ANTARCTICA NEW ZEALAND

Statement of Intent

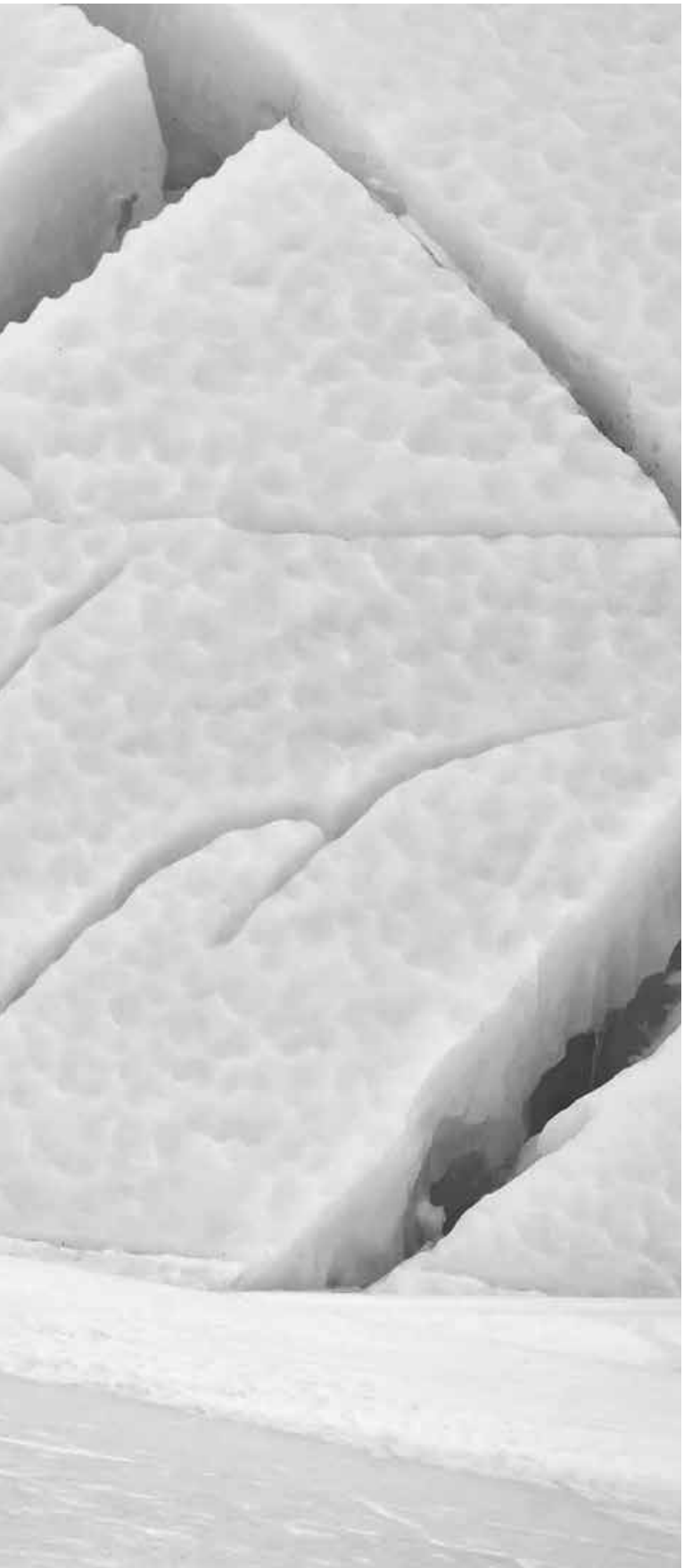
2016 – 2020

Antarctica New Zealand

New Zealand Government

Our vision

Antarctica and the Southern Ocean:
Valued, Protected, Understood.



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Cover: Scott Base and Mount Erebus. Photo by Anthony Powell

Left: Ice Abstract. Photo by Anthony Powell

Introduction

Antarctica New Zealand's vision statement *Antarctica and the Southern Ocean – valued, protected, understood* – highlights Antarctica's importance to New Zealand.

Valuing the intrinsic and scientific values of Antarctica and the security provided through the Antarctic Treaty System as an effective governance regime to ensure Antarctica's future as a natural reserve devoted to peace and science.

Protecting Antarctica to the highest standards of international environmental stewardship through our efforts to minimise environmental footprints, leadership in protected area management, and support for the conservation of human heritage in the Ross Sea region.

Understanding the impacts and influence of climate change and human interactions in Antarctica and on New Zealand's climate and ocean systems, including New Zealand's sub-Antarctic islands, is of vital importance for Antarctica and New Zealand. Examples include predicting the impact of change in Southern Ocean fish stocks, coastal impacts through sea level rise and natural environmental impacts due to changing weather patterns.

This document provides the strategic foundation for our day to day work and guides the delivery of the Minister's expectations. The strategic initiatives we will deliver over the next four years are:

- We will continue to enhance our health and safety systems, processes and standards to underpin our relentless focus on safety and our commitment to zero harm
- Secure organisational funding to ensure New Zealand's continued active and safe presence in Antarctica through a Scott Base facility that is fit for purpose for the next 50 years
- Work with the New Zealand Defence Force and others to ensure air and sea access to Scott Base is maintained
- Support the Christchurch Antarctic Office to develop an Antarctic strategy that helps us to sustain and develop relationships with other national Antarctic programmes for mutual benefit
- Ensure the Antarctic Environments Portal built for and adopted by the Antarctic Treaty System is actively used
- Participate in influential Antarctic Treaty forums to ensure a cooperative approach to managing Ross Sea region environments
- Support the implementation of any recommendations arising from a review of the Antarctic and Southern Ocean Science Directions and Priorities 2010-2020 document, currently in progress
- Work with other New Zealand agencies to ensure science achievement maintains New Zealand's strong position within the Antarctic Treaty system
- Contribute a Ross Sea region focus to the International body of knowledge on climate change
- Build and leverage outreach network channels to enhance New Zealanders' understanding of Antarctica and its influence on New Zealand

The Board of Antarctica New Zealand is pleased to present its Statement of Intent for the four years to 30 June 2020.

