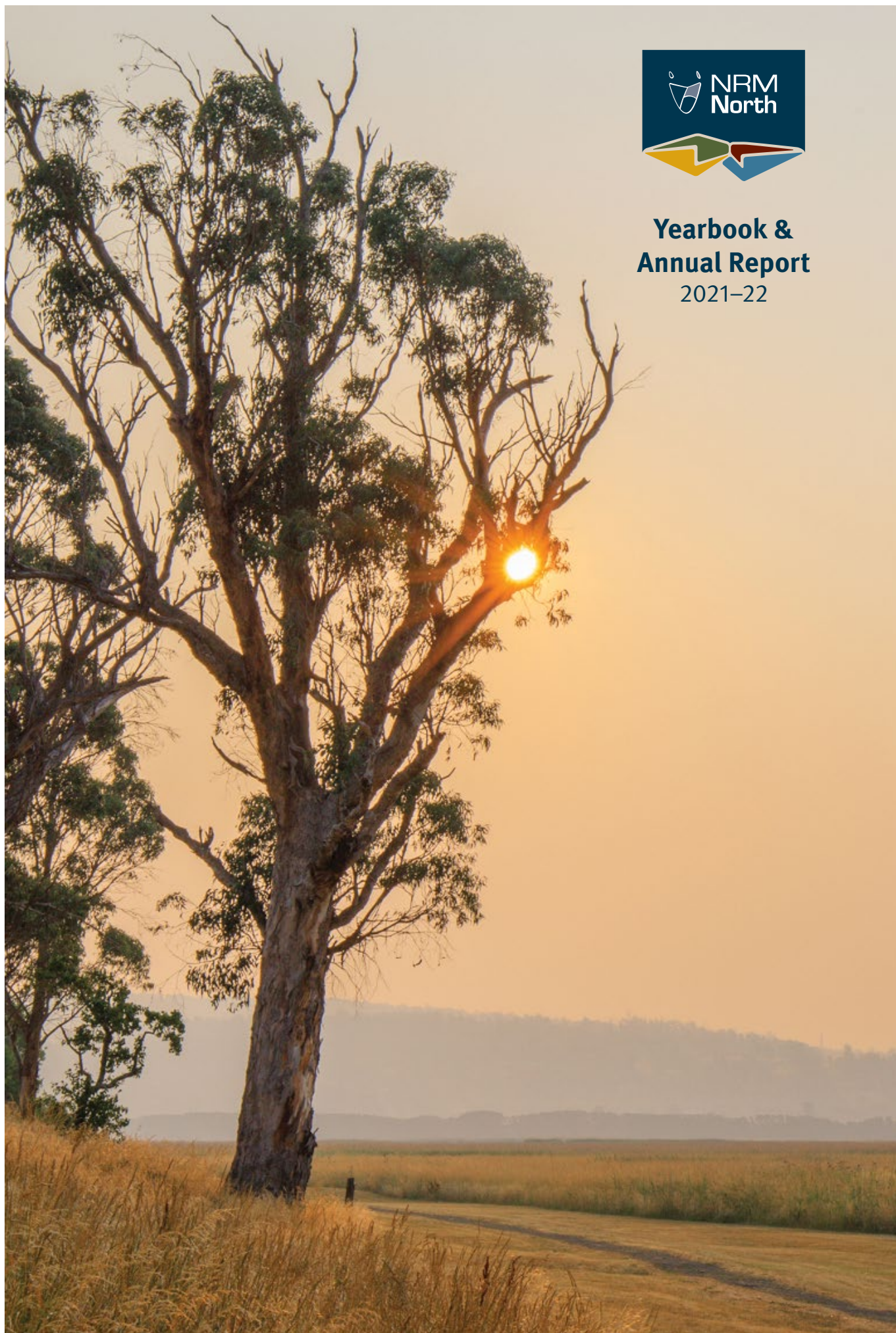




**Yearbook &
Annual Report**
2021-22



We pay respect to the Traditional Owners of lutruwita (Tasmania), the Tasmanian Aboriginal people past, present and emerging, and acknowledge their connection with land, sea and sky Country that spans millenia.

Working with you to care for the natural resources of our island home.

We live in one of the most unique places in the world. NRM North aims to help you keep it that way by continuing to provide leadership to ensure sound management of the region's natural resources continues; to develop programs that recognise the need to balance the environmental, economic and social needs of the people of the region; and to work in partnership with all stakeholders to determine appropriate investment and cost-sharing strategies in the management of our natural resources.



Northern Tasmanian Natural Resource Management Association Inc.
63-65 Cameron Street, Launceston TAS 7250
03 6333 7777 | admin@nrmnorth.org.au | nrmnorth.org.au



Overview	2
CEO Welcome	4
About northern Tasmania	6
About NRM North	
NRM North Strategic Plan 2019-2023	7
Water Program	8
Tamar Estuary and Esk Rivers Program	12
River Health Action Plan	20
Tamar Action Grants	21
Land Program	24
Weeds Action Fund	28
Hillslope Erosion Project	29
Soil Acidification Project	30
Soil Carbon Projects	31
Vegetation and Biodiversity On-Farm Project	32
Agricultural Stewardship	33
Regional Agricultural Landcare Facilitator	34
Future Drought Fund	35
Healthy Country	36
Biodiversity Program	38
Eastern Barred Bandicoot Project	42
Giant Freshwater Crayfish Project	43
Hooded Plover Project	44
Saving Shy Susan Project	45
Small Farm Living Project	46
Tasmanian Cat Management Project	47
Volunteer Champions Program	48
Ringarooma Ramsar Project	49
Annual Report	50
Chair's Report	52
Corporate Services Program	54
COVID-19 Response	58
Partnerships	59
2030 NRM Strategy for Northern Tasmania + Sustainable Organisational Funding Model	60
Operations and People Management	61
NRM North Staff	62
Organisational Health	63
Corporate Governance	64
NRM North Management Committee Members	66
NRM North subcommittees	67
NRM North Management Committee Member Profiles	70
NRM North Recognition Awards	72
Summary Financial Statements	74
Statement of Profit or Loss	75
Statement of Financial Position	76
Statement of Changes in Equity	77
Statement of Cash Flows	78
Notes to the Summary Financial Statements	79
Management Committee Declaration	80



NRM North CEO Report

Rosanna Coombes

The last 12 months have presented many challenges, however, through diligence and agility the team at NRM North has persevered through COVID, unseasonal rain, and rising costs of materials and labour to meet, and often exceed, targets. The following details many of the highlights for NRM North in the 2021-22 financial year.

A new NRM Strategy for northern Tasmania

A key achievement in 2021-22 was the completion of the revised NRM Strategy for the north of the state.

Over the past two years, NRM North has worked closely with NRM South and Cradle Coast Authority to prepare regional NRM strategies to 2030.

In consultation with industry, government, and community stakeholders, the strategies identify natural resource management priorities that each NRM organisation will invest in to 2030 with an emphasis on improving the condition of natural resources and driving

sustainable production under the three primary themes of Land, Water and Biodiversity.

The northern strategy can be viewed online or accessed through the NRM North office.

Reducing pathogens in the Tamar estuary

NRM North is working with graziers, dairy farmers, and councils to reduce pathogens entering the kanamaluka/ Tamar estuary. Actions include fencing stock out of waterways, improving effluent management, and working with councils to improve stormwater quality by addressing cross-connections of sewage into the stormwater system.

So far, the program has exceeded projected outcomes and is progressing well. To date, NRM North has contracted 75 per cent of the fencing target, and 64 per cent of the effluent management target. The program concludes February 2025.

In collaboration with City of Launceston, the program has surpassed targets in urban stormwater assessment and remediation works with 44 sewage intrusions identified and completed. These actions alone have removed the equivalent of five Olympic-sized swimming pools of sewage entering the estuary every year.

Enhancing knowledge of water quality in the Tamar catchment

The Tamar Estuary and Esk Rivers (TEER) Program monitors water quality at 16 sites throughout the Tamar estuary resulting in over a decade's worth of water quality data, one of the longest running datasets for a major waterway in Tasmania.

Using this data, the TEER Program produced the 2022 Tamar Estuary Report Card and Technical Report. The report provides a score of ecosystem health in five zones along the length of the estuary.

Improving habitat and management for threatened species and communities

NRM North is working with landholders to expand populations of the iconic giant freshwater crayfish in the Pipers, Brid and Boobyalla catchments by controlling stock access to rivers to reduce sedimentation, and by improving riparian vegetation to provide stream shading. Approximately 12 km of riparian vegetation has been restored so far.

Staff are also working with landholders in the West Tamar and Northern Midlands to expand habitat of the eastern barred bandicoot through the exclusion of stock from native vegetation, and revegetation. To date, 82 hectares of habitat have been protected or revegetated. The launch of the Urban Refuges handbook detailing five bandicoot-friendly gardens has received national media coverage. This year, 25 gardens have secured funding.

Improving soil and vegetation management on-farm

Soil health workshops have focused on lime management to address soil acidification and management of soil carbon in intensive cropping systems and pastures. NRM North has secured Australian Government funding to lead a statewide soil extension program to increase awareness and adoption of land management practices to improve soil health. The launch of the Erosion Economic Calculator this year also helped farmers understand the financial risk of erosion, and the potential costs of inaction.

The Vegetation and Biodiversity On-Farms Project exceeded the target of 15 hectares to protect remnant native vegetation, with over 284 hectares now protected.

Increasing on-farm resilience and biosecurity

With a changing climate, on-farm resilience is a critical factor impacting short and long-term decision making. Partnering with the Bureau of Meteorology, information on the projected effect of climate change on farms over the next 30 years was shared through a series of information sessions.

NRM North was one of six organisations across the country to pilot the Agricultural Stewardship program. During the pilot, 20 landholders in the north were granted projects to diversify income by rewarding landholders for biodiversity outcomes and enhance remnant vegetation.

NRM North provided support to Break O'Day Council to assist land managers in "drought weed" actions for activities and strategies to mitigate weed threats. Project delivery included weed mapping, biosecurity planning, and the delivery of weed control grants.

NRM North is supporting the state government Weeds Action Fund. The WAF has since completed 26 small grants, established 24 multi-year management agreements totalling \$2.4 million with a further leverage of \$3.5 million in co-contributions, reported over 2,000 hectares of weed control measures and 150 management plans. The program includes more than 30 collaborative partnerships with over 400 participants.

Thank you and farewell

I am sad to say that 1 September 2022 was my last day with NRM North. I have thoroughly enjoyed my time with the team, and I wish the organisation well as it continues to deliver positive outcomes for natural resource management.

I would like to thank the Management Committee, and particularly the Chairs (James Walch and Pam Allan) for its unyielding support over the past six and a half years. We have shared some amazing achievements - the organisation has more than doubled its portfolio, staffing, and resource.

NRM North is blessed with dedicated and passionate staff who come to work with the sole aim of making our slice of paradise better. Thank you for your support and commitment to natural resource management in our region.

Lastly, I'd like to thank my family for their understanding and support. A CEO can't do their job well without the A-Team at home.

To the greater northern community – thank you for your partnership and the great work you do to make northern Tasmania such a wonderful place to live, work, and play. I wish you all the best.

Rosanna Coombes

About Northern Tasmania

The northern region of Tasmania covers 25,200 km² and encompasses some of the most outstanding and picturesque landscapes in the state - from Bass Strait, along the craggy peaks of the Western Tiers, to the stunning beaches of the Bay of Fires, and the unspoiled islands of the Furneaux and Kent Groups.

More than 148,000 people live in the region, with the major urban areas based around Launceston and the Tamar Valley. The valley is dissected by the iconic kanamaluka/Tamar estuary. At 70 km, it is Australia's longest navigable estuary carrying the combined flows from over 10,000 km² including the waters from the North

Esk, South Esk, Meander, Brumbys Lake and Macquarie Rivers.

The many smaller towns that service the rural and coastal communities include numerous historic colonial villages and coastal settlements. The region is governed by eight municipal councils: City of Launceston, Break O'Day, Dorset, George Town, Meander Valley, Northern Midlands, West Tamar and Flinders (covering the eastern Bass Strait islands).

Much of the region's wealth is derived from industries such as agriculture, viticulture, forestry, tourism, fishing, aquaculture and recreation – all of which depend on our natural

resources. Regional agriculture alone generates more than \$858m annually¹.

We are fortunate to have a large number of people in our region eager to improve their natural resource assets, whether that be individually or through community groups.

¹Australian Bureau of Statistics, Value of Agricultural Commodities Produced, Australia 2019-20 abs.gov.au/statistics/industry/agriculture/agricultural-commodities-australia/latest-release

About NRM North

Trading as NRM North, the Northern Tasmanian Natural Resource Management Association Inc., is one of three formally recognised regional natural resource management bodies in Tasmania and one of 54 across Australia.

NRM North is a not-for-profit organisation established in March 2003 through a community-driven process in response to the Tasmanian Government's Natural Resource Management Framework and its enabling legislation, the *Tasmanian Natural Resource Management Act 2002 (Amendments 2018)*.

The organisation is overseen by the NRM North Management Committee to ensure the continuation of sound business and best practice in natural resource management.

NRM North's vision is to be the leading non-government organisation in natural resource management across northern Tasmania.

Our vision for natural resource management in Tasmania is to undertake collaborative action for healthy landscapes and seascapes, protected natural values, and sustainable livelihoods and lifestyles.

Our vision for natural resource management is applied through the following principles:

Stewardship

To promote and enable the growth and uptake of knowledge, capabilities and practices that support the natural environment and productive landscapes to sustain productivity, profitability and healthy functioning.

Participation

To actively establish and nurture partnerships and collaborations as the preferred operating arrangement for the planning and implementation of regional, cross-regional and local NRM programs, projects and activities.

Influence

To work with planners and policy developers to inform regional environmental and agricultural initiatives at state and federal levels.

Aboriginal Culture and Knowledge

To appropriately and respectfully recognise and engage with Tasmanian Aboriginal people around natural resource management knowledge, perspectives, and practices.

Risk and Resilience

To facilitate access to information that enables people to anticipate challenges, avoid or resist impacts, and recover without loss of economic, social or environmental functional capability or capacity, especially in relation to the direct and indirect consequences of changing regional climate conditions.

NRM North Strategic Plan 2019-2023

To direct the operations of NRM North, the Management Committee has adopted the NRM North Strategic Plan (2019-2023) which includes the four program pillars:

Biodiversity

Water

Land

Corporate Services

Some of our key achievements are outlined in the program summaries that follow.



Photo: Hudson O'Neil



Photo: Joy Kachina

Program Aim

The aim of the Water Program is to maintain and enhance ecosystem health of the kanamaluka / Tamar estuary and Brid and George catchments through water quality improvements.

Water assets in the NRM North region include surface water, ground water, freshwater lakes, wetlands and estuaries. These assets are essential for the provision of clean drinking water, primary industries, and recreational amenity, and they support unique and diverse aquatic ecosystems. The kanamaluka / Tamar estuary is a focal point for the city of Launceston and underpins the region's social and economic values. The health of the kanamaluka / Tamar estuary has been a long-standing issue of concern in the community. The upper reaches of the estuary are

under pressure from pollutant loads from both diffuse (catchment) and point source pollutants including nutrients, sediments, metals, and pathogens. Other important catchments in the region that face similar water quality pressures include the Brid and George catchments. There is an opportunity to work with partners, landholders, and the community to address the pressures facing our rivers and estuaries, and to reduce pollutants entering our waterways from urban and diffuse sources.



Tamar Estuary and Esk Rivers Program

The following points outline key goals achieved in the 2021-22 financial year:

- monitored water quality in the kanamaluka / Tamar estuary collecting data for analysis and interpretation to prepare and launch the 2022 Tamar Estuary Report Card
- developed a biological monitoring program for the estuary, including scoping and development of methodologies for monitoring
- undertook monitoring in Lake Trevallyn during the summer months to assess the risk of blue-green algal blooms
- facilitated capacity building for best practice stormwater management through soil and erosion control training
- collaborated with the Derwent Estuary Program and LGAT to develop statewide policy and guidance for stormwater management for local government
- built community knowledge and awareness of the kanamaluka / Tamar estuary through facilitation of the Tamar Forum 2021
- released a range of fact sheets describing the natural values of the kanamaluka / Tamar estuary and summarising the evaluation of options for sediment management
- launched a stand-alone TEER Program website and social media page.

River Health Action Plan – Catchment Works Program

The following points outline key goals achieved in the 2021-22 financial year:

- managed projects to complete more than 100 km of stock exclusion fencing along waterways on dairy and grazing properties
- completed 888 hectares of effluent management improvements on dairy farms
- completed three grant assessment rounds including 35 projects and 122 km of additional fencing contracted
- completed the second major evaluation of the program through landholder surveys and catchment modelling to assess program outcomes to date
- undertook monthly water sampling and data collection in the catchment during the wet season.



