keep vegetation clear of the building	T. S. Godley (tenant)					✓
Conserve the ruin of the Detonation Chamber	Inspect the ruin and clear of all plant growth (including overhanging growth), rubbish and debris to ensure that it is safe for access	Christchurch City Council/Experienced contractor/T. S. Godley			✓		
	Where access is required as part of initiative to open the site to public, ensure adaptation creates minimum disruption to heritage fabric				✓		



STRATEGY	MAINTENANCE TASK	RESPONSIBILITY	RECOMMENDED TIMEFRAME (YEARS)				
			IMMEDIATE	< 1	1 - 4	5 - 10	AS REQUIRED
Repair, restore and adapt the Drill Hall to meet the ongoing needs of T. S. Godley	Re-roof the building in its entirety. Conserve historic exterior weatherboard, timber detailing and trims, window and door joinery, and make like-for-like repairs where rotten. Replace broken glazing. Remove internal wall and false ceiling linings where present. Insulate and reline walls and false ceilings as required. The roof trusses should remain exposed in the main body of the building. Remove and refit kitchen equipment, heating, electrical and fire safety services. Lay new flooring as required	Christchurch City Council/Experienced contractor/T.S. Godley		✓			
Maintain the Drill Hall	Clean (wash down) the building, clear gutters and drains	T. S. Godley (tenant)			✓		
	Repaint the building exterior and make like-for-like replacements of any damaged or rotten timbers	Christchurch City Council/ T. S. Godley (tenant)				✓	
	Keep vegetation clear of the building	T. S. Godley (tenant)					✓

STRATEGY	MAINTENANCE TASK	RESPONSIBILITY	RECOMMENDED TIMEFRAME (YEARS)				
			IMMEDIATE	< 1	1 - 4	5 - 10	AS REQUIRED
Repair, restore and adapt the Office/Ward Building to meet the ongoing needs of T. S. Godley	Re-roof the building in its entirety. Conserve historic exterior weatherboard, timber detailing and trims, window and door joinery, and make like-for-like repairs where rotten. Replace broken glazing. Remove internal plasterboard or fibrous plaster linings if required but retain timber linings to the greatest possible extent. Install internal access to bathroom at the rear. Refit bathrooms and kitchen. Repaint the building entirely. Lay new flooring as required	Christchurch City Council/Experienced contractor/T. S. Godley		✓			
Maintain the Office/Ward Building	Clean (wash down) the building, clear gutters and drains	T. S. Godley (tenant)			✓		
	Repaint the building exterior and make like-for-like replacements of any damaged or rotten timbers	Christchurch City Council/ T. S. Godley (tenant)				✓	
	Keep vegetation clear of the building						✓
Repair, restore and adapt the former Girls Accommodation Block to meet the needs of the CBRA	Re-roof the building in its entirety. Conserve historic exterior weatherboard, timber detailing and trims, and make like-for-like repairs where rotten. Replace windows and doors on the east elevation with new timber frame joinery.	Christchurch City Council/Experienced contractor/CBRA		✓			

STRATEGY	MAINTENANCE TASK	RESPONSIBILITY	RECOMMENDED TIMEFRAME (YEARS)				
			IMMEDIATE	< 1	1 - 4	5 - 10	AS REQUIRED
	Remove internal linings and internal wall complete (if required), insulate and reline. Repaint the building entirely. Lay new flooring as required. Repair retaining wall						
Maintain the former Girls Accommodation Block	Clean (wash down) the building, clear gutters and drains	CBRA (tenant)			✓		
	Repaint the building exterior and make like-for-like replacements of any damaged or rotten timbers	Christchurch City Council/CBRA (tenant)				✓	
	Keep vegetation clear of the building	CBRA (tenant)					✓
Provide for long term repair, restoration, and appropriate reuse of the Laboratory and Quartermasters Accommodation buildings	Secure the buildings from access by people and pests, and provide for temporary weather protection	Christchurch City Council/Experienced contractor	✓				
	Complete a detailed condition and structural assessment of each building to determine the extent to which they can be repaired	Christchurch City Council/Experienced contractor		✓			
	Implement the repairs recommended in the structural and condition assessments, in accordance with this document	Christchurch City Council/Experienced contractor			✓		



STRATEGY	MAINTENANCE TASK	RESPONSIBILITY	RECOMMENDED TIMEFRAME (YEARS)				
			IMMEDIATE	< 1	1 - 4	5 - 10	AS REQUIRED
Protect access roads and drainage channels	Keep gorse and weeds clear of all access roads including drainage channels	Christchurch City Council/Experienced contractor		✓			✓
	Inspect, map and protect the location of tar seal remnants from RNZN occupation on access road east of the stream	Christchurch City Council/Experienced contractor		✓			
	Inspect and stabilise eroded sections of access road north of 2005 tar seal, east of the stream	Christchurch City Council/Experienced contractor		✓			
	Repair broken 2005 tar seal on access road, eastern side of the stream	Christchurch City Council/Experienced contractor			✓		
Repair, restore, replace and protect pedestrian bridges in lower area of site	Inspect and provide condition assessment of upper pedestrian bridge (Item 3, Figure 81). Repair where broken or replace as per Policy 5	Experienced contractor		✓			
	Reconstruct lower pedestrian bridge to its original form using historic images (Item 4, Figure 81) as per Policy 5	Experienced contractor and appropriate qualified heritage expert		✓			
Protect stone retaining walls alongside stream and buildings; also stones within rock terracing in lower site	Inspect all stone retaining and determine appropriate level of intervention to make secure. Undertake stabilisation and repairs as necessary as per Policy 5	Stone conservator and experienced contractor		✓			