Brian Roche
Board Chair
09 June 2016

Tony O'Brien
Board Member
09 June 2016

Nature and scope

Antarctica New Zealand

Antarctica New Zealand was established on 1 July 1996 by the New Zealand Antarctic Institute Act (NZAI Act), and is based in Christchurch.

Our principal functions under the NZAI Act are:

a) To develop, manage, and execute New Zealand activities in respect of Antarctica and the Southern Ocean, in particular in the Ross Dependency

b) To maintain and enhance the quality of New Zealand Antarctic scientific research

c) To co-operate with other institutions and organisations both within and outside New Zealand having objectives similar to those of the Institute

In performing our functions, the NZAI Act requires us to act in a manner that is consistent with:

a) The need to conserve the intrinsic values of Antarctica and the Southern Ocean

b) Active and responsible stewardship of the Ross Dependency for the benefit of present and future generations of New Zealanders

c) New Zealand's international obligations

d) The provisions of the Antarctica Act 1960 and the Antarctica (Environmental Protection) Act 1994

e) The risks to personnel being minimised as far as is reasonable

Our Vision

Our overarching vision is - ***Antarctica and the Southern Ocean – valued, protected, understood***.

Our Values

People are the key to Antarctica New Zealand's success. This includes permanent staff; fixed term and contract staff; seconded staff from the New Zealand Defence Force and our many strategic partners in Government, the science community and other national Antarctic programmes. We seek to create a high performance organisation underpinned by a culture of shared beliefs:

- We are passionate about what we do
- We care for each other and the environment
- We work together
- We act with integrity
- We aspire to the highest standards

Our Minister

The Minister of Foreign Affairs is the Minister responsible for Antarctica New Zealand.

Operating environment

The context in which we work

New Zealand's interests in Antarctica are founded in our geography and our history. Our direct connections can be traced back to the expeditions of Scott and Shackleton over one hundred years ago and we have maintained an active permanent presence in the Ross Dependency since 1956.

The importance of Antarctica to New Zealand

Antarctica's importance to New Zealand reflects:

Sovereignty

- New Zealand maintains its right of sovereignty over the Ross Dependency

International Governance

- New Zealand has international sectorial responsibility in the Ross Sea region of Antarctica for: co-ordinating air and maritime search and rescue all the way to the South Pole; meteorological observations for the World Meteorological Organisation (WMO); and hydrographic survey under the auspices of the International Hydrographic Organisation (IHO)

Diplomatic

- New Zealand is an original signatory to the 1959 Antarctic Treaty and has been involved in negotiations of all international instruments that constitute the Antarctic Treaty System
- Antarctic co-operation deepens some of New Zealand's most important bilateral relationships

Economic

- New Zealand's proximity to Antarctica provides economic and diplomatic opportunities, especially for Christchurch as one of just five Antarctic gateway cities in the world
- An economic impact study undertaken in March 2016 by Lincoln University estimated that Antarctic-related activities make a direct annual contribution of $121 million to the Canterbury economy (up 17% from $103 million 2 years ago) and in excess of $174 million to the New Zealand economy as a whole (up 7% from $162 million 2 years ago)

Scientific

- As a global laboratory, Antarctica provides opportunities for New Zealand scientists to carry out whole-Earth systems science and to form scientific partnerships with a wide range of countries
- Antarctica plays a critical role in global climate processes. We have a direct interest in any changes in the Antarctic environment and how these might affect us

Environmental

- Antarctica is designated by the Protocol on Environmental Protection to the Antarctic Treaty as a natural reserve devoted to peace and science. Our commitment to the conservation of the intrinsic and wilderness values of Antarctica and the Southern Ocean provides New Zealand with a significant opportunity to demonstrate our international environmental leadership credentials

Ice Bergs Cape Evans. Photo Anthony Powell ©Antarctica New Zealand Pictorial Collection, 2015-16

Historic

- The Ross Dependency contains key historic sites of global significance, including the Historic Huts of Scott, Shackleton, Borchgrevink and Hillary

A dynamic environment

We operate in a complex and changing environment. Key challenges, opportunities and risks we are currently managing include:

Antarctic science

- The demand for scientific understanding and knowledge of our planet's southern Polar Regions has never been greater. Antarctica and Southern Ocean management, conservation and protection critically depend on scientific understanding and knowledge of our planet's southern polar regions and their critical role in the Earth and climate systems
- The scientific questions currently being asked are requiring researchers to work more collaboratively on larger multidisciplinary science programmes to achieve their scientific objectives. These projects are often in more remote areas of Antarctica and require higher levels of logistics support from Antarctica New Zealand
- The Government has provided Antarctica New Zealand with an additional $16.7 million over four years in Budget 2016 to address cost pressures arising from the provision of logistics support and related services, to facilitate scientific research in Antarctica

Antarctic and Southern Ocean Science Directions and Priorities 2010-2020 document

- The mandated mid-point review of the Government's science priorities for Antarctica is a work in progress at the date of this Statement of Intent

Antarctic infrastructure funding

- Antarctica New Zealand's capital asset management plan indicates a significant shortfall in funding the cost of replacing Scott Base assets when they come to end of their useful lives. A business case is being developed in conjunction with MFAT and Treasury to address the funding shortfall