The Water Program focuses on improving water quality and enhancing the ecological, social, and economic value of the region’s waterways by reducing the load of diffuse and point source pollutants entering waterways.

In 2022-23, the Tamar Estuary and Esk Rivers (TEER) Program will:

- continue monthly water quality monitoring of the kanamaluka / Tamar estuary
- continue to monitor Lake Trevallyn for blue-green algae and test a predictive model for blooms
- implement a biological monitoring program for the kanamaluka / Tamar estuary
- release the Freshwater Report Card, updating the status of freshwater ecosystems in the TEER catchment
- collate and report on recreational water quality data from relevant sources
- engage councils and stakeholders in best practice stormwater management, particularly, soil and erosion control and water sensitive urban design
- continue to assist delivery of catchment works for the River Health Action Plan, including advice and input into scientific monitoring.

In 2022-23, the River Health Action Plan – Catchment Works Program will continue to deliver projects to reduce pathogens entering the kanamaluka / Tamar estuary by:

- supporting dairy and grazing landholders to undertake riparian management activities and exclude stock from waterways through the Tamar Action Grants
- supporting dairy farmers to improve dairy effluent management practices and reduce stock effluent from entering waterways
- releasing three educational videos to increase adoption and awareness of the Tamar Action Grants Program and promote the supported application process
- conducting monthly water sampling in the catchment during the wet season.

Tamar Estuary and Esk Rivers Program

The Tamar Estuary and Esk Rivers (TEER) Program was established in 2008 as a regional partnership between the agencies responsible for management of the kanamaluka / Tamar estuary and Esk rivers. The TEER Program aims to provide a coordinated approach to management, and a guide for solutions and investment to protect, maintain and restore the waterways from 'catchment to coast'.

The history of the TEER Program demonstrates the benefit of the program in achieving coordinated management of the kanamaluka / Tamar estuary and Esk rivers system. The development of the Water Quality Improvement Plan in 2015 was the foundational blueprint for improving water quality throughout the catchment. Its scientific modelling supported the development of a River Health Action Plan to guide significant investment in water quality improvement. More recently, the

scientific and technical evaluation of sediment management options informed policy recommendations and supported the development of a draft 10-year vision for the estuary. These coordinated projects demonstrate the strong partner engagement achieved by the TEER Program, which supports coordinated management and investment. The value of the partnership is demonstrated through the addition of new partners, with TasPorts and Tasmanian Irrigation joining the program this year.

The TEER Program works collaboratively with a range of stakeholders to inform management and improve the health of the kanamaluka / Tamar estuary.



Photo: St John Pound

TEER Strategic Plan and Governance

The vision of the TEER Program is to be 'a trusted and respected provider of science and evidence that informs decision making to protect, restore and enhance water quality in the kanamaluka / Tamar estuary and its rivers from catchment to coast'.

This is separate from, but complementary to, the work of the Tamar Estuary Management Taskforce (TEMT) whose role is to develop policy recommendations and source investment for management of the kanamaluka / Tamar estuary.

The role of the TEER Program is to improve understanding of the issues impacting waterway health to better identify and target priority areas requiring on-ground action. To achieve this, the TEER Strategic Plan 2020-2024 outlines three future directions:

1. Work together to support integrated governance, planning and management.
2. Understand and advise on waterway health.
3. Build community knowledge and awareness.

Under the Strategic Plan 2020-2024, the TEER Program will continue core activities such as water quality monitoring as well as developing a greater focus on building community knowledge and awareness, and enhancing biological monitoring.

Continuing to build on our understanding of the catchment will ensure our waterways can cope with future pressures and remain healthy and productive.



Photo: Sam Jack

TEER Ecosystem Health Assessment Program

The TEER Ecosystem Health Assessment Program (EHAP) is one of the longest ongoing water quality data series for a major waterway in Tasmania. It represents the core monitoring effort of the TEER Program and provides data not only on current ecosystem health, but the long-term trends in water quality in the kanamaluka / Tamar estuary. Beginning in 2009, the EHAP now has over a decade of data that can be used to inform evidence-based management and investment to protect and enhance this iconic waterway.

Each month, the program measures 38 separate water quality parameters ranging from physical parameters like temperature and oxygen concentration, to chemical parameters such as salinity and pH, as well as nutrients including nitrogen and phosphorus. With measurements taken at 16 sites over the 70 km length of the waterway from the head of the estuary at Launceston to the mouth at Low Head, this equates to between 2,000 and 2,500 observations made every month. Recording was initially done every second year, but recognition of the importance of the dataset led to regular monitoring from 2016 onwards.

The EHAP is a collaborative program, with logistical monitoring support continuing to benefit from a close working relationship with several partners. The data collected is used to develop the biennial estuary report card, which provides an update on the health of the estuary within five functional zones.

Data collected from the kanamaluka / Tamar estuary continues to be a valuable resource available to the local and broader community. Since July 2021, the program has provided water quality data to a dozen community members and stakeholders for the purpose of research and development.

Water samples are collected along the 70 km length of the kanamaluka / Tamar estuary every month.



Photo: Sam Jack

Quick Fact

Since July 2021, the Ecosystem Health Assessment Program has recorded 24,611 individual observations on water quality in the estuary. The data is accompanied by a much larger set of metadata – close to 475,000 entries that describe where the data is collected in space and time and associated environmental conditions.

2022 Tamar Estuary Report Card

The biennial Tamar Estuary Report Card and Technical Report was released in June 2022, summarising water quality data collected in the estuary between December 2020 and November 2021.

The report enables the community and stakeholders to stay informed about the current health status of the estuary, providing an insight into the drivers of change in ecosystem health and helping decision makers prioritise management actions and investment. For the purposes of reporting, the estuary is divided into five zones that reflect differences in critical habitats, key processes, and anthropogenic impacts, with Zone 1 at the upper end near Launceston and Zone 5 at the lower end of the estuary near Low Head.

The 2022 Tamar Estuary Report Card showed that Zone 1 (Launceston to Legana) retained a score of D representing 'poor ecosystem health', while Zone 2 scored a C+ reflecting 'fair' ecosystem health. Consistent with previous years, Zones 3, 4 and 5 scored 'good' and 'excellent' grades. The 2022 Report Card demonstrates a minor decline in grades in Zones 2, 4 and 5, with Zones 1 and 3 retaining the same grades as those in the 2020 Report Card.

High nutrient loads in the upper and mid estuary, low dissolved oxygen observed during two months of the monitoring period throughout the estuary, and generally more acidic water have been identified as the predominant drivers of the change in ecosystem health grades. These

factors are likely to have been influenced by high rainfall throughout the catchment that coincided with the current reporting period.

Improvements in dissolved metal concentrations first observed in the 2020 Report Card monitoring period have been maintained in all zones, following high levels experienced during previous years when a sediment raking program was operating in the upper estuary. Similarly, improvements in nutrient levels have been maintained in the lower estuary.

Quick Fact

The TEER Program collaborates with more than 18 partner organisations in Tasmania to monitor and report on waterway health in the TEER catchment.

The kanamaluka / Tamar Estuary 2022 Report Card provides a snapshot of ecosystem health for the entire estuary.



Lake Trevallyn Blue-Green Algae Monitoring

The Lake Trevallyn Blue-Green Algae Monitoring Program concluded its fifteenth monitoring season at the end of April 2022, with another summer free from algal blooms.

Water quality in Lake Trevallyn is extremely important; it is a main drinking water supply for Launceston and is an important recreational location for local residents. In summer, Lake Trevallyn becomes a popular choice for swimming, kayaking, and water skiing. However, the warmer conditions that the community enjoys for recreational activities are also conducive to algal growth.

Following a significant algal bloom in 2006 that extended to 2008, the Lake Trevallyn Blue-Green Algae Monitoring Program was formed to provide an

early warning system for future bloom events. Each year, between December and April, the TEER Program collects weekly water samples to monitor water quality and assess concentrations of blue-green algae.

Algal concentrations in Lake Trevallyn fluctuate depending on several factors such as the amount of rainfall in the preceding winter, wind speed, pH, the regularity of large flows in summer that 'flush' the lake, and water temperature and stratification. Algal growth is thought to be stimulated by water temperature above 20 degrees Celsius, which was exceeded in Lake Trevallyn from late December 2021 to mid-February 2022. However, algal cell counts remained low during the season, peaking at 361 cells/mL in late January, which is well below the recreational level of 2,000 cells/mL

that would signal an alert for a potential bloom. Throughout the monitoring season, flow through the dam was relatively constant, including one large flow event in the first half of January. This may have offset the effect of the warmer water temperatures.

The goal of the program is to inform stakeholders and the community of any changes to water quality that may present a risk to recreational water quality. A secondary objective is to understand the drivers of algal bloom formation in Lake Trevallyn, and to develop an early warning system for bloom events. Data obtained throughout monitoring seasons can be used to build, test, and refine a model that will help predict when an algal bloom may occur.

Quick Fact

The last algal bloom detected in Lake Trevallyn was during the summer of 2008-2009 when Dolichospermum spp. (a type of blue-green algae) concentrations exceeded 120,000 cells/mL. Although referred to as algae, the organisms that cause blooms are a type of blue-green bacteria called cyanobacteria. These organisms occur naturally in waterways but can become harmful to humans if their concentrations increase dramatically.

Blackstone Beach is a popular recreational space on the banks of Lake Trevallyn.



Photo: Sam Jack

Stormwater Management

Urban stormwater is a significant contributor to pollution in our waterways. Urban centres are characterised by a high percentage of hard surfaces, which leads to greater runoff into stormwater. This runoff carries pollutants like litter, sediment, nutrients and oil into stormwater drains where it is transported into receiving waterways. At elevated levels, pollutants create imbalances in the physical and chemical properties of water, which can promote algal blooms, and have cascading consequences on aquatic ecosystems.

The Northern Tasmanian Stormwater Working Group (NTSWG) was established in 2011 to foster collaboration and knowledge sharing between councils, with the goal of improving stormwater management in Tasmania's northern region. The eight regional councils, TasWater and EPA Tasmania meet twice a year to discuss stormwater developments, challenges, and opportunities for improvement.

Released this year, stormwater policy standards and guidance for local government has been co-developed with TEER Program partners, the Derwent Estuary Program (DEP), and Local Government Association of Tasmania (LGAT). This document is important to achieving consistent, best-practice standards for stormwater management across the state. The document and associated legal advice are available on the TEER Program website teer.org.au.

A significant pollutant in stormwater is sediment, mainly in the form of clay particles which remain suspended in water and carry other pollutants such as nutrients and heavy metals. While clay occurs naturally in water, clearing of land for development greatly increases the risk of loss through erosion during rainfall events, leading to increased turbidity and negative ecological consequences. As an example, a typical subdivision with moderately erosive soil and moderate to steep slopes may lose approximately 400 tonnes of sediment over the course of a year, given average rainfall.

In collaboration with Master Builders Tasmania (MBT), the TEER Program facilitates stormwater training for councils and industry each year. Training sessions provide an overview of erosion and sediment control standards, and the impacts of discharging sediment from construction sites into stormwater. Practical options for controlling sediment and erosion during construction are also shared, with a demonstration of commonly used sediment control measures. By implementing training at construction sites, attendees can help to reduce sediment pollution into local waterways through the stormwater system.

To promote best practice erosion and sediment control from building and construction companies, the TEER Program also sponsors a Soil and Water Management category at the annual MBT Awards for Excellence. This year the award went to VOS Construction for their Dove Lake Viewing Shelter project at Cradle Mountain.

Erosion and sediment control training attendees learn how to reduce sediment pollution from construction sites, such as the installation of sediment fences.



Photo: Sam Jack

Biological Monitoring

The kanamaluka / Tamar estuary and its foreshore are associated with a wide variety of environmental values, including diverse benthic reef and sponge garden communities, and highly productive flora and fauna species that support a thriving ecosystem. These habitats and the species that use them offer numerous direct and indirect benefits to humans, such as coastal food production; improved water quality from filtration of pollutants like sediments, nutrients, and heavy metals; buffering against storm surges and sea level rise; and mitigating climate change by sequestering carbon.

The species and biological communities of the estuary are

incredibly valuable to the community and important in their own right. Our understanding of the biological health of the estuary, measured by the condition of indicator species and communities, is limited. To understand the biological health of the estuary and impacts from pressures such as point and diffuse-source pollution, land management practices, and global change drivers, a more specific biological monitoring program is needed.

The TEER Program is developing a biological monitoring plan. The objective is to improve knowledge of the biological health of the estuary by updating mapping of the spatial extent of selected biological communities,

both above and below the water, as well as establishing long-term 'condition' monitoring for a range of indicator species. The data will complement the long-term EHAP water quality monitoring dataset, to create a more holistic understanding of estuary health.

Indicator species or communities that have been selected for the pilot phase of monitoring include wetlands, saltmarsh and swamp forest, seagrasses, bird populations, and pest populations. The TEER Program is working closely with a stakeholder working group and local experts to select monitoring sites and develop appropriate monitoring methods. Monitoring will begin in late 2022.

Quick Fact

Temperate saltmarshes are protected under the federal Environment Protection and Biodiversity Conservation Act 1999 as 'vulnerable', while wetland and Melaleuca swamp forests are state protected under the Tasmanian Nature Conservation Act 2002 as Threatened Native Vegetation Communities due to their diminishing spatial extent.

Wetlands are just one of the protected habitat types found along the banks of the kanamaluka / Tamar estuary.



Photo: Sam Jack

Community Education and Engagement

Education and engagement with the communities of the kanamaluka / Tamar estuary and Esk rivers catchment is an important aspect of the TEER Program. Educating the community and stakeholders about the science and knowledge gained through the TEER Program, aims to increase the understanding of, and appreciation for, these local waterways. Everyone has a role to play in caring for waterways; by connecting with people, the program aims to motivate and inspire positive action for ecosystem health, as well as the unique and diverse species that rely on them.

Tamar Forum

The kanamaluka / Tamar estuary is important to many community members who have a desire to understand and be informed about the estuary and how it is managed. The 2021 Tamar Forum brought together industry professionals, local experts, and members of the community in an open discussion about the health

and future vision for the estuary, and current actions to improve water quality. The biennial event resulted in positive conversations between stakeholders and the community, and achieved the aim of increased understanding of the kanamaluka / Tamar estuary.

Catch it in the Catchment

Collaborating with Tamar NRM, the TEER Program again supported the 'Catch it in the Catchment' initiative to raise awareness about the impact of rubbish in waterways, and to clean up the North Esk. In just a few hours, TEER Program staff and volunteers removed 153 kg of rubbish from a one kilometre stretch of riverbank. From large items like shopping trolleys to small objects such as cigarette butts, debris of every shape and size was collected during the clean-up. Over the course of a week, the 'Catch it in the Catchment' initiative engages schools, community groups, and businesses, and provides a great opportunity for increasing community

understanding of the impacts of rubbish while promoting sustainable practices that can be implemented in everyday life.

The TEER Program also connects with a much wider audience through digital platforms. This year the program has been interviewing various groups from Landcare to FishCare, educational institutes including the University of Tasmania, and the Tasmanian Aboriginal people, to create a series of educational videos. Exploring the natural values and human uses of the kanamaluka / Tamar estuary and surrounding waterways, how these values are intertwined, and how the community can protect and enhance them, this series draws on the knowledge of a range of experts that understand the estuary and its catchment. The series is the result of a collaborative effort and will be launched with complementary fact sheets expanding on the themes explored within each video.

Quick Fact

Each year, the TEER Program hosts a major community event. These alternate between the Tamar Forum with expert presenters, and the Tamar Discovery Day, a fun, interactive and educational family event.



Photo: Darren McPhee

NRM North staff members removed over 150 kg of debris from the banks of the North Esk River in Launceston as part of community clean-up event 'Catch it in the Catchment'.

River Health Action Plan - Catchment Works Program

In 2018, the Tasmanian and Australian Governments committed to funding recommendations from the River Health Action Plan (RHAP) to improve the health of the kanamaluka / Tamar estuary and contributing waterways. The funding objective is to improve public health by reducing pathogen concentrations in Zone 1 of the estuary (Launceston to Legana) by more than four per cent.

Selected as the preferred provider for delivery of the RHAP - Catchment Works Program, NRM North formed partnerships with the City of Launceston, DairyTas and the Tasmanian Farmers and Graziers Association (TFGA) to engage the community and implement catchment works. To reduce pathogens introduced from both urban and rural landscapes, the program was designed with a rural component - the Tamar Action Grants, and an urban

component - the Sewage Intrusion Program. In 2021 the Sewage Intrusion Program was completed with great success. Delivered in partnership with the City of Launceston, the objective of the program was to identify incorrectly plumbed sewerage infrastructure connected to the separated stormwater system in greater Launceston. Cross-connections of sewerage pipes into the separated stormwater system result in untreated sewage discharging directly into the estuary, which carries pathogens, and has implications for public health. Through the program 44 sewage intrusions were identified across the separated stormwater system. All are now fully rectified. Water quality monitoring of normal and high flow conditions was undertaken across Launceston sub-catchments to evaluate changes in pathogen concentrations before and after sewage intrusions were rectified.