STRATEGY	MAINTENANCE TASK	RESPONSIBILITY	RECOMMENDED TIMEFRAME (YEARS)				
			IMMEDIATE	< 1	1 - 4	5 - 10	AS REQUIRED
Conserve post and barbed wire fences and concrete and wire	Inspect perimeter fences for damage and repair to ensure the fence is secure (e.g. Governors Bay Road boundary fence)	Experienced contractor	✓				
	Where access is required as part of initiative to open the site to public, ensure adaptation creates minimum disruption to heritage fabric.	Experienced contractor			✓		
Conserve reservoir fences	Install a new perimeter fence around reservoirs leaving original fences in place	Experienced contractor		✓			
Protect ecological health of HMNZS Steadfast including streamside planting	Prepare a Vegetation Plan and Weed Management Strategy for HMNZS Steadfast. Ensure grazing animals are fenced from native planting and areas of high erosion	Christchurch City Council, Cass Bay Reserves Management Committee and Whaka-Ora Healthy Harbour initiative	✓				
	Clear grass from terraced rock garden, pathway and native seedlings so that historic rock terracing and pathway are visible. Maintain in this state	Christchurch City Council, Cass Bay Reserves Management Committee and Whaka-Ora Healthy Harbour initiative	✓				
Improve site drainage to prevent buildings from flooding and channel waterways and storm water to the appropriate outlets	Prepare and implement a comprehensive site drainage strategy for HMNZS Steadfast. This is likely to include the installation of new buried drains, culverts, soak pits, and (potentially) tanks to collect water that	Christchurch City Council (in conjunction with appropriate engineers)	✓				

STRATEGY	MAINTENANCE TASK	RESPONSIBILITY	RECOMMENDED TIMEFRAME (YEARS)				
			IMMEDIATE	< 1	1 - 4	5 - 10	AS REQUIRED
	can be redistributed across the site for plant maintenance. Maintain all drainage and water management equipment through regular inspection, repair and upgrade						
Protect views into site and native trees on Governors Bay Road boundary	Inspect planting and 'limb' to retain views into the site; 'top' where growth is excessive and encroaching power lines	Arborist		✓			
Care of lawn areas	<b>Contractor:</b> Mowing to comply with Christchurch City Council Recreational Services Agreement Specification C1 Mowing, varying as required between Informal and Amenity Turf <b>TS Godley:</b> at an agreed level or better	Christchurch City Council and TS Godley					✓
Mature trees	Survey, identification and condition assessment of all mature trees to ensure structural soundness and identify potential limb failure	Arborist		✓			
Protect HMNZS Steadfast heritage fabric and ecology from fire	Prepare a Fire Management Strategy that incorporates conservation principles to protect the heritage fabric of the site, as part of risk-preparedness for HMNZS Steadfast	Christchurch City Council, TS Godley and Whaka-Ora Healthy Harbour initiative	✓				
Restore sightlines within Sea Cadet firing range	Remove rockfall blocking views	Christchurch City Council and experienced contractor		✓			



STRATEGY	MAINTENANCE TASK	RESPONSIBILITY	RECOMMENDED TIMEFRAME (YEARS)				
			IMMEDIATE	< 1	1 - 4	5 - 10	AS REQUIRED
Obtain appropriate consents	Ensure Christchurch District Plan requirements are met to obtain resource consents	Appropriate qualified heritage expert and Christchurch City Council					✓
Document all conservation work for future reference	Record all conservation work, removals and new elements introduced to the site for future reference. Record cleaning or repairs to any built fabric. Ensure before and after photographs are taken to record the change. Store in HMNZS Steadfast heritage files	Appropriate qualified heritage expert and Christchurch City Council					✓
Measure impacts of public use on heritage fabric of HMNZS Steadfast	Monitor condition of assessed heritage fabric in HMNZS Steadfast to gauge impact of public use. Carry out annual condition assessment as part of written report. Take action to manage its use if overuse or particular forms of usage appear to be causing damage	Christchurch City Council					✓
Review Landscape History and Conservation Report	Carry out a regular review of this Landscape Conservation Report	Appropriately qualified heritage expert				✓	

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## General Resources

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- R18988959 - CH150 - 41/3 - part 2 - Navy Department Files - Cass Bay Naval Armament Depot and Residence - 1945-50
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- R18995061 - CH160 - 4736 - Sealed Contracts - Cass Bay Naval Depot - Top course and tar sealing - 1956

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## Appendix 1

Crown Deed – Conveyance of blocks 268 and 483 in Cass Bay from Rev. E Puckle to the Crown, 1865

(Archives NZ)

## Appendix 2

Land owned by R.M. Morten,  
Crown Grant Plans Halswell District, Feb 1880

Archives NZ



## Appendix 3

### Plan attached to 1956 tar seal tender documentation

Archives NZ Christchurch, R18995061 – CH160 – 4736 – Sealed Contracts – Cass Bay Naval Depot – Top course and tar sealing – 1956

## Appendix 4

### HMNZS Steadfast Landscape Plan

Approved by Te Pātaka o Rākaihautū/Banks Peninsula Community Board  
6 December 2021

## Appendix 5

### ICOMOS NZ Charter for the Conservation of Places of Cultural Value (Revised 2010)



## Appendix 6

### ICOMOS Historic Gardens (The Florence Charter 1981)