New Zealand's Antarctic air transport capability

- Antarctica New Zealand is contributing to the review of options arising from the Defence White Paper with regard to New Zealand's medium-term future air transport capability

Our objectives

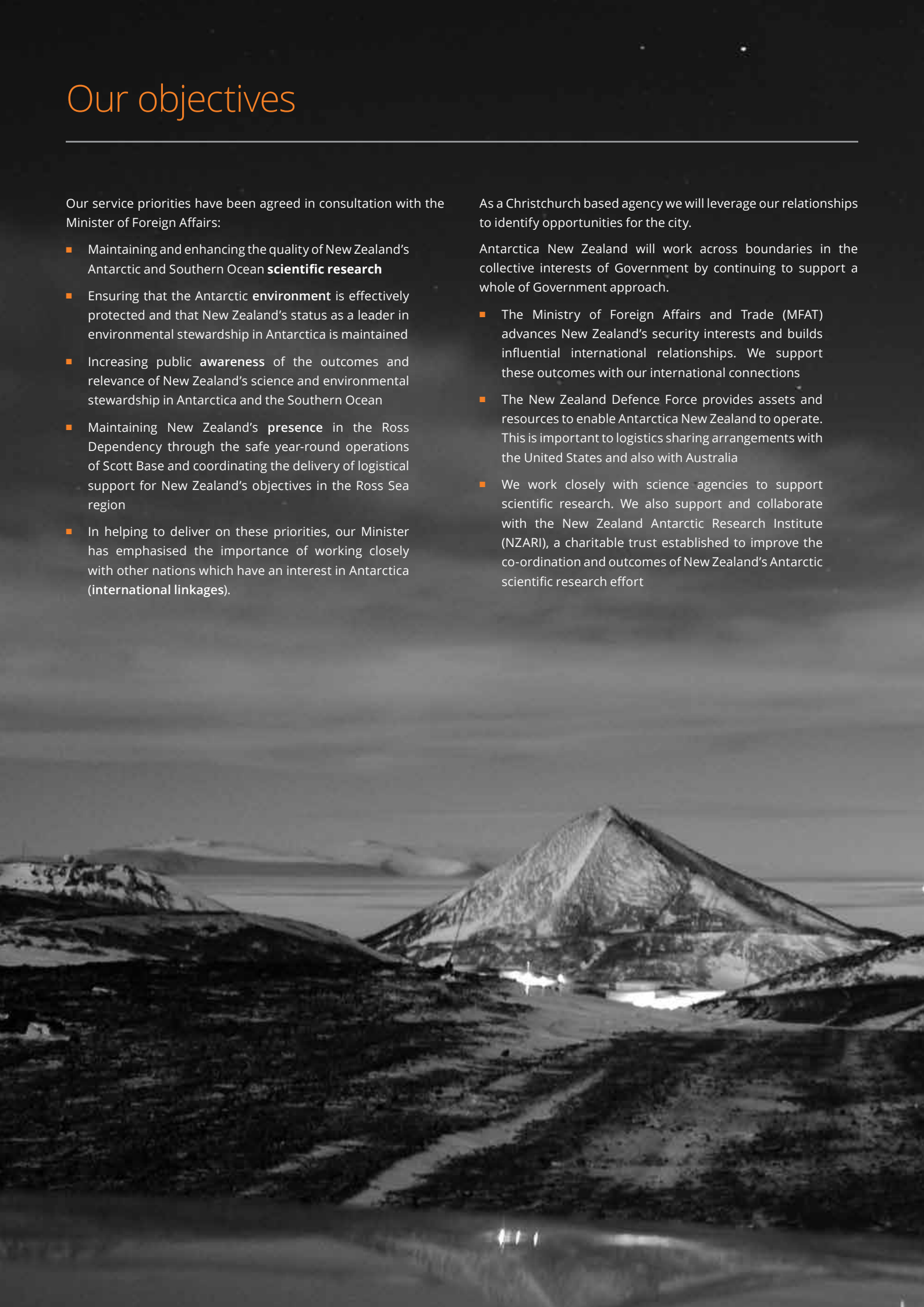
Our service priorities have been agreed in consultation with the Minister of Foreign Affairs:

- Maintaining and enhancing the quality of New Zealand's Antarctic and Southern Ocean **scientific research**
- Ensuring that the Antarctic **environment** is effectively protected and that New Zealand's status as a leader in environmental stewardship in Antarctica is maintained
- Increasing public **awareness** of the outcomes and relevance of New Zealand's science and environmental stewardship in Antarctica and the Southern Ocean
- Maintaining New Zealand's **presence** in the Ross Dependency through the safe year-round operations of Scott Base and coordinating the delivery of logistical support for New Zealand's objectives in the Ross Sea region
- In helping to deliver on these priorities, our Minister has emphasised the importance of working closely with other nations which have an interest in Antarctica (**international linkages**).

As a Christchurch based agency we will leverage our relationships to identify opportunities for the city.

Antarctica New Zealand will work across boundaries in the collective interests of Government by continuing to support a whole of Government approach.