Quick Fact

Sewage intrusions occur when sewerage pipes are incorrectly plumbed into stormwater pipes in the separated stormwater system.

Rectification of all 44 sewage intrusions is estimated to prevent 13.2ML/annum of untreated sewage entering the estuary.

That is equivalent to 5.3 Olympic-sized swimming pools!

Streamside fencing will exclude stock from Back Creek on Daniel Greig's property 'Lowlands' near Cressy.



Tamar Action Grants

The Tamar Action Grants assist farmers in the Meander, North Esk, South Esk, Brumbys-Lake, Macquarie and Tamar catchments to improve waterway health by limiting stock access to waterways and reducing effluent runoff.

Since its inception in 2019, the Tamar Action Grants (TAG) have facilitated 140 landholders in planning and implementing water quality improvement projects that contribute toward achieving the goals of the River Health Action Plan. This will significantly reduce the amount of pathogens entering the kanamaluka / Tamar estuary, provide localised improvements to water quality and ecosystem health, and benefit on-farm stock management.

Quick Facts

Since its inception in 2019, the Tamar Action Grants have:

- *contracted 546 km and completed 352 km of livestock exclusion fencing*
- *protected 1,489 hectares of streamside riparian area*
- *contracted 2,986 hectares of dairy milking platform for improved effluent management*
- *excluded 222,200 sheep, 18,600 cattle and 7,500 dairy cows at the completion of contracted works*

TAG funding supports water quality improvements through the installation of stock crossings, waterway fencing, alternative stock water, effluent management, and revegetation and weed management.



Tamar Action Grants

Land stewardship

The Tamar Action Grants (TAG) have attracted significant interest from the agricultural community, with many landholders driven by their own land stewardship goals to improve water quality, reduce streamside erosion, and rehabilitate riparian areas, as well as helping to improve public health and the environmental value of the kanamaluka / Tamar estuary.

While the overriding objective of the TAG Program is to improve water quality in the kanamaluka / Tamar catchment, the reason for doing so varies greatly between grant recipients.

For Gordon Bayles from 'Little Forest' near Cressy, the grant has enabled him to install 1.5 km of fencing on his grazing property. He said the main benefit of the Tamar Action Grants was

improved water quality and improving the riparian area.

But the flow-on effect from improved water quality is far reaching. At Will Green's farm near Cressy, on-ground works have contributed to improve habitat for one of the most threatened native freshwater fish species in Tasmania – the swan galaxias.

"The grant helped to add to my property's conservation value ... it's good to know you are looking after something."

Will Green

Will's project has excluded stock from 4 km of watercourse. His brother Tom Green is also undertaking a TAG project to exclude livestock from over 9 km along Lake River near Cressy and an associated tributary.

The contribution of community funding toward projects like those undertaken by Gordon Bayles and Will and Tom Green allows landholders to achieve environmental outcomes which not only benefit the broader community but hold significant personal value to the landholder as stewards of the land.

The installation of infrastructure, however, comes at a significant cost and landholders are expected to make a co-contribution towards the project. For many landholders, projects to install stock exclusion fencing and other measures to improve water quality would not have been viable without access to funding.

Stage one of Tom Green's Tamar Action Grant project involved the installation of 9 km of fencing, 21 gates, four water pumps and eight troughs at his property in the Brumbys-Lake catchment.



Tamar Action Grants

Practical, on-farm benefits

To make streamside fencing a realistic exercise, TAG funding has been made available for water infrastructure, stock crossings, riparian revegetation, and weed management associated with stock exclusion fencing. Installing fencing can result in the management of stock rotation along creek paddocks, while water infrastructure can provide access to clean water sources for stock and prevent erosion issues along stream banks. Colin Gibson said financial assistance through TAG has enabled water infrastructure to be installed on his property near Hagley.

"Every bit of financial help is greatly appreciated. The main benefit was getting reticulated water to the paddocks ... putting water in troughs is better than the animals walking into the creeks."

Colin Gibson

Riparian recruitment of vegetation following fencing, or active revegetation, can aid in bank stabilisation and over time benefit stock health by providing shelter. This was an important benefit for Cressy farmer Daniel Greig.

"The main benefit of the Tamar Action Grants was preservation of the waterways to help eliminate erosion and contaminants. Having the waterway fenced off allows it to be managed better and have some recovery time."

Daniel Greig

Messages to the community

It is important for landholders involved in the Tamar Action Grants that the community is aware of the value they place on looking after waterways on their properties.

TAG recipient Bill Gibson has completed stock exclusion fencing which has protected an impressive 11 hectares of riparian zone. This will be revegetated through a collaboration with NRM North's Eastern Barred Bandicoot Project.

"The Tamar Action Grants is a good opportunity to collaborate ... and to hurry along environmental protection. It is an important development for the public to know that farmers are interested in the protection of the environment ... I am much encouraged by the support from the grant."

Bill Gibson

Daniel Greig's Tamar Action Grant project involved the installation of 465 m fencing, alternative water sources, and 0.08 hectares of revegetation in the Brumbys-Lake catchment.





Photo: Sue Jones

Program Aim

The aim of the Land Program is to improve the condition of northern Tasmania's agricultural, natural, and cultural landscapes by partnering with landholders to promote the adoption of best practice management of soil health, on-farm native vegetation and priority invasive weeds. The Land Program also aims to partner closely with Tasmanian Aboriginal communities to enhance awareness of Aboriginal cultural heritage in the landscape, and to promote the concept of Healthy Country in natural resource management.

Agriculture in the NRM North region is one of the most important sectors in the northern regional economy, contributing 46 per cent of the \$3.22 billion gross value of Tasmania's agriculture¹.

The region also encompasses the lands of several traditional owner groups and supports a number of threatened vegetation communities, which in turn

support a range of threatened flora and fauna species. Creating awareness of innovative, sustainable and traditional land management practices, and promoting the adoption of practices that lead to increased resilience, is critically important in the face of increasing economic, social and biophysical pressures such as climate change, and uncertainty in global market trends.

¹nre.tas.gov.au/Documents/Tasmanian%20Agri-Food%20ScoreCard%202019-20.pdf

Achievements
2021–2022

Land Program

The following points outline key goals achieved in the 2021-22 financial year:

- built staff understanding of north east Tasmanian Aboriginal cultural heritage through Cultural Awareness Training delivered by Auntie Patsy Cameron and the team at melythina tiakana warrana Aboriginal Corporation
- supported, volunteered and participated in the Mannalargenna Day festival at tebrakunna Country / Musselroe Bay
- contracted investment of \$2.4 million over three years, leveraging a further \$3.5 million in co-investment to tackle priority weeds in Tasmania, creating over 20 partnerships with more than 350 participants across Tasmania
- partnered with NRM South and key stakeholder groups in the Fingal Valley and east coast to demonstrate the use of innovative technology to predict how weather patterns affect future pasture production
- the Hillslope Erosion trial at Jetsonville demonstrated the benefits of sowing cover crop to mitigate erosion, with an 8:1 return on investment by reducing the cost of erosion by \$1,723/ha
- in partnership with Sustainable Farming Systems, NRM North engaged five growers in the demonstrate the use of innovative pasture establishment and renovation techniques on four trial sites at Lewisham, Speyside, Milton and Tunbridge with the aim of renovating pastures and establishing winter forage crops to improve groundcover
- engaged 15 farmers in the NRM North region to enhance their remnant vegetation, delivering workshops to more than 60 participants on best vegetation management techniques
- in partnership with private landholders, protected more than 284 hectares of remnant vegetation on farms in the NRM North region
- increased awareness of the value of traditional land management practices through delivery of the “Burning for Healthy Country” workshop at ‘Somerset’ in Epping Forest.

Focus
Moving forward

The strategic focus of the Land Program is to build the skills and capacity of farmers in the northern region to better manage soil health, native vegetation on-farm, preserve Aboriginal cultural heritage in the landscape, and to promote the adoption of best management practices which will help mitigate soil degradation and economic loss.

In 2022-23, the Land Program will:

- work with farmers to improve drought resilience through innovative technologies
- increase awareness of the importance of soil health in production systems and promote the adoption of best management practices to improve production and increase resilience to climate impacts
- raise awareness of our shared responsibility for managing priority weeds in Tasmania
- facilitate partnerships with landholders, government agencies and private industry to tackle priority weeds
- work with farmers to protect and enhance a further 184 hectares of remnant native vegetation on farms
- continue working with Tasmanian Aboriginal communities to promote the importance of Aboriginal cultural heritage in natural resource management.



Photo: Sheldon Daley

Weeds Action Fund

The Tasmanian Weeds Action Fund is a \$5 million Tasmanian Government initiative that supports farmers and other community organisations tackle invasive weeds that are impacting valuable agricultural and environmental assets. NRM North is a delivery partner of the five-year project.

Funded until 2024, a key principle of the Weeds Action Fund is the concept of 'shared responsibility', with landowners, local government and the broader community being encouraged to work together to identify, and where possible, eradicate priority weeds that impact their land.

From July 2021 to June 2022, NRM North successfully established 24 three-year projects to the value of \$2.4 million, with an added \$3.5 million in co-contributions from a diverse range of stakeholders including local government, business, private landholders, and community and catchment groups. Each project represents broader partnerships between landholders, private industry, local government, and service providers working collectively to manage priority weeds.

Weeds Action Fund Chair, Ian Sauer, said widespread interest in the initiative is encouraging in the fight

against weeds that have a detrimental impact on valuable agricultural and environmental assets.

The first year of the three-year grant projects has returned promising outcomes, with over 2,030 hectares of priority weeds managed and more than 160 individual and collaborative weed management plans developed.

Weeds such as cotton thistle are a common sight across many parts of rural Tasmania. The invasive species was targeted under the Tasmanian Government's \$5 million Weeds Action Fund.

Did you know?

Since NRM North became a delivery partner of Stage 2 of the Weeds Action Fund, we have:

- facilitated 30 collaborative partnerships with more than 400 participants across the state (NRET, NRM South, CCA, TFGA, industry stakeholders, farmers, and private landholders)
- successfully delivered 26 12-month projects with a total value of \$200,000 through the Stage 2 Small Grants program
- established 24 large grant projects (ongoing three-year projects) across the state for eradication and containment of priority weeds, with a total value of \$2.4 million over three years.

Gorse and tussock are two of the invasive species being targeted under the Tasmanian Government's \$5 million Weeds Action Fund.



Hillslope Erosion Project

Soil is a foundational asset that supports productive landscapes but is easily lost through erosion. While losses in soil depth may not appear significant, a reduction of just 1 mm from a hectare is equivalent to removing 10 to 15 tonnes of soil. This is not only a loss of an important asset, but it can lead to a significant decline in water quality through increased runoff into waterways. Mitigating these risks is a key focus of NRM North's Hillslope Erosion Project.

Intensive cropping enterprises have long capitalised on the nutrient-rich soils surrounding Deloraine and Scottsdale. These areas are also highly susceptible to hillslope erosion. As a result, trial sites were established at Weetah in 2019 and Jetsonville in 2021 to demonstrate the cost-effectiveness of reducing hillslope erosion, by adopting best practice erosion mitigation techniques.

In Jetsonville, soil erosion in various treatment plots was determined through measuring the distance soil had eroded or deposited in relation to a measurement on 190 bamboo pegs installed on site. Key findings in the last 12 months reveal all plots experienced some level of erosion, however, the extent of erosion was reduced when mitigation methods such as cover cropping and deep ripping, were used.

Quick Tip

Access the Erosion Economic Calculator online at nrmnorth.org.au/land/cost-erosion/

NRM North's Christine Plummer measures erosion at the Jetsonville site in July 2021.

These measurements were entered into NRM North's Erosion Economic Calculator to determine the on-farm cost of erosion across each treatment. Launched in 2021, the Erosion Economic Calculator was developed to help farmers and industry stakeholders understand the financial risk of erosion, and the potential cost of inaction. According to the Erosion Economic Calculator, measurements taken from the Jetsonville site demonstrated that sowing a cover crop produced an 8:1 return on

investment by reducing the cost of erosion by \$1,723/ha (calculated in November 2021).

Overall, the findings from the Jetsonville trial show that leaving soil bare, especially through an intensive rainfall period, is an expensive option to a cropping enterprise. Therefore, investing in cover crops or tillage to reduce erosion risk through winter and early spring is typically a cost-effective investment in Tasmania's higher rainfall agricultural zones.



Soil Acidification Project

NRM North's Soil Acidification Project aims to increase awareness of soil acidification and its effect on productivity, and to promote practices to reduce soil acidification at surface and subsurface layers.

Many of Tasmania's agricultural areas experience relatively high rainfall, leaving soils vulnerable to nitrogen leaching. This results in the rapid acidification of topsoil, which affects soil performance and pasture productivity.

Increased awareness and adoption of soil management practices such as appropriate fertiliser and lime application to maintain optimal pH, promote productive soil outcomes.

Now in its fourth year, NRM North's Regional Agricultural Officer, Peter Heading, said data collected at trial sites in the north east, Flinders Island and Fingal Valley has been used to evaluate methods in mitigating the loss of soil productivity due to soil acidification.

"A surface application of prilled lime on pastures would not be a cost-effective alternative to an aglime / superfine blend but has potential benefits when renovating an old paddock. This approach places the lime closer to the emerging seedling rootzone and assists with treating subsurface acidity," said Mr Heading.

Historical data shows lime applications on acidic soil pastures affect soil composition, and surface-applied lime on long-term pastures (15 – 40 years) restricts the movement of lime and fertiliser through the soil profile.

Since the Soil Acidification Project began in 2019, NRM North has worked with pasture consultant Eric Hall who has undertaken pasture composition assessments at various trial sites. At one limed site, which had limited liming history, there was a distinct line of subterranean clover change from the limed and un-limed strips. Mr Hall said the results reaffirm the effect of lime application on pasture composition.

"The limed strips on average had increased frequency of subterranean and white clovers and cocksfoot, reflecting a reduction of flat weeds, weedy grasses and naturalised legumes."

Eric Hall

The latest trial results were presented to farmers in the state's north east in June 2022. Peter Heading said the event was an opportunity for robust discussion, and to share ideas for future evaluation.

NRM North staff involved in the Soil Acidification Project would like to thank farmers and farming groups who have generously provided paddocks for establishing the trials.

The project will conclude in June 2023.

Pasture consultant Eric Hall assesses pasture composition at a trial site.



Soil Carbon Projects

NRM North's Soil Carbon Projects engage graziers, broadacre croppers and mixed enterprise farmers to investigate profitable and productive methods of soil carbon sequestration across Tasmania's north. Farmer interest in the project has been strong as carbon market accessibility improves, and industry driven carbon neutrality demands surge.

Soil Carbon in Pastures

In 2019, NRM North partnered with four farmers to develop soil carbon trials in different pasture-based systems across Jetsonville, Mangana, Rosevale and Westwood. Over a four-year period, the project aims to demonstrate how to build soil carbon through the use of diverse pastures.

Now two years into the trials, NRM North's Regional Agricultural Landcare

Facilitator, Christine Plummer, said while variables occurred at each site, results show well-managed and productive diverse pasture can give farmers large increases in soil organic carbon, thus an increase in grazeable pasture.

"The largest shifts in soil organic carbon and pasture quantity were experienced in paddocks that retained their productivity and were well-managed through preserving groundcover and maintaining control of weeds," said Ms Plummer.

The benefits of the trial extend beyond the soil carbon sequestration results. A pioneer of using mixed species fodder crops and pastures, Rosevale farmer and trial host Tim Reed said the proof is in liveweight gain.

"Animals always prefer to graze the diverse pastures and camp on this side prior to installing the dividing fence. Fodder production last season for silage was 50% more on the diverse side," said Mr Reed.



Species diverse pastures provided more available fodder for livestock compared to simple pastures.

Soil Carbon in Crops

NRM North's Soil Carbon in Crops project focuses on increased awareness of constraints to carbon flow into soil, while encouraging the on-farm adoption of best practice management techniques to assist carbon movement.

Delivered in partnership with Southern Farming System's Tasmanian branch, the project has engaged five key growers in the Cressy and Campbell Town regions in the last 12 months, where fragile duplex soils are compromised by continuous intensive crop production.

Soil testing was conducted in key paddocks on each property to demonstrate the consequences of these management practices, and to encourage a shift in production habits. The results, including current carbon measurements, were presented at a workshop in Campbell Town in June 2022. Bulk density and gravel measurements were also presented to demonstrate the carbon ceiling of each paddock.

Soil carbon sequestration was greatest in the paddocks where pasture had remained productive and well-managed.



Vegetation and Biodiversity On-Farm

NRM North’s Vegetation and Biodiversity On-Farm Project aims to increase the protection of remnant vegetation and revegetate areas with native species on private land. The project also focuses on raising awareness about profitability and productivity benefits through the retention of native vegetation.

In 2021-22, the Vegetation and Biodiversity On-Farm Project supported the protection of more than 284 hectares of remnant native vegetation including areas of threatened vegetation community, *Melaleuca ericifolia* swamp forest, and plant species *Pomaderris paniculosa subsp. paralia* and *Caladenia anthracina*. The sustained protection of these species will also deliver persistent habitat for a number of threatened fauna species including the Tasmanian Wedge-Tailed Eagle, Spotted-Tail Quoll, and Green and Gold Frog. A further 184 hectares of vegetation is anticipated to be protected before the end of the project in June 2023.

Sustained on-farm protection of remnant vegetation from livestock grazing will support continuous habitat for a number of threatened fauna and flora species.



Photo: Christine Plummer

NRM North’s Regional Agricultural Landcare Facilitator, Christine Plummer, said landholder interest is encouraging.

“The project has seen farmers express significant interest in protecting or re-establishing on-farm vegetation. On-ground works significantly improve the long-term conservation of threatened flora and fauna zones,” said Ms Plummer.

Funding incentives are available to eligible landholders to construct fencing, revegetate and establish off-stream water infrastructure, and to rehabilitate degraded farmland with native plantings.

Project participant Julian von Bibra has excluded stock from over 20 hectares of native vegetation on his farm. He said protecting remnant vegetation on farms is a valuable exercise.

“We are promoting biodiversity, providing shade and shelter to our neighbouring agricultural land, building up carbon, and creating wildlife refuges. An excellent program.”

Julian von Bibra

A number of workshops have been held to promote the wider adoption of vegetation protection and revegetation in the farming community. More than 30 people attended the ‘Shelterbelts: Plan, Design and Protect’ event in Ross in November 2021, where the design and plant protection stages for native shelterbelt development were discussed. Hosting landholder, Rae Young, provided insight into propagation, species selection, site preparation and plantings undertaken at their property ‘Lewisham’.

In June 2022, the ‘Burning for Healthy Country’ workshop was held at ‘Somerset’ in Epping Forest. Healthy Country Practitioners Lyndon and Jess from melythina tiakana warrana Aboriginal Corporation gave over 40 people the opportunity to participate in a talking circle before they were taken through how to read country and when vegetation rehabilitation through fire is needed. The workshop concluded with practical activities on Country including undertaking a cultural burn on a native grassland site.

Agricultural Stewardships

Northern Tasmania is one of only six NRM regions across Australia selected to host the initial phase of the Australian Government’s Agricultural Stewardship Pilot Program which gives farmers the opportunity to earn income by providing on-farm environmental services related to biodiversity and carbon. Two sub-projects have been conducted so far - the Carbon + Biodiversity and the Enhancing Remnant Vegetation pilots.

Carbon + Biodiversity Pilot

The Carbon + Biodiversity Pilot (C+B Pilot) explores the improvement of environmental outcomes and creation of financial opportunities for farmers to buy and sell biodiversity services and carbon credits. Farmers are required to plant and maintain mixed native species as a registered Emissions Reduction Fund project, under which they will receive carbon credits. The projects must be maintained for a minimum 25-year period.

Over the past 12 months, the C+B Pilot has been in a maintenance phase. Project selection was undertaken by the Australian Government in the previous financial year. NRM North

staff provided farmers with support in-person and over the phone. Staff also attended stakeholder meetings associated with the program.

Enhancing Remnant Vegetation Pilot

The Enhancing Remnant Vegetation (ERV) Pilot pays farmers to protect and enhance remnant vegetation areas on-farm. Selected farmers must commit to a minimum 10-year period, during which time they will receive ongoing payments and incentives to undertake infill planting, weed and pest management, and fencing works at selected areas.

In December 2021, NRM North staff conducted 15 vegetation assessments across 2,500 hectares of native bushland on various farms in the state’s north. The assessments examined the condition and type of vegetation with consideration of potential works to be undertaken by farmers.

As part of the ERV Pilot, NRM North was engaged to deliver a series of workshops to educate landholders in vegetation identification and management.

Thirty people attended the first workshop, ‘Plant Identification’, in April 2022 at Hadspen. Ecologist Mark Wapstra gave an overview of flora specific to Tasmania and how to identify plant specimens.

The second workshop, ‘Restoration Works: Weeds and Infill Planting’ held at Evandale in May was also well attended. Glenn Szalman from the Derwent Catchment Project discussed various weed management options for blackberry and gorse, while Herbert Staubmann from Habitat Plants demonstrated different methods of infill planting at a remnant vegetation site.

Opportunities for carbon farming and biodiversity stewardship are increasingly available to land managers to support revenue diversification and increase land productivity.

Interest in native vegetation management is strong, with over 60 people attending Enhancing Remnant Vegetation workshops.



Photo: Christine Plummer

Regional Agricultural Landcare Facilitator

The Regional Agricultural Landcare Facilitator (RALF) aims to support agricultural production in the northern region through increased awareness and adoption of sustainable land management practices. The RALF also supports building climate resilience in rural communities and assisting farmers and landholders to meet market expectations.

Direct interactions with grower and farmer-based groups have been critical to establishing important relationships and facilitating knowledge transfer between the RALF and farmers.

NRM North's RALF, Christine Plummer, said stakeholder engagement and partnerships has been key to delivering the outcomes.

"Attending and supporting various government, industry and community-run events, such as Red Meat Updates, the Climate Smart Agriculture Conference and the Tasmanian Young Farmer Competition, has provided insightful exposure to challenges faced by the regions' farmers."

Ms Plummer said that exposure has further demonstrated where the opportunities exist to assist producers and landholders in adopting sustainable and productive agricultural practices.

In April 2022, the RALF partnered with the Bureau of Meteorology to deliver a number of information sessions on climate risk, and the opportunities northern Tasmanian farmers may experience over the next 30 years.

The Bureau's Imogen Fullagar presented these opportunities through demonstrations of the Climate Services for Agriculture tool. The prototype helps Australian farmers adapt to climate variability and related trends by combining historical, seasonal forecast and projected climate data to improve the long-term viability of their businesses.

The information sessions were delivered in the north east, Meander and Fingal Valley regions with good attendance and valuable participation. Ms Plummer has also liaised with groups to build skills in property planning and mapping by supporting LISTMap and QGIS training sessions in the Northern Midlands.

Imogen Fullagar from the Bureau of Meteorology talks to landholders about the Climate Services for Agriculture tool in the Meander Valley in April 2022.



Photo: Christine Plummer

Future Drought Fund: Drought Resilience Innovation Project

The Drought Resilience Innovation Project was developed to support farmers in drought-prone areas to improve long-term productivity through resilient pastures and innovative farming methods.

Working alongside key industry stakeholders, the collaborative approach investigates various pasture establishment techniques to support robust pastures, and the use of climate and soil data to determine methods for optimum cropping outcomes.

Pasture establishment and renovation

An increased prevalence of drought in parts of Tasmania including the Fingal Valley, and the Northern and Southern Midlands, has led to significantly reduced ground cover, which in turn leads to increased erosion, soil carbon loss, and loss of productive land. Investigating ways to improve ground

cover not only mitigates the risk of erosion, but it also promotes viable dryland grazing.

Between 2021 and 2022, four trial sites were established at Milton, Speyside, Lewisham and Tunbridge with the aim of renovating pastures and establishing winter forage crops to improve ground cover.

Various pasture renovation techniques were demonstrated at Lewisham in April 2022.



The pasture renovation initiative is supported by NRM South, NRM North, the Tasmanian Institute of Agriculture and AgriProve, with funding from the Australian Government's Future Drought Fund.

Farming Forecaster

The Farming Forecaster tool has been developed to give graziers in drought-prone areas a better insight into current pasture conditions and projections on likely pasture production and livestock performance.

The pilot has involved the installation of soil moisture probes at seven sites in the Fingal Valley and on the east coast. Soil moisture, soil temperature and rainfall data from the sites show how rainfall events and weather patterns affect future pasture production.

To further predict future pasture availability and livestock performance, historical weather data is used in conjunction with probe results, making this a powerful decision-support tool.

Tim Ackroyd from NRM South said Farming Forecaster can help take a level of risk out of farming decisions.

"Farming Forecaster uses leading edge technology to provide a roadmap of pasture availability, helping graziers to get a better understanding of conditions over the next three to four months, allowing for forward planning."

Tim Ackroyd

The concept has been well received, with more than 50 people attending various workshops and information sessions in the Fingal Valley and on the east coast. The Farming Forecaster tool is a valuable source of soil and climate data for farmers, advisors and those involved in the agricultural sector and natural resource management across dryland farming regions.

Data from the Farming Forecaster tool can help graziers predict future pasture availability and livestock performance.



Healthy Country: Cultural Awareness

Cultural events provide NRM North staff with the opportunity to gain valuable insights from Aboriginal Elders and other members of the Tasmanian Aboriginal communities who generously share their knowledge, cultural skills and traditions, taking the time to come together to educate and make connections.

In November 2021, a number of NRM North staff participated in cultural awareness and sensitivity training.

Delivered by Aunty Patsy Cameron AO and the team at melythina tiakana warrana Aboriginal Corporation, staff learnt about the rich history of Tasmanian Aboriginal communities, present and future paths to address challenges faced, and a wonderful visit to tebrakunna Country to learn about how the traditional owners listen to country and use natural resources to provide for their communities.

NRM North has also had the opportunity to take part in traditional celebrations. Last year's Mannalargenna Day festival marked 186 years since the death of revered ancestor and warrior Mannalargenna. Over 600 people attended the celebration of culture at tebrakunna near Musselroe Bay in the state's north east. NRM North provided financial and volunteer support to the festival in December 2021 and will continue to support this event into the future.

trawlwoolway Tasmanian Aboriginal man, Dave mangelner Gough, performing a ceremony to call ancestors back to tebrakunna Country on Mannalargenna Day 2021.



Photo: Kate Thorn

We are working to integrate Aboriginal cultural heritage and knowledge in natural resource management, and to develop better understanding of the cultural, environmental, social and economic dimensions of the region's natural resources from the perspective of Aboriginal people.

Healthy Country: Education

In 2022, the Tamar Estuary and Esk Rivers (TEER) Program engaged members of Tasmanian Aboriginal communities to take part in an educational video series, to share their connections, both past and present, with Launceston's Cataract Gorge and the upper estuary. The interviews explored indigenous values and use of the kanamaluka / Tamar estuary, and forms part of a series that unpacks the many natural values that underpin aquatic ecosystems as well as human use of local waterways.

In June 2022, NRM North staff partnered with Healthy Country Practitioners and members of melythina tiakana warrana Aboriginal Corporation, Lyndon O'Neil and

Jessica Riley, to deliver the 'Burning for Healthy Country' workshop at 'Somerset' in Epping Forest - land of the Stoney Creek Nation. Following a Welcome to Country and Smoking Ceremony, attendees participated in a talking circle before being led through Healthy Country Planning, including techniques on how to read country and the indicators for fire regeneration. The event finished with guidance on designing a cool burn before the facilitators undertook a cultural burn on a native grassland.

Throughout the year, NRM North engages Aboriginal Elders and other members of Aboriginal communities at various events, such as the biennial

Small Farm Living Field Day and Tamar Forum, who we thank for generously imparting their traditional skills and values.

Key partners in the delivery of the program include the Aboriginal Land Council of Tasmania (ALCT), the Tasmanian Aboriginal Centre (TAC), melythina tiakana warrana Aboriginal Corporation (MTWAC), the Flinders Island Aboriginal Association Incorporated (FIAAI), and other members of the Tasmanian Aboriginal communities not affiliated with an organisation.

Healthy Country Practitioner Lyndon O'Neil (left) demonstrates the effect cultural fire has on native grasses at Epping Forest in June 2022.



Photo: Christine Plummer



Photo: Louise Fairfax

Program Aim

The aim of the Biodiversity Program is to maintain and enhance landscape function for biodiversity, with a focus on protecting habitat for Environment Protection and Biodiversity Conservation (EPBC) species and communities and Ramsar wetland values in northern Tasmania.

Natural landscapes make up about 60 per cent of the NRM North region. These biodiversity-rich landscapes support native species, communities, and ecosystems, and are highly valued for the way they characterise Tasmania, being a significant drawcard for the tourism industry and Tasmania's economy. However, the biodiversity values are under pressure from habitat loss, changing land use and

development pressures, weeds, pests and diseases, climate change, and natural disasters such as floods, drought, and fire. There is an opportunity to work with public and private land managers to implement on-ground actions and to support policy and planning initiatives to buffer the impact of these threats and pressures on our biodiversity.

Achievements
2021–2022

Biodiversity Program

The following points outline key goals achieved in the 2021-22 financial year:

- 30 hectares of habitat for eastern barred bandicoot was created or improved, with over 80 landholders participating in the project, including strong partnership with West Tamar Landcare Group
- interest in the Urban Refuges program for eastern barred bandicoot has expanded, with residents taking the opportunity to create gardens as habitat refuges for the species
- vulnerable populations of hooded plover continue to be protected through community participation in nest protection and weed management
- the Tasmanian Cat Management Project received a further four years of funding. The combination of the TassieCat public awareness campaign, firmer legislation, and support for initiatives from local government and other stakeholders is resulting in practical outcomes in improved cat management
- the future of critically endangered plant Shy Susan (*Tetratheca gunnii*) is more secure, with key actions completed to protect remaining wild populations, and an increase in the insurance population held at the Royal Tasmanian Botanic Gardens
- on-ground works including weed management and waterway restoration have commenced to protect native habitats and improve water quality for the internationally-listed Ringarooma Ramsar wetland complex
- increased participation in the Giant Freshwater Crayfish Project through community planting days and citizen science workshops. Surveys reveal pockets where the species is breeding successfully, offering hope that habitat restoration will connect remaining populations
- the 2021 Small Farm Living Field Day attracted record numbers from around the region and the state, providing smallholders with the knowledge to boost the resilience of their activities.

Focus
Moving forward

The Biodiversity Program aims to protect and enhance native habitat and landscape function, with a focus on high value natural assets including threatened species and ecological communities, endemic species and Ramsar wetland sites. The priority natural assets and associated actions have been selected based on NRM North’s capacity to achieve long-term positive outcomes by increasing community awareness and engagement and working with a range of partners across land tenures.

In 2022-23, the Biodiversity Program will:

- implement high priority actions and continue to support community education initiatives for responsible cat ownership in collaboration with state government, local councils and key stakeholders
- implement remaining on-ground works to achieve targets for the eastern barred bandicoot, giant freshwater crayfish, Ringarooma Ramsar and hooded plover projects
- deliver a suite of tailored events for smallholders, together with updated small property planning support and resources
- revisit project sites from 2019 to 2022 to monitor success and change, including revegetation survival and growth rates, habitat improvement, and populations of threatened species
- undertake a comprehensive evaluation of all Regional Land Partnerships projects in the lead-up to project completion reporting in June 2023
- source investment for ongoing implementation of biodiversity priorities in the NRM North Strategy, beyond current funded programs.



Photo: Marcus Haywood

Eastern Barred Bandicoot Project

Safeguarding northern Tasmania as a refuge for eastern barred bandicoot and other threatened species and communities.

NRM North's Eastern Barred Bandicoot Project aims to improve the population trajectory of this native marsupial in northern Tasmania, which remains a stronghold for the threatened species.

The multi-faceted approach to enhance conservation of the species includes on-ground works to create, protect and improve eastern barred bandicoot habitat; a campaign to increase public awareness of the species and major threats faced; and support for research that will inform bandicoot conservation efforts into the future. In partnership with the Tasmanian Land Conservancy (TLC), the project is also able to deliver property conservation and habitat management advice, and citizen-science based wildlife monitoring to landholders.

Over 80 hectares of habitat in the target areas of West Tamar, upper Northern Midlands and Meander Valley has already been created or protected through revegetation, and protection of habitat from livestock damage. Most of the remaining works required to reach the project target of 110 hectares of habitat enhancement and protection by June 2023 are already under contract. To date, 85 landowners have taken part in the project either by undertaking on-ground works, or changing the way they manage their property to benefit eastern barred bandicoots. A focus on creating Urban Refuge habitat gardens is likely to double that number in the final year of the project.

Over 70,000 seedlings have been planted as part of NRM North's eastern barred bandicoot habitat creation project including at this property near Longford.

NRM North Biodiversity Coordinator Stephen Izzard said years of hard work has paid off.

"This project is quite ambitious in its goals ... Now, four years into the project we can see planting sites that were completed early on growing strongly and starting to provide real habitat value and anecdotally, supporting increased bandicoot activity."

Increased awareness and engagement with community members and partners such as the West Tamar Landcare Group, will enable the plight of the threatened marsupial to continue beyond the life of this project.