- The Ministry of Foreign Affairs and Trade (MFAT) advances New Zealand's security interests and builds influential international relationships. We support these outcomes with our international connections
- The New Zealand Defence Force provides assets and resources to enable Antarctica New Zealand to operate. This is important to logistics sharing arrangements with the United States and also with Australia
- We work closely with science agencies to support scientific research. We also support and collaborate with the New Zealand Antarctic Research Institute (NZARI), a charitable trust established to improve the co-ordination and outcomes of New Zealand's Antarctic scientific research effort



- Land Information New Zealand maps areas of Antarctica of interest to New Zealand and we assist Maritime New Zealand with search and rescue coordination
- We provide logistics support to the Antarctic Heritage Trust, a charitable trust set up to conserve the historic huts of the early Antarctic explorers
- Antarctica New Zealand also works closely with the Christchurch City Council and its newly established Antarctic Office to maintain and develop relationships across a broad range of organisations with Antarctic interests based in the city

Overview

OUR RESOURCES	OUR SERVICES	MAJOR INITIATIVES
Relationships New Zealand government and local government partners Antarctic science funding organisations Antarctic science researchers International partners – collaborations and logistics sharing Contractors and suppliers **People** Culture and values Committed and capable staff **Infrastructure and processes** Scott Base Wind farm Christchurch gateway Health, safety and environment systems IT platform and systems	**Environmental protection** **Operational presence** **Science leadership and support** **International linkages** **Public awareness and engagement**	❶ Ensure the Antarctic Environments Portal built for and adopted by the Committee for Environmental Protection (CEP) is now actively used ❷ Participate in influential Antarctic Treaty forums ❹ Sustain and develop relationships with other National Antarctic Programmes ❺ Contribute a Ross Sea region focus to the International body of knowledge on climate change ❻ Build and leverage outreach network channels ❼ Continue to enhance health and safety systems, processes and standards to underpin our relentless focus on safety and our commitment to zero harm. ❽ Secure future organisational funding requirements ❾ Support the Christchurch Antarctic Office to develop an Antarctic strategy ❿ Ensure air and sea access to Scott Base is maintained.
Government appropriations ($18M)		

WHAT WE WILL ACHIEVE	OUR GOAL FOR NEW ZEALANDERS	VISION
Antarctica and Southern Ocean environments are increasingly well managed The quality of New Zealand's Antarctic and Southern Ocean scientific research is enhanced The impact on New Zealand of climate change research in Antarctica is better understood and communicated New Zealand's Antarctic programme is sustainable	New Zealand's ability to influence the future of Antarctica and the Southern Ocean is secured	Antarctica and the Southern Ocean: Valued, Protected, Understood

Our goal for New Zealanders

New Zealand's ability to influence the future of Antarctica and the Southern Ocean is secured

For over 50 years the Antarctic Treaty System (ATS) has proven to be an effective governance regime for Antarctica and the Southern Ocean. It has provided peace and security in the region based on principles of co-operation, scientific research and high standards of environmental protection.

As an Antarctic claimant country and geographical neighbour, New Zealand has a strong and vested interest in ensuring that the Antarctic Treaty System continues to be recognised as the appropriate mechanism for the management and governance of the region.

What we will do to contribute to this

Our focus on sustainability and reducing our environmental footprint in Antarctica significantly enhances New Zealand's credibility among Antarctic Treaty nations, as does the high standard of our contribution to scientific knowledge about Antarctica and the Southern Ocean. We are also highly regarded for our approach to finding innovative solutions to environmental management challenges.

Antarctica New Zealand's four medium-term objectives (see pages 11-16) contribute to the accomplishment of this goal.

Indicators of success

Indicators of success	Baseline 2014	Current state 2016	Target
New Zealand's record of performance in Antarctic forums, scientific research, operations and environmental stewardship.	No comprehensive baseline measure.	Identify baseline measure in 2016/17.	New Zealand's record of performance in Antarctica forums, scientific research, operations and environmental stewardship increases.

View across the Adelie Penguin colony at Cape Adare Looking north towards the Southern Ocean beyond Antarctica © Soon Gyu Hong

What we will achieve

1. Antarctica and Southern Ocean environments are increasingly well managed

The Protocol on Environmental Protection to the Antarctic Treaty (1991) commits to the "comprehensive protection of the Antarctic environment and dependent and associated ecosystems" and sets out tough rules to minimise impacts on the natural environment.

The Antarctic environment is experiencing increasing pressure from two sources: the expansion of human activity (through fishing, tourism and national Antarctic programmes) and, more significantly, the effects of climate change. At risk are the science and natural environmental values that the international community currently places on Antarctica.

To support the New Zealand Government's objective of continuing to play a leading role in managing the Antarctic environment, Antarctica New Zealand has a crucial responsibility to understand these impacts, and to identify appropriate management and policy responses.

Antarctica New Zealand initiated the concept of an Antarctic Environments Portal to provide the important link between Antarctic science and Antarctic policy. The Portal makes science-based information available to the Antarctic Treaty System's Committee for Environmental Protection (CEP) and all the Antarctic Treaty nations. Antarctica New Zealand and Landcare New Zealand built the Portal in partnership, and it was launched at the Antarctic Treaty Committee Meeting (ATCM) XXXVIII - CEP XVIII in May 2015 to great acclaim by the members of the CEP.

What we will do to achieve this

Contribute to influential Antarctic Treaty forums by:

- Supporting the work of the CEP by providing high quality input to its meetings and intersessional work, and seek to hold leadership positions within the Committee as appropriate
- Working closely with the research community nationally and internationally to ensure the best available scientific knowledge is used by the CEP as a basis for its decision making and advice
- Providing Ministry of Foreign Affairs and Trade (MFAT) with high quality and timely advice on environmental and other Antarctic policy matters
- Fostering collaboration with our Ross Sea region partners to ensure a cooperative approach to managing Ross Sea region environments

How we will demonstrate success in achieving this

Indicators of success	Baseline 2014	Current state 2016	Target
The Antarctic Environments Portal is adopted and used by the CEP.	Concept supported.	Built and adopted.	Actively used.
New Zealand holds leadership positions within the CEP.	None currently held.	None currently held.	Leadership of at least one intersessional contact group or CEP Vice Chair.
An effective network of protected areas exists within the Ross Sea region.	Management plans for Antarctic specially protected areas (ASPA) and specially managed areas (ASMA) in the Ross Sea region have all been reviewed and updated within five years and have been adopted by the CEP.	Management plans for ASPA's and ASMA's have been reviewed, updated and adopted within five years.	Revised management plans and new proposals adopted by the ATCM based on a systematic approach.