Utilising properties involved in the NRM North project, University of Tasmania PhD candidates Bridgette Barnden and Joanna Lyall are conducting research into eastern barred bandicoot distribution, habitat use, landscape genetics and interaction with cats with a range of interesting and unexpected results emerging after just one year.

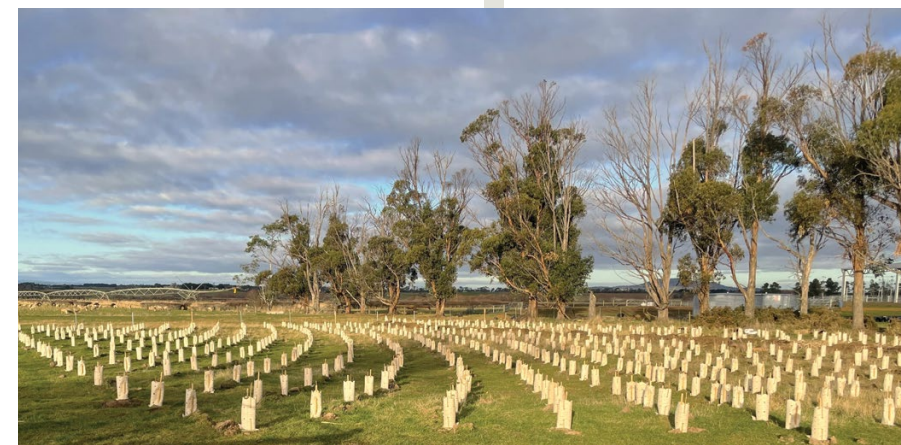
"We're meeting landholders who are excited to have a threatened species on their property ... the results of our research will hopefully help organisations like NRM North to refine project design and provide suitable habitat for the species to not just survive but thrive in the landscape."

Joanna Lyall

The final year of the project will be another busy one, with significant on-ground habitat creation and protection works scheduled; an increased focus on urban areas; and the continuation of UTAS research projects.

Northern Tasmania remains one of the last strongholds for the eastern barred bandicoot.

Photo: Peter Jolly



Giant Freshwater Crayfish Project

Partnerships for giant freshwater crayfish recovery in north east Tasmania.

NRM North's Giant Freshwater Crayfish Project works in partnership with landholders in high priority reaches of the Pipers, Brid and Boobyalla catchments in north east Tasmania to co-invest in riverbank restoration works to recover populations of the giant freshwater crayfish (*Astacopsis gouldi*). The project also raises community awareness of the species, its threats, and habitat requirements.

The giant freshwater crayfish is the largest freshwater invertebrate in the world and is only found in rivers that flow into Bass Strait (except for the Tamar catchment) and the Arthur catchment. Giant freshwater crayfish can grow up to 80 cm in length and weigh 6 kg, but there are few individuals of this size left in the wild. Key threats include habitat loss or disturbance, sediment accumulation in waterways, drought, climate change, and poaching.

Project Coordinator Lauren Bird has worked with over 20 landholders to develop restoration plans that integrate best practice land and waterway management with site-specific ecology to improve native habitat and reduce threats to the species.

"Giant freshwater crayfish rely on undisturbed streams and rivers with dense, overhanging native vegetation, in-stream logs, undercut banks, and rocks and logs to shelter. Excluding livestock from rivers, installing troughs, controlling weeds, and re-establishing native streambank vegetation are effective actions that reduce key threats to crayfish and, over time, will see populations thrive," Ms Bird said.

Since the project's inception in 2018, over 12 km of high priority river reaches have been restored across the three catchments. Further sites are already under contract, leaving the project well placed to achieve or exceed its target of 15 km of restoration by June 2023.

'Summerlea' is a 69-hectare Angus beef property situated within the Pipers catchment in north east Tasmania. Through support from the project, owners Rick and Liz Mahnken have restored over a kilometre of the Second River that directly links remnant native forest with known populations of unique threatened species, including giant freshwater crayfish.

Mrs Mahnken said support from NRM North has enabled them to prioritise their goal to restore the river.

"Having support from NRM North has allowed us to do what we wanted to do in terms of fencing off the river and improving our rotational grazing," said Mrs Mahnken.

The project at Summerlea Farm has attracted strong interest and support from community members to get involved in on-ground restoration activities for crayfish. In partnership with NRM North, Rick and Liz Mahnken have hosted two community tree planting days that have collectively involved 70 people planting 2,250 native seedlings.

"There's something incredible about putting trees in the ground and knowing that they will be there longer than you are going to be on Earth. This is the start of something for the future and it's incredible to be a part of that, to do something for the planet that is going to leave a legacy."

Liz Mahnken

Over a kilometre of the Second River on Summerlea Farm in Lilydale was rehabilitated during 2021-22.



Photo: Lauren Bird

Giant freshwater crayfish can grow up to 80 cm and weigh 6 kg.



Photo: Lauren Bird

Hooded Plover Project

Reducing threats to hooded plover breeding success in northern Tasmania.

The Hooded Plover Project works collaboratively with coastal communities to protect and improve nesting habitat for one of Australia's most threatened shorebirds.

Approximately half of the remaining population of eastern hooded plover (*Thinornis rubricollis rubricollis*) call Tasmania home, with about 20 per cent of known individuals nesting on northern Tasmanian beaches.

Now in its fourth year, NRM North Biodiversity Program Coordinator Emma Ferguson said the Hooded Plover Project continues to support important conservation activities.

"The north east coast of Tasmania is significant to the eastern hooded plover population. This project raises community awareness and actively reduces threats posed by human disturbance and habitat altering weeds." Emma Ferguson.

Hooded plovers require a line-of-sight from their nests above the high tide mark to the water's edge where they feed. Coastal weeds such as sea spurge pose a significant threat to the species by blocking their view. Subsequently, sea spurge has been the focus of weed management activities along the north east coast of Tasmania. In August, volunteers

and a local contractor treated and removed the invasive weed from over 20 hectares of coastline as part of the 'Irapuna community weekend' in the lead up to the 2021-22 hooded plover breeding season.

During the summer months, five priority beaches were monitored by volunteer nest wardens who helped to install temporary fences and signage to alert beach users to the presence of vulnerable nest sites. Despite a particularly challenging summer, with a tsunami warning bringing unusually high tides, nest wardens recorded four chicks to fledgling stage.

The 'Irapuna community weekend' spans three days, with volunteers manually removing sea spurge along priority beaches on Tasmania's east coast.



Photo: Kate Thorn

The Hooded Plover Project is supported by NRM North through funding from the Australian Government and works together with the Tasmania Parks and Wildlife Service, Break O'Day Council, Birdlife Australia, and Northeast Bioregional Network.

Emma Ferguson
Biodiversity Coordinator
eferguson@nrmnorth.org.au
03 6333 7775

Project Contact

Saving Shy Susan Project

NRM North's Saving Shy Susan Project has worked with land managers, ecologists, and the community to monitor and protect remaining wild populations of the critically endangered plant Shy Susan (*Tetratheca gunnii*) near Beaconsfield in northern Tasmania. The project has also worked with specialist botanists to secure a viable genetic insurance collection of the species.

Shy Susan is a delicate, native understorey plant that is adorned in purple flowers in spring and the only place in the world that it is found is on serpentine soils in the Beaconsfield foothills. Shy Susan is threatened by either too frequent or too infrequent fire regimes, browsing from native wildlife, particularly after fire, habitat disturbance, and the introduction of weeds and disease (e.g. root rot

fungus *Phytophthora cinnamomi*), from illegal firewood harvesting, off-road vehicle use, poor biosecurity practice, and mineral exploration. The annual population survey completed in October 2021 revealed there are less than 200 Shy Susan plants remaining in the wild.

Biodiversity Coordinator Lauren Bird has collaborated with members of the species reference committee, including senior ecologists, to develop the first adaptive management plan and monitoring plan specific to Shy Susan.

"Refining monitoring and management requirements for Shy Susan has been a critical process for understanding and formally documenting the species' requirements for survival. Through this project, we have developed a legacy process that outlines the

ongoing actions required to stabilise and improve the trajectory of the wild population beyond this funded project," Ms Bird said.

Key actions were also undertaken on-ground to safeguard some of the precious remaining locations and plants. These included undertaking an entire population census in spring 2021, controlling exotic weeds, and fencing and caging Shy Susan plants to prevent browsing by native animals.

The on-ground interventions undertaken by the project were a critical component of efforts to stabilise populations of Shy Susan. Sustaining the species will require ongoing monitoring and adaptive and responsive actions.

Shy Susan (*Tetratheca gunnii*) is listed as critically endangered. In 2021, there were less than 200 plants remaining in the wild.



Photo: Philip Milner

Volunteers assist NRM North staff in the search for Shy Susan plants during the 2021 spring annual population census.



Photo: Lauren Bird

The Saving Shy Susan Project concluded in June 2022. This project was supported by NRM North through funding from the Australian Government.

Kate Thorn
Biodiversity Program Manager
kthorn@nrmnorth.org.au
03 6333 7777

Project Contact

Biodiversity Program

Small Farm Living Project

The Small Farm Living Project supports and empowers small farm and rural lifestyle landholders in northern Tasmania to take informed approaches to sustainably managing natural resources on their properties. The project provides smallholders with the opportunity to network, learn, and build skills across a range of natural resource management topics while working to improve access to best-practice property planning resources.

In September 2021, the biennial Small Farm Living Field Day returned to 'Sonoma Lodge' in Lilydale for the fifth time. The event was held in partnership with Lilydale Landcare, attracting around 600 people, the highest attendance since its inception in 2013.

Project Coordinator Lauren Bird said interest in the event continues to grow as more families and interstate buyers consider a rural Tasmanian lifestyle.

"Since the COVID-19 pandemic began, we have observed a surge in small acreage development accompanied by a demand for land management resources and skill-

building opportunities from those new to managing rural properties in Tasmania. The Small Farm Living Field Day is a great opportunity for smallholders to network, hear from leading experts and ask direct questions about a range of land management topics," said Ms Bird.

The field day also has a strong focus on biosecurity awareness. International pest and livestock disease outbreaks such as Foot and Mouth Disease pose an increased threat to Australian and Tasmanian livestock and produce industries. The field day incorporates presentations on livestock health and diseases, domestic and feral cat management, and changes to Tasmania's *Biosecurity Act 2019* supported by expert advice from Biosecurity Tasmania, the Tasmanian Farmers and Graziers Association, and the Northern Tasmanian Beekeepers Association.

Keynote speaker and best-selling author, Rachel Treasure, also captivated crowds with her journey in restoring a 100-acre property in Tasmania using regenerative agriculture practices.

Event attendees were inspired by the presentation line-up, the idyllic setting, and the opportunity to speak with like-minded producers.

"The Small Farm Living Field Day has renewed our thinking about how we can improve our current land management ... the presentation on pasture and grazing management was extremely useful and, as a result, we are now reviewing our pasture management practices."

Anonymous event attendee

Over the next 12 months, the project will deliver a series of smaller workshops to provide landholders with the opportunity to gain awareness, knowledge and skills on improved sustainable land management practices. Key topics will include biosecurity, livestock health, waterway management, and land and soil management. The events will be supported by the development of an online property planning tool to assist landholders in strategically implementing their new best-practice knowledge on-farm.

Record crowds attended the 2021 Small Farm Living Field Day in Lilydale, with around 600 people making their way through the gates to learn how to 'future-proof' their small farms.



Photo: Ashleigh Walker

Tasmanian Cat Management Project

The Tasmanian Cat Management Project was established in 2018 as a statewide initiative to facilitate improved cat management participation and education across Tasmania through partnerships with local government, industry stakeholders and the community.

The project is delivered through three Regional Cat Management Coordinators covering the north, north west and south of the state, and is underpinned by the Tasmanian Cat Management Plan.

Amendments to the *Cat Management Act 2009* to drive effective cat management and responsible ownership are now in effect. These include compulsory microchipping and desexing of cats, a four-cat limit to households, and the ability for residents in urban areas to trap a cat on their property.

The communication of these amendments has been a key role of Regional Cat Management Coordinators. The use of the

TassieCat website and social media, radio advertisements, and the development of educational material have been valuable tools in the effective communication of these changes. Remaining active within the community by attending events including AgFest, pet shows and agricultural shows has provided additional opportunities to educate the community and further promote TassieCat resources.

At a regional level, efforts in the last 12 months have largely focused on the implementation of the *Northern Regional Cat Management Strategy 2020-2030*. Endorsed by all local councils in the region and other key organisations involved in cat management, many councils are now actively implementing measures at a local level, including trapping programs and subsidised microchipping and desexing services. Council presence within the regional working group has also facilitated greater opportunities for inter-council collaboration and knowledge sharing.

Animal Control and Compliance Officer Maria Ortiz Rodriguez from the Northern Midlands Council said the collaborative effort has proven very effective.

"The interdisciplinary approach of the Tasmanian Cat Management Working Group has been really valuable when proposing and implementing actions that will lead to tangible improvements."

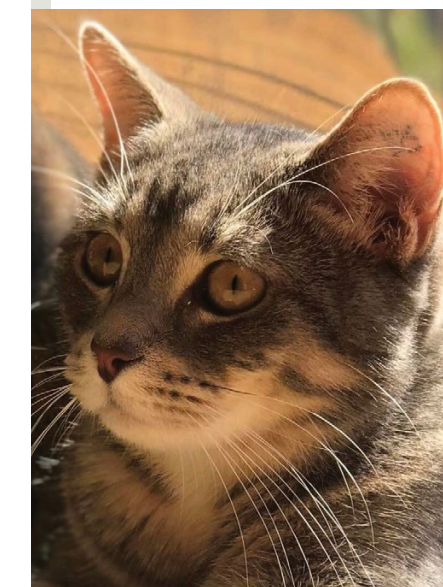
Maria Ortiz Rodriguez

Break O'Day Council representative on the Northern Regional Cat Management Working Group, Polly Buchhorn, said the regional collaboration on cat management has provided Break O'Day Council with access to knowledge which has helped design actions and achieve strategic priorities for cat management here and in the northern region.

The Northern Region Cat Management Working Group meeting at NRM North. L – R: Darren McPhee, Polly Buchhorn, Andrea Dawkins, David Mullenger, Krista Palfreyman, Angela Offord, Bonnie Kenner, Sam Johnstone, Stan Matuszek, Steve Hallett, Jacqui Smith, Tammi Axton.



Microchipping cats is now compulsory under changes to cat management legislation.



Volunteer Champions Program

NRM North's Volunteer Champions Program aims to empower the community to contribute to the protection and restoration of natural values across our region in northern Tasmania.

The program was established in 2021 after the easing of COVID-19 restrictions on gatherings. A surge in community interest to be actively involved in natural resource management activities was the perfect complement to a need amongst landholders for additional support to deliver large-scale restoration projects.

Volunteers are highly valued for the extremely important role they play in the delivery of NRM North programs that work with industry and the community to care for the natural resources in their local areas.

Within the past 12 months, over 85 volunteers have contributed to on-ground activities across NRM North's projects including planting over 3,400 seedlings to improve habitat for the giant freshwater crayfish, and assisting with population monitoring of the threatened plant Shy Susan. Over 50 people have also subscribed to be regularly involved in ongoing volunteer activities.

Getting involved with natural resource management activities is a great way to feel connected to nature and the community, to make a difference, and to learn more about the environment and natural values in local areas.

Over 45 volunteers planted 1,250 seedlings for giant freshwater crayfish habitat at 'Summerlea' in Lilydale in June 2022.



Photo: Lauren Bird

Ringarooma Ramsar Project

Reducing threats to the Flood Plain Lower Ringarooma River Ramsar site

The Flood Plain Lower Ringarooma River is a complex coastal and estuarine ecosystem spanning over 3,500 hectares near the coast of north east Tasmania.

Designated as an internationally significant wetland under the Ramsar Convention, the site encompasses both reserved land and private property, and is located within the culturally significant tebrakuna Country.

The Ringarooma Ramsar Project aims to protect and restore the ecological character of the site by reducing threats to the condition of the wetland vegetation communities and improving water quality runoff from agricultural properties.

Following project delays due to wet seasonal conditions and challenges associated with the COVID-19 pandemic, Biodiversity Coordinator Jodie Elmer will apply recommendations outlined in foundational documents that inform the project, specifically the Water Quality Improvement Plan (WQIP), to

help protect and restore the wetlands.

In addition to the WQIP, a weed distribution and flora survey has informed the development of a Vegetation Management Plan to provide guidance for on-ground activities.

Andy Welling, lead consultant in the development of the draft plan, said research on site yielded some positive results as well as works required to mitigate threats to the Ramsar site.

"It was really interesting to study the diverse vegetation of the Ringarooma site, and exciting to locate three threatened plant species that hadn't been recorded there before. However, we also documented how weeds and cattle access are impacting the site. Woody weeds with localised occurrences such as gorse, boxthorn and crack willow are a priority for control, with the aim of eradication from the site."