2. The quality of New Zealand's Antarctic and Southern Ocean scientific research is enhanced

Science is a central theme of the Antarctic Treaty (1961) and the Protocol on Environmental Protection to the Antarctic Treaty (1991) establishes Antarctica as a "natural reserve devoted to peace and science".

Antarctica New Zealand works closely with science funding organisations to support high-quality scientific research and ensures science is aligned with the Government's *Antarctic and Southern Ocean Science Directions and Priorities 2010-2020* document.

To help deliver the Government's strategic priorities for Antarctic research, Antarctica New Zealand worked with the Government to establish the New Zealand Antarctic Research Institute (NZARI) - a Public Private Partnership (PPP) to attract external funding to enhance the quality of Antarctic research. Antarctica New Zealand supports NZARI in its aim to foster the growth and alignment of the research effort to address the challenging scientific questions currently being asked.

The Antarctic science that is conducted is of global importance and provides unique opportunities for collaborations both within New Zealand's science institutions and internationally. These international scientific collaborations contribute to broader New Zealand connections and relationships with overseas scientists and their institutions.

New Zealand's leadership in many areas of Antarctic research feeds directly and indirectly into the Antarctic Treaty System and other international organisations such as the Intergovernmental Panel on Climate Change (IPCC). This supports New Zealand's work in those forums.

What we will do to achieve this

Collaborate with national science stakeholders

- Work with science funding organisations to identify and support the highest quality Antarctic and Southern Ocean science
- Support the Antarctica New Zealand/NZARI PPP to foster science leadership required to grow and align the Antarctic research effort
- Continue to monitor the quantity and quality of outputs and outcomes from the science programmes we support and ensure that this is fed back to the programmes
- Support the implementation of any recommendations arising from a review of the *Antarctic and Southern Ocean Science Directions and Priorities 2010-2020* document currently in progress

Sustain and develop relationships with other national Antarctic programmes

- Work with other national Antarctic programmes to improve logistics and scientific cooperation
- Lead meetings with other national Antarctic programmes to develop more collaborative science programmes and cohesive and integrated logistics support
- Partner with other national Antarctic programmes to expand the scope and range of support and science collaborations

Build logistics capability and improve Scott Base facilities

- Evolve our logistics support capability to provide fit-for-purpose support services to enable our scientists to lead the Antarctic research agenda that delivers the Government's *Directions and Priorities*
- Upgrade our facilities at Scott Base to provide safe, high quality support for science programmes and other visitors

How we will demonstrate success in achieving this

Indicators of success	Baseline 2014	Current state 2016	Target
The quantity and quality of Antarctic science by Antarctica New Zealand-supported researchers improves.	Quantity – 60 peer reviewed scientific papers are produced annually.	Quantity – 67 peer reviewed scientific papers were produced.	Peer reviewed scientific papers (continue to) increase over time.
	Quality – 1,000 citations were made for scientific papers published in the past six years.	Quality – 1,135 citations were made for scientific papers published in the past six years.	Citations for peer reviewed scientific papers increase over time.
Antarctica New Zealand supports relevant science.	Government priorities are set out in the *Antarctic and Southern Ocean Science Directions and Priorities 2010-2020.*	The *Antarctic and Southern Ocean Science Directions and Priorities 2010-2020* document is in the process of a mid-term review.	Antarctica New Zealand ensures that it provides logistic support in accordance with the Government's priorities.
International science linkages are strengthened.	New Zealand maintains at least three, and leads one significant international collaborative science project in the Ross Sea region.	Three significant collaborative projects with the United States in the Ross Sea region are underway with two more potential projects under discussion.	Increase in the number of countries wishing to collaborate with New Zealand.
Collaborative logistics support arrangements with other national Antarctic programmes are enhanced.	New Zealand has a collaborative logistics support arrangement with the United States.	New Zealand has an on-going collaborative logistics support arrangement with the United States and project-specific collaborative arrangements with Italy and Korea.	New Zealand has collaborative logistics support arrangements with all national Antarctic programmes operating in the Ross Sea region.
Scott Base facilities are able to safely support current and future science needs.	Plan to redevelop the Hillary Field Centre to provide flexible science facilities to support high quality research.	Phase one (of two) to redevelop the Hillary Field Centre completed. Conceptual design for redevelopment of Scott Base completed.	A Scott Base facility that's fit for purpose for the next 50 years and continuing to support high quality science aligned to the Government's *Directions and Priorities* document and broader strategic objectives.

3. The impact on New Zealand of climate change research in Antarctica is better understood and communicated

New Zealand is one of the first countries to feel the impact as Antarctica responds to climate change. It represents a threat to New Zealand's future prosperity.

Climate change is the unifying theme in the Government's *Antarctic and Southern Ocean Science Directions and Priorities 2010-2020* document. It is also a highly relevant issue on the Antarctic Treaty System agenda.

A key aspect of our role in Antarctica is to support science that addresses issues of short and long term risk around changing environmental conditions in Antarctica that will affect New Zealand and New Zealanders (through direct economic impacts (e.g. to fisheries and land productivity), and indirect economic impacts (e.g. coastal impacts through sea level rise from melting ice, changing weather patterns and altered ocean conditions).