Andy Wellin

Weed control activities commenced in May 2022 in Cameron Regional Reserve, with approximately 10 hectares of dense infestations treated. More weed management activities are planned over the next 12 months. This will have a significant impact on restoring and protecting biodiversity in the riparian habitat along the Ringarooma River and associated wetlands.

Negotiations with local landowners have led to contracts for stock exclusion and restoration of waterways which flow directly into the wetlands on the western side of the Ramsar site. These works are key recommendations outlined in the WQIP, with water sampling and modelling indicating significant benefits from a reduction in nitrogen, phosphorous and suspended sediment.

In addition to guiding works for the remaining 12 months of the current project, key documents produced will inform future planning, investment and additional surveys and monitoring in this important but remote area.

Mature gorse in Cameron Regional Reserve, prior to weed control operations in autumn 2022.



Hardwicks Lagoon, part of the Ringarooma complex of wetlands. NRM North is supporting upstream landholders undertaking waterway restoration works to improve water quality in the lagoon.





Annual Report

The 2022 Annual Report provides a summary of the actions taken during FY21-22 to address the key objectives in the Corporate Services Program.

Photo: Hudson O'Neil



NRM North Chair's Report

Pamela Allan

Change is in the air. Winds rustle the waters of the kanamaluka / Tamar estuary. The Voice, Truth Telling, changes in political and organisational leadership, climate change and mitigation of climate change impacts, new ministers, federal and state. Eddies. Flow.

Almost overnight there has been an elevation of the debate around environment, climate change and natural resource management. An increased awareness of the state of the environment and a signalling of increased scrutiny with proposed new federal environmental laws and a restorative agenda for land and sea country. Inter-government, industry, NGO and community consultation ensures this will not be a quick fix.

NRM North's Treasurer, Michael Walsh, has been in a reflective mood since he made the decision to step down later this year from the Management Committee after eight years.

"... we continue to grow ... it is incredible how the NRM North program budget has grown since I have been here," said Michael.

nayri nina-tu / thank you Michael for your hard work which has helped bring about yet another successful year for NRM North.

Michael's impending departure is one of many changes circling us. Lakapawa nina / see you to our long serving and avid portfolio Minister and supporter, Guy Barnett. Ya Pulingina / welcome to Minister Jo Palmer. For any new minister, state or federal, this is a time for informing themselves of the issues in their portfolio and formulating strategies to manage them. NRM North, NRM South and Cradle Coast NRM have contributed greatly to this process this year by producing a joint collaborative strategy going forward to 2030. Congratulations to all the Tasmanian NRM CEOs who initiated this approach and drove the process.

2030 is becoming a critical year. There is new ambition leading up to 2030 for reduction of Australia's greenhouse emissions so the remainder of this decade will see intense activity to see these targets achieved. The new Federal Environment Minister, Tanya Plibersek, is already signalling an intent to link Australia's record on nature conservation on land and sea, to a broader whole-of-government climate change agenda.

Many of the outcomes identified in the 2030 NRM Strategy for Tasmania, such as 200 land managers adopting the knowledge, tools or resources they need to mitigate climate change impacts, understand emerging carbon

markets and emission reduction options, will facilitate our state and federal governments achieving their broader climate change agendas by 2030. The overwhelming purpose of the NRM Strategy for northern Tasmania is to provide the framework to facilitate sustainable management of our natural resources.

By 2030, our strategy has also committed to supporting Tasmanian Aboriginal people participate in natural resource management activities from planning through to implementation on lands owned or managed by them. NRM actions will help reduce the impacts of loss of tunapri, disengagement of young people, inappropriate fire regimes, feral animals and stock damage. We will be prioritising these actions at a time of unprecedented engagement with First Nations people across Australia in the lead up to the Voice referendum.

By 2030, Australia is also on track to have an agricultural sector worth over \$100 billion dollars.

In the sector there is tremendous ambition not just to grow even further but to do it sustainably and collaboratively with other regional drivers such as regeneration of natural landscapes, growing resilient communities and social cohesion.

NRM North is well placed through its continuous engagement with farmers to contribute directly to the achievement of these goals.

NRM North is about to face one of its biggest challenges. Our CEO Rosanna Coombes is leaving us. Rosanna's contribution to our organisation is almost unmeasurable. She has delivered stability, security, growth, respect, recognition by

government, community, peers and most importantly a strong foundation for the organisation to continue to develop. Those foundations underpin staff and the Management Committee, associate NRMs, and all levels of government. The Management Committee is full of gratitude to Rosanna for her work as CEO since 2016 and wish her continued success in her next career.

Thank you to the NRM North Management Committee, the Association, our partners, and the staff of NRM North for all the effort which contributes to making us such a strong organisation - agile and attentive to the challenges and the winds of change around us.

Pamela Allan
Pamela Allan, Chair



Photo: Luke Whitestar McColl

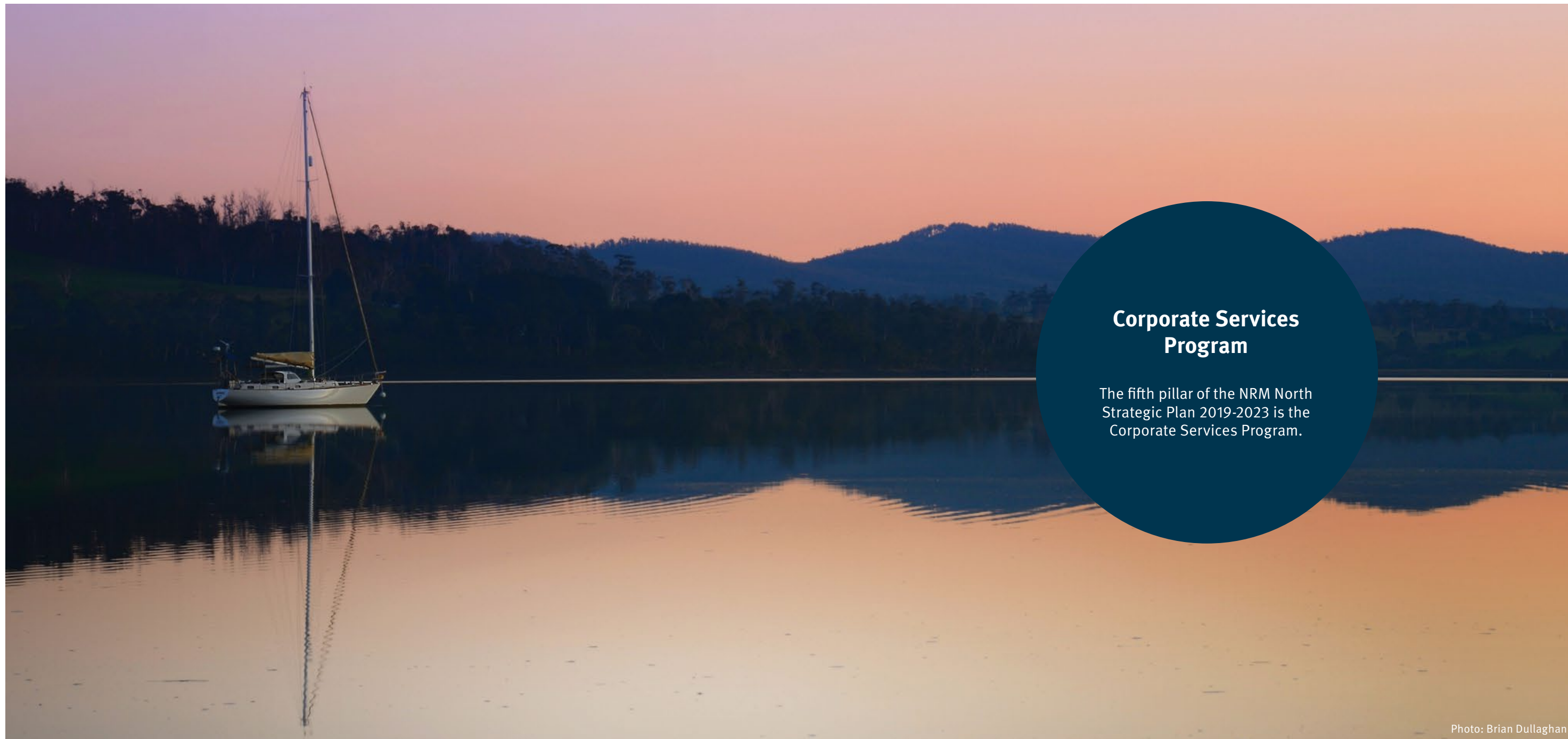


Photo: Brian Dullaghan

Corporate Services Program

The fifth pillar of the NRM North Strategic Plan 2019-2023 is the Corporate Services Program.

Program Aim

The aim of the Corporate Services Program is to maintain a sustainable organisation that delivers strategic NRM results for the community and demonstrates best practice business management and governance.

The Northern Tasmanian Natural Resource Management Association Inc., trading as NRM North, is an incorporated association established in 2003 in response to the Tasmanian Government's Natural Resource Management Framework and its enabling legislation, the *Tasmanian Natural Resource Management Act 2002 (Amendments 2018)*.

NRM North is one of three NRM organisations in the state, and one of 54 nationally. The Management Committee, organisational management team, and staff, strive for best practice governance, program delivery, and a thriving, sustainable organisation to deliver NRM outcomes for the community.



Corporate Services Program

The following are the key achievements in the past 12 months for the Corporate Services Program:

- managed the COVID-19 response with development of policies, plans, and procedures to ensure safety of staff, Management Committee members, partners and the community, while ensuring continued delivery of programs and acquiring a ‘COVID-Safe Workplace’ designation
- procured a new financial management system to create greater efficiencies in organisational and program budget management
- worked towards best practice governance by reviewing and updating contract related documents, internal policies, and procedures
- enhanced branding through improvements to communications platforms including website, webinars, and video production
- partnered with NRM South and Cradle Coast Authority to complete the review and update of regional NRM strategies
- expanded program delivery by:
 - executing a \$480,000 grant for the Tasmanian Government Regional Cat Management Coordination Project (2022 to 2025)
 - securing a \$955,000 grant to support a statewide Soil Extension Program
 - executing a \$200,000 work order to support the Enhancing Remnant Vegetation Pilot rollout
- supported partnership programs including:
 - delivery of the Tasmanian Government’s Weeds Action Fund
 - establishment of the Tasmanian Drought and Innovation Hub
 - support for the Tamar Estuary Management Taskforce
 - water monitoring program to underpin the River Health Action Plan
- supported regional collaboration with the:
 - TFGA’s Landcare Action Grant program
 - West Tamar Landcare Group to enhance eastern barred bandicoot recovery and community awareness of the species
 - Tasmanian Land Conservancy on delivery of the Eastern Barred Bandicoot Project
 - TFGA, DairyTas, and regional councils on delivery of the River Health Action Plan Catchment Works Project
 - Lilydale Landcare group to deliver the highly successful Small Farm Living Field Day
 - local government authorities, cat management facilities, and AVA to implement the Northern Tasmania Regional Cat Management Strategy.



From 2019 to 2023, the Corporate Services pillar is focused on eight key outcome areas including:

- 1

ensuring the Northern Tasmanian Natural Resource Management Strategy 2015-2020 remains relevant and reflects the needs of the community
- 2

partners recognise the value proposition of NRM North and seek to partner on programs
- 3

NRM North demonstrates business outcomes through implementation of the NRM North Strategic Plan (Strategy to Action)
- 4

ensuring the Management Committee is recognised as an efficient governing body through best practice governance, structure, and policy
- 5

creating a culture of innovation and business excellence
- 6

securing information management systems that allow the organisation to monitor performance, and supports engagement and partnerships
- 7

ensuring a viable, long-term and sustainable organisational funding model
- 8

implementing a best practice staff performance management system that supports professional development and provides rewards and recognition

In 2022-23, NRM North will focus on the following areas of the Corporate Services Program:

- prepare investment proposals and action plans to secure projects that deliver on the 2030 Natural Resource Management Strategy for Northern Tasmania, including tendering for the next Australian Government Natural Heritage Trust investment program, and the Australian Government’s Urban Rivers and Catchments Program
- work with the Tasmanian Government and local governments in the north on waste management initiatives
- secure the funding commitment from the Australian Government’s Urban Rivers and Catchments Program and work with partners on the implementation of works to restore wetlands in the North Esk River
- procure and implement next generation project management software
- implement new budget management software
- review and continuously improve procedures for staff recruitment, onboarding, remuneration, performance management and recognition
- review office accommodation needs and lease arrangements
- ongoing review of the organisational policy, with a focus on workplace health and safety, risk management, information management, privacy and personal information, and financial management policies
- continued focus on embedding and improving project management and corporate governance frameworks.

COVID-19 Response

The safety of our volunteers, employees and visitors remains a priority.

NRM North continues to monitor and adapt its guidelines for field work and engagement with partners, landholders, and committee members.

NRM North has reviewed and updated the COVID-19 Workplace Safety Plan to align with the Australian Government’s National COVID-19 Safe Work Principles, Tasmanian

Public Health and WorkSafe Tasmania COVID-19 Safe Workplaces Framework, standards, and guidelines. The NRM North Dealing with COVID-19 in the Workplace Policy has also been reviewed and updated.

NRM North has developed a COVID-19 Case and Outbreak Management Plan to minimise the spread of COVID-19 and minimise the impact on staff and others in the workplace/setting, stakeholders, and the organisation. A series of COVID-19 Response

Flowcharts have also been developed as a quick reference tool for staff and managers.

While some NRM North staff have been impacted by COVID-19, with the implementation of the COVID-19 Workplace Safety Plan, the diligence of the NRM North team, and the cooperation of partners, clients, and visitors, NRM North has not had any transmission of COVID-19 in the workplace to date.



Photo: Karley Murphy

Partnerships

Partners recognise the value proposition of NRM North and seek to partner on program delivery.

Most of the programs NRM North implements rely on partnerships with other organisations or landholders for delivery of outcomes. In the past year, NRM North has worked closely with all levels of government, industry bodies, other regional and sub-regional natural resource management organisations, community volunteers, and allied environmental organisations. NRM North also works collaboratively with farmers and individual landholders to implement actions on-ground; this is where most of the transformational results occur.

While there are many partnerships NRM North maintains, examples from the past year include:

- The TEER Program has brought together a range of local stakeholders and experts to develop a biological monitoring program. The objective is to improve the knowledge about the health of the estuary by updating mapping of the spatial extent of selected biological communities above and below the water, as well as establishing long-term ‘condition’ monitoring for a range of indicator species. The data will complement the long-term EHAP water quality monitoring dataset and create a more holistic understanding of estuary health. Tasmanian Irrigation has also joined the TEER Program this year. They are developing the Tamar Irrigation Scheme and manage a number of other schemes within the kanamaluka / Tamar catchment.
- Working with peak agricultural bodies (TFGA ad DairyTas) and five of the region’s local councils, NRM North is implementing three key programs to reduce pathogens in the upper kanamaluka / Tamar estuary from
- diffuse sources. The first element assists grazing landholders to fence stock out of waterways; the second element assists dairy farmers to fence cattle out of waterways and improve dairy effluent management; and the third element is an investigation of cross-connections of sewerage systems into the separated stormwater system in the Launceston urban area. Over the past 12 months the programs have added to the cumulative total to:
 - exclude approximately 222,200 sheep and 26,100 cattle from waterways;
 - protect nearly 1,500 hectares of streamside riparian area; and
 - remove 13.2 ML of sewage - equivalent to five Olympic swimming pools - from entering the estuary annually by identifying and remediating cross-connections in the greater Launceston urban area.
- Private landholders across the region are key partners in the delivery of on-ground outcomes for threatened species and wetland conservation projects. Landcare groups also remain critical for reaching rural community members and as delivery partners for planting days and other events.
- The Department of Natural Resources and Environment Tasmania (NRET), Tasmanian Land Conservancy, University of Tasmania, and independent experts provide invaluable technical support and advice for monitoring and decision making.
- Local councils have been particularly active partners in cat management and eastern barred bandicoot conservation.

- With funding from the Australian Government, NRM North partners with 32 landholders across the region to conduct trials that demonstrate best practice soil management to reduce soil acidification, erosion, and increase soil carbon. Through the Regional Agricultural Landcare Facilitator, NRM North engages with government agencies, private industry, and individual landholders to support the sharing of knowledge and promote the adoption of sustainable agricultural practices. The Soil Extension Program partners with Cradle Coast Authority and NRM South to promote the importance of soil health and improve the adoption of soil testing in Tasmania, working to engage stakeholders to elicit industry input into the program as well as build a context for soil management and extension activities.
- The Tasmanian Government’s Weeds Action Fund is coordinated by NRM North and delivered statewide in partnership with NRET, Cradle Coast Authority and NRM South. Through multi-year grant opportunities, the Weeds Action Fund has facilitated more than 30 collaborative partnerships with over 400 participants including individual landholders, local governments, agricultural productivity groups and private enterprise to manage priority weeds in Tasmania.

2030 Natural Resource Management Strategy for Northern Tasmania

The 2030 NRM Strategy for Northern Tasmania was launched in August 2022.

One of the key statutory responsibilities of the three NRM organisations is to prepare, implement and maintain a natural resource management strategy for each region. This year the three NRM organisations continued to work together to finalise the review of the current strategies ensuring the methodology and framework used to prepare the 2030 plans are consistent across the

state. There are many factors that have changed, or the emphasis and importance of planning for certain scenarios has intensified, since the strategies were last prepared. Important priorities that have shaped the development of the strategies include the requirement of the Australian Government to have an investment portfolio identified to guide future funding, partnerships with the state government, and other entities in the delivery of on-ground works. The collaborative approach

has also helped to identify how the NRM organisations can work together to provide outcomes at a regional and statewide level. In addition, the role of climate and resilience and the role of traditional land management practices in the landscape have strongly influenced the priorities reflected in the strategy.

The 2030 NRM Strategy for Northern Tasmania has been accredited by the Tasmanian and Australian Governments.

Sustainable Organisational Funding Model

NRM North has a viable, long-term and sustainable organisational funding model.

Staff have worked diligently to identify and secure opportunities to diversify NRM North’s funding model to set the organisation up for a viable long-term future. For the period from 2019-20 to 2024-25, NRM North has been able to nearly triple program funding compared to the previous five-year period.

To continue to grow and develop our portfolio of projects, NRM North has, in the past year, secured the following funding to continue its works:

- expansion of Australian Government work order to provide technical services and delivery support of the Agricultural Stewardship Pilot with an additional \$200,000 (2022 – 2023)
- execution of an Australian Government \$955,000 work order for the Tasmanian NRM Soil Extension Program (2022 to 2023)

- execution of the Tasmanian Government’s \$480,000 - Regional Cat Management Coordination Project (2022 to 2025).

Operations and People Management

Central office

NRM North has its main office at 63-65 Cameron Street, Launceston. The office provides good working conditions, adequate space and is conveniently located in the hub of the CBD.

Operational funding

During 2021-22, NRM North received \$350,000 of funding for its baseline organisational operations from the Tasmanian Government to deliver its statutory roles. This core funding remains critical to effectively carry out the regional committee’s functions under the *Tasmanian Natural Resource*

Management Act 2002 (Amendments 2018). The Australian Government’s Regional Land Partnerships also provides operational funding as a percentage of funding received. Operational funding is enough to provide baseline support to the organisation but does not provide funding for project delivery. Staff must source additional funding to deliver outcomes against the NRM North Strategic Plan. In April 2021, the Tasmanian Government committed to an increase in core operational funding to \$466,000 per year beginning in July 2022 through to June 2025.

Personnel

Throughout 2021-22, NRM North personnel provided critical support for the development and implementation of natural resource management programs in the region. This support includes effective stakeholder and industry engagement, business administration and management, partnership development, and communications. NRM North staff members are employed on terms and conditions determined by NRM North in compliance with the *Fair Work Act* and National Employment Standards.



Photo: Marcus Haywood

NRM North Staff

As at 30 June 2022.

Position	Incumbent	Commencement date
Chief Executive Officer	Rosanna Coombes	4 January 2016
Corporate Services Manager	Jenni Kew	31 March 2020
Operations Manager – Land & Biodiversity	Andrew Baldwin	7 March 2007
Operations Manager – Water & Strategy	Dr Jo Fearman	25 March 2019
Governance Manager/Executive Assistant	Josie Grace	22 November 2021
Finance Coordinator	Sarah Presnell	10 May 2010
Administration Coordinator	St John Pound	19 January 2022
Administration Assistant	Katie Bain	2 November 2021
Communications Coordinator	Biba Archer	18 June 2018
Communications Coordinator	Ashleigh Walker	11 June 2019
Biodiversity Program Manager	Kate Thorn	6 August 2012
Biodiversity Coordinator	Jodie Elmer	11 January 2022
Biodiversity Coordinator	Lauren Bird	29 October 2018
Biodiversity Coordinator	Stephen Izzard	5 October 2020
Cat Management Coordinator	Jessica Taylor	11 April 2022
TEER Program Manager	Darren McPhee	26 October 2020
TEER Scientific & Technical Coordinator	Sam Jack	10 February 2020
TEER Program Coordinator / Biodiversity Coordinator	Emma Ferguson	17 May 2021
Water Program Manager	Jesse Webster	17 November 2014
Catchment Coordinator	Andrew Easton	18 October 2021
Catchment Coordinator	Michaela Rathbone	28 June 2021
Land Program Manager	Ben Slingsby	1 July 2021
Soil Extension Coordinator	Tahlia Kinrade	8 November 2021
Regional Agriculture Landcare Facilitator/ Agriculture Officer	Christine Plummer	28 June 2021
Agriculture Officer	Peter Heading	30 June 2021
Weeds Action Fund Coordinator	Vacant	

Not all staff are full-time employees. The total full-time equivalent is 21.9 employees.

Organisational Health

NRM North strives to promote a friendly, supportive, and continual learning environment for staff members. As well as providing ongoing health and wellbeing and professional learning opportunities, an annual review of programs and procedures is conducted to maintain a healthy working environment for all staff members.

To ensure NRM North remains a healthy working environment, the following processes include but are not limited to:

- NRM North Employee Handbook
- Health and Wellbeing Program
- staff induction procedures
- team development and training opportunities
- social committee and team building
- cultural awareness
- Employee Assistance Program
- annual NRM North staff performance assessment
- implementation of WHS Committee.



Photo: Niki Fulton

Corporate Governance

Enabling legislation

NRM North is an independent non-statutory body constituted and operating under the provisions of the *Tasmanian Natural Resource Management Act 2002 (2018 Amendments)*. Reporting, accountability, and other rules for operation are set out in the *Tasmanian Incorporated Associations Act 1964*.

Functions of NRM North Management Committee

The general functions and powers of the NRM North Management Committee as determined by the *Tasmanian Natural Resource Management Act 2002 (2018 Amendments)* are to:

- identify priorities for NRM for the northern region
- prepare a regional strategy for the northern region
- facilitate the implementation of the regional strategy
- promote NRM principles
- facilitate planning and integration of NRM activities for the region
- seek, manage and allocate funds according to the regional strategy
- coordinate the northern region’s participation in national and state programs relating to NRM
- monitor and evaluate the implementation of the northern regional strategy
- develop and implement processes to ensure appropriate education and training in NRM.

Responsible Minister

Under Section 9 of the *Tasmanian Natural Resource Management Act 2002 (2018 Amendments)*, the Minister has the power to:

- declare a managing body or committee of an incorporated association or body corporate as a regional committee
- appoint the Chairperson of the regional committee.

The NRM North Management Committee is responsible to the Minister for Primary Industries for its accountabilities under the *Tasmanian Natural Resource Management Act 2002 (2018 Amendments)*. For much of the 2021-22 financial year, the Hon Guy Barnett, Minister for Primary Industries, was the responsible Minister for the oversight of the Natural Resource Management Portfolio under the Act. On 12 April 2022 following cabinet changes, the Hon Jo Palmer MLC was appointed as Minister for Primary Industries and Water and assumed oversight of the Natural Resources Management Portfolio.

Engagement with other Ministerial portfolios

In addition to statutory accountabilities to the Minister for Primary Industries and Water, NRM North delivers programs with links to the Environment and State Development portfolios. During FY 2021-22, programs related to portfolios included:

Program/project	Ministerial Portfolio during FY 2021/22
Tamar Estuary River Health Action Plan – Catchment Works Program	Hon Roger Jaensch MP Minister for State Growth (1 July 2021 – 12 April 2022) Hon Guy Barnett MP Minister for State Development (12 April 2022 - present) Hon Nick Duigan MLC Parliamentary Secretary for the Tamar Estuary (28 June 2022 - present)
Tamar Estuary and Esk Rivers Program	Hon Roger Jaensch MP Minister for Environment and Climate Change (1 July 2021 – present)

Accountability to Parliament

The NRM North Management Committee is accountable to the Minister for Primary Industries and, through the Minister, to the Parliament of Tasmania for its accountabilities under the Act. Under Section 11 (4) of the *Tasmanian Natural Resource Management Act 2002 (Amendments 2018)*, the Minister must table NRM North’s Annual Report in Parliament.

The Management Committee

The Management Committee is responsible for the oversight of the business affairs of NRM North and ensuring appropriate management is in place to carry out its objectives and functions. The Management Committee sets the strategic direction of the organisation and ensures NRM North meets all areas of compliance and performance.

Management Committee meetings

The Management Committee meets for a minimum of six scheduled meetings within a financial year. The Management Committee has out-of-session processes in place to address specific matters that require attention between scheduled meetings.

Composition of the Management Committee

Section 9 (3) of the *Tasmanian Natural Resource Management Act 2002 (Amendments 2018)* outlines the requirements of the composition of a regional committee. In compliance with the Act as of 30 June 2022, the NRM North Management Committee had 10 sitting members with skills across best-practice governance, business administration, legal and contractual issues, and the achievement of natural resource management and conservation outcomes.



Photo: Louise Rhodes

Management Committee Members

NRM North Management Committee members as of 30 June 2022 **.

Member	Association Status	Committee Term	Date Appointed / Reappointed
Dr. Joanna Ellison	Group B	4 years	September 2020
Mr. Stuart Blom	Group B	4 years	September 2020
Ms. Amanda Shepherd	Group B	4 Years	September 2020
Mr. Royce Aldred	Group B	4 Years	September 2020
Hon. Professor Pamela Allan	Group B	4 years	September 2019
Mr. Michael Walsh	Group B	4 years	September 2019
Mr. Peter Sattler	Group B	4 Years	September 2019
Ms. Leanne Sherriff	Group B	4 Years	September 2021
Ms. Cassandre Tickner-Smith	Group B	4 Years	September 2021
Ms. Louise Clark	Group B	4 Years	September 2021

** Mr Peter Curley resigned from the Management Committee on 29 May 2022.

Subcommittees

The Management Committee has established subcommittees to undertake duties and provide recommendations for action. All matters considered and determined by subcommittees are submitted to the Management Committee for information and, where appropriate, ratification and decision. The following four subcommittees operated in 2021-2022 to assist the Management Committee to fulfil its functions effectively.

Governance and Policy Subcommittee

The Governance and Policy Subcommittee is responsible for ensuring that NRM North’s governance policies and procedures comply with legislation and current best-practice standards. The subcommittee reviews these policies regularly and makes recommendations to the Management Committee.

The subcommittee helps to set the overall corporate ‘tone’, business practices, and ethical behaviour of the organisation.

Members: Stuart Blom (Chair), Pamela Allan, Amanda Shepherd, Cassandre Tickner-Smith, Louise Clark.

Audit and Finance Subcommittee

The Audit and Finance Subcommittee is responsible to the Management Committee for NRM North’s financial reports including the appropriateness of accounting policies and principles used by the organisation. External auditors are responsible for auditing the Association’s financial reports.

The subcommittee takes appropriate action to set the overall standards for quality financial reporting and sound business practices.

Members: Michael Walsh (Chair), Royce Aldred, Pamela Allan, Leanne Sherriff, Honni Pitt (Independent Member).

CEO Performance Review Subcommittee

The CEO Performance Review Subcommittee’s primary responsibility is to oversee the NRM North Chief Executive Officer’s performance review process on behalf of the Management Committee and to provide recommendations to the Management Committee regarding the CEO’s annual evaluation.

Members: Pamela Allan (Chair), Joanna Ellison, Royce Aldred.

Due to Mr Peter Curley’s resignation from the Management Committee on 29 May 2022, Mr Royce Aldred was appointed by the Management Committee on 22 June 2022 to complete the balance of Mr Curley’s term on the CEO Performance Review Subcommittee.

Recognition Subcommittee

The Recognition Subcommittee was established to develop and implement an annual program formally recognising individuals who have made a significant contribution to the Association, Management Committee, or operations of NRM North.

The subcommittee assesses nominations received against the individual award category criteria for formal endorsement by the Management Committee.

Members: Leanne Sherriff (Chair), Peter Sattler, Rosanna Coombes (Chief Executive Officer).

Attendance at Management Committee and Subcommittee Meetings

Attendance by Management Committee members at NRM North Management Committee and subcommittee meetings held during the year ended 30 June 2022.

Management Committee Members	Management Committee		Governance & Policy Subcommittee		Audit & Finance Subcommittee		CEO Review Subcommittee		Recognition Subcommittee	
	Held	Attended	Held	Attended	Held	Attended	Held	Attended	Held	Attended
Hon. Professor Pamela Allan	6	6	3	3	4	3	3	3		
Dr. Joanna Ellison	6	5					3	3		
Mr. Stuart Blom	6	2	3	3						
Ms. Amanda Shepherd	6	5	3	3						
Mr. Michael Walsh	6	6			4	4				
Mr. Peter Sattler	6	6	3	1					4	4
Mr. Royce Aldred	6	6			4	4				
Ms. Louise Clark	6	4	3	0						
Ms. Leanne Sherriff	6	4			4	3			4	4
Mr. Peter Curley *	6	5					3	3		
Ms. Cassandre Tickner-Smith	6	5	3	2						
Honni Pitt – Independent Representative					4	3				

* Mr Peter Curley resigned from the Management Committee on 29 May 2022.

Management Committee Payments

Remuneration of Management Committee Members as at 30 June 2022.

Management Committee Members	Sitting Fees	Travel Payments	Total
Hon. Professor Pamela Allan	\$8,944.09		\$8,944.09
Michael Walsh	\$1,320.00		\$1,320.00
Dr Joanna Ellison	\$850.00		\$850.00
Stuart Blom	\$790.00		\$790.00
Amanda Shepherd	\$1,105.00		\$1,105.00
Peter Sattler	\$1,607.00	\$229.08	\$1,836.08
Royce Aldred	\$1,190.00		\$1,190.00
Louise Clark			
Leanne Sherriff	\$1,360.00		\$1,360.00
Peter Curley	\$850.00		\$850.00
Honni Pitt	\$170.00		\$170.00
Cassandre Tickner-Smith	\$1,020.00		\$1,020.00
TOTAL	\$19,206.09	\$229.08	\$19,435.17

* Mr Peter Curley resigned from the Management Committee on 29 May 2022.

Conflicts of interest

The Management Committee has a policy in place for the disclosure and resolution of any matter that may give rise to actual or potential conflicts between the interests of a Management Committee member and those of NRM North.

Ethical standards

NRM North aims to conduct its business with the highest standard of personal and corporate integrity. The NRM North Management Committee and personnel have adopted Codes of Conduct outlining the standards of personal and corporate behaviour that Management Committee members and personnel observe.

Remuneration of Management Committee members

Members may claim sitting fees for attendance and participation in all formal activities, such as Management Committee meetings, subcommittee meetings and working group tasks.

In accordance with the NRM North Constitution, sitting fees are to be set at each year’s Annual General Meeting.

NRM North meetings also include those meetings that a Management Committee member has been given delegation by the Management Committee to attend on behalf of NRM North.

Eligible members may also claim reimbursement for reasonable travel and other expenses associated with formal meetings and activities.

NRM North Management Committee Members



Honourable Professor Pamela Allan
Launceston

- Tasmanian NRM Chair of Chairs
- Adjunct Professor, School of Technology, Environment & Design, UTAS
- Member, Reference Group for Review of Tasmania’s Local Government Legislation, 2019
- Chair, NSW South Regional Planning Panel
- Strategic Policy Consultant (environment)
- Member, Launceston Historical Society
- Chair, Waste and Resource Recovery Ministerial Advisory Group (to 30 June 2022)



Mr Michael Walsh
Launceston

- CPA Finance Professional
- Australian Institute of Company Directors, graduate
- Financial Controller, Timberlands Pacific Pty Ltd
- Bachelor of Business, UTAS
- Member, Friends of Four Mile Creek (Coast Care Group)



Dr Joanna Ellison
Bridgenorth

- Associate Professor, Geography, Planning and Spatial Sciences, UTAS
- Member, Tamar NRM Reference Group
- Subject Editor, Wetlands Ecology and Management
- PhD (UCal Berkeley); MSc (Simon Fraser University); MA (Cambridge University)
- Member, Lilydale Pony Club
- Life Member, International Society for Mangrove Ecosystems



Ms Amanda Shepherd
Launceston

- General Manager, Theatre North Inc
- Australian Institute of Company Directors, graduate



Mr Stuart Blom
Launceston

- Director, Rae & Partners Lawyers
- Australian Institute of Company Directors, member and graduate



Mr Peter Sattler
Bridport

- Farmer, beef cattle and potatoes
- Member, Bridport Lions Club
- Member, Great Forester Catchment Management Consultative Group



Mr Royce Aldred
Launceston

- Senior Environmental Consultant, Environmental Service & Design Pty Ltd
- Bachelor of Technology (Environment), UTAS
- Australian Institute of Company Directors, graduate
- Lead Auditor, Exemplar Global



Ms Louise Clark
Launceston

- Community Relations Specialist, Bell Bay Aluminium
- Bachelor of Law, UTAS
- Tasmanian Leaders Program, graduate 2009
- Deputy Chair, Regional Development Australia, Tasmania Committee
- Member, QVMAG Advisory Board



Ms Leanne Sherriff
Cressy

- Carbon and Climate Change Team Leader, Pinion Advisory
- Employee, Palmerston Coopworth
- Tasmanian Leaders Program, graduate 2013
- Member, Tasmanian Red Meat Industry Steering Committee
- Member, Threatened Species Community Review Committee



Mr Peter Curley
Launceston

Resigned from the Management Committee on 29 May 2022

- Environmental Assessment Coordinator, DPIPWE Parks & Wildlife Service
- Secretary Exeter & Gravelly Beach Advisory Group, West Tamar Council
- Bachelor of Science (Ecology), University of Queensland
- Graduate Diploma Natural Resource Management, University of New England



Ms Cassandre Tickner-Smith
Launceston

- Environment Coordinator, Tasmanian Irrigation
- Member, Australian Water Association (TAS Branch) Committee
- Vice President, SwingMania Inc.
- Bachelor of Environmental Science / Bachelor of Biological Sciences, LaTrobe University
- Environmental Management Systems Auditor, Exemplar Global

NRM North Recognition Awards

The NRM North Management Committee Recognition Awards were introduced in October 2021. The Awards formally recognise individuals who have provided

service to NRM North or made an outstanding contribution to the Association, Management Committee, or operations of NRM North.