To prepare, New Zealand scientists are focussing on those most pressing areas of research which contribute to the *Antarctic and Southern Ocean Science Directions and Priorities 2010-2020* document as follows:

	Antarctic and Southern Ocean Science Directions and Priorities 2010-2020 – High level research outcomes:		
Pressing research area:	Climate, Cryosphere, Atmosphere and Lithosphere.	Inland and Coastal Ecosystems.	Marine Systems.
Melting ice and rising sea levels Develop predictive tools (scope, scale and rate) for changing ice (sheet, shelves and sea ice) mass and conditions in Antarctica through observations, experiments and computer models.	✓	✓	
Challenges to living species and biodiversity Understand the resilience and resistance of cold adapted species and ecosystems to stress – monitoring changing environments for climate change (terrestrial and marine), fishing and human presence.	✓	✓	✓
How Antarctica connects with the rest of the world Understand the changing ocean and atmospheric connections between Antarctica and global systems. It's essential we know what impact this will have on New Zealand.	✓		✓

Science outcomes from this research contribute to improved policy and decision making for New Zealand and also for the Antarctic Treaty System.

Raising long term public awareness is also an essential part of our mandate. In particular by demystifying science to increase understanding of the results of this research and why Antarctica is relevant to current and future New Zealanders.

What we will do to achieve this objective

Science

- Contribute a Ross Sea region focus to the international body of knowledge on climate change
- Integrate science activities with those of other nations and the Scientific Committee on Antarctic Research (SCAR)
- Ensure scientific research is aligned to the requirements of the international and domestic policy makers through bodies such as the Antarctic Treaty, it's associated committees and the Intergovernmental Panel on Climate Change (IPCC)

Build and leverage outreach network channels

- Maintain a strong and comprehensive outreach programme
- Link artist and media programmes to Antarctica New Zealand's objectives
- Develop and implement outreach evaluation strategies
- Bring Antarctic champions and ambassadors to the outreach programme
- Pursue outreach links with other national Antarctic programmes, New Zealand Crown Research Institutes and New Zealand Universities

How we will demonstrate success in achieving this

Indicators of success	Baseline 2014	Current state 2016	Target
Increase understanding of the role Antarctica and the Southern Ocean play in determining future climate change by providing a Ross Sea region focus.	New.	Publish an annual report on New Zealand's scientific achievements in Antarctica including those related to climate change. Any impacts identified for New Zealand will also be included.	Increase visibility of the role Antarctica and the Southern Ocean play in determining future climate change.
The Antarctic Environments Portal contains policy relevant scientific information.	Concept supported.	The Antarctic Environments Portal is built and adopted by Committee for Environmental Protection (CEP).	New Zealand researchers contribute information summaries in the Antarctic Environments Portal.
The general public recognises the value of Antarctica New Zealand's work in Antarctica and the Southern Ocean.	76% general public recognition of importance (Source: Public Survey in 2011).	84% general public recognition of importance (Source: Public Survey in 2015).	Long term evaluation criteria demonstrate increases in public recognition.
Development of engagement expectations with artists, media and tour operators.	All artist, media and tour events aligned to Antarctica New Zealand's objectives.	During the 2015/16 Antarctic season the reporting on Antarctica and climate matters was of a high standard and achieved international coverage.	Quality and quantity of reporting and public engagement aligned to Antarctica New Zealand's objectives increases.

4. New Zealand's Antarctic programme is sustainable

Sustainability at Antarctica New Zealand means:

Health and safety

Health and safety is a core value and our highest organisational priority. We believe all injuries and occupational illnesses are preventable and that business excellence is linked to safe outcomes.

Rigorous management of risk with an unequivocal commitment to health and safety helps to protect all people working in the New Zealand Antarctic programme from harm. We will continue to enhance our systems, processes and standards to underpin our relentless focus on safety and our commitment to zero harm.

Environment

Our focus on reducing our environmental footprint in Antarctica significantly enhances New Zealand's credibility as an operator there, as does our approach to finding innovative solutions to environmental management challenges.

We continue to place high priority on excellent standards of environmental practice and have undertaken a series of improvements to our environmental management systems which have been accredited at Enviro-Mark® NZ Diamond Standard, the highest level available. In 2016, Antarctica New Zealand became the first organisation in New Zealand to be certified with Energy-Mark® Bronze Standard.

This approach, coupled with high standards of environmental impact assessment undertaken in accordance with the Antarctica (Environmental Protection Act) 1994 provides a rigorous means of minimising our impacts on the Antarctic environment.

Community

Christchurch is one of just five Antarctic gateway cities around the world.

Antarctic related activities are a significant contributor to both the Canterbury and New Zealand economies. In conjunction with the Christchurch City Council's Antarctic Office, Antarctica New Zealand leverages its relationships to identify opportunities for the city. Examples include attracting the Korean Antarctic programme to base its logistics activities out of Christchurch, and securing the hosting rights of three international conferences in New Zealand in 2015, one in Christchurch.

Antarctic New Zealand also manages its relationships to ensure existing Antarctic activities are maintained in Christchurch, in particular the key relationship with the United States Antarctic program.

Financial

Antarctica New Zealand defines financial sustainability as having the financial capacity to meet its current and future obligations and commitments so as to meet the reasonable expectations of stakeholders, whilst maintaining sufficient capacity to withstand shocks.

In Budget 2016 the Government has provided Antarctica New Zealand with an additional $16.7 million over four years to meet the increasing cost of logistics required to support Antarctic scientific research that delivers the objectives of the *2010-2020 New Zealand Antarctic and Southern Ocean Science Directions and Priorities* document.

A risk to Antarctica New Zealand's financial sustainability remains because its capital asset management plan indicates a significant shortfall in funding the cost of replacing Scott Base assets when they come to the end of their useful lives (see page 23).

We are working with Treasury and the Ministry of Foreign Affairs and Trade (MFAT) to address this risk.

What we will do to achieve this

Improve health and safety

- New Zealand Antarctic programme activities are conducted safely
- Health and safety systems are enhanced and accredited
- Buildings, facilities and infrastructure are fit for purpose

Minimise environmental impact

- Implement an energy management system
- Reduce or recycle our waste
- Environmental management systems are enhanced and accredited

Improve Antarctic related economic opportunities

- Support the Christchurch Antarctic Office to enable Antarctic-related networks to be more effective
- Use our knowledge and influence within the international Antarctic community to identify economic opportunities for Christchurch organisations

Ensure Antarctica New Zealand has sufficient resources to carry out its mandate

- Work with MFAT and Treasury to secure future funding requirements

How we will demonstrate success in achieving this

Indicators of success	Baseline 2014	Current state 2016	Target
New Zealand Antarctic programme activities are conducted safely.	Four incidents of moderate severity (medical treatment required).	One incident has been assessed as being of moderate severity, the injury required one stitch.	No notifiable injuries.
Implement an energy management system to deliver a best practice energy management approach.	CEMARS accreditation.	Energy-Mark Certification – bronze.	Antarctica New Zealand's energy management system is accredited.
Biennial growth in the aggregated direct economic impact from Antarctic–related activities.	2.4% pa.	4.8% pa – New Zealand 10.1% pa – Canterbury only (Based on draft economic impact report – May 2016).	Greater than average New Zealand Gross Domestic Product growth.
The role of Antarctic-related activity within Christchurch's wider economic development plan is clear.	Multiple Antarctic-related economic development related initiatives exist.	Support the establishment of the Christchurch Antarctic office and contribute to the development of an Antarctic strategy.	Christchurch and Canterbury's Antarctic strategy developed and initiatives consolidated into a coordinated action plan.
New Zealand's Antarctic programme is funded appropriately.	New.	Work with Treasury and Ministry of Foreign Affairs and Trade to develop a robust and well evidenced business case for change.	New Zealand's Antarctic programme has the resources to deliver its mandate.

Organisational health and capability

To deliver our long-term strategy we need our staff to be engaged and to have clearly defined roles aligned with our vision, outcomes and strategies.

Staff feedback

We care what our staff and contractors think about all aspects of the organisation and take time to connect with them to get their feedback. All permanent staff have monthly personal performance reviews with their team leaders to discuss progress against agreed KPI's, personal development actions and any other matters the staff member wishes to raise. Annually we conduct a staff engagement survey from which opportunities for continuous improvement are highlighted. These are prioritised and included in our annual business plan.

Seasonal Scott Base staff

Because we operate in Antarctica, seasonal Scott Base staff are offered fixed term employment of five months (summer only roles) or 13 months (summer/winter roles).

We actively encourage high performing Scott Base staff to return for further periods of employment in future seasons or to take up permanent seasonal employment agreements. The continuity of leadership and job specific knowledge they bring back to the organisation is a significant factor in our success.

Leadership and accountability

Shared values form the core of our high performing culture where people thrive and develop together. Antarctica New Zealand is consistently building a common culture through values, a clear leadership approach and a strong focus on accountability. Health, safety and sustainability are absolutely fundamental in everything we do.

Risk management

Antarctica New Zealand operates in a high-risk natural environment. Remoteness and extreme weather conditions are inherent dangers in all the work New Zealand undertakes within the Ross Sea region. Risk management is a critical success factor for the organisation.

We are reviewing our risk management systems to ensure all the component parts remain well integrated and continue to be fit for purpose.

Business process improvement

We work to improve productivity across the organisation to manage rising costs within static baselines and have made good progress through a combination of short and longer term initiatives.

Information management

Our greatest challenge is designing and operating information systems that will work across the limited satellite bandwidth available to Scott Base.

We continue to look at ways to mitigate IT related risks and have now established fully redundant hardware infrastructure at an offsite datacentre in Christchurch. Other technology projects are focussed on improving mobility and simplification of systems for users.

Following a Public Records Act (PRA) audit in 2015 we are reviewing our records management system to make the improvements necessary for full PRA compliance.

Asset management

The environment at Scott Base makes asset management and facility development challenging. The last major phase of investment in facilities at Scott Base was in the early 1980s and mid-1990s. Since then a number of building refurbishments have taken place, a waste water treatment plant installed, a new replacement laboratory at Arrival Heights and implementation of the Ross Island wind turbines and associated energy systems.

Antarctica New Zealand's capital asset management plan indicates a significant shortfall in funding the cost of replacing Scott Base assets when they come to the end of their useful lives. In response the Board of Antarctica New Zealand has now approved an overarching design concept for Scott Base which provides guidance for the development of Scott Base for the period to 2030. The first phase of this design is the construction of the refurbished and reconfigured Hillary Field Centre creating a modern science facility commensurate with current and future science ambitions.

To address the funding shortfall a Business Case is being developed in conjunction with Ministry of Foreign Affairs and Trade (MFAT) and Treasury seeking to ensure New Zealand's continued active presence in Antarctica through a Scott Base facility that is fit for purpose for the next 50 years and continuing to safely support high quality science aligned to New Zealand's Antarctica science strategy *(Antarctica and Southern Ocean Directions and Priorities 2010-2020* document) and broader strategic objectives.

Meanwhile the focus over the next four years will be on delivering high quality science facilities while improving life support systems for people working in Antarctica.