The Management Committee will present the following awards to recipients at the 2022 Annual General Meeting:

Outstanding Contribution Awards

These awards recognise an outstanding contribution to the organisation in the area of leadership, governance, or operational services. Two candidates have been selected for recognition at the 2022 Annual General Meeting.

Mr Greg Pinkard

Outstanding Contribution to Leadership

Greg was the inaugural Executive Officer of NRM North following the passage of the *Tasmanian Natural Resource Management Act in 2002 (Amendments 2018)*. Greg served in the Executive Officer role, while also a senior manager at the Tasmanian Department of Primary Industries and Water (DPIW).

NRM North Committee meetings started in early 2003. Greg gave an orientation briefing to the new committee on operational issues, office bearer roles and strategy development, and provided guidance and leadership as organisational governance was developed. He maintained that leadership position until the appointment of the inaugural CEO.

In the early days, NRM North was based at the DPIW Prospect offices, where Greg guided appointments of NRM North staff and changeover of committee members. During development of the Association's Constitution, Greg advised on its compatibility with guiding legislation.

After stepping down as Executive Officer of NRM North, Greg became Chair of the Management Committee Selection Panel, with member nominations considered each year before the AGM. Greg has also been an active member of the selection panel for the appointment of the current Chair of NRM North and was part of the selection process for the current CEO of NRM North.

His voluntary service to NRM North has continued to the present day; a period approaching two decades.

Mr James Walch

Outstanding Contribution to Leadership and Governance

James joined the NRM North Management Committee in October 2015. He provided strong, collaborative leadership to the Management Committee, Association, and organisation, and supportive guidance to the CEO.

Accomplishments of note include:

- recruitment of the current NRM North CEO in January 2016, and providing ongoing guidance and support particularly with challenging problem solving
- presiding over a cohesive and collaborative Management Committee that was fully engaged in NRM North's governance and strategy, and supporting a Board culture of participation and transparency
- participating in a number of subcommittees to oversee and improve governance systems and processes
- raising the profile of NRM North by participating in and representing the organisation at meetings with stakeholders and partners
- providing state leadership for natural resource management as the Chair of NRM Chairs including lobbying for, and securing, a 71% increase in state NRM funding from 2018 to 2022
- representing Tasmania on the National Chairs' Working Group and providing input to the national NRM agenda on behalf of the state and participating in the strategic planning for the creation of an incorporated national NRM body
- providing leadership for the development of the NRM North Strategic Plan and working closely with the CEO on organisational improvements ensuring NRM North was viewed as 'safe hands' by the Australian Government and other funding bodies
- oversight of business development to diversify and grow NRM North's funding base
- oversight of the National Landcare Program tender in 2017 leading to NRM North being the only Tasmanian NRM body to execute a 5-year Services Agreement for the delivery of Australian Government NRM programs.

Length of Service Awards

The Length of Service Awards recognise existing staff and Management Committee members for their dedicated service to the organisation. The Management Committee will recognise three recipients at the 2022 Annual General Meeting.

Joanna Ellison

NRM North Management Committee member

Joanna will be acknowledged for her length of service to the organisation of almost 19 years and will receive two awards in recognition of her 10 and 15 years of service.

Andrew Baldwin

Operations Manager – Land & Biodiversity NRM North

Andrew has been with the organisation for over 15 years and will receive two awards acknowledging his 10 and 15 years of service.

Sarah Presnell

Finance Coordinator NRM North

Sarah will be recognised for her contribution to the organisation receiving one award acknowledging her 10 years of service.

Prior long-serving Management Committee and staff members

The Management Committee also acknowledges the following previous Management Committee members and staff members for their length of service (10 years or longer) to NRM North:

Management Committee members

- Maureen Bennett – 2003 to 2018
- Dr. Leigh Sparrow – 2003 to 2013
- Janet Wallace – 2003 to 2014

Staff members

- Denise Colvin – 2003 to 2022
- Fiona George – 2008 to 2021
- Amanda Locatelli – 2007 to 2019
- James McKee – 2005 to 2016
- Greg Stewart – 2006 to 2018
- Jo Voller – 2007 to 2018



Photo: Hudson O'Neil

Summary Financial Statements

For the Year Ended 30 June 2022.

Photo: Dahlia Westergreen

Summary Financial Statements

The summary financial statements are an extract from the full financial statements of NRM North for the year ended 30 June 2022.

The summary financial statements and specific disclosures included in it have been derived from the full financial statements.

The concise financial report cannot be expected to provide as full an understanding of the financial performance, financial position and financing and investing activities of NRM North as the full financial statements.

Further financial information can be obtained from the full financial statements, which is available, free of charge, on request to NRM North.

Statement of Profit or Loss and Other Comprehensive Income

For the year ended 30 June 2022.

	Note	2022 \$	2021 \$
Revenue			
Funding revenue	2	8,138,397	4,001,552
Interest received		16,032	23,314
Other income		6,096	50,500
		8,160,525	4,075,366
Expenses			
Employee benefits expense		2,162,631	1,757,094
Contract services		1,805,582	1,654,028
Project materials		285,438	202,828
Professional services		140,405	161,522
Communications and information technology		81,928	72,084
Depreciation		140,663	140,466
Travelling and motor vehicle		49,340	50,408
Other operating expenses		172,995	160,051
		4,838,982	4,198,481
Net surplus/(deficit)		3,321,543	(123,115)
Other comprehensive income		-	-
Total comprehensive income for the year		3,321,543	(123,115)

Statement of Financial Position

For the year ended 30 June 2022.

	2022 \$	2021 \$
Assets		
Current assets		
Cash and cash equivalents	2,130,153	1,118,091
Trade and other receivables	857,471	635,621
Other financial assets	2,789,391	2,774,296
Prepayments	56,500	31,577
Total current assets	5,833,515	4,559,585
Non current assets		
Property, plant and equipment	113,219	155,943
Total non current assets	113,219	155,943
TOTAL ASSETS	5,946,734	4,715,528
Liabilities		
Current liabilities		
Trade and other payables	258,458	268,168
Deferred income	641,052	2,687,395
Provisions	159,335	165,404
Lease liabilities	101,960	144,259
Total current liabilities	1,160,805	3,265,226
Non current liabilities		
Provisions	48,052	33,967
	1,208,857	3,299,193
Net Assets	4,737,877	1,416,335
Equity		
Reserves	4,538,717	1,340,701
Retained earnings	199,160	75,634
TOTAL EQUITY	4,737,877	1,416,335

Statement of Changes in Equity

For the year ended 30 June 2022.

	Operating Reserve \$	Retained Earnings \$	Capital Reserve \$	Contingency Reserve \$	Committed Projects Reserve \$	Total \$
Balance at 1 July 2021	915,701	75,634	75,000	350,000	-	1,416,335
Total comprehensive income	-	3,321,543	-	-	-	3,321,543
Transfers to and from reserves	-	(3,198,017)	-	-	3,198,017	-
Balance at 30 June 2022	915,701	199,160	75,000	350,000	3,198,017	4,737,877
Balance at 1 July 2020	1,038,816	75,634	75,000	350,000	-	1,539,450
Total comprehensive income	-	(123,115)	-	-	-	(123,115)
Transfers to and from reserves	(123,115)	123,115	-	-	-	-
Balance at 30 June 2021	915,701	75,634	75,000	350,000	-	1,416,335



Photo: Helen Cunningham

Statement of Cash Flows

For the year ended 30 June 2022.

	Note	2022 \$	2021 \$
Cash from operating activities			
Receipts from Government and corporate partners		6,461,203	4,828,268
Contract payments		(2,245,242)	(2,148,586)
Payments to employees		(2,154,715)	(1,783,813)
Payments to suppliers		(597,963)	(500,527)
Other income		6,096	50,500
Interest received		16,032	24,904
GST refunded/(remitted)		(318,018)	(105,799)
Net cash provided by/(used in) operating activities		1,167,393	364,947
Cash flows from investing activities			
		-	-
Acquisition of plant and equipment		(13,010)	(8,483)
Acquisition of other financial assets		(15,094)	(1,523,236)
Net cash used by investing activities		(28,104)	(1,531,719)
Cash flows from financing activities			
		-	-
Repayment of borrowings		(127,227)	(110,842)
Net cash used by financing activities		(127,227)	(110,842)
Net cash increase (decreases) in cash and cash equivalents		1,012,062	(1,277,614)
Cash and cash equivalents at beginning of year		1,118,091	2,395,705
Cash and cash equivalents at end of year		2,130,153	1,118,091

Notes to the Summary Financial Statements

For the year ended 30 June 2022.

1. Basis of Preparation of Summary Financial Statements

The summary financial statements are an extract from the full financial statements of NRM North for the year ended 30 June 2022.

The financial report covers NRM North as an individual entity. NRM North is an incorporated association in Tasmania under the *Associations Incorporations Act 1964* and operates as a not-for-profit entity. NRM North is a registered charity under the *Australian Charities and Not-for-profits Commission Act 2012*.

2. Funding Revenue

NRM North determines whether an enforceable agreement exists and whether the promises to transfer goods or services to the customer are ‘sufficiently specific’. If an enforceable agreement exists and the promises are ‘sufficiently specific’ (to a transaction or part of a transaction), NRM North applies the general AASB15 principles to determine the appropriate revenue recognition. If these criteria are not met, NRM North applies AASB1058.

Government grants and corporate contributions are initially recorded

as a liability and then subsequently recognised as revenue once specific performance obligations arising under the respective contracts have been met. Contract liabilities represent NRM North’s obligation to transfer goods or services to a customer and are recognised when a customer pays consideration, or when the NRM North recognises a receivable to reflect its unconditional right to consideration (whichever is earlier) before NRM North has transferred the goods or services to the customer.

	Opening Balance \$	Funding Received \$	Revenue Recognised \$	Closing Balance \$
Commonwealth Government				
National Landcare Program	1,098,440	1,698,684	(2,797,124)	-
Regional Land Partnership				
Catchment Works	390,009	1,500,000	(1,890,009)	-
Small Farms Small Living	98,595	-	(98,595)	-
State Government				
Catchment Works	635,657	1,000,000	(1,635,657)	-
Event Monitoring	7,300	-	(7,300)	-
Core funding	-	350,000	(350,000)	-
Cat Management Plan	59,666	-	(59,666)	-
Regional Cat Co-ordination Program	-	120,000	(30,728)	89,272
Weeds Action Fund	30,962	207,564	(148,701)	89,825
Weeds Action Fund Devolved Grants	132	891,925	(454,162)	437,895
Other Revenue				
Tamar Estuary and Esk Rivers Partnership	361,715	297,818	(659,533)	-
Break O’ Day Council Drought Weeds Officer	4,921	2,000	(6,921)	-
	2,687,397	6,067,991	(8,138,396)	616,992

Management Committee Declaration

The management committee declare that in their opinion:

- as described in note 1, the summary financial statements are an extract from the full financial statements of NRM North for the year ended 30 June 2022;
- the financial statements and notes present fairly the financial position of NRM North at 30 June 2022, and its financial performance for the year then ended; and
- there are reasonable grounds to believe that NRM North is able to pay all of its debts, as and when they become due and payable.

Signed in accordance with a resolution of the Management Committee:

Chair Pamela Allan
Pamela Allan
Dated: 31 August 2022

Treasurer Michael Walsh
Michael Walsh
Dated: 31 August 2022



Photo: Marcus Haywood



Crowe Audit Australia
ABN 84 006 466 351
62 Paterson Street
LAUNCESTON TAS 7250
PO Box 1000
LAUNCESTON TAS 7250
Main +61 (0) 6323 1222
Fax +61 (0) 6323 1231
www.crowe.com.au

NRM North

Independent Auditor's Report to the Members of NRM North

Report of the Independent Auditor on the Summary Financial Statements

The summary financial statements, which comprise the statement of financial position as at 30 June 2022, the statement of profit or loss and other comprehensive income, statement of changes in equity and statement of cashflows for the year then ended, and related notes, are derived from the audited financial report of NRM North for the year ended 30 June 2022.

Opinion

In our opinion, the accompanying summary financial statements are consistent, in all material respects, with the audited financial report, on the basis described in Note 1.

Summary Financial Statements

The summary financial statements do not contain all the disclosures required by *Australian Accounting Standards – Simplified Disclosure Standard*, the *Natural Resource Management Act (Tasmania) 2002* and the *Australian Charities and Not-for-profits Commission Act 2012*. Reading the summary financial statements and the auditor's report thereon, therefore, is not a substitute for reading the audited financial report and the auditor's report thereon.

Responsibilities of the Management Committee for the Summary Financial Statements

The management committee is responsible for the preparation and fair presentation of the summary financial statements on the basis described in Note 1.

Auditor's Responsibilities for the Audit of the Summary Financial Statements

Our responsibility is to express an opinion on whether the summary financial statements are consistent, in all material respects, with the audited financial report based on our procedures, which were conducted in accordance with Auditing Standard ASA 810 *Engagements to Report on Summary Financial Statements*.

Crowe Audit Australia
CROWE AUDIT AUSTRALIA

Malcolm Matthews

Launceston

Date: 6 September 2022

Partner

Liability limited by a scheme approved under Professional Standards Legislation.

The title 'Partner' conveys that the person is a senior member within their respective division, and is among the group of persons who hold an equity interest (shareholder) in its parent entity, Findex Group Limited. The only professional service offering which is conducted by a partnership is the Crowe Australasia external audit division. All other professional services offered by Findex Group Limited are conducted by a privately owned organisation and/or its subsidiaries.

Findex (Aust) Pty Ltd, trading as Crowe Australasia is a member of Crowe Global, a Swiss Verein. Each member firm of Crowe Global is a separate and independent legal entity. Findex (Aust) Pty Ltd and its affiliates are not responsible or liable for any acts or omissions of Crowe Global or any other member of Crowe Global. Crowe Global does not render any professional services and does not have an ownership or partnership interest in Findex (Aust) Pty Ltd. Services are provided by Crowe Audit Australia, an affiliate of Findex (Aust) Pty Ltd.
© 2022 Findex (Aust) Pty Ltd



The NRM North Yearbook and Annual Report 2021-22 has been prepared with all due care and diligence using the best available information at the time of publication. NRM North holds no responsibility for any errors or omissions within the document. Any decision made by other parties based on this report are the responsibility of those parties.

Cover: The Tamar Island Wetlands in the upper kanamaluka / Tamar estuary support an ecosystem rich in biodiversity values and play a vital role in flood management and reducing the impacts of climate change, storing carbon and acting as a sponge that soak up flood waters. The upper estuary is one of five zones that the Tamar Estuary and Esk Rivers (TEER) Program samples every month to assess water quality. With ongoing monitoring, a greater understanding of the health and function of these valuable wetland habitats is achieved.

Photo: St John Pound.

All unspecified images are credit of NRM North.

The NRM North Yearbook and Annual Report 2021-22 is printed on environmentally responsible paper made Carbon Neutral and the fibre source is FSC (CoC) Recycled certified. The paper is manufactured from 100% post-consumer recycled paper in a chlorine-free environment process under the ISO 14001 environmental management system.

© Published by NRM North, September 2022.

Northern Tasmanian Natural Resource Management Association Inc.
63-65 Cameron Street, Launceston TAS 7250
03 6333 7777 | admin@mrnnorth.org.au | nrmnorth.org.au