Completion of the Scott Base Hillary Field Centre redevelopment

2016/17 sees the final phase of this $6.25 million project to enhance science capability with the introduction of three new internal laboratories, specialised external laboratories and work spaces for field preparation and field data analysis. Specific objectives this project will deliver on are: consolidate science field operations preparation, provide new purpose in-built laboratories with improved functionality and flexibility, and provide the ability for purpose built re-locatable laboratories to be housed within the Hillary Field Centre.

Deep field overland traverse capability

Antarctica New Zealand is responding to increasing levels of interest from the New Zealand science community for deep-field logistics capability to support science projects up to 1,000 km from Scott Base. We are reviewing what additional capability is required to provide that level of support, in particular the traverse vehicles required to tow large amounts of equipment and fuel for long distances across the Ross Ice Shelf.

Scott Base accommodation building replacement

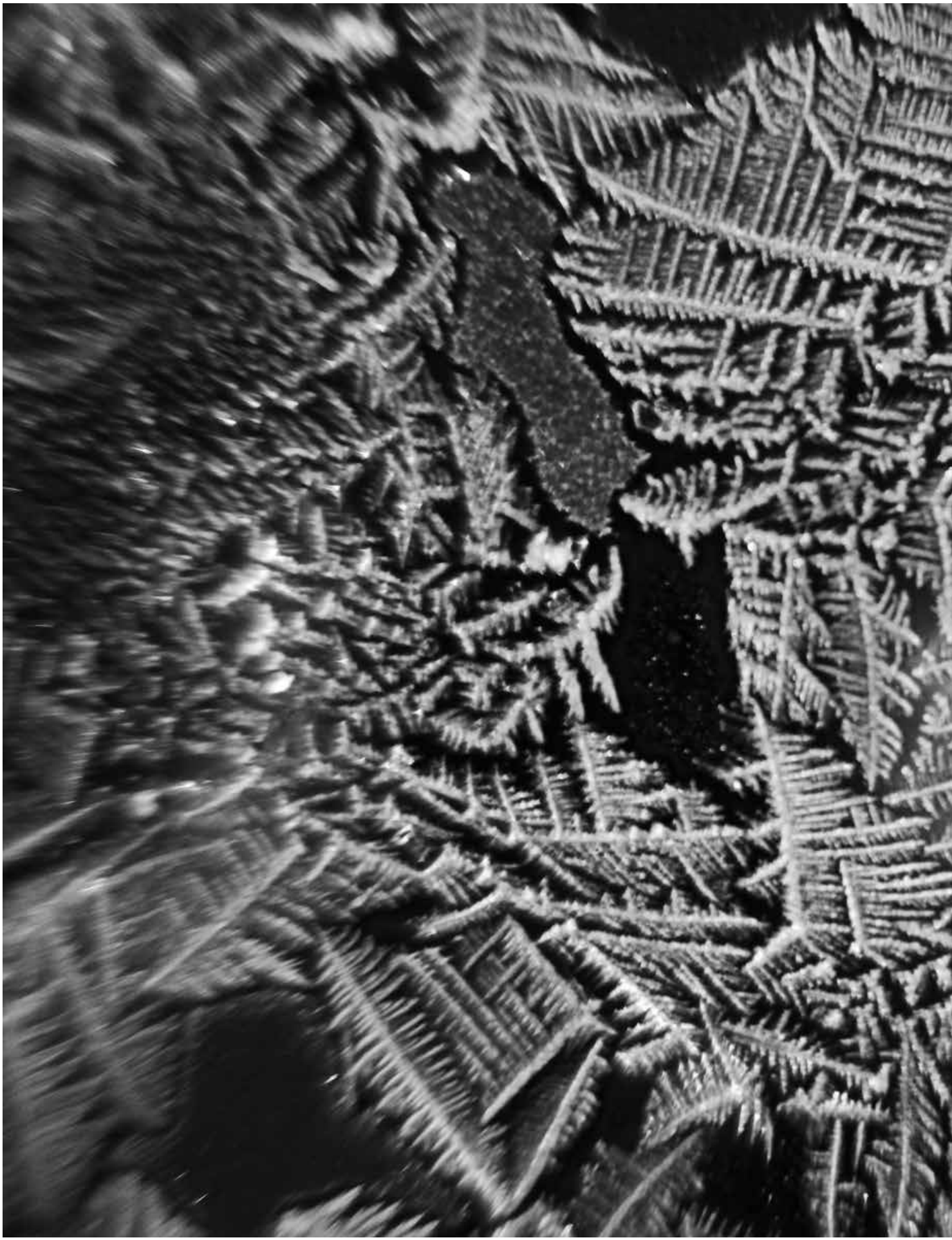
Planning will be advanced for the replacement of one of the main accommodation buildings and associated facilities. This will depend on the outcome of the Business Case noted above.

Scott Base water plant replacement

This asset will be upgraded to best practice including the circulation of sea water to the Hillary Field Centre new laboratories.

In additional there is provision for the routine replacement of information systems, vehicles, plant and equipment. Assets are replaced at the optimum point in their life cycles.

Capital Expenditure Intentions	2016/17 $000	2017/18 $000	2018/19 $000	2019/20 $000
Scott Base buildings	1,913	2,400	2,342	321
Scott Base vehicles	1,475	1,480	137	125
Scott Base plant and equipment	628	1,351	2,213	4,816
Christchurch	35	25	117	90
Information technology	409	400	518	225
Total Capital Expenditure	4,460	5,656	5,327	5,577



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Antarctica New Zealand
Private Bag 4745
International Antarctic Centre
38 Orchard Road, Christchurch, New Zealand
Tel 64 3 358 0200 Fax 64 3 358 0211

www.antarcticanz.govt.